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Building The Future We Want

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► **To cite this version:**

Rajendra K. Pachauri, Anne Paugam, Teresa Ribera, Laurence Tubiana, P. G. Dhar Chakrabarti, et al.. Building The Future We Want. 2015. hal-02568002

HAL Id: hal-02568002

<https://hal.science/hal-02568002>

Submitted on 2 Jun 2020

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Building the future we want

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■ **The Agence Française de Développement (AFD)** is a public development-finance institution that has worked for seventy years to alleviate poverty and foster sustainable development in the developing world and in the French Overseas Provinces. AFD executes the French government's development aid policies. Working on four continents, AFD has seventy-one field offices and bureaus, including nine in France's overseas provinces and one in Brussels. The Agency provides financing and support for projects that improve living conditions, promote economic growth, and protect the planet. In 2013, AFD committed €7.8 billion to projects in developing and emerging countries and in the French Overseas Provinces. These AFD-financed projects will provide schooling for children, improve maternal health, promote equality between men and women, support farmers and small businesses, and bolster access to drinking water, transportation and energy. These newly-funded projects will also help mitigate climate disruption by abating nearly 3.3 million metric tons of carbon dioxide-equivalent annually.

More information and publications available at www.afd.fr/lang/en/home

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■ **The Energy and Resources Institute (TERI)** was set up in 1974 to deal inter alia with issues relating to sustainable development, the environment, energy efficiency and the sustainable use of natural resources. Its goal is to develop innovative solutions for achieving sustainable development. Its activities range from the formulation of local and national strategies, to proposals for global solutions, to energy and environment-related issues. TERI is based in New Delhi, and also present in many other regions of India. It has over 900 employees and is headed by Rajendra K. Pachauri who is also the Chairman of the Intergovernmental Panel on Climate Change (IPCC), which was awarded the 2007 Nobel Prize. More information and publications available at www.teriin.org

A Planet for Life – Building the future we want
Rajendra K. Pachauri, Anne Paugam, Teresa Ribera and Laurence Tubiana (Editors)

Delhi: TERI, 2015
ISBN 9788179935750

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Editorial coordinators: Raphaël Jozan (AFD) and Isabelle Biagiotti (AIDA).

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Translation and adaptation from French: Jim Johnson and Katell Guernic.

Editorial consultants and copy-editors: Katell Guernic, Jim Johnson and Gautier Kohler.

Print-Production: TERI Press.

Maps and figures: Dario Ingiusto (Légendes Cartographique).

Graphic design: Alain Chevallier, design and cover.

Photo credits: Cover: Corbis

Thanks to: Martine Aufroy, Mourad Ayouch, Pierre Barthélemy, Morgane Beaudouin, Cyrille Bellier, Agnès Biscaglia, Alexis Bonnel, Anne-Sophie Bourg, Nadine Brunner-Coquemer, Henry de Cazotte, Lucien Chabason, Lucas Chancel, Bertrand Charrier, Michel Colombier, Elise Coudane, Lisa Dacosta, Marion Danton, Damien Demailly, Aude Flogny, Isabelle Fortuit, Jean-Yves Grosclaude, Emmanuel Guérin, Ellen Hanak, Alain Henry, Martine Lorenzo, Jacques Loup, Philippe Orliange, Mohamed Ali Marouani, Elsa Mathews, Jacques Moineville, Benjamin Neumann, Suzan Nolan, Anne Perrin, Guillaume de Saint-Phalle, Annick Salama, Carole-Anne Sénéit, Camille Séverac, Léna Spinazzé, Sanjivi Sundar, Sébastien Treyer, Henri Waisman, Laurence Wunderle.

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Foreword

More than twenty years after the Rio Earth Summit which gave political and institutional birth to ‘sustainable development’, the nations of the world are on the verge of entering into a new era of negotiation and implementation of sustainable development policies. With three particularly important events – the Addis Ababa conference on development financing, the session of the UN General Assembly on the setting of universal sustainable development goals, and the ‘last chance’ conference on climate change in Paris – 2015 will certainly be a landmark. A two-decade long cycle of talks and experiences ends; while another begins, aiming at addressing challenges which by their magnitude and scope cannot be addressed with business as usual policies.

As recalled by the UN Secretary-General, the year 2015 offers a unique opportunity for global leaders and others to end poverty, and also to transform the world to better meet human needs and the necessities of economic transformation, while protecting our environment, ensuring peace and realizing human rights. ‘Transformation is our watchword’, the UN Secretary General emphasized.

The unprecedented challenges of the twenty-first century incentivize us – people, institutions, decision-makers – to rise above ourselves and invent solutions to old and new problems. Our three institutions have stakes in this endeavour to produce meaning and shed light on our possible futures, leaving it up to the readers, we hope, to look at sustainable development as something that tomorrow will bring.

The *Agenda 21* at Rio gave us the vision of the twenty-first century; the *Future We Want* at Rio+20 gave us the blueprint of the vision; 2015 will give us, we all hope, a common roadmap with clear goals, measurable targets and definite means to achieve them. The tasks are daunting and challenging, with many roadblocks and bumps ahead, but the people of the planet, across all countries and continents, must put their heads and hearts together and draw on all their resources to build the future we want.

On this planet earth there can no longer be islands of hope and prosperity amidst oceans of despair and poverty. Technology, economy and climate have joined us together, as never before. The remotest parts of the world are connected with each other by production systems and supply chains, ideas and information. The changing climates have linked the melting glaciers of the Arctic with the rising sea levels of the Pacific islands. We can no longer remain centred on the idea of nation-states that were created in the past; we are all part of the same planet – we will sail or sink together in future.

The Millennium Development Goals have given us the confidence to realize that together we can achieve many things that have eluded us for so long. Sustainable Development Goals should give us the guidance and the means to translate this confidence into action. Many of the goals and the targets recommended by the Open Working Group of the United Nations have already been adopted as national and local development goals in many countries. The synergies between global and national development goals should be reinforced through better technical guidance for programming, implementation and monitoring.

At the same time, we need better synergies in development assistance, which can sometimes be too thin and dispersed to create the desired impacts. Surely there is scope for better targeting and coordination to avoid duplication, just as there are opportunities for scaling up assistance from developed – and also from emerging – economies.

AFD, TERI and IDDRI have joined forces, bringing together their ideas and creating a vast network of renowned scholars and experts from across the world to share their understanding and vision of this ongoing ‘transformation’. They provide us with the incomparable narrative of its intellectual and material underpinnings, and as the reader will see, of its different meanings and perspectives in a representative set of developing and developed countries.

This anthology of ideas and perspectives from countries and regions around the planet demonstrate the challenges and complexities of the roads ahead, but at the same time captures the common dreams and the desire to move ahead for a better future.

Let us dedicate ourselves to build The Future We Want. ■

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Building the future we want

The 2015 edition of *A Planet for Life* will reach bookshelves a few months before a meeting of the United Nations General Assembly in September 2015, when member states will determine a new development cooperation framework and design the 2016-2030 sustainable development goals (SDGs). In December 2015, France will host the 21st Conference of the Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC), a decisive step in negotiating and adopting a global climate treaty. Following the same timetable, the Global Partnership for Effective Development Co-operation will devise financing modalities for the SDGs; the group will also suggest the forms of partnership and governance needed to overcome the challenges to implementing the SDGs and the climate treaty.

A superficial understanding of these events could convey the idea that global leaders will once again meet, write down lyrical declarations and leave international bureaucracy the daunting task of turning words into actions. The contributors to this book tell a different story: that the stakes at this '2015 juncture' far exceed those of other recent global talks.

In line with the increasing momentum behind this drive to make 'sustainable development' the norm internationally, *A Planet for Life* explores what the promise of the '2015 juncture' really means. Contributors to this volume report on their exchanges with a host of stakeholders involved in behind-the-scenes negotiations and the United

Nations consultation process. Readers will learn in the first part how negotiators are seizing the moment to build a sustainable world and advance toward a comprehensive environmental and social contract.

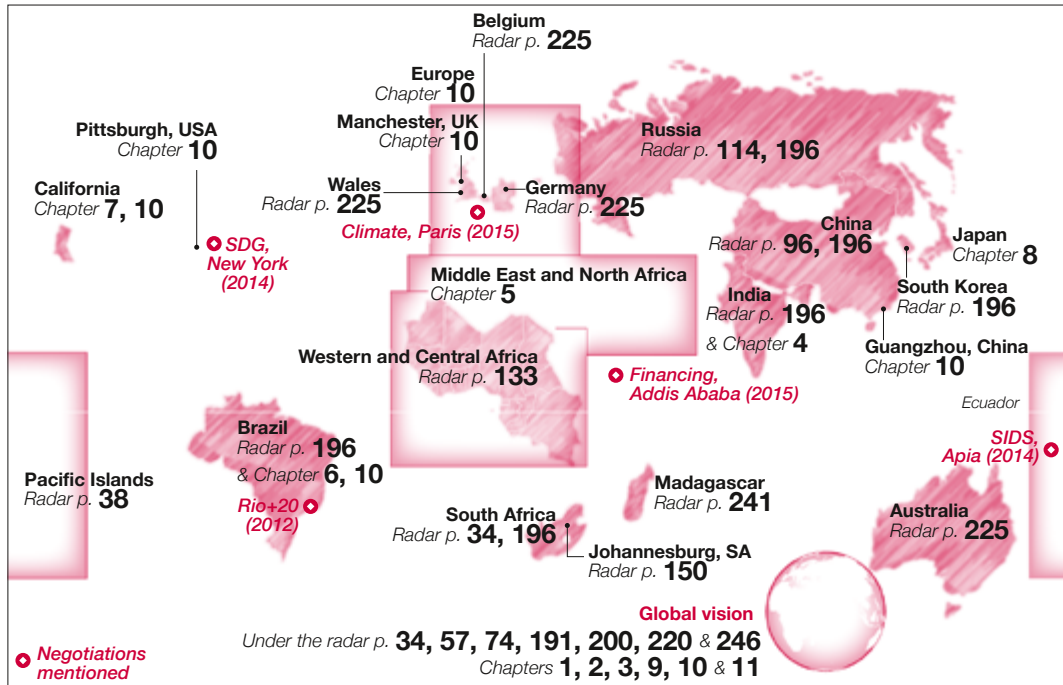
Beyond the negotiators, central and local governments, private-sector companies, and civil society create concrete responses to environmental and social challenges. The second part of the 2015 edition of *A Planet for Life* tours five continents to understand what countries and regions are actually doing to achieve sustainable development in often ambitious ways, tackling their own local – and global – problems, in the face of frequently more immediate challenges to growth, competitiveness, employment and equality. In the third part, we address implementation issues and financing for development options more specifically, with an overview of key propositions for making sustainable development financing a lever to transform economies and societies.

How are territories addressing the issue of sustainable development?

'A Planet for Life Series' takes a worldwide view of the issue, examining the ways in which various countries are addressing sustainable development challenges. For each country, several questions are raised: How do countries see their development in the year 2030? How do they determine priorities for growth, employment, redistribution and environmental protection? What trade-offs are made? How are priorities and trade-offs debated within society? What mechanisms fuel growth trajectories and what margin for manoeuvre do countries have? What are the sustainable development challenges for countries? Who raises these challenges and what is the appropriation by economic (particularly industry) and social actors? How do they disrupt national development strategies?

Looking at the paths taken by various countries, we see how sustainable development and 'green growth' concepts percolate through society, distilling into development plans. Sometimes such concepts even form the strategic backbone for decision-making by public authorities. Some localities and nations rally all their development efforts around notions of sustainability. **Jae-Seung Lee** shows this to be the case in South Korea (Under the radar 7). In 2008, the country launched an ambitious 'Green Growth Strategy' that continued under the second (2013-2018) 'Five-Year Plan for Green Growth'. **Marcelo Carneiro, Stéphane Guéneau and Fabiano Toni** (Chapter 6) present Brazil's long history of integrating environmental issues into its development strategy; it underpins efforts to preserve biodiversity and the Amazon rainforest, and to promote a sustainable agribusiness model. **Liu Changyi and Liu Zhe** (Under the radar 4) review the rise of an 'ecological civilization' in China. They also show how environmental issues have become central to China's agenda, as the government proposes the launching of an 'energy revolution' and drives forward an ambitious 'Energy Development Action Plan for 2014-2020' to reduce Chinese energy intensity. The movement affects the great emerging countries and Western powers (see Chapter 7 on the United States and California, by **Louise Bedsworth**). It also affects many lower-income countries, as illustrated by **Alexandre Magnan** in

FIGURE 1 Countries and regions covered in this edition



his focus on Small Island Developing States (Under the radar 2), one of these states having made a commitment to becoming the ‘world’s first “carbon-neutral” country through energy efficiency and renewables’.

Countries also promote the social dimensions of sustainable development. **Valérie Schmitt** and **Daniel Kamelgarn** (Under the radar 1) show this in the progress made by social-welfare protection schemes globally. Not even including the efforts of pioneering countries, such as Argentina, Brazil, China, Colombia, India, Mongolia, South Africa, and Thailand, ‘social protection has continued to grow since the Second World War, both geographically and in the number of sectors covered’ worldwide. The authors explain that ‘in Sub-Saharan Africa, private mutual health systems have developed to address the lack of social protection schemes for workers in the informal economy’. Some African cities, such as Johannesburg, presented by **Anne Odic** in Under the radar 7, ‘make their social priorities the engine of their development strategies’. In MENA countries, **Samir Aita** (Chapter 5) recalls that unemployment and frustration fuelled by the perception of injustice have led to a crisis that would later be coined the Arab Spring. ‘The first priority today is certainly to find “decent jobs”, possibly with training, for the millions of young men and women that arrive each year on the job market’, **Samir Aita** acknowledges.

By comparing the histories of how countries have seized on sustainable development and taken concrete steps to achieve it, we can see how strongly crises change politicians' attitudes: suddenly they evoke the need to 'change paths', to 'reorient the country's development', and to 'propose a new global compact' to turn the crisis into an opportunity to boost more inclusive and sustainable growth. The 2008 economic and financial crisis exemplified this on an international scale; in many countries, it hastened the adoption of sustainable development concepts by leaders, both within the state apparatus and in company boardrooms. Such crises may also be more local, as in China, where huge waves of pollution and smog engulf large cities, demonstrating the urgent need to reconsider environmental issues.

A reading of these histories shows the concepts and tools that have already entered society through various channels. In developing and emerging countries, civil society proves a major conduit, as **Théo Bouma** (Under the radar 2) explains in his article about the growing maturity and professionalism of non-governmental organizations (NGOs). He claims 'there are now many countries where national NGOs are recognized by policymakers and are truly part of the public debate.' Such organizations play a critical role in public discourse, reintroducing previously excluded actors and stakes to 'give a voice to the poorest and the weakest people, and to lobby and educate leaders and influence policies.'

However, sustainable development is no longer just a political slogan or a societal demand. Over the past ten years, it has started to become an economic and industrial reality. The way societies take sustainability into account affects the way companies position themselves and seize opportunities, proposing goods and services to meet new demands. The work of **Nicolas Vincent and Raphaël de Guerre** shows this as they look at the flourishing of 'social business' (Under the radar 11). **Valérie Schmitt and Daniel Kamelgarn** further illustrate how business can propose services central to social insurance coverage.

In effect, an entire network of actors and factors has coalesced around the subject of sustainability. 'Success depends on a solid base of research and data and strong communication skills, but also on the mobilization of political courage among governments,' **Mark Halle** explains. He introduces the notion of 'action coalitions' marching forward, noting that 'addressing fossil fuel subsidy report in Egypt, or India, or Mexico, requires the data available from the International Energy Agency of the World Bank and their official contacts at the national level. It requires to understand the political economy of skilled players in-country, in civil society, in academia, and in the media; and it requires trusted spokespersons prepared to stand up and express the inconvenient truth and offer alternatives.'

Even when agendas change, the promised changes do not automatically happen, despite the political will and substantial investments brought to bear. Sustainable development cannot be decreed from the top down. Indeed, we often see major disappointments, as with South Korea's 'Green Growth Strategy'; a plan that was nowhere near as popular as the authorities had hoped, while its achievements in energy decarbonization remain debatable. When it comes to changing their development

trajectory, countries suffer powerful inertia and strong social and technical barriers, such as ‘fossil-fuel public subsidies’. Such forces slow down change; as **Mark Halle** explains, ‘most of the key issues around sustainable development share a common thread – they require a change in the pattern of incentives and disincentives that govern the consumption and lifestyle behaviour of citizens’.

What is at stake at the ‘2015 juncture’?

With the achievement of many (but not all) of the UN’s Millennium Development Goals (MDGs), the movement to define new SDGs finds its roots in the changes most countries have made to their development plans as they integrate environmental concerns. Development can no longer be imagined without the modifier ‘sustainable’; the slogan has become the standard, one we have watched gain purchase over the years in previous editions of *A Planet for Life*. After more than forty years of gradual progress, since sustainability was first embraced at the 1992 Rio Summit and the link between development and the environment was first recognized by officialdom, sustainable development has become the watchword, the expectation, the norm. The first and major issue at stake is for political leaders and stakeholders to make the global sustainable development agenda a genuine *transformative* agenda in their own territory.

Other issues come into play, as **Armand Rioust de Largentaye** explains in his analysis of the ‘historical construction of the “2015 juncture”’ (Chapter 1). The SDGs will belong to what we might call the ‘Group of Twenty (G20) Era’, unlike the MDGs, which were set up in 2000 at a time when the world’s existing balance of power was entering into its twilight. That world was upended as large emerging nations – China foremost – burst onto the scene, rebalancing economic and political power between countries. Subsequently, the architecture of international aid also underwent great change, and needs further reinvention. ‘The mapping of donors is rapidly changing,’ **Pascal Canfin** notes (Under the radar 9). For example, African countries now have a choice of three funders for infrastructure projects of any size: bilateral and multilateral development banks, the Gulf States, and China as it shifts from aid recipient to donor.

A Planet for Life informs us of the ins and outs of international negotiations. It shows that states are the primary actors; they lead the negotiations and are likely to conduct implementation in their territories. Over time, the number of states that negotiate and make implementation decisions has increased considerably. Countries like Colombia or Nigeria (Guatemala was at the initiative of SDGs) stand out in their drive to push for negotiation and change. **Alexandre Magnan** (Under the radar 2) explains how Small Island States seize on climate issues in the UNFCCC and the ‘unique opportunity to make their voices heard internationally.’ Indeed, they end up stimulating ‘a revival of the traditional negotiation processes of the United Nations.’ What is new is that at Rio+20 countries acknowledged that this challenge was universal and had to be addressed by all countries, regardless of their income level. Debates within OECD countries on ‘post-growth’ societies exemplify this. The need for cooperation, learning and experience sharing between OECD and non-OECD countries has never been so acute.

With decades of low growth and a high level of investment in R&D and education, Japan provides a striking example of the pace and difficulties of adjustments and reforms, as **Robert Boyer** shows in his Chapter 8, where he explores the route for what he calls an ‘anthropogenetic regime’ and a new industrial model to which education, culture and health especially contribute.

In this transformation process, non-state actors are also becoming increasingly involved, whether companies (multinationals, SME, social businesses), civil society organizations (NGOs, trade unions) and local authorities (major cities); these non-state actors are playing an increasing role in the preparation of negotiations, or even in the negotiations themselves. In *Under the radar 3*, **Csaba Kőrösi**, a major contributor to negotiations centring on SDG implementation, describes the mechanics of building consensus on the SDGs and shows how the negotiations clearly extend beyond inter-country relations. ‘Only a part of the work was done in the negotiation room. Around 80% of meetings and consultations took place in between sessions, with the majority of discussions being bilateral or involving stakeholders other than member states.’

When setting up the negotiation process, the goal was to enlarge the arena as much as possible, opening it to anyone who wanted to participate, making the ‘we want’ become reality. The global political arena can no longer only be open to historical and institutionalized ‘Major Groups’. Challenging the Major Groups approach inherited from Rio, internet-based participation mechanisms ‘aim to enhance the ability of civil society actors around the world, organized or not, to express their perspectives, organize deliberations, take action and increase their participation and engagement in the creation and implementation of sustainable development norms and agreements’ **Carole-Anne Sénit** (Chapter 3) tells us. To this end, the United Nations created an Internet site to host an open forum where anyone can say what he or she thinks about the SDG proposals. Carole Anne-Sénit examines how well this tool has been received and how much it can really guide negotiations. Quantitatively, the site has proven very successful. Qualitatively, it does not change the status quo; the most active contributors are groups with significant communication budgets and global reach. In addition, the technology itself creates a barrier: Internet access remains highly unequal across the world.

Are we moving towards a comprehensive environmental and social contract?

According to the post-2015 agenda set out by ‘The Future We Want’, sustainable development can be reduced to a limited series of universal, coherent and implementable goals, reflecting the harmonious preferences of nations. These goals, drafted by the open working group (OWG), are explored in **Csaba Kőrösi’s** chapter (*Under the radar 3*). The existence of a list of universal, implementable and coherent set of goals had not been established before the SDGs and one could wonder why. Before Rio+20, UN texts did not contain any, or at least very few such examples; and attempts at defining such goals did not simultaneously fulfil these three properties.

Csaba Kőrösi emphasizes that ‘the transformation potential of the SDG package is so great that many of the countries involved in the negotiations may not even fully comprehend the possible magnitude, which may be similar to that of the industrial or digital revolutions.’ One question arises here: will SDGs deliver real transformation in territories and countries, and if so, at what conditions?

Mark Halle is sceptical on the capacity of large UN Summits to really deliver transformation. He does not have much trust in the ‘repeated and disappointing mega-summits, the pious reports of independent commissions, or the monotonous series of failed intergovernmental negotiations.’ Instead, he emphasizes the ‘wave of the future’ of new initiatives, that merge top-down and bottom-up approaches, ‘new forms of action, involving alliances of players from across the spectrum, coalitions of donors, and positive action at the public policy level.’ He notes that ‘Diversity and experimentation are the most likely routes to success.’

In his chapter, Mark Halle further argues that ‘we are stuck when it comes to making progress on issues that depend on addressing the equity gap’, adding that ‘we will not reach sustainable development unless and until we can take on equity as the fundamental core of the challenge. This means conceiving of a form of economic organization that respects both the social floor and the planetary boundaries.’ Diversity and experimentation is required at the micro level as much as the macro level to make sustainable development policies and projects deliver.

Henry de Cazotte and Céline Ramstein (Under the radar 11) provide examples and evidence of the proliferation of voluntary initiatives on sustainable development issues, such as global warming, taken by development actors (public authorities and agencies, companies, the financial sector, NGOs, local universities, etc.). A new architecture seems to be emerging from these various networks of actors, alongside and in conjunction with the international negotiations between states. They highlight how much, for instance, the Global Alliance for Climate-Smart Agriculture, which includes large agribusiness multinational companies whose models are highly controversial in terms of environmental sustainability or social inclusion, and is attacked by NGOs and defenders of family farming. The authors raise several questions, that remain unanswered, and that must be addressed seriously in debates: ‘in what way do these projects have a real impact on emissions and do they represent the latest embodiment of green washing, in the absence of control mechanisms and international reporting?’. One major challenge is ‘to imagine a system of monitoring, evaluation and coordination within or linked with the United Nations.’ This issue is part of the ongoing talks in the post-2015 agenda.

Nicolas Vincent and Raphaël De Guerre (Under the radar 11 bis) explore the opportunity for social business to bridge the implementation gap of national sustainable development policies in Madagascar. There is no silver bullet for (sustainable) development problems, they warn. ‘In addition to the usual difficulties for small and medium-sized enterprises in developing countries (such as financing, business environment, knowledge of the market, etc.), social business projects face additional difficulties inherent to their model.’ They add that ‘there is a significant tension between the social objective and the imperative of financial stability.’

Changing the way development is measured is a key building block of a common narrative on sustainable development, intelligible by all in every country. **Lucas Chancel, Géraldine Thiry and Damien Demailly** (Under the radar 10) provide striking evidence of the use and misuse of Beyond GDP (BGDP) indicators in a set of European countries. The actual transformation triggered by BGDP initiatives with regard to national accounting systems and the design of public policies shows that there remains much work to be done in terms of crafting a new social contract for the route to 2030. Taking due note of this and pushing for a far more radical agenda, **Michael Albert** (Chapter 11) makes the claim for a complete reshuffling of our institutions, laying out the principles of what he calls ‘participatory economics’, ‘without competition, without an authoritarian centre, and arriving at a worthy plan that manifests collective self-managed preferences all by a process consistent with, manifesting, and facilitating other features sought for society including balanced jobs, equitable remuneration, and self-managing councils - and thus without class hierarchy and rule’.

Reinventing development and its financing

Implementation issues encompass development financing and other topics such as innovation protection and transfer, institutional capacity building, and policy space enabling experimentation and learning by doing. The focus for 2015 is being placed on development financing, with the Addis Ababa Conference in July addressing this issue. At least two key questions will be raised during the Conference. The first deals with the mobilization of additional financing sources, complementing conventional official development assistance (ODA), that will be needed to meet the massive financing needs of the SDGs and the post-2015 development agenda more broadly. The second relates to the definition of new allocation criteria for ODA, so as to use it where it has the highest leverage or catalytic effect. Both of these issues are closely related and provide the foundations to the Addis Ababa talks.

In Chapter 9, **Voituriez, Giordano, Bakkour and Boussichas** show us that the financing needs for development after 2015 are estimated to be, on a yearly basis, at least twenty times higher than the current annual ODA amount, which reached a record level in 2013 of \$134 billion. The bulk of the additional funds required to cover the financing needs of the post-2015 agenda must therefore come from other sources of long-term financing – pension funds, insurance companies, sovereign wealth funds, among other institutional investors. They contend however that ODA remains unescapable and a core component of the development financing ecosystem – even if is marginalized in terms of volume – because of its unique capacity to carry over some risks that private actors will never dare to take on. Because of the political and institutional reforms it entails, the mobilization of domestic resources is a highly sensitive issue. To be properly addressed, it requires in many cases substantial reforms: tax collection systems, capacity building for civil servants, the strengthening of democratic institutions monitoring government expenditure, the development of international norms and standards for combating illicit fiscal and financial flows

(account transparency for companies, action plans on base erosion and profit shifting, public budget transparency, open data, etc.). While there seems to be a consensus on the need to prioritize domestic resources mobilization, political hurdles remain that are hindering the making of this high profile agenda and in turning the momentum into action.

As **Pascal Canfin** (Under the radar 9) emphasizes in his chapter, the average tax burden in OECD countries is 35%, and about 15% in the countries of Sub-Saharan Africa. Illicit financial flows coming out of Southern countries are up to ten times greater than the amount of ODA. Bringing an end to abusive transfer pricing that concentrates value in very low tax countries is a high priority on an agenda that is progressing much more rapidly than we would have thought possible four years ago. Accounting transparency for every country is now part of the negotiations of the financing of the post-2015 agenda.

Beyond the discussion on the amount of financing, the debate on development financing offers an opportunity to observe the progress of the construction of international cooperation efficiency, South-South and triangular in particular. **Laetitia Martinet** (Under the radar 9 bis) analyses the period that has seen the announcement of the creation of new international financial institutions originated by member countries of the BRICS (Brazil, Russia, India, China and South Africa), China in particular. The New Development Bank (NDB), the Contingent Reserve Arrangement (CRA), the Asian Infrastructure Investment Bank (AIIB) and the Silk Road Fund (SRF) have been created as a result of the frustration experienced by emerging countries with regard to the rigidity of the international financial architecture. She recalls that ‘it is also an expression of China’s will to strengthen its regional and global geopolitical weight.’ However, she warns, ‘while there is no doubt that these institutions have a geopolitical importance, their short-term impact on the architecture of aid is open to debate.’ The differences in the design of international cooperation between traditional and emerging donors may be an obstacle: while the former cooperate according to rules that are common to DAC members, a sort of ‘gentlemen’s agreement’ on development, the latter see international cooperation through the prism of the comparative advantages of each partner.

How can we better connect (sustainable) development finance and climate change mitigation financing? The idea laid out by **Jean-Charles Hourcade** (Under the radar 9 ter) consists in creating a new real asset – the climate remediation asset – whereby Central Banks could remunerate emission reductions and incentivize investors to invest in low carbon and sustainable projects or technologies. Comparable to the clean development mechanism of the European Emission Trading Scheme, it does not act as a ‘punishment’ like a carbon tax, but as a reward for constructing the Future we want.

Conclusion

‘Building the Future We Want’ has three key messages. First, we have long past the often-evoked criticism of the output of UN discussions as producing nothing but ‘pious wishes’. Indeed, the processes have begun: states and stakeholders are making their

moves, both backstage and outside of the UN. Second, our future is not written in stone; rather, we must collectively build it, experiment, learn, and exchange ideas on the possible pathways towards sustainability. It is not the job of the UN or national governments alone; it is everybody's business – scientific and technical organizations, academic institutions, civil society, community and faith-based organizations, media and above all businesses. Multi-stakeholder participation marked the development of the SDGs and it should drive their implementation. Third, a sustainable world cannot be achieved by decree and the work does not stop once some goals have been written down. The world we are heading for will be the one we make. It may not automatically or necessarily resemble the sustainable world described in the UN report, 'The Future We Want', but it will nevertheless be the future we collectively build. This focus on collective choices and preferences allows us to emphasize everyone's responsibility to transform vague aspirations into actions that we can no longer postpone if we are to build the future we want. ■

Part 1

**Towards a
comprehensive
environmental
and social
contract**

The United Nations' intention to build 'The future we want' from 2015 calls for several narratives to converge: the development narrative, represented by the Millennium Development Goals (MDGs); the sustainable development narrative, which has been somewhat overtaken by the MDGs in the last decade; and the narrative on government and non-government financing and implementation. The prospect of convergence is completely re-shaping the cooperation and negotiations involved in these different areas.

2015: Negotiating a common and sustainable future

This chapter analyses the historical construction of the '2015 juncture', the year the Millennium Development Goals (MDGs) – unanimously adopted by the UN General Assembly in 2000 – are to be fulfilled, and the year the Sustainable Development Goals (SDGs) are to be decided. Moreover, in 2015 several programmes are supposed to converge; these include: the Action Plan for Sustainable Development that was launched as 'Agenda 21' in 1992 to lead towards the SDGs in 2015; the critical twenty-first session of the Conference of the Parties (COP 21) in Paris, as part of the climate change agenda; and the plan for financing sustainable development. The chapter assesses the extent to which these different agendas will effectively converge. It furthermore considers whether these initiatives and deadlines are of concern merely for international development cooperation institutions or whether the environmental and geopolitical issues they address are such as to make them the priorities of the world at large, particularly the G20. This question touches on issues of development finance which, depending on the views, may be just a matter of financial intermediation, of transferring global savings from rich to poor countries, or a matter of more general concern, such as the economic sovereignty of countries, or economic and monetary policy space to meet the challenge of full employment.

Millennium Development Goals and assistance

OFFICIAL DEVELOPMENT ASSISTANCE (ODA) UNDERMINED

It is probably no coincidence that the genesis of the MDGs goes back to the years following the fall of the Berlin Wall, which took place in 1989, and the implosion of

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de Largentaye**

Advisor, Strategy
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the Soviet bloc. During the Cold War, ODA was justified as a means of solidarity, not without geopolitical connotations. For the liberal West and for multilateral institutions, the intention was indeed to provide help primarily for political allies. However, promptly after this issue disappeared, studies began casting doubts on the impact of ODA on poverty reduction,¹ calling into question the economic effectiveness of aid, denouncing its negative effects on economic incentives, highlighting the heavy human costs of ‘structural adjustments’ (i.e. austerity measures required by the Bretton Woods institutions) and the failure of conditionalities. The fall of the Berlin Wall thus opened a genuine crisis of ODA legitimacy (AMPROU and CHAUVET, 2007).

First in line, the World Bank responded by publishing ‘Assessing Aid’ (1998), a report signed by two prominent US economists – David Dollar and Lant Pritchett. The report argued that aid effectiveness was a function of the governance of a country, particularly the control of inflation, fiscal balance and trade openness, elements of the ‘Washington consensus’, as described in 1989 by John Williamson, an English economist. The World Bank then became interested in assessing the quality of institutions and developed indicators for this purpose. Observing that conditionality had been ineffective, the Bank opted for ex-ante conditionality: no funding until reforms were implemented (the European Commission instead opted for ex-post conditionality). However, instead of calming the debate, the Bank’s studies revealed the fragility of the underlying assumptions. An evaluation of the Bank’s research programme even revealed a manipulation of statistics to justify the institution’s line of thought (BANERJEE et al., 2006). Recognizing that the growth of economies depended on factors other than ODA, the Bank decided to focus on poverty reduction.

GENESIS OF THE MDGS

On 8 September 2000, the United Nations General Assembly adopted the Millennium Declaration, a text that contained a programme to strengthen collective security and establish a global partnership for development. It was then that the eight MDGs were adopted unanimously, with a target date of 2015. The MDGs were inspired by the work of the OECD’s Development Assistance Committee (DAC) and its 1996 report entitled ‘Shaping the 21st century: the contribution of development cooperation’. In the midst of the controversy on the issue of aid effectiveness, the DAC opted for clarity, proposing six goals that would inspire the MDGs a few years later, as shown in Figure 1 that compares the six DAC goals with the eight MDGs.

On 11 September 2001, the attack of New York’s twin towers increased the impact of the Millennium Declaration. Indeed, without this dramatic event, it is not certain that the MDGs would have galvanized public opinion and breathed new life into ODA. In March 2002, world leaders gathered in Monterrey, Mexico, where they agreed that ODA was vital in supplementing other sources of development finance, especially in countries that were poorly served by private direct investment. The ‘Monterrey Consensus’ on financing for development thus recommended an increase

1. For a detailed analysis of these studies, see Amprou and Chauvet, Notes and Documents, AFD 37, 2007

FIGURE 1 The building of common objectives

1996 DAC objectives	MDGs (2000)
Eradicate extreme poverty	1. Eradicate extreme poverty and hunger
Achieve universal primary education	2. Achieve universal primary education
Promote gender equality and empower women	3. Promote gender equality and empower women
Reduce child mortality	4. Reduce child mortality
Provide access to reproductive health	5. Improve maternal health
	6. Combat HIV/AIDS, malaria and other diseases
Stop environmental loss	7. Ensure environmental sustainability
	8. Develop a global partnership for development

Source : Compilation by the author.

in ODA, with donor countries being asked to allocate 0.7% of their GDP to ODA, as had been pledged in the late 1960s.

At the 2015 MDG deadline, some objectives and ‘targets’ (sub-objectives) have been reached, especially MDG 1 (halving the proportion of people living in extreme poverty) and MDG 7.C, which relates to the sustainable access to potable water. However, progress is uneven, particularly regarding MDG 1. The successes, which are in part attributable to China’s performance, are less evident in sub-Saharan Africa, where achievements in terms of access to safe drinking water have been particularly insufficient. The United Nations Development Programme (UNDP) considers that by clarifying the targeted objectives, the MDGs have helped galvanize public opinion and encouraged development cooperation. Regardless of the results, the initiative to launch a similar challenge (that of the SDGs) is a measure of MDG success.

TOWARDS SUSTAINABLE DEVELOPMENT

Alongside the debates on ODA, the world was awakening to the threats to its environment. In 1992, Meadows report ‘The Limits to Growth’ was an international success.² The same year, the UN organized the first global conference on human environment in Stockholm and created the United Nations Environment Programme (UNEP). However, it was not until 1987 that ‘Our Common Future’, the report commissioned by the UN to a group chaired by the former Norwegian Prime Minister Gro Harlem Brundtland, called for a different trade-off between human welfare and the environment, while safeguarding the needs of developing countries. The report inspired the 1992 UN Conference on Environment and Development in Rio.

Designated as the ‘Earth Summit’, the conference advocated ‘sustainable development’ based on three (economic, social and environmental) pillars.³ The Summit produced several documents, two of which are particularly topical in 2015:

2. Donella and Dennis Meadows, wife and husband, were two key authors of the report that bears their name.

3. The term ‘sustainable development’ replaced the term ‘eco-development’ that was used following the Stockholm Conference (Sachs, 2007).

the Climate Convention (United Nations Framework Convention on Climate Change - UNFCCC) and Agenda 21, an action plan for the twenty-first century. Agenda 21 addressed the range of sustainable development challenges, which include poverty, health, housing, pollution, protection of the atmosphere (including the fight against climate change and variability), management of seas, forests and mountains, management of water resources and sanitation, agriculture and waste...

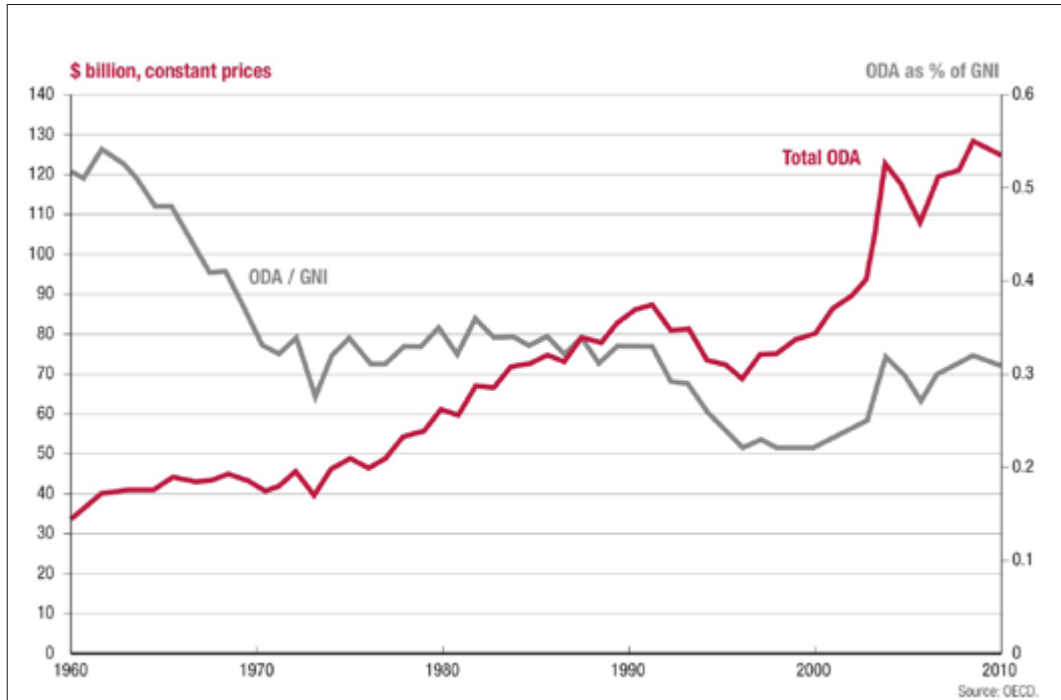
During the last quarter of the twentieth century, civil society organizations emerged as a global phenomenon, outlining a participatory democracy at different levels: local (rural and urban), national and global. In 1980, the International Union for the Conservation of Nature (IUCN) established a strategy for nature conservation. These developments were not without the political overtones of a reaction to the extension of the neo-liberal ideology during the period; they peaked at the Seattle protests during the WTO summit in 1999. With pressure from NGOs, the Rio Conference forced environmental issues into the jurisdiction of international financial institutions (IFI). The Global Environment Facility (GEF) was created in 1992. IFI procedures were amended to incorporate systematic environmental assessments.

Paradoxically, the environment, long considered an obstacle to development, became a boon for international financial institutions during the 1990s: the end of the Cold War, the debt crisis and the emergence in the 1980s of an international financial market serving centres of growth, particularly South Asia, were threatening to erode donor capacity. The GEF pioneered financing of global environmental public goods, such as climate, biodiversity, desertification control and soil protection. The Kyoto Protocol, signed in 1997 and ratified in 2005, created the Clean Development Mechanism, prompting the establishment of polluter-financed 'carbon funds' to compensate the victims of greenhouse gas emissions. Budget aid and climate programmes stimulated research on reform implementation and on effective environmental interventions.

In 2008, the 'green transition' appeared as a general response to the crisis, as economist Nicholas Stern had suggested in his 'Review of the Economics of Climate Change', published in 2006. Some countries such as Korea began to develop environmental technology for its competitive advantage, while in Europe, Germany, Denmark and the Netherlands were quick to realize the potential of the sector.

The UN 'Rio+20' conference, held in Rio de Janeiro between 20 and 22 June 2012 to mark the twentieth anniversary of the Earth Summit, stressed in its closing statement entitled 'The Future We Want', the UN's consistent line of thought since Stockholm. The conference called for a set of SDGs, based on Agenda 21, to inspire the UN post-2015 development programme. Among the 26 thematic areas reviewed in the declaration, climate change raised deep concern and called for urgent decisions to limit the rise of temperatures to 2°C by 2100, as compared to the beginning of the industrial era. The conference requested an 'Open Working Group' to develop the SDGs. In 2014 seventy countries shared the thirty seats of the Group, France sharing its seat with Germany and Switzerland, India with Pakistan and Sri Lanka.

FIGURE 2 Development assistance, an unloved tool?



Despite repeated political mobilization, development assistance remains a modest and fragile source of funding for developing countries.

Emergence and constraints

THE EMERGENCE OF CHINA

Between 1978 and 2010, the economic performance of China was arguably one of the most dramatic economic developments of modern times, raising the country out of poverty at an unprecedented speed and scale. During those years, China's annual average GDP growth exceeded 9.7%. GDP per capita increased at an average annual rate of 8.5% over this period, due in part to population control and the benefits of the 'demographic dividend' (the advantage of having a high proportion of the population in working age). China, a country of 1.3 billion people, saw its share of population living in poverty (living on less than \$1.25 a day) fall from 60% in 1990 to 12% in 2010.

China's performance was the result of an endogenous and autocratic approach, far from the OECD's liberal vision. The experiment began after the takeover of the Chinese Communist Party (CCP) in 1949, under conditions of extreme difficulty and poverty, cut off from international aid (which at the time was mainly from the US), China having to rely on its own resources (AGLIETTA and GUO BAI, 2012). Soviet assistance arrived in the 1950s, putting the emphasis on the construction of heavy industry. This difficult period of investment was not without setbacks. The victims

of the famine following the disastrous Great Leap Forward of 1960 are estimated to number in the tens of millions, not including other sufferings and massacres, particularly the Cultural Revolution a decade later.

However, China learned from its mistakes and adapted to developments. Access to the US market with a competitive exchange rate opened the way for an export industry. Through globalized value chains, China's export-oriented industrialization benefited the entire world. Figure 3 is taken from the 2014 UNDP Human Development Report, presenting the HDI in 141 countries over the period from 1990 to 2010; this figure helps to understand how some of the MDGs were achieved. The emergence of other rising powers, too numerous to mention here, did not exert the same traction on world development as the integration of China into the global economy.

GLOBAL NEO-LIBERALISM

From 1980, conservative parties in many Western countries rose to power, initiating the 'neoliberal counter-reform' that was accompanied by rising inequality. There was no shortage of research that highlighted the risks of this counter-reform. Amartya Sen, Nobel Laureate in Economics (1998), emphasized the link between inequality and poverty, advancing the idea of 'capabilities'⁴ to assert the role of social factors in development. In 2006, under the leadership of François Bourguignon, World Bank Chief Economist, the World Development Report entitled 'Equity and development' departed from neo-liberal trends, including those influencing the president of the World Bank, Paul Wolfowitz. The report showed that inequalities were an obstacle not only to social well-being, but also to economic growth. In addition, the report noted the inability of some *laissez-faire*-inspired economic systems to promote development for all and the eradication of poverty.

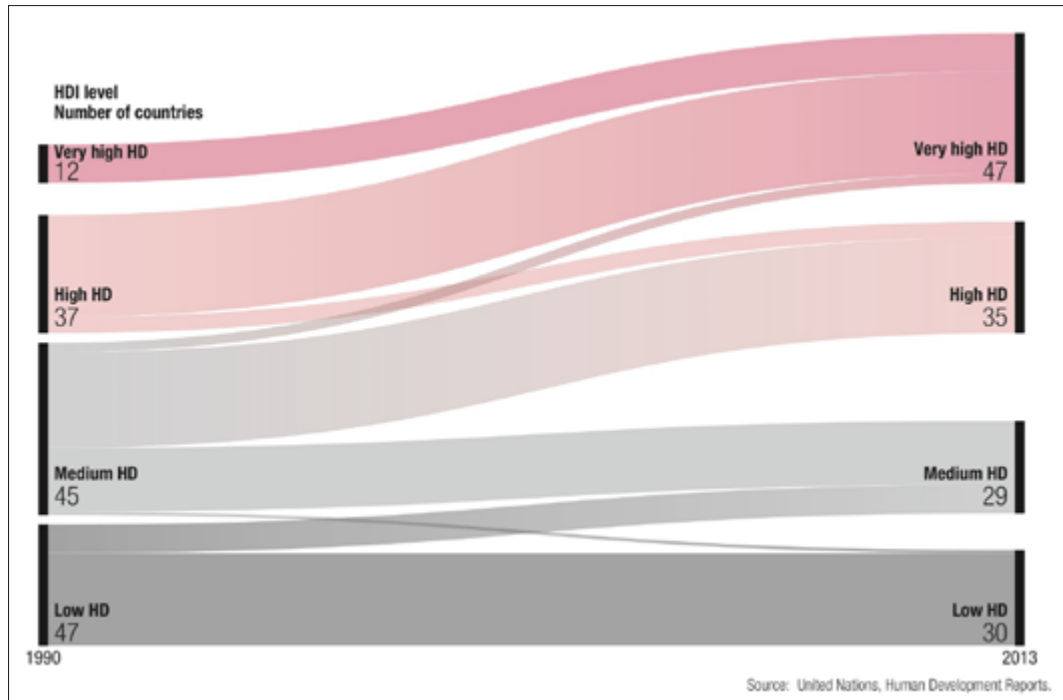
The attitude of the IMF during the 1997 Asian crisis, shortly after the IMF had declared it favoured liberalizing capital accounts, led China to accumulate foreign exchange reserves to reduce its dependence on the Bretton Woods institutions. The liberalization of capital accounts, championed by IMF staff,⁵ ignored one of the IMF's founding principles, derived from the Bretton Woods Conference (1944). According to these principles, national authorities should be able to maintain monetary independence, enabling low interest rates to stimulate private investment in the event of an economic slowdown and in periods of underemployment. Liberalization of capital movements had unwarranted restrictive effects on this policy space (STIGLITZ 2002, MOREL, 2011, UNDP 2014).

The 2007 financial crisis finally called into question the doctrine of *laissez-faire* economics. The Washington Consensus, characterizing the policies of the Bretton Woods institutions, was criticized as an extreme type of *laissez-faire* economics, which was probably an exaggeration. However, the Arab Spring and other popular

4. 'Capabilities' or 'substantive freedoms' are, according to Amartya Sen's definition, the effective ability of a person to choose combinations of functionings, i.e. an assessment of the freedom a person actually has (Wikipedia).

5. More so than the US, notwithstanding the favourable attitude of the US representative to the Board, see Abdelal 2009.

FIGURE 3 Human development boundary



Development should not be measured only in economic terms. Various indicators, including the human development index (HDI) developed by Amartya Sen, have attempted to address this issue. Despite a general trend of improvement, HDI also reveals that very harsh living conditions persist in several countries.

protests that arose in 2011, showed the tragic consequences of inequality and social divisions in the cohesion of societies and in the trajectory of growth and development. With the effects of deregulation on the environment, they confirmed the need to simultaneously foster the three sustainable development pillars (economic, social and environmental), as stressed by the Earth Summit in the wake of the Brundtland Report.

CLIMATE NEGOTIATIONS

From 1992 global warming has been a major environmental concern and probably the one that is the biggest obstacle to development aspirations. As a result of greenhouse gas emissions, global warming is related to industrialization, GDP growth and economic development, pitching the interests of developing countries against those of industrialized nations better positioned to worry about the threat of greenhouse gas emissions. Developing countries argue that industrialized countries bear the main responsibility for climate degradation, causing all nations to suffer from global warming.

Following the Earth Summit, the UNFCCC Climate Convention has introduced regular meetings of the COP bringing together 192 member countries. In 2009, the fifteenth COP in Copenhagen was due to produce a climate agreement to replace the 1997 Kyoto Protocol. The aim was to agree on commitments for low-carbon development, translating into operational terms the objective to limit the increase in average temperature to 2°C by 2100. Although the parties were unable to reach an agreement, industrialized countries committed to provide \$100 billion of ‘climate finance’ annually from 2020 to finance the investment required to reduce emissions (mitigation of greenhouse gas emissions) and to address the negative effects of these emissions (adaptation to warming). Climate finance refers to financial transfers from developed countries designed to mitigate climate change and to help developing countries adapt to its effects.

The separation of climate finance commitments from other development assistance flows reflects the dual concern of developing countries to achieve greater influence while creating a separate source of finance, given that rich countries are not meeting their commitment, re-affirmed in the Monterrey Consensus, to provide 0.7% of their GDPs. In 2010, the COP 16 in Cancun decided to create a Green Climate Fund managed equally between donor and developing countries. One of the main objectives of the 2015 COP 21 in Paris will be to establish and capitalize this Fund.

The 2015 momentum

THE PROPOSED SUSTAINABLE DEVELOPMENT GOALS AND THEIR FINANCING

The year 2015 began with a sense of satisfactory preparation. The Open Working Group proposed seventeen SDGs. The Intergovernmental Committee of experts on financing sustainable development submitted its report, while the UN Secretary General produced a synthesis report⁶ presenting the overall preparation achievements. In addition, with the ‘Lima Call for Action’, the COP 20 provided a working basis for the COP 21 in Paris.

The proposed SDGs are inspired by the MDGs but give a more detailed description of basic services (water, energy, education and health, as part of ‘healthy lives’); economic components (growth, employment, industrialization and sustainable cities, modes of production and consumption); and environmental protections to be considered. The three pillars of sustainable development (social, economic and environmental) can be easily recognized. SDG 1 (End poverty in all its forms everywhere) gives a high priority to social protection, the subject of Target 1.3⁷. Climate change appears in SDG 13 (Take urgent action to combat climate change and its impacts), but is accompanied by an asterisk, a reminder that this is the subject of a specific negotiation process.⁸ Governance,

6. Entitled ‘The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet’.

7. ‘Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.’

8. The asterisk refers to the following clarification: ‘Acknowledging that the UNFCCC is the primary international, inter-governmental forum for negotiating the global response to climate change.’

which was not identified in 1992 as a separate pillar of sustainable development, is the subject of SDG 16 (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels).

However, SDGs are distinct from the MDGs in their universal nature, a characteristic mandated by the Rio+20 Conference. They must therefore apply to rich and poor countries alike. They are ambitious (end poverty...) but remain a voluntary agreement; they are a statement of aspirations, rather than a binding treaty. Each government should set its own national targets according to the global objectives, while taking its national circumstances into account. Lastly, the legitimacy of the SDGs has been grounded in global public consultations that have reached millions of online contributors, while drawing on the wisdom of international experts, especially the High Level Panel, chaired by the British Prime Minister, David Cameron.

SDG 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development) addresses the 1992 global partnership, which was the subject of MDG 8 (Develop a global partnership for development). The challenge of this partnership (see further discussion below) was addressed at the first High-Level Meeting of the Global Partnership for Effective Development Cooperation, organized jointly by UNDP and the OECD in Mexico in April 2014. This meeting resulted from the aid effectiveness agenda launched by OECD's DAC in the 2005 Paris Declaration, following the Monterrey Summit (2002). Whether the Mexico meeting will help achieve the organization of the global partnership for sustainable development remains to be seen.

In its report on the financing of sustainable development, the Intergovernmental Committee of Experts mentions the Monterrey Consensus and its focus on the holistic mobilization of all forms of financing: public, private, domestic and international. In 2014, the OECD focused its development cooperation report on the same issue, considering that the challenge lay in the ability to transfer the required amount of savings from rich to poor countries (OECD, 2014). The Intergovernmental Committee rather emphasises the importance of respecting national policies and priorities, as well as national strategies for sustainable development, which should determine national financing plans. The Committee believes that development financing will not result from a simple solution but that a range of measures should allow each government to choose the desired combination. Finally, the Committee notes that without a stable international financial system, the post-2015 development agenda will remain vulnerable to financial crises.

CONVERGENCE

How to assess the convergence of the three programmes? First, SDGs should be related to Agenda 21, the sustainable development action plan of 1992, because 'The future we want' (the Rio+20 document) specifically underlined this relationship. International cooperation under the MDGs will therefore converge on the SDGs out of political necessity. This particular convergence draws on the legitimacy of the SDGs: during the preparation of the SDGs, the level of attention given to establishing their

legitimacy was a reminder that MDGs, originally formulated by the OECD's DAC, had been adopted too hurriedly by the UN in 2000, without sufficiently reflecting the aspirations of the Earth Summit.

Moreover, the sought-for legitimacy of the SDGs is indicative of the opposition that persists between rich and poor countries. The latter consider that the neo-liberal line of discourse of OECD countries and the Washington Consensus contribute to maintain 'peripheral' countries outside the OECD in an inferior status. For these countries, the recurring calls for equal opportunity for all and for a level playing field in international relations are a clever way for Northern countries to argue moralistically in favour of maintaining the geopolitical status quo. Fifty years ago, Latin American countries led by Raul Prebisch (1901-1986), the Argentinian director of the Economic Commission for Latin America (ECLA), were already arguing for a different form of cooperation and economic relations in the UN. The creation of the United Nations Conference on Trade and Development (UNCTAD) in 1964 was a result of this campaign (TOYE and TOYE, 2004).

Rather than a level playing field, which would imply equal conditions of competition for unequal partners, cooperation for the SDGs requires support for institutions. According to Justin Yifu Lin, former World Bank Chief Economist, institutions must at every stage adapt to their social function and promote further progress. For the Intergovernmental Committee of experts, this issue appears to apply particularly to local financial institutions. Influencing the development of local systems, which are often complex, is however more subtle than copying a foreign model. The idea Justin Yifu Lin suggests is to support the adjustment of local behaviours to changing realities, such as OECD member states do in their peer reviews, on the basis of exchanges of knowledge, identification of best practices, and possible stigmatization of non-performers.

In addition, the opposition to the neo-liberal model explains the difficulty to achieve the convergence between SDGs, which are comparable to Agenda 21, and the climate programme. The asterisk on the climate-related SDG 13 serves as a reminder of the opposition between developing and industrialized countries. Added to this is the fact that the US and the UK want to maintain the specificity of the climate negotiations, no doubt to obtain the commitment of China and newly industrialized countries.

What do the Intergovernmental Committee's proposals show, in terms of convergence? Analyses have suggested a double rapprochement: first, between development assistance and development financing, the latter focusing on all sources of funding that can work for development (public and private, internal and external); and second between development financing and *sustainable* development financing to reconcile the Rio agenda (SDGs, including the link with climate-financing) and that of Monterrey (MDGs). The Intergovernmental Committee's proposals particularly emphasized that the financing of sustainable development will be meaningless without an alignment of economic incentives with public goods, nor without policies that encourage private investment in that direction.

THE CHALLENGE OF THE GLOBAL PARTNERSHIP

This leads to the challenge of establishing a global partnership that is able to deal with the tasks ahead. On global financial governance, the Intergovernmental Committee's proposals call for tough reforms, starting with the Bretton Woods institutions, which need to adapt the weighting of member votes to the new geopolitical realities.

In 2015, the context of the Addis Ababa conference is not unlike that of the 1944 Bretton Woods conference. As in 2015, the world in 1944 was looking for ways to better manage the planet, and for future generations to avoid the series of disasters which were still ongoing at the time. Like in 1944, one of the difficult issues to deal with today is the policy space to be granted to countries to implement sustainable development policies. In 1944, the main concern being employment, the envisaged international architecture had just two pillars: social and economic. But even with these two pillars, the challenge proved difficult to meet and the Bretton Woods conference resulted in an unbalanced system of governance. Economic and financial discipline was applicable to debtors, not to creditor countries. Far from achieving the goal of full employment, after a few years the system revealed its deflationary bias. It took the Marshall Plan (1947) and the Korean War (1950) to relaunch global demand (TOYE and TOYE, 2004).

Today, the third pillar of the environment does not fundamentally change the nature of the challenge. Rather than a concern, some see the environment as an opportunity, provided the reforms entail investments of sufficient volume. According to Sir Nicholas Stern's 'Review of the Economics of Climate Change', the investment volume should maintain demand at the level required to ensure 'high levels of employment and real income', consistent with the first of the Articles of Agreement of the IMF. Thus, the environment can provide the justification for a post-2015 development programme inspired by the Marshall Plan, as well as the self-interest of industrialized countries. When at the end of the 1940s, the American war industry was returned to its peacetime activity, the Truman administration understood that outlets for this activity were required. By duly providing such outlets, the Marshall Plan became the historical gesture of international solidarity supported by the belief that 'charity begins at home'.

Conclusions

The history of cooperation for development and of global conservation movements confirms the longstanding antagonisms in the global political economy, eloquently described in John and Richard Toye's, 'The UN and Global Political Economy' (2004). On one side there are forces that could be called 'social democratic', concerned with growth through full employment and also concerned with reducing social divides and avoiding social exclusion. These forces, embodied by Gro Harlem Brundtland in 1987, inspired the 1992 Earth Summit. The integration of environmental problems has even led to suggest 'social ecology'.⁹ This social democratic (or social ecology) force seems to prevail in the UN with the reaffirmation of Agenda 21 in its new SDG incarnation. On the other side are the neo-liberal, free trade and laissez-faire forces, dominating the

9. Eloi Laurent, 'Le bel avenir de l'Etat providence', Paris, Les liens qui libèrent, 2014.

financial and banking sectors, including public financial institutions and the industrialized world, as well as the OECD. These forces have inspired the MDGs and influenced OECD countries and the promotion of ODA. The confrontation between the two forces continues in the climate negotiations.

A second conclusion is that 2015 looks set to be a historic moment, announcing major decisions for the future of the planet. However, the comparison with 1944 underscores the magnitude of the issues, that go beyond a mere adjustment of the rules of international governance, in particular in the financial sector, since these rules have disappeared with the collapse of the Bretton Woods system in 1971 and must be reinvented. Aside from the ambition of the SDGs, the difficulties that lie ahead in 2015 are increased by the multilateral nature of the negotiations. In comparison, Bretton Woods was essentially bilateral, between the US and the UK (SKIDELSKY, 2004). In response to the question raised at the beginning of this chapter, the comparison with Bretton Woods shows the difficulty involved in raising the 2015 concerns to the top of the global agenda. And yet, the future of humanity depends on meeting this challenge.

Finally, regarding sustainable development, as it was for economic development, two types of institutions remain necessary. The first are institutions that underpin the rules of international governance, especially in the financial arena. Comparable to the IMF,¹⁰ the Latin American Reserve Fund and the Chiang Mai Initiative Multilateralization, such institutions would be responsible for deciding the policy space necessary for the implementation of national sustainable development programmes, knowing that all countries cannot simultaneously improve their international competitiveness because the payment surpluses of creditor countries are the deficits of the debtor countries.

The second type of institutions would be directly responsible for financing development. However, according to the sustainable development concept, development assistance should finance equipment and infrastructure, while also reinforcing institutions and capacities for their operation and maintenance. As Justin Yifu Lin duly stresses, development finance institutions must provide physical capital as much as they should assist in developing human and social capital. While a road can be destroyed by a climatic event, it is the local capacity to maintain and rebuild the road that ensures its resilience. In the post-2015 development agenda, this capacity must remain a priority for development finance institutions. However, the two types of institutions – those of governance and those of development finance – should work together so that countries, adhering to a common set of rules, enjoy the necessary margins to allow their local capacities to operate and develop. ■

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Revisiting social protection in the twenty-first century

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Fifteen years ago the gradual global extension of social protection began, illustrating the way that sustainable development is being established, including in the poorest countries. Although a matter of human rights, social protection for all remains far from the reality.

This article is based on a discussion between Valérie Schmitt and Daniel Kamelgarn. It highlights the growing awareness of the importance of social protection for sustainable development, together with concrete examples showing that this human right can be converted into reality.

Social protection: a human right and a social and economic necessity

Social protection allows for a life in dignity. However, it is still a privilege for far too few. Only 27% of the world population enjoys adequate social protection.

The need for such protection is not new: in 1944, the Declaration of Philadelphia affirmed that access to adequate levels of social protection was a basic right for all individuals; and in 1948 the right to social security and to a standard of living adequate for health and well-being were enshrined in the Universal Declaration of Human Rights (Articles 22 and 25).

The ILO has mobilized to enable its members to extend social protection to all groups of society. In June 2001 at the eighty ninth session of the International Labour Conference in the Palais des Nations in Geneva, delegations from 175 states comprising representatives of governments,

employers and workers called for the International Labour Organization (ILO) to launch a Global Campaign on Social Security and Coverage for All. The campaign was officially launched in 2003 (ILO, 2011).

Beyond these principles, social protection is also gradually gaining recognition as a social and economic necessity; it contributes to the development of countries by ensuring that people receive income security and access to healthcare and other social services, and facilitates their access to training or employment opportunities. Social protection is a powerful tool in the fight against poverty and inequality and helps develop domestic demand for goods and services that enable an inclusive and sustainable growth (ILO, 2014 and AFD, 2014). In situations such as the 2008 financial crisis, social protection mechanisms served as stabilizers of the economy and society.¹

The 'social protection floor' as a strategy for implementing the right to social security

From 2009, calls for the establishment of 'social protection floors' began to intensify² and their importance was confirmed at the G20 summits, particularly in Cannes in 2011. In 2012, this movement led to the unanimous adoption by International Labour Conference members

1. In April 2009, the UN Secretary General stated that the establishment of social protection floors was one of the nine anti-crisis measures.

2. See in particular the report of the group chaired by Michelle Bachelet, OIT 2011.

of Recommendation No. 202 for the establishment and maintenance of social protection floors, which are nationally-defined sets of basic social security guarantees, such as access to essential healthcare for all, basic income security for children, persons in active age who are unable to earn sufficient income (especially in cases of sickness, unemployment, maternity and disability), and for older persons.

The effective implementation of social protection

Although ILO recommendations are not intended for ratification by Member States and are not therefore systematically translated into national legislation, this particular recommendation has provided a powerful lever to promote social protection floors and support their implementation. Pioneering countries such as South Africa, Argentina, Brazil, China, Colombia, India, Mongolia and Thailand were valuable examples that helped to convince even the most recalcitrant governments that social protection floors were not only desirable but also possible.

The wide range of examples shows that there are no ready-made solutions and that each country must find its own model that is most suited to its context. For example, both Thailand and Colombia have successfully expanded health coverage by heavily subsidizing the benefit packages of people engaged in the informal economy. However, this was achieved by very different methods: in Thailand, a social security agency was created from scratch to extend health coverage to those previously excluded; while Colombia put existing public and private agencies (insurance and mutual funds) into competition with each other, and facilitated the organization of the sector through progressively demanding regulations.

In addition, a number of emblematic examples have made a big impression: Argentina, South Africa and Mongolia have all established social protection systems for children; and Brazil, China and Cape Verde have accomplished the same for senior citizens. While India has implemented the most well known example of an unemployment protection programme: the New Rural Employment Guarantee Scheme, which provides rural households with an annual guarantee of one hundred work days per family. This is achieved through enrolment

in public works such as road construction and maintenance, or the establishment of health centres.

Key factors for successful social protection schemes

Ensuring the sustainability of social protection schemes requires a legal framework, adequate funding and good governance, while it is also necessary that all stakeholders are convinced of the benefits of the system. In the case of contributory schemes that are financed through contributions of employees and companies, the stakeholders are the government and the representatives of workers and employers. Employees often need to be convinced of the benefits of the implementation of a new social protection system. For example, when the Malaysian government proposed the establishment of an unemployment insurance scheme, employee representatives were resistant due to a strong attachment to the existing compensation arrangements of substantial redundancy payments. Even though in practice these sums are rarely paid, since employers that make redundancies often do so due to insolvency.

In developing countries, where about 80% of the working age population is employed in the informal economy, it is difficult for social insurance mechanisms to identify, register and obtain contributions from self-employed workers or those employed by unregistered companies. Moreover, in some of these countries taxation is in its infancy, which complicates the implementation and sustainability of tax-funded schemes. Fiscal space must therefore be increased through a reallocation of government spending in favour of social protection and by the introduction of new taxes. In a number of middle-income countries (for example, Uruguay, Argentina and Brazil), significant progress has been made to increase the coverage of social insurance schemes to include more workers from the informal economy. These successes, however, have only been possible due to large subsidies and the administrative simplification of registration procedures and payment contribution systems for these workers (such as the 'Monotax' mechanism in Uruguay or the 'SIMPLES' taxation scheme in Brazil).

Difficulties in the implementation of social protection

The main difficulties relating to the implementation of social protection schemes arise when low-capacity administrations are involved. Establishing a new universal system of protection in countries such as Thailand, where the entire population is recorded and identified, would only take two to three years. Whereas a country such as Cambodia, where several generations of national identity cards coexist, the introduction of social protection requires the initial identification and recording of the entire target population. In Cambodia, the establishment of a municipality-managed 'single-window system' for social protection would enable population data to be recorded, people to be informed about their rights, the improvement of access to various schemes managed by different ministries, and would support appeal procedures. Similar single-window systems already exist in Mongolia, India and many Latin American countries.

In sub-Saharan Africa, private mutual health systems have developed to address the lack of social protection schemes for workers in the informal economy. These systems are the main insurance providers in this territory for this target population, and could become one of the entry points for a state-guaranteed social protection floor.

Identifying actors of change

Through discussions between tripartite constituents (employers, employees and governments), the social dimension of sustainable development has progressed over the last fifteen years in developing countries with the implementation of social protection systems. This process takes time: for example, in the Philippines the social dialogue around the introduction of an unemployment insurance scheme began ten years ago and has still not reached a conclusion. Sometimes it takes a crisis or a specific event to accelerate discussions.

When a state sets up a scheme for informal economy workers and their families, the workers organizations are often not directly representative of the scheme's beneficiaries, since these workers are mostly non-unionized. Civil society pressure groups can then play a decisive role, such as in HomeNet in Thailand, WIEGO in South Africa

and the NGO Help Age International in different regions of the world.

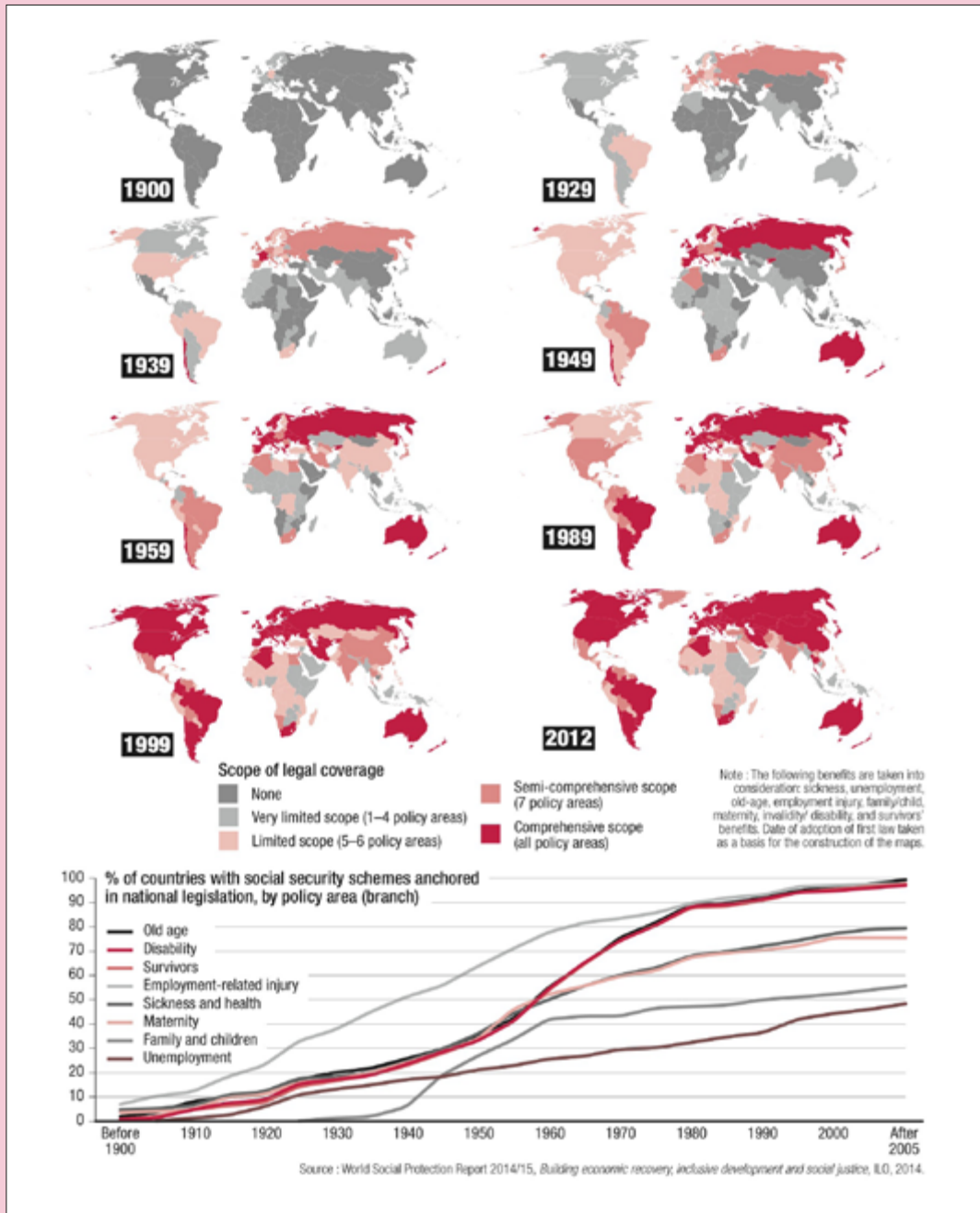
Some multinationals already offer social protection coverage for their employees around the world. Their commitment to social protection ensures the continuity of the company's business and is a vector of a positive brand image. Some multinationals extend this commitment to the workers alongside the value creation chain by supporting the financial initial investments that are necessary for the establishment of such floors.

Change at the country level comes thanks to politicians, social partners (employers and workers representatives) and civil society actors with a vision for the development of their countries and of the world in which we live. UN agencies and development partners influence and support these changes at the global, regional and country levels through a variety of measures stemming from the set-up and promotion of development goals and relevant standards to achieve universal social protection, capacity building and technical support, south-south exchanges, as well as proper planning and coordination of interventions. Creating and expanding social protection floors will enable us to achieve the future that we want by leaving no one behind. ■

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FIGURE 1. Are we moving towards a universal social security?



Social protection has continued to grow globally since the Second World War both geographically and in the number of sectors covered.

International forum and national projects: Island states, SDGs and climate

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Since the late 1990s, island nations have been sounding the alarm bells regarding the environmental changes associated with climate change, including the progressive degradation of vital resources like fresh water and the incidence of devastating extreme weather events such as cyclones. These environmental impacts have raised questions regarding their viability over a time horizon of a few decades (Nurse et al., 2014). At the United Nations (UN), Island nations are challenging the major countries on their historical responsibility for climate change, and sometimes actions are undertaken. However, an analysis of the actual amounts of international funding (Buchner et al., 2013)¹ directed towards SIDS and other developing countries shows that this challenge is being largely unheeded. In fact, many major countries promise to donate funds but then frequently fail to deliver on these promises, on top of which they are slow to take the necessary drastic action to reduce greenhouse gas emissions. Faced with this situation, SIDS are resorting to other, increasingly subtle, avenues of influence. One such example of this new approach was the organization of the UN's Third International Conference on SIDS (1-4 September 2014, Apia, Samoa).

Three decades of effort

As early as in 1989, the UN adopted a specific resolution on the potentially negative effects of rising sea levels

on islands and coastal areas, thus officially recognizing that these territories had a high vulnerability to climate change. However, it was mainly the 1992 UN Conference on Environment and Development (Earth Summit), held in Rio de Janeiro, Brazil, that brought the special case of small islands to international attention. For the first time, SIDS were recognized as a specific type of country, which called for a dedicated type of negotiation process.

Thus, the first UN Global Conference on the Sustainable Development of SIDS was held in Barbados in 1994. It adopted a specific action programme on different themes for SIDS (the Barbados Programme of Action). These themes included climate change and rising sea levels, natural and environmental disasters, waste management, coastal and marine resources, freshwater resources, land resources, energy resources and biodiversity. In 2005, the Second Global Conference (held in Mauritius) aimed to evaluate a decade of efforts and was concluded with the adoption of the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action. In 2014, another decade later, it was the turn of the Pacific region to host the event.

While in 2012, the final document of the Rio+20 Conference, entitled 'The Future We Want', reaffirmed that SIDS are a special case in terms of sustainable development because of their vulnerability (small size, isolation, lack of resources, etc.).

The Samoa Conference

Unlike its predecessors, the aim of the Samoa Conference was not the negotiation of new sustainable development

1. In 2012, funding for the fight against climate change – mitigation + adaptation – was valued globally between \$356 and \$363 billion, of which only 6% was allocated to adaptation in developing countries, including SIDS.

goals, but rather their implementation via 'genuine and durable partnerships', to use the official terms. Action rather than negotiation was the intention, which we can at least say is an original objective for a UN conference.

The Island states therefore arrived at the Samoa Conference with a final declaration that had already been drafted and adopted. This text was written on the basis of regional preparatory meetings in 2013 (in Jamaica for the Caribbean; the Seychelles for the Atlantic, Indian Ocean and South China Sea; and in Fiji for the Pacific). In July 2014 it was finalized and adopted by the Preparatory Committee of the Conference at the UN headquarters in New York. This final text, entitled 'SIDS Accelerated Modalities of Action (SAMOA) Pathway', placed particular emphasis on the importance of recognizing that the implementation of sustainable development requires Island states to have their own specific tools, and that differentiated partnerships should be developed. An example of a partnership that was discussed at the conference is the International Renewable Energy Agency's 'SIDS Lighthouses Initiative', which aims to increase the use of renewable energy in SIDS. Another initiative that was well received at Samoa included a proposal for public-private partnerships on illegal, unreported and unregulated fishing (IISD, 2014).

In this way, by focusing on the achievement of past commitments rather than on the negotiation of new political agreements, which could have been time consuming, SIDS decided to focus the conference on the creation of new partnerships. Thus, the Heads of State and Government of the 39 SIDS have called upon the international community to 'speed up (...) the worldwide effort to ensure the sustainable development of SIDS through concrete programmes, that are targeted and geared towards the future and to action'. Somehow freed from traditional negotiation constraints, discussions successfully brought together various stakeholders (local authorities, civil society and NGOs, foundations, private sector and international financial institutions) to focus on six areas critical to the sustainability of island development:

climate change and disaster risk management; social development, health and non-communicable diseases; sustainable energy; oceans, seas and biodiversity; water and sanitation; food safety and waste management.

After the conference, Wu Hongbo, the UN's Under-Secretary-General for Economic and Social Affairs and the Secretary-General of the conference, noted that the call for concrete action had never before been so well integrated into a UN conference, saying that it was 'the model of the future'.

The way forward?

Some feared that the absence of high-stakes discussions in Samoa would harm the success of this meeting. Yet, it is precisely this 'atypical' characteristic compared to the traditional UN negotiation process which has helped create a peaceful and conducive atmosphere for a more positive and constructive vision of development, an atmosphere that was essential to encourage discussions on pragmatic partnerships.

The fact that SIDS have initiated this 'atypical' process is particularly interesting. First, because it demonstrates that they are neither insignificant nor passive in the face of exogenous threats. It shows that SIDS can have a definite impact on the mobilization of international public opinion, especially on the issue of climate change. By shifting the focus away from the general objectives of sustainable development negotiations and onto the practical aspects of achieving such goals, SIDS could play an integral role in the establishment of a pragmatic approach and a more constructive future, something that is sorely lacking today. Finally, the SIDS approach could be at the origin of an evolution in the model of international climate negotiations. Indeed, what if annual Conferences of the Parties, by sidelining some of the negotiations to interim meetings, could leave more space for discussions on the modalities of action, on examples of success and failure, etc.?

Evidently, this is only a hypothesis because in the real world, things are not so simple, especially in international climate negotiations. Nevertheless, through innovation in

FIGURE 1 The state of development in Small Islands

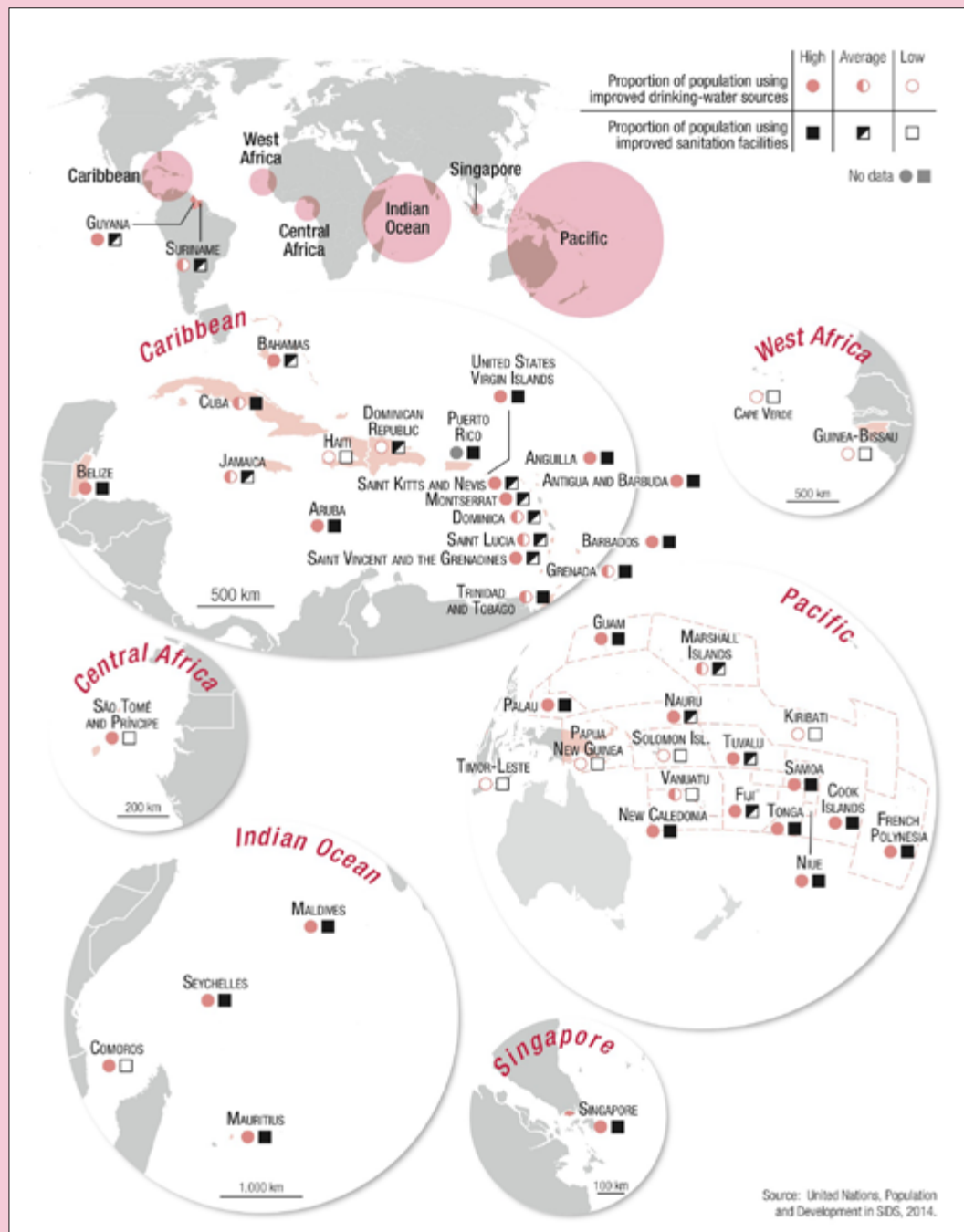
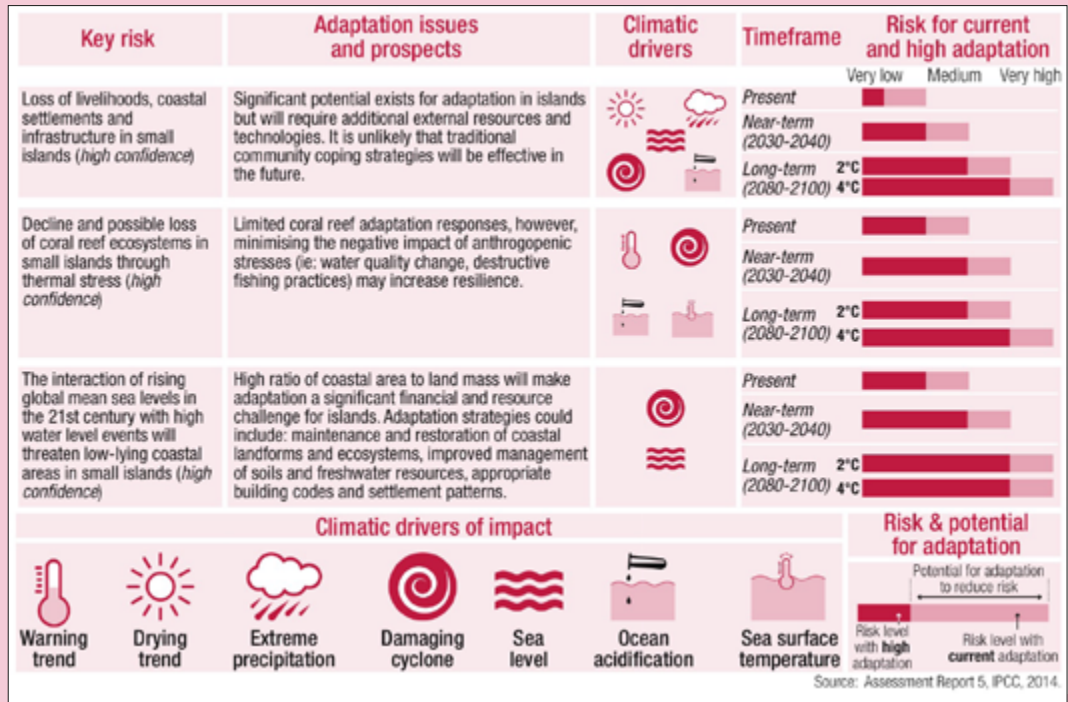


FIGURE 2 Climate risks for Small Islands



Small island states are very aware of climate negotiations because of the importance of the impact of climate change on their environments and economies.

the way of conducting multilateral discussions (negotiating before, then meeting to discuss practical implementation), SIDS have contributed to a change in their status from that of climate change victim (being both the least responsible and extremely vulnerable) to a force for proposing action. This development began in 2009, under the leadership of the Maldives, Bangladesh and Kiribati, with the creation of the Climate Vulnerable Forum (CVF). The CVF is a small coalition of island and continental states that are recognized by the UN as ‘the most vulnerable to climate change’. By coming together, these countries are showing that, despite geographical and cultural differences, they face many similar issues, which strengthens their overall impact, including on the issue of adaptation financing. The CVF provides a way for SIDS to escape from their status as tiny and isolated territories and enables them to have a greater impact in negotiations. In addition,

several countries within the CVF, led by the Maldives, have declared an intention to become the world’s first ‘carbon neutral’ country, particularly through the use of renewable energy and energy efficiency technologies. In so doing, SIDS are taking up a position on the mitigation aspect of the negotiations – normally dominated by the major emitters such as the United States and China – and are attempting a coup: the idea is to highlight the unsatisfactory efforts of the major emitters in reducing their greenhouse gas emissions, while subtly putting the emphasis onto the need to increase the financing for adaptation in lower emitting countries. It remains to be seen whether this attempt will pay off.

In any event, this posture change is very interesting, particularly since through the Samoa Conference it has reached a highly operational dimension. If other countries, or even the entire climate negotiations process, were to

follow this movement then it could engender a constructive vision of the future. It could provide a way out of the current overly constrained situation in which there is too little space for 'political courage', which leads to national commitments that are insufficient for the +2°C objective, let alone the scientific reality of climate change.

Pioneers of adaptation?

SIDS face a number of problems inherent to their small size and their geographical isolation (for example, they cannot take advantage of many economies of scale effects, which affects their competitiveness, education systems, etc.). These states are also highly vulnerable to climate change and natural disasters, primarily because their structural make-up and certain intrinsic characteristics (for example, a high dependence on environmental components like coral reefs) quickly lead to the generation of impact sequences that are not dissipated in space and time as they would be in a continental context (DUVAT et al., 2012). SIDS are therefore highly reactive territorial systems, which paradoxically and under certain conditions can be a benefit: relatively little action and resources are needed for the rapid implementation of effective responses. They could therefore become pioneers of adaptation.

In Samoa, SIDS reaffirmed that they belong to a distinct category of developing countries that require special attention. Given the modalities of the negotiations, they could

also assert a leadership role in the international community, which will meet throughout 2015 at three major events: the Third UN Conference on Disaster Risk Reduction in Sendai (Japan); the Third International Conference on Financing for Development in Addis Ababa (Ethiopia); and the Conference of Parties to the UN Framework Convention on Climate Change in Paris (COP 21, France).

In this busy international agenda, the results and dynamics of the Samoa conference should be a source of inspiration, positioning SIDS as examples of a desirable future. ■

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The promotion of sustainable development has overused a number of ideas and themes to mobilize and influence policymakers. Today environmental and social emergencies are increasing the need to find new means of taking action.

New configurations of actors for sustainable development

A quarter century's worth of attempts to 'sell' sustainable development offer a range of lessons which, if properly incorporated, can serve as a guide to better success in future. Four of these lessons – all closely related – are explored here. Following an analysis of these four issues, the next section of the article discusses a number of emerging approaches that will be crucial to humanity in making a shift towards more sustainable development modes.

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Fundamental contradictions at the core of the sustainable development narrative

THE MYTH OF MAINSTREAMING

One of the most pervasive verbs in the sustainable development vocabulary since the late 1980s has been 'mainstreaming'. The word itself, born of the US custom of turning nouns into verbs, was popularized by the World Bank, and quickly permeated the sustainable development narrative worldwide. The notion is both convincing and fundamentally flawed.

We all know and accept that when policies in different areas run on separate tracks, the opportunities for optimization tend to be lost. The core narrative of sustainable development during the first twenty-five years has been articulated around the notion of policy alignment and policy coherence. The imagery used to illustrate it has followed a similar route. The sustainable development platform is supported, like the legs of a stool, by the three pillars of economy, society and the environment. If one is broken or weakened, the stool becomes unstable. More recently, preference has gone to the helix image of the DNA molecule. The three strands weave together

to provide the genetic make-up of sustainable development and in the imagery the strands are always equal.

In reality, unfortunately, they are not. Whatever the standard used to measure them – budget allocation; time dedicated to them in parliamentary debate; prestige of the political posts associated with them, etc. – economic policy occupies one plane, social policy one well below, and environmental policy a distant last place. In any government, the finance or economic ministry is a place of high political importance, whereas ministers of environment – in the company of ministers of post, or youth and sports – occupy the lowest planes.

The notion of mainstreaming emerged to address this. Economic policy, realistically, represented the stream. The task for social and environmental policy was to flow into and mix with the stream thus ensuring that they became fully integrated in a single, mighty river. No more milking stools; no more strands twisting off into infinity without ever coming into contact. The image is the Danube, the Mississippi; in looking at the river downstream from the confluence, it is impossible to say that this cubic metre came down the Inn or the Missouri. It has all become one.

However, even from an imagery point of view, there are two major problems. Observe a clear, blue mountain brook flowing into a muddy river. A few kilometres downstream and the blue water has disappeared, leaving nothing but the muddy river. By this token, environmental policy flows into economic policy and quickly loses its identity. It has in no fundamental way changed the character or composition of the river, and it has certainly not changed its flow direction.

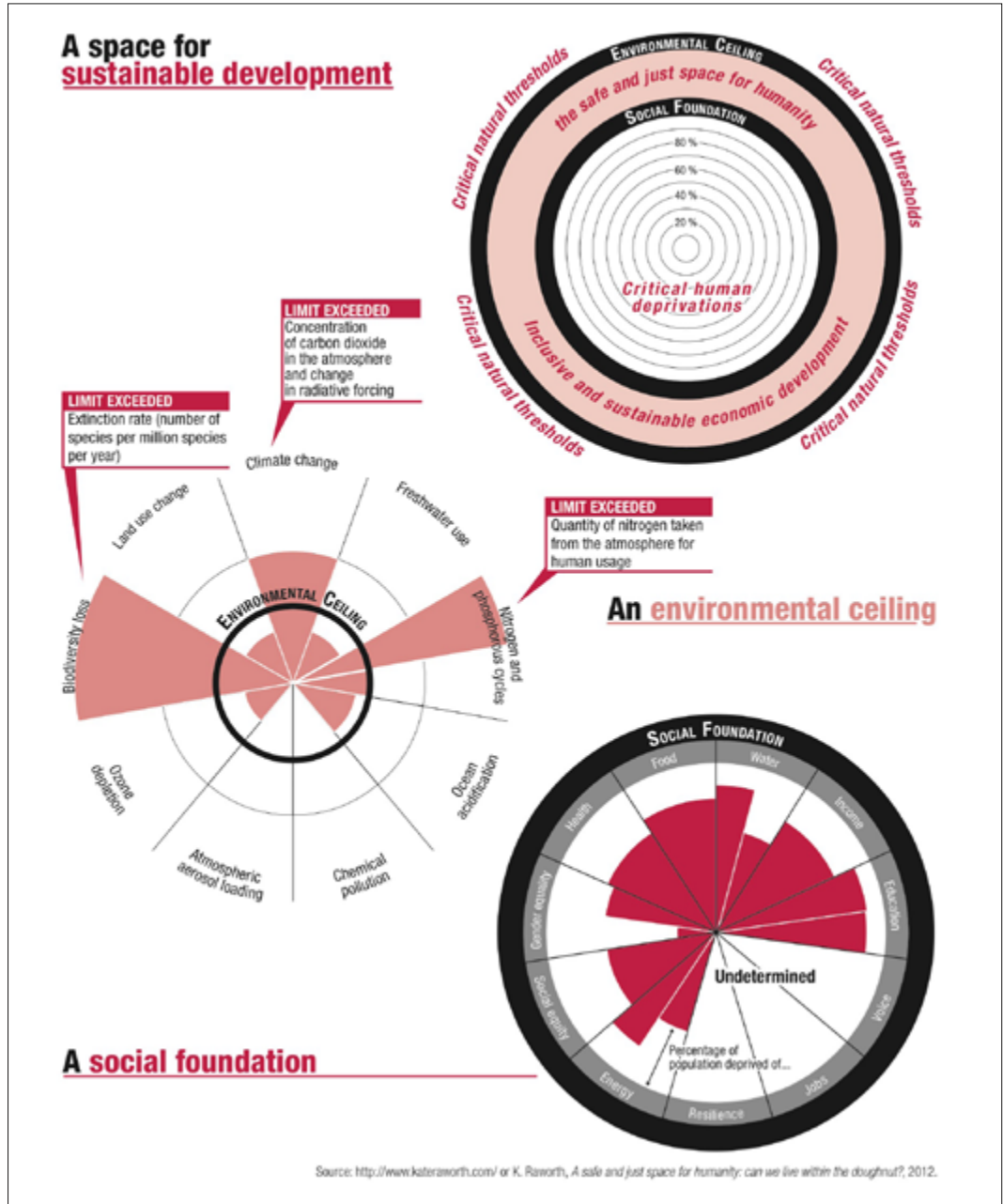
This leads to the other awkward aspect of the image. The call to mainstream assumes that the stream is the right stream, and that it is fundamentally moving in the right direction. It also accepts – at least passively – that the direction, speed and destination of the flow are determined by economic policy. Indeed, it essentially means that economic policy is a given – or at least that its principal characteristics will be set well before any contribution from the tributaries of social or environmental policy will be accepted.

What the economic crisis that began in 2008 demonstrates is that we cannot accept the basic shape and functioning of economic policy as a ‘given’. If, as it appears at least conceivable for the sake of argument, the fundamentals of economic organization are flawed, then mainstreaming is a disastrous policy. In retrospect, the enthusiastic way that the term was bandied about by the World Bank and other temples of economic orthodoxy should have been a warning.

THE DIVORCE OF ECONOMIC POLICY

Most proponents of sustainable development bet on a strategy of seducing economic policy and it lost. Once economic policy is defined and set, the range of options for social and economic policy in a mainstreaming scenario shrinks to encompass only those compatible with economic policy as defined. This sealed the failure of sustainable development in the first two decades; to the extent that it was mainstreamed, it disappeared into the muddy waters of an economic paradigm that values

FIGURE 1 Beyond the social foundation but above the environmental ceiling



The 'doughnut' representation of Kate Raworth illustrates the environmental and social issues to be addressed to achieve a balanced form of development.

economic growth over all other considerations – the imperative of full employment, the progress of social justice, respect for planetary boundaries or the integrity of ecosystems. Far from mainstreaming, the social and environmental streams of sustainable development found themselves swimming against the current. Or, in the words of David Orr, they found themselves ‘walking north on a southbound train’ (ORR, 2003).

If any good came out of the economic crisis that broke in 2008, it lay in the beginnings of a deep reassessment of the functioning and impact of our economic system. Indeed, the crisis appeared to confirm the growing doubts as to whether the neo-liberal economic model could genuinely deliver on broadly-supported goals relating to social justice and inclusiveness, and on environmental responsibility. The ensuing debate has set sustainable development off in an entirely new direction and allowed it to find new vigour and energy. It began with the search for the structure and organization of the green economy (which trades under a variety of names – green growth, a green and inclusive economy, eco-civilization, a safe and just operating space for humanity, etc.). What all – or at least most – of these have in common is the understanding that the economy is not by any means a ‘given’, a set structure that social and environment policy must seek to infiltrate and infect.

Instead, the insight of the green economy is to understand that it is the organization and functioning of the economy itself that will deliver sustainable development. The aim must be to design economic policy and regulation so that the economy can, by its very functioning, deliver on the social and environmental objectives that we seek to secure. A green economy is one that creates jobs and safeguards livelihoods. It is one that diminishes and finally eliminates social exclusion. It is one that returns development within the limits set by planetary and resource boundaries and maintains essential ecosystem services.

In 2001, Dani Rodrik of Harvard published a report for UNDP entitled ‘The governance of global trade as if development really mattered’ (RODRIK, 2001). It looked at the multilateral trading system and speculated how it would be organized and how it would function if the alleviation of poverty were its single goal and objective. The answer, of course, is that it would look and work very differently from a trading system in which development is a stated goal, but where the implications of taking that goal seriously are never placed front and centre.

In view of its past failures, there is an urgent need seriously to ask ourselves what our economy would need to look like if it were designed to deliver not only economic growth and wealth accumulation for some, but a balanced form of development that is situated in the ‘doughnut’ above the social floor but under the ceiling set by planetary boundaries.

THE EQUITY GAP

There is no shortage of efforts to do just that. Rio+20 has updated the global agenda; Sustainable Development Goals are being crafted; a High-Level Political Forum has been created to steer and oversee the diligent implementation of both.

And, sectorally, the world is creaking under the weight of solemnly-adopted goals and targets, few of which lead to the sort of change that would bring development onto a sustainable path.

There are, of course, many areas where we have advanced, and many problems of the past have been solved or are well along the way towards a solution. Where we have not advanced much, however, is in respect of issues that require addressing the equity gap, or a shift in the way in which the economy works. So we can adopt a mercury convention, or repair the ozone layer, or nudge the palm oil industry towards sustainability. But we find it almost impossible to advance on any issue that requires closing the gap between the privileged and less privileged, or that requires an amendment of the economic framework that sets the terms of competition among states.

We will not make the shift to a green economy, much less to sustainable development, unless and until we can do both. The chances of doing that based on global intergovernmental consensus-building are almost non-existent. We have to find other approaches.

Despite the international conspiracy to see only the rosy side of the outcome, Rio+20 failed in almost every respect against the very standards of measurement set by the international community itself. The gap between the binding agreements governing climate and the needs of a 2-degree world is enormous – and would be even if these agreements were fully implemented. The same gap exists in biodiversity conservation, or fisheries management, or human rights, and the list goes on. A vast proportion of the time, attention and funding of governments goes into the formal process, even when this process fails to advance at a pace that would allow it properly to address the problems.

The same is true in the world of economic policy. The World Trade Organization secured a mandate to negotiate the Doha Round (2001) only by promising to address the development problems caused by the Uruguay Round (concluded in 1994). Contrary to the promise that the Uruguay Round would benefit all members of the multilateral trading system many developing countries found that, while these benefits were there in theory, to secure them in practice would require human and institutional capacity that they lacked, improved governance, and better access to investment capital.

The intention on the part of many of the stronger trading nations in making these promises was no doubt to pay lip service to development, and to argue that trade-led economic growth was tantamount to development. Only the world has changed and the developing countries are now looking for real development concessions – such as greater development policy space; they are looking for trade arrangements that actually narrow the gap between the stronger and weaker trading nations, and for trade rules to respect the development space the latter need to address issues such as food security.

The world has changed, and it is idle to continue pinning our hopes on the tired processes of another century.

MIGRATION OF AUTHORITY

The intergovernmental system rests still on the myth that the truly important decisions in society – and most especially those with impacts beyond international borders – can only be taken by states, and in most cases by national governments. This is to ignore the significant three-way migration of power over the past few decades.

Authority has migrated upwards – to supra-national structures such as the European Commission or to international organizations like the International Monetary Fund, the World Bank, the World Trade Organization, the Bank of International Settlements, and many more. Mostly by conscious decision, but sometimes by the simple reality of power, authority that was once exercised in national capitals is now exercised at a level beyond the individual state.

Authority has also migrated downwards. In many if not most nations, authority that once rested with the national government, the army or the royal family is now distributed to sub-national jurisdictions. Many of the decisions affecting development are now taken by state or provincial governments, by municipalities or communes. The principle of subsidiarity – which states that authority should be exercised at the lowest level of governance compatible with efficiency – is increasingly accepted as the right governance template, even if it is hard to implement in practice.

Perhaps most important, however, authority has migrated outwards, beyond the confines of the public sector, whatever the level of geographical organization. It is no secret that the market plays a far greater role in development than it did in the past. Whether by influencing government rule-setting, or through playing a more active role in delivering development benefits on behalf of the government, the private sector is now a far greater development actor than ever in the past.

What is true of the for-profit sector is as well for the non-profit sector – for civil society broadly considered. Non-governmental organizations have stepped forward to offer a range of social and environmental services, sometimes on behalf of governments, and more often to step into the breach as governments cut back on what they are able to offer. From small community or church groups acting at the local level to the giants like Oxfam, Action Aid and Care, civil society is a massive part of the development machinery nationally and internationally.

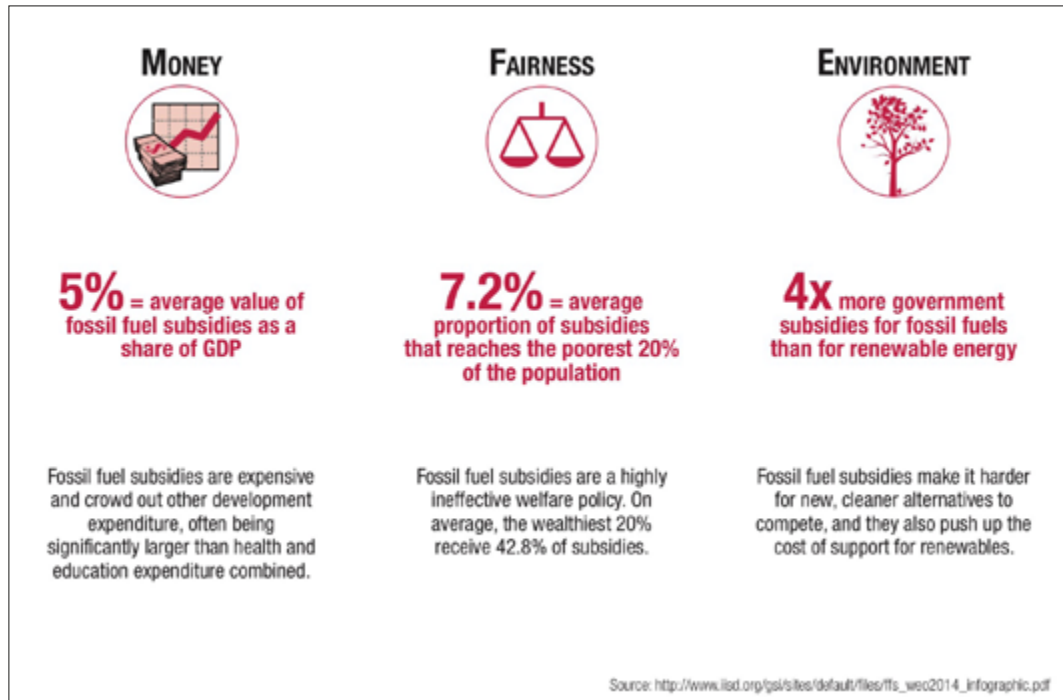
And yet our intergovernmental system continues to act as if we had just signed the Treaty of Westphalia.

Seeking a new configurations of actors

It is interesting to pose the question of which pathways, and what configurations of actors, offer the best prospects for progress on particular issues. An honest answer would rarely insist that the official intergovernmental process lies at the top of the list. Instead, it would more likely spell out a series of configurations that recognize the three-way migration of authority described above.

If, for example, the single objective of humanity were to avoid carbon entering the atmosphere, and a contest were mounted to choose the three sets of actions

FIGURE 2 Why oil subsidies should be removed



The persistence of fossil fuel subsidies is one of the failures of the political commitment to a more sustainable form of development and to mobilization against climate change.

that would be most likely to succeed in achieving this objective, it is likely that the solutions would be very creative. They might include, for example:

- The complete removal of subsidies to production and consumption of fossil fuels.
- Action to oblige investors to factor in and accept the carbon risk attached to their investments.
- Working with the insurance industry and the public sector to ‘de-risk’ investment in renewable energy.
- Working with fiscal authorities to introduce differential taxation for ‘clean’ versus ‘dirty’ development.
- Supporting the C40 network of megacities to accelerate climate action where an increasing proportion of the world’s populations reside.
- Launching a global Green Bonds market to fund green infrastructure and energy technology transformation.
- A global campaign to ‘strand’ coal assets at the earliest possible date.

None of these ideas (and they are selected almost at random from among many possible contenders) require 193 governments sitting around the same table to

reach a consensus. While of course it would be preferable if they did, the point is that a great deal can be done to address the climate challenge provided that the exclusive priority is not given to the tired and disappointing UNFCCC process and it is accepted that action can and must take place on many different levels, involving many different actors or combinations of actors, working in a wide spectrum of modes from academic research, through local action to aggressive campaigning or deliberately disruptive action.

Taking the first of the examples suggested above, what prospects are there for fossil fuel subsidies to be eliminated, and what impact would it have? First, a massive amount of public money is devoted to lowering the price of carbon-based fuels. Taking subsidies to exploration and production in combination with those to consumption of these fuels, estimates of public subsidy range from \$550 billion to over \$1.5 trillion per year (CLEMENTS B. et al., 2013; ARZE DEL GRANADO et al., 2010). Adopting the more conservative figures (and the difference lies largely in how subsidies are defined), this compares to over five times the amount targeted by the Green Climate Fund. Worse, it serves effectively as a massive incentive to give preference to carbon-based fuels over the alternatives. Through subsidizing fossil fuels, the same governments that have pledged to act urgently to address climate change are paying us royally to behave in a way that undermines the very goals they have set, that pushes their realization back by years if not decades, and that makes stabilization of global warming at 2 degrees well-nigh impossible.

We are not talking about theoretical figures. The money spent on subsidies could, absolutely, be placed in the Green Climate Fund. It could be invested to end the energy poverty of the rural poor across the developing world. It could be placed in a fund that serves to de-risk the clean energy transition. It could be used to repay some of the national debt and lower the cost of borrowing new capital. It could be used to retrain coal miners, or to start up small businesses in areas that will suffer from the death of the carbon industry. And, of course, it could be invested in health and education. So not only are subsidies to fossil fuels an unfortunate use of taxpayer money, they have an actively negative impact and represent a massive opportunity cost. Finally, to those who argue that they may be expensive but that they are an important source of support for the poor, it is important to understand that even the International Monetary Fund finds that some 43% of all fossil fuels subsidies benefit the top fifth of income earners, and only 7% the bottom fifth (ARZE DEL GRANADO et al., 2010, p.2247, Table 12).

If there is a compelling case for phasing out subsidies to fossil fuels, nobody thinks it is easy. There are several reasons why it is so difficult to remove subsidies once they are in place. First and foremost, it is not for nothing that subsidies are sometimes called 'the currency of politics'. Politicians with access to the budget allocation process use subsidies to reward interest groups in their constituencies on the understanding that this will secure their vote in the next election. Subsidies to US corn ethanol have little to do with climate action or lowering dependence on oil from the Middle East, and a great deal to do with electoral arithmetic in states like Iowa.

Second, the political economy of subsidy reform is complex.¹ Those who suffer from the subsidy are widespread and diverse; those who benefit are concentrated and organized. Interest groups will lobby fiercely to defend their subsidies while those for whom it is just a questionable allocation of tax money lack the motivation to go to the barricades.

Finally, it is difficult to mobilize international action on subsidy reform since subsidy policy is – with the exception of occasional trade impacts – domestic policy par excellence. The way that the French parliament allocates tax revenue is, with exceptions, not the business of other countries. Indeed, given the sensitive and highly political nature of subsidy allocation, a great effort is made to ensure that subsidy allocation is poorly reported, poorly understood and, to the extent possible, ignored. Foreigners poking around in this dirty linen are particularly unwelcome.

And yet, the question about fossil fuel subsidies – all \$500 billion annually – is not whether we can afford to confront them given the complexities, but whether we can afford not to if we genuinely believe in sustainable development. But when it comes to deciding how they might best be confronted, it is clear that new approaches are needed.

NON-TRADITIONAL ALLIANCES

The late International Institute for Sustainable Development (IISD) researcher Konrad von Moltke used to point out that many of the successes at addressing complex international problems could be traced back to what he called ‘non-traditional alliances’. By that he meant not just alliances involving a diversity of stakeholder groups – government, intergovernmental organizations, local authorities, business, academia, civil society, the media... – but more especially alliances that would not otherwise get together around any other issues. Wolfgang Reinicke studied a range of these in his 1998 book *Global Public Policy: governing without government?*² and drew out some of the reasons for their success.

The alliance around negotiations on fish subsidies at the World Trade Organization is an example. There are few issues that would gather as disparate a group of countries as the ‘Friends of Fish’, because it is difficult to imagine on what other issues they might find common ground. But the preparation of the negotiations required years of research and data gathering by FAO, OECD, UNEP, WWF and others, and more especially the advocacy and mobilizations skills of WWF and its network. Three essential elements need to come together to ensure success: a solid foundation of research and data so that the facts of the case are not seriously in dispute; the authority of ‘officialdom’ that is vested in governments and intergovernmental structures; and the freedom, communications skills and mobilizing power of the better members of civil society.

1. http://www.iisd.org/gsi/sites/default/files/politics_ffs.pdf

2. <http://www.brookings.edu/research/books/1998/globalpp>

Reinicke chronicles several examples – e.g. the setting of a globally-accepted standard for large dams, undertaken by the World Commission on Dams; or the successful negotiation of a treaty banning anti-personnel mines, which won the campaign the Nobel Peace Prize.

The world still relies far too much on formal negotiations among governments at a time when governments hold only some of the cards that make up a full deck. We need now to show a great deal more imagination in how we approach problems and their solution at the international level.

ACTION COALITIONS

Returning to the reform of fossil fuel subsidies it has been established that, as a challenge, it is formidable. As with the examples above, success depends on a solid base of research and data and strong communications skills, but also on the mobilization of political courage among governments. In the end, only they can actually eliminate or restructure the subsidies. The challenge then, is to create an environment that lowers the political risk of subsidy reform to the government in question.

In some cases, what is needed is transparency – a job for civil society and the media. Once the public knows that the subsidies intended for the poor are going to the middle class and that alternatives exist, their attachment to the existing subsidies is loosened. Successful campaigning can change the political risk profile, introducing the perception that maintaining the subsidy can be more dangerous politically than moving towards reform.

Few organizations, however, possess the range of skills needed to undertake all of what is necessary – the research, the communications, the mobilization – successfully. Most specialize at least to some extent – they focus on research or analysis, or they mount public campaigns, or they lobby politically at a high level. The culture to do each successfully is different from that required to do the others and it is difficult, if not impossible, to pull all the pieces together in one organization. It is probably not even desirable.

A new trend, therefore, is the development of purpose-built coalitions around specific policy targets, with all coalition members agreeing on a common agenda. While this is not new – note the examples above relating to fish subsidies or land mines – two aspects have risen to the surface in the past years. First, the nature of the challenges – addressing atmospheric carbon, or mismanagement of fisheries, or abuse of land rights, or female genital mutilation – are such that no single organization can address all the facets. Second, the risk of failure for any organization is so great that it would be unwise for it to venture into the dragon's lair on its own.

Addressing fossil fuel subsidy reform in Egypt, or India, or Mexico requires the data available from the International Energy Agency or the World Bank and their official contacts at the national level. It requires the skill and experience of organizations like IISD's Global Subsidies Initiative to understand the political economy of reform and to draw the partners together into an action coalition; but it also

needs skilled players in-country, in civil society, in academia, and in the media; and it requires trusted spokespersons prepared to stand up and express the inconvenient truth and offer alternatives.

Increasingly, such action coalitions are coming together around specific international challenges, or challenges too thorny to address only at the domestic level. That trend can only become reinforced over the coming years.

FURTHER AGGREGATION

For the same risk-related reasons, funders are beginning to respond in the same way that campaigning members of civil society have learned to do. They understand that the complexity and intractable nature of many of the most important issues present them with a risk that few would be prepared to accept on their own. So they are coming together in funder aggregates to take on some of the more difficult challenges. For example, the European Climate Foundation (ECF), along with many others, is increasingly convinced that none of the scenarios for stabilizing climate change within acceptable limits involves more than the marginal use of coal. Indeed, the Intergovernmental Panel on Climate Change (IPCC) has recently declared that all fossil fuel use must be phased out before the end of the century if we are to avoid catastrophic climate change. Clearly, even eliminating coal is a formidable challenge, especially since it will involve taking on powerful and well-organized lobbies, stranding investors' assets, restructuring whole sectors of industry and the economy, and causing loss of employment at the local level in coal-producing areas and within derivative industries. At the same time, players like ECF know that this is a necessary transition and that, the sooner it is undertaken, the better-off society will be.

Their response and that of an increasing number of funders and foundations has been similar to that of civil society: band together in purpose-built coalitions. ECF and others are looking both for a coalition of funders able to put the necessary resources behind what will clearly be a Herculean effort. But they are also trying to identify the players they need on the field, the mix of skills, experience and reach that will allow them to deploy a complex and ambitious strategy with a chance of success.

In the end, most of the key issues around sustainable development share a common thread – they require a change in the pattern of incentives and disincentives that govern the consumption and lifestyle behaviour of citizens. Since most of these incentives are in place because they respond to the interests of individual groups with access to power, they are entrenched and difficult to budge. Nevertheless, budge they must, and one can take comfort at the long history of 'impossible' issues that have in the end been solved or are on the way to solution. Ending smoking in public places is a telling example. When efforts began, the first reaction was that the tobacco lobbies have full control over members of parliaments or national assemblies and are prepared to spend billions to defend their access to innocent lungs; and, sure enough, for years this seemed to reflect the truth. Then, in one country after another, public smoking was kerbed and a smoke-free environment became the norm rather than the exception.

The trouble is, we no longer have the time to pick off issue after issue. Some issues, such as climate change and biodiversity loss, need to be addressed now.

REGULATION AND NEW INDUSTRIAL POLICY

It is striking in the above examples that the role of government – once central to debates on public policy – now seems secondary. Or worse, the inability of governments to act genuinely in the long-term public interest is seen to be a large part of the problem. Is the choice, then, between bypassing governments and forcing them to act through public pressure?

This would be too pessimistic a reading of present potential. However, it will be necessary to move past the assumptions of neo-liberal economics that government is necessarily a cumbersome and inefficient alternative to the market and should be reserved for a limited set of actions – such as ensuring national defense or conducting foreign policy – for which the market is ill-suited.

Together with the rethinking of sustainable development action, there is in parallel a deep rethinking of the role of the public sector and increasing calls for government to regulate in the public good. This is at least in part because the market has proved to be such a poor mechanism to defend the public interest in a wide range of areas. A movement is underway not only to debate how best government might put in place a framework of policies and regulations that are favourable to the sustainability transition; there is also the beginning of a debate on how government can go further, and set in place a framework that deliberately steers the economy in a desirable direction. This debate on a ‘Green Industrial Policy’ represents a fundamental shift away from thirty years of economic orthodoxy, and one that could play a major role in accelerating the green transition.³ Just as neo-liberal economic thinking led to the dismantlement of government structures and services around the world, it is now increasingly accepted that only government can set in place and defend the enabling policy and regulatory framework that will ensure that the public good is genuinely defended.

Just as Dani Rodrik imagined an overriding goal for the trading system and examined what design would be needed to reach that goal, Green Industrial Policy suggests that there are public goods in the form of social and natural capital every bit as important as economic capital and asks what actions governments should take to ensure that these forms of capital are generated, even if it means new restrictions on the search for immediate gain on the part of a few.

ADDRESSING THE EQUITY AGENDA

It has been clear for some time that we are stuck when it comes to making progress on issues that depend on addressing the equity gap, whether it is between rich and poor countries or the rich and poor within countries. Delivering a global trade deal that allows smaller traders to take some of the market share heretofore reserved for the

3. See, for example: http://www.iisd.org/sites/default/files/pdf/2013/industrial_policy_green_economy.pdf

larger traders is beyond the abilities of the trading system today. Similarly, adopting a binding climate deal appears impossible because of fears that the action required would fundamentally challenge the foundation on which today's economy is based.

And yet we will not reach sustainable development unless and until we can take on equity as the fundamental core of the challenge. This means conceiving of a form of economic organization that respects both the social floor and the planetary boundaries, that situates itself in the space in between, in what Kate Raworth refers to as the 'safe and just operating space for humanity'⁴. This will not happen by citizen action alone (or at least not until it can change the policy and regulatory framework) and the last three decades have demonstrated that the market, left to its own devices, will not do it either. Deliberate action in the public sector, encouraged if not forced by citizen action and where possible recruiting the positive segments of the market is the only way to succeed in time.

Conclusion

We are on the cusp of a major change, and if we are able to configure the change elements positively, the shift to sustainable forms of development could happen fast. It is not inconceivable that renewable energy could become the norm in a short period of time, leading to a rapid end of the dominance of the fossil fuel interests. We have, in the past, seen many seemingly intractable issues brought to a tipping point and then transform fundamentally in a short period of time. We have seen plenty of evidence that humanity retains a strong survival instinct and that it will eventually choose the right course – though probably, as Winston Churchill said of the Americans, only after exhausting all of the alternatives! We have learned a great deal about how change occurs and are becoming better at replicating it.

What is needed now is a sharp acceleration of the shift to new forms of action, involving alliances of players from across the spectrum, coalitions of donors, and positive action at the public policy level. It is no longer only about what you do, but how and with whom you do it. Examples abound (LOVINS HUNTER L., COHEN B., 2011; HAWKEN P., 2008), from those supporting the proper use of free markets to those who believe in reversing globalization; from those who support divestment of dirty investments to those seeking to create new green investment vehicles; from those who believe in moulding personal behaviour to those who believe in changing the rules that govern global trade and investment. There is room for all these approaches. Indeed, diversity and experimentation are the most likely routes to success.

Sufficient examples exist to suggest that this is the wave of the future, not the repeated and disappointing mega-summits, the pious reports of independent commissions, or the monotonous series of failed intergovernmental negotiations. In keeping with the words of American inventor Thomas Edison: 'There is a way to do it better – find it!' ■

4. <http://www.oxfam.org/sites/www.oxfam.org/files/dp-a-safe-and-just-space-for-humanity-130212-en.pdf>

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Redefining global solidarity

Theo Bouma, Director Confederation Development, Oxfam International, The Hague, Netherlands

Oxfam is a non-governmental organization (NGO) that was founded in Britain in 1942. It began as purely an emergency relief agency but soon added the implementation of long-term development programmes in vulnerable communities to its range of activities. As part of a global civil society movement, Oxfam today also campaigns against the causes of poverty, demanding economic equality and better health and education services for all. It strives for a fairer and more sustainable global food system, for the rights of people living in conflicts and disasters, and fights against climate change.

By 1995, the NGO had grown into a confederation of eleven members – Oxfam UK and Ireland were joined by eight other relief and development agencies based in Australia, Belgium, Canada, Hong Kong, the Netherlands, New Zealand, Quebec, and the United States – to form Oxfam International. Since then, Oxfam has welcomed seven new affiliates: France, Germany, India, Italy, Japan, Mexico and Spain, further adapting to a changing international environment and enhancing the effectiveness and representativeness of its action and influence.

In 2012, Oxfam adopted its 2020 agenda, a plan that took into account the major ongoing changes in global dynamics. Oxfam set out its intention to strengthen its efforts to give a voice to the poorest and weakest people, and to lobby and educate leaders and influence policies. This article examines the major reforms in the 2020 agenda and discusses how it will impact on Oxfam's campaigning work and service delivery.

A need to become a truly global network

Oxfam has always taken pride in being globally oriented, with affiliate members and advocacy offices across the

world. However, until recently Oxfam had remained a predominantly Northern organization with a composition that did not reflect its global objectives. The Oxfam International Secretariat was established in Oxford, UK, which has remained its base since its creation, while only three of its seventeen affiliates are from the South (Hong Kong, Mexico and India).

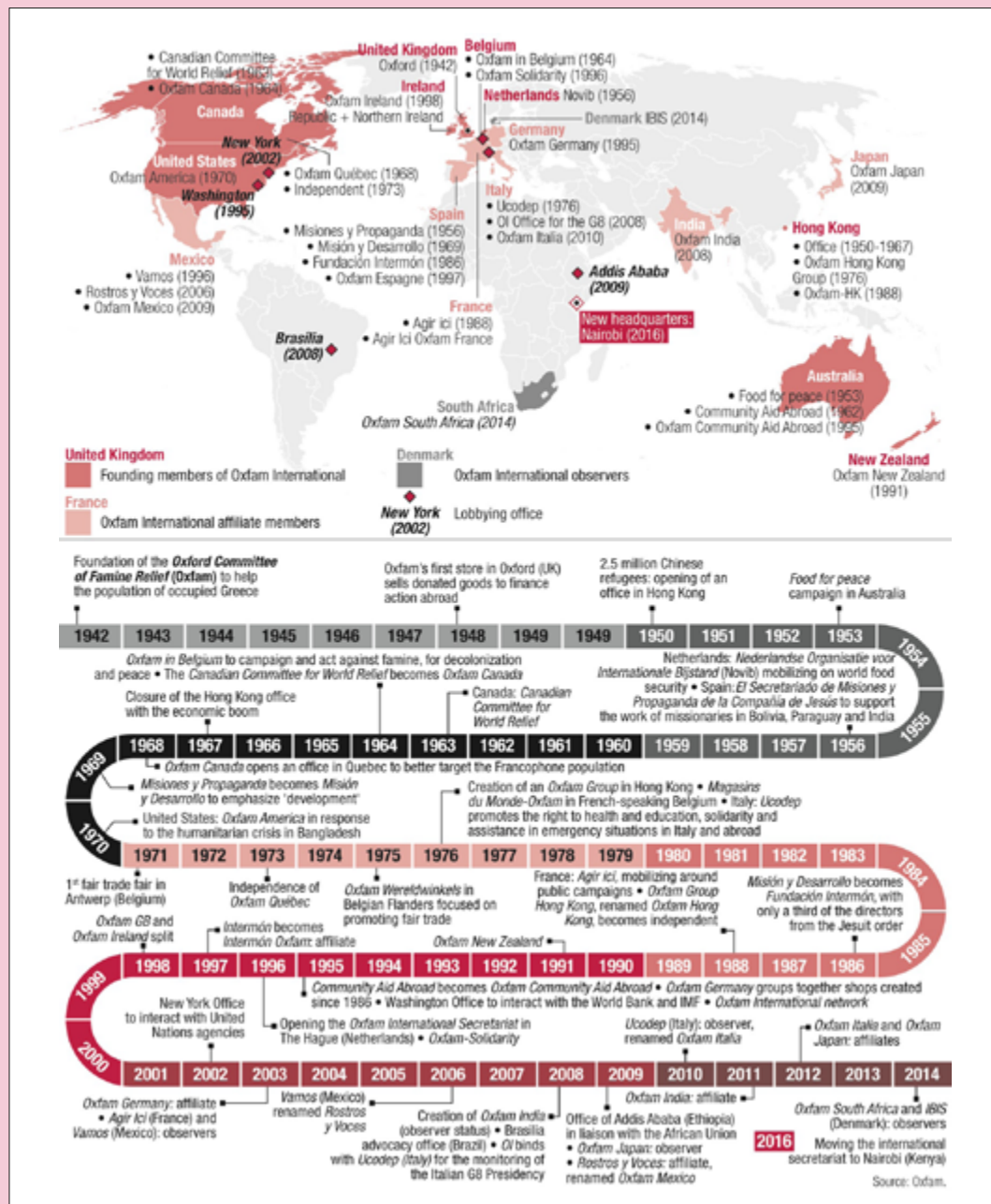
Global civil society and its relationships with the public and policymakers have now changed. There is an increasing level of self-awareness and professionalism among Southern NGOs and their networks. While there are substantial differences in the strength of civil society organizations, there are now many countries where national NGOs are recognized by policymakers and are truly part of the public debate. This is also true in international fora. Oxfam's 2020 agenda took this evolution into account and the changes will ensure that the organization maximizes its influence on the national, regional and international stages and that its work remains highly visible. It will become a truly global network that equally represents Northern and Southern concerns and strengthens Southern voices, enabling it to have a genuinely 'home-grown' influence in all regions and places.

Increasing the number of Southern affiliates

One of Oxfam's major reforms is to increase its number of Southern affiliates to at least ten, by 2020. Oxfam has already started inviting organizations to become affiliates: Oxfam South Africa has recently joined as an observer, and Oxfam Brazil plans to do likewise in the near future.

Oxfam is increasing its Southern membership to remain credible, legitimate and influential, not only globally but also regionally. Operating through local affiliates is a more effective way to influence local governments. In many

FIGURE Oxfam, a network in continual adaptation



Established in 1942 in the UK, Oxfam has become a global network that aims to expand its presence in national, regional and international decision-making spheres to carry out its lobbying action.

countries international NGOs are seen as foreign actors, and this can generate resistance to their activities. By having more genuinely 'home-grown' affiliates, Oxfam will be able to more effectively negotiate with and influence national governments on a variety of issues in line with Oxfam's objectives.

Oxfam also wants to correct the bias – which many international NGOs suffer from – of powerful Northern affiliates having a bigger say in the organization's strategic plans, with often only informal engagement with Southern actors. As Oxfam's proposals start to take effect, the representation of Southern affiliates will greatly increase in its own decision-making processes. They will bring new perspectives and ideas to the table. For example, independent affiliates from countries such as Indonesia, Turkey or Columbia (countries where Oxfam is currently looking for new members) will be able to provide their own analyses about their distinct problems and the best ways of tackling them. They will often be in a much better position to engage in a more permanent manner with local decision-makers and opinion-leaders.

A credible network with an influence at all levels

By 2020, Oxfam will be a different organization. It will have a new power balance between representatives from the North and South, with Southern affiliates having equal weight at the decision-making table. Consequently, Oxfam will be able to forge stronger links between its national and global campaigning activities.

The interaction between international and local campaigning is vital. For instance, Oxfam's advocacy for free access for people in poor countries to good quality essential services, such as education and health, is a global campaign. However, some affiliates, including Oxfam India, have developed their own agenda inside this global call. Oxfam India, together with local partner organizations, has held conversations with the Indian government, supported by data obtained from Oxfam's policy research unit. It has had much success in pursuing Oxfam's objectives in that country as a result. India's politicians and public have accepted the legitimacy of Oxfam India in a way that would have been impossible for an organization from the UK, the Netherlands or elsewhere.

Another example is Oxfam's recent inequality campaign. It too is a global campaign to which all Oxfam affiliates are committed. However, affiliates can make adjustments to suit their particular national circumstances. Different affiliates have developed national campaigns based on Oxfam's globally available inequality research. For the first time perhaps, some Northern affiliates have used the campaign to discuss the impact of inequality on their own national populations, in the same way that Mexican and Indian affiliates have done. Each country has been able to frame its work to suit its national situation. For example, taking two of the Northern affiliates that have engaged in national campaigns, the financial crisis has had a very different impact on Spain than it has in the Netherlands.

In short, it is important to increase impact, to be effective, and to be a credible actor, in any particular context. As long as the central message is maintained – in this case that inequality should end and that national governments have a key role to play – there should be openness for members to adapt the campaign to local circumstances.

More than programme delivery

Oxfam has made a conscious decision to combine advocacy and campaigning work with its programme delivery, making campaigning an essential component of all of its programmes. For example, in a project to establish a new school, Oxfam would not only concern itself with getting the school built, it would also engage with authorities to prioritize education in their budgets and development policies, and with communities to encourage an understanding of the importance of educating their children. This is a holistic approach, combining action against both the causes and effects of poverty.

Oxfam is acutely aware of what can be achieved by exerting its influence on national governments and it aims to increase this aspect in all of its programmes. However, a 'one size fits all' approach does not suit all countries. The programme delivery and campaigning components of each project will vary from one country to another. For example, in Brazil it is entirely possible to engage with national and state governments. The country has a fully functioning media, radio, TV, Internet, etc., all of which facilitate public advocacy, campaigning and accountability.

A country like Somalia on the other hand lacks a legitimate central government, so advocacy work here is an entirely different matter. In these cases Oxfam's influencing work needs to be shaped differently.

The value of symbolic change

Oxfam 2020 will change the headquarters of the confederation's secretariat from its historical location in Oxford to Nairobi by 2017. This was a careful and strategic choice. By moving to Nairobi, Oxfam is not only relocating to the heart of Africa, it is also sending out a strong message to the world that it is serious about the need to give more voice to people in the South. The value of this symbolism should not be underestimated.

There is also a cultural dimension to these reforms: by

enlarging its Southern network of affiliates and relocating its headquarters, more African, Asian and Latin American people and organizations will join the ranks of the Oxfam confederation and its secretariat, strengthening the Southern perspectives on national, regional and global issues.

Oxfam 2020 is aiming to adapt to the shifting global dynamics. It seeks to transform itself into a genuinely global organization, which shares its power more democratically and is more accountable to, and more in touch with, the people it represents. In taking these steps, Oxfam stands the best possible chance of remaining a relevant and influential organization for the future, and therefore of continuing its vital work in fighting poverty and injustice. ■

The development of information and communication technology makes possible a new participation of civil society in the development process of intergovernmental policies. What is the impact of these mechanisms developed in the Rio+20 framework? Do they influence the policies developed? Do they make them more legitimate?

Reinventing modes of participation in UN negotiations

Since Rio+20, new direct forms of civil society participation have emerged in UN negotiation processes. Often internet-based, they aim to enhance the ability of civil society actors around the world, organized or not, to express their perspectives, organize deliberations, take action and increase their participation and engagement in the creation and implementation of sustainable development norms and agreements. The proliferation of these new formal participatory mechanisms, which are coordinated by international organizations and governments, suggests that sustainable development norms and agreements are likely to have the best results if they stem from an open, inclusive and transparent process with broad multi-stakeholder participation.

While there are many channels for civil society participation in and influence on global policymaking structures, both official and unofficial, at international and national levels, this paper focuses on civil society participation during the 2012 Rio+20 Sustainable Development Dialogues (SDD), held within the framework of the United Nations Conference on Sustainable Development (UNCSD), and addresses three main questions:

First, why have formal participatory processes changed over time from a representative form based on the 'Major Groups model' to a mix of a representative system and a new direct form of participation that includes the use of virtual platforms and Internet-based surveys?

Second, are the innovative forms of civil society engagement (based on direct Internet participation) truly open and inclusive? This article assesses one of the

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variables of legitimacy – inclusiveness – in the case of the direct formal mechanisms for civil society participation in the Rio+20 SDD. This evaluation is based on the analysis of data that reveals the levels of participation of different civil society actors and different countries.

Third, does the broader access of civil society to intergovernmental policymaking necessarily influence negotiations? The last section of this paper evaluates the effects of the Rio+20 Dialogues on the official part of the conference (using the indicators of agenda setting and position shifting), and addresses the critical issue of determining whether there is correlation and causality between the inclusiveness and influence of civil society on intergovernmental negotiation processes and outcomes.

The shortcomings of the Major Groups model

Although the Major Groups model has been innovative in integrating civil society into intergovernmental processes at the UN, particularly with the Commission for Sustainable Development (CSD) which generated a number of good practices that have been tested in real life situations and have proven their value¹, it also raises serious issues about their ability to include all stakeholders and their impact on policymaking.

DYNAMICS OF EXCLUSION

As early as 2001 a UN Secretary General's report² on the Major Groups highlighted geographical imbalances in participation, stressing that the majority of stakeholder participants in intergovernmental processes continued to be from developed countries, with an under-representation of participants from developing countries (E/CN.17/2001/PC/4). In 2013, a report³ commissioned by the Division for Sustainable Development of the UN Department of Economic and Social Affairs (DESA), which is in charge of coordinating the Major Groups, reasserted this observation. The authors found that the Major Groups system was often perceived as North and New York-centric, and did not allow for a broad participation of social and people's movements.

These dynamics of exclusion are fuelled by various factors. First, exclusion is inherent to the Major Groups concept. By predefining nine categories of civil society, the Major Groups model has been seen by some as reductionist and exclusive: for instance, Foster and Anand (1999) argue that 'the list of Major Groups is arbitrary. It includes women but not men, the young but not the elderly, farmers but not fishing communities, trade unions but not professional associations... It is repugnant to allocate people to pre-specified groups rather than accepting whatever manner people choose to organize on a voluntary basis.' Indeed, the rigidity of the categories forces groups to adhere to definitions that do not correctly reflect their identity.

1. For an assessment of the experience of Major Groups at the CSD, see ADAMS Barbara and PINGEOT Lou. *Strengthening public participation at the United Nations for Sustainable Development: Dialogue, Debate, Deliberation, Dissent*. UNDESA/DSD, June 2013.

2. Report of the Secretary-General on the Major Groups, United Nations, 2001.

3. Ibid. 1

Besides, the NGO Major Group is a residual category that allows for the inclusion of any civil society organization that could not identify with one of the eight other groups (WILLETTS, 2011). In light of its size and diversity, any consensus that stems from the NGO Major Group is more likely to reflect the interests of the most organized and powerful organizations rather than those of the most affected communities.

Second, relying on representatives may fuel exclusion. The Major Groups system is based on Organizing Partners (OPs) that act as focal points for their constituencies. OPs are well acquainted with year-round intergovernmental policy processes and can help their constituencies navigate the often complicated, opaque and unwritten rules of the intergovernmental negotiations (ADAMS and PINGEOT, 2013:14). However, such professionalization of representation can foster exclusion if a Major Group lacks appropriate mechanisms to promote internal transparency and accountability. As a result, Adams and Pingeot further argue, professionalization may lead to power imbalances between the insiders (OPs and civil society representatives based within easy range of UN Headquarters) who possess the information and can exploit it to their advantage, and the outsiders (grassroots organizations).

Third, a lack of reliable funding for Major Groups is a substantial obstacle to the inclusiveness and participation of broad constituencies (*Ibid.*: 20-21). Most Major Groups depend on bilateral and multilateral institutions to fund their work. Yet, they can rarely rely on the funding granted through these institutions for their participation. For example, the UN services in charge of civil society, such as the

BOX 1 THE RISE OF THE PARTICIPATORY PRINCIPLE IN GLOBAL GOVERNANCE

The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992 is often associated with the beginning of the participatory turn of global sustainable development governance. It enshrines in its outcome document, the Rio Declaration, the principle according to which 'environmental issues are best handled with the participation of all concerned citizens, at the relevant level. [...] States shall facilitate and encourage public awareness and participation by making information widely available.' The plan of action of the United Nations for sustainable development, Agenda 21, underscored the need to gather expertise and build on the capacity from all group-

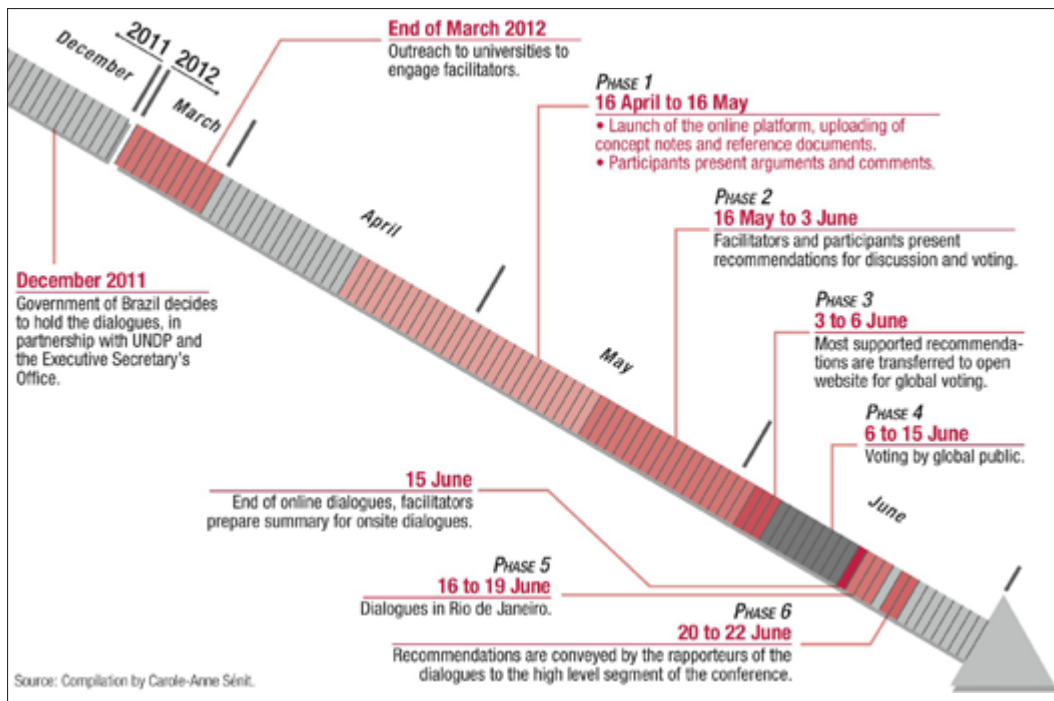
ings of society and institutionalized participation of civil society in intergovernmental decision-making with the creation of nine Major Groups¹, which complemented informal (advocacy) and external (Peoples' Summit and World Social Forum) channels for civil society engagement.

While other United Nations processes, such as the International Labour Organization (ILO), the United Nations Framework Convention on Climate Change (UNFCCC) and the Committee on World Food Security (CFS) of the Food and Agriculture Organization (FAO), have used different frameworks for civil society participation, the Commission on Sustainable Development (CSD) and the

United Nations Environmental Programme (UNEP) have relied on the Major Groups system of representative participation to engage civil society in intergovernmental decision-making from 1992 onwards. In particular, the CSD, which was mandated to implement the sustainable development principles outlined in Agenda 21 through an inclusive process of deliberation and decision-making, integrated two-day multi-stakeholder dialogue segments into its annual sessions between Rio+5 and Rio+20.

1. The Groups include Business and Industry, Children and Youth, Farmers, Indigenous Peoples, Local Authorities, NGOs, Scientific and Technological Community, Women, Workers and Trade Unions.

FIGURE 1 Sustainable Development Dialogues: a timeline



Major Groups programme of the Division for Sustainable Development and the Non-Governmental Liaison Service (NGLS), are under-resourced, both financially and in terms of staff.

Fourth, inclusion is also hampered by the prevalence of English as a working language. Documents regarding intergovernmental processes are mainly issued in English and not often translated into other UN languages. This makes it more difficult for OPs to communicate with their non-English speaking constituencies and disadvantages those organizations and communities for which English is not a working language or not used at all (*Ibid.*: 19).

LIMITED IMPACT ON INTERGOVERNMENTAL PROCESSES

While Major Groups may be given the opportunity to provide input into the intergovernmental process, they can rarely assess whether their preferences have been taken into consideration or have influenced the negotiations. Although the 2001 UNSG report on Major Groups acknowledges that participation in decision-making goes beyond the passive exchange of information and refers to the active presence of Major Groups in the design, execution and monitoring of sustainable development activities at all levels, the authors of the 2013 report commissioned by the United

Nations Division for Sustainable Development (DSD) of the United Nations found that Major Groups members raised concerns about international organizations and member states providing many spaces for civil society participation without really ensuring meaningful engagement. This latest report further stressed that ‘Major Groups pointed out that having access to a process could not be equated with influencing the process and warned against the risk of tokenism and civil society engagement becoming a box-ticking exercise.’ (ADAMS and PINGEOT, 2013:16).

Facilitated by the development of information and communications technology (ICT), other practices for civil society engagement in intergovernmental policymaking processes have emerged and are promoting the direct participation of civil society actors. However, it is open to debate whether the shift to the new practices for civil society engagement used in the Rio+20 dialogues adequately respond to the pitfalls of the Major Groups model. However, it is open to debate whether these new practices for civil society engagement, such as those used in the Rio+20 dialogues, adequately respond to the pitfalls of the Major Groups model.

The emergence of a new participatory process at Rio+20

THE ORGANIZATION OF THE RIO+20 DIALOGUES











Organized by the Government of Brazil with the support of the United Nations Development Programme (UNDP) and the Offices of the Executive Coordinators for Rio+20, the dialogues aimed at fostering discussion on ten topics related to sustainable development and at engaging civil society in the decision-making process of the Rio+20 Conference. The dialogues consisted of two phases (Figure 1). From 16 April to the end of May 2012, they were launched through a digital platform⁴ to provide individuals with a space for discussion. After filling a form, participants were able to enter this digital space and share experiences, express opinions, and contribute fresh ideas to the forum. The academic experts, in charge of facilitating the online discussions, and the participants then had the opportunity to present their own recommendations for the future they wanted. Once the recommendations were posted on the platform, members could express their support for their preferred recommendation(s) through the use of a ‘like’ feature similar to those available on social media. The academic experts then identified the ten most supported recommendations in each theme. The online discussions thus resulted in a set of one hundred recommendations which was submitted to the vote of a broader public through an open website.⁵ The final top ten recommendations (Figure 2) were then transmitted to the participants present at the conference site.

During the second phase, between 16 and 19 June 2012, top representatives from civil society engaged in ‘open and action-oriented debates’ at the conference site in Rio de Janeiro. Facilitated by a journalist, each dialogue gathered ten panellists and a

4. <http://www.riodialogues.org>

5. The results of the final vote, including disaggregated data by continent, by human development index (HDI), by age and by gender, are available at <http://vote.riodialogues.org>

FIGURE 2 Sustainable Development Dialogues and collective preferences

Dialogue topic	Most voted recommendation	Dialogue topic	Most voted recommendation
 Sustainable Cities and Innovation	Promote the use of waste as a renewable energy source in urban environments	 Water	Secure water supply by protecting biodiversity, ecosystems and water sources
 The Economics of Sustainable Development, including Sustainable Patterns of Production and Consumption	Phase out harmful subsidies and develop green tax schemes	 Food and Nutrition Security	Promote food systems that are sustainable and contribute to improvement of health
 Sustainable Development as an Answer to the Economic and Financial Crises	Promote tax reforms that encourage environmental protection and benefit the poor	 Sustainable Development for Fighting Poverty	Promote global education to eradicate poverty and to achieve sustainable development
 Sustainable Energy for All	Take concrete steps to eliminate fossil fuel subsidies	 Forests	Restore 150 million hectares of deforested and degraded lands by 2020
 Unemployment, Decent Work and Migrations	Put education at the core of Sustainable Development Goals agenda	 Oceans	Avoid ocean pollution by plastics through education and community collaboration

Source: Vote for the Future You Want, Rio+20 Dialogues

The Internet consultation process has enabled the identification of the broadly-supported recommendations.

physical audience of about 1,300 people who eventually agreed on thirty recommendations (three for each topic): the first recommendation was taken from the open vote on the Internet, the second was produced by the audience present during the live dialogues, and the third was formulated by the panellists.

BOX 2 METHODOLOGY FOR THE ASSESSMENT OF PARTICIPATORY PROCESSES

The inclusiveness and influence of the Rio+20 Dialogues were assessed with several empirical materials. The inclusiveness of the online phase was assessed with quantitative data stemming from the answers to an anonymous web survey that was emailed to the 330 civil society actors that partook in the dialogue on ‘Sustainable Development as an Answer to the Economic and Financial Crises’ to

gather socio-demographic data, as well as from the results of the global vote on the 100 recommendations that were disaggregated by gender, age and country.¹ The influence of the Rio+20 Dialogues was assessed with qualitative data emanating from: (i) a review of the statements of member states delivered at the Rio+20 Conference and UN official documents related to the Conference (draft outcome

document and the Rio+20 outcome document ‘The Future We Want’); (ii) two open questions included in the web survey; and (iii) 22 semi-structured interviews with dialogue participants, organizers, and official delegates.

1. The data was generously provided by Seed Media Group and UNDP.

This final set of recommendations was directly conveyed to the Heads of State and Governments present at the High-Level Roundtables convened in parallel with the plenary meetings of the Rio+20 conference. Additionally, the thirty recommendations were added to the annexes of the Report of the Conference (A/CONF.216).

Overall, the dialogues engaged 60,000 people from 193 countries. In particular, the discussions on the online platform generated over 843 recommendations which were submitted by more than 10,000 participants, garnering 11,842 indications of support. Additionally, 1.3 million votes were cast on the public website.

The emergence of direct participatory mechanisms: Towards enhanced legitimacy?

INCLUSIVENESS: WHO ACTUALLY PARTICIPATED IN THE RIO+20 ONLINE DIALOGUES?

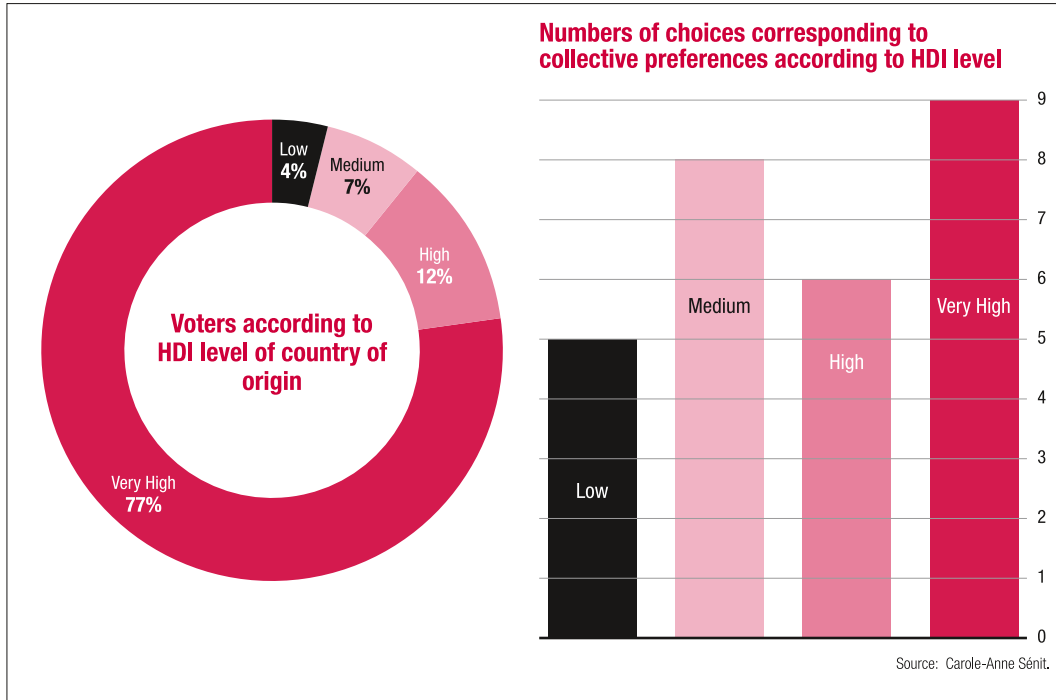
The voting results on the one hundred recommendations, disaggregated according to country, gender and age, give a primary indication of the inclusiveness of the online dialogues.

Participation was gender-balanced: 52% of the total 55,317 voters were women, and 48% were men. In terms of age categories, young adults and children were slightly less represented (27%) than voters from other age categories (36% and 37% respectively for 35-54 year-old voters and <55 year-old voters). Regarding the countries of origin of the voters, which were classified in four groups according to their Human Development Index (HDI) levels (low, medium, high and very high), participation was sharply unbalanced: although all 193 countries were 'represented' by at least one voter, more than three voters out of four came from a country with a very high HDI (Figure 3). Additionally, nearly 50% of the voters came from only four English-speaking countries: the UK (17.5%), Canada (12%), the US (12%) and Australia (8%).

Although the organizers of the consultation pointed out that the voting results were not intended to provide a complete representation of the world's opinion, the over-representation of voters from very high HDI countries was likely to bias the world's preferences. Indeed, in nine dialogues out of ten, the result of the global vote was convergent with the preferences of the voters from very high HDI countries, while this number falls to five out of ten when it comes to the preferences of voters from low HDI countries (Figure 3). In three dialogues in particular – related to Energy; Sustainable Development as an Answer to the Economic and Financial Crises; and the Economics of Sustainable Development – the votes from very high HDI countries alone determined the results, and therefore global preferences.

Furthermore, some recommendations received a significant number of votes as soon as they were uploaded onto the web platform. In some cases, this can be interpreted as coordinated lobbying: for instance, the most voted on recommendation from the Energy dialogue, 'Take concrete steps to eliminate fossil fuel subsidies', which received twice as much support than any other recommendation from any

FIGURE 3 Over-representation of highly developed countries



Three out of four voters were from high HDI countries, giving them a disproportional influence on decision-making: nine out of ten dialogues have adopted the same recommendations as the Internet voters.

other dialogue, was in fact put forward by Avaaz who led an online campaign to encourage its network to vote. Thus, the civil society actors that were best able to get their preferences into the final top ten recommendations were those who were the most organized, that had significant financial and human resources at their disposal, and had communication and social mobilization strategies: participation from well-resourced, western and English-speaking NGOs was higher than that of smaller NGOs or social movements.

The results of the online survey of the participants involved in the dialogue on ‘Sustainable Development as an Answer to the Economic and Financial Crises’ show similar trends. Participation was fairly balanced across gender (58% were male, while 42% were female). Participation from young adults (34%) was higher than participation from 55 year-old or older (18%) but still lower than participation from 35 to 54 year-olds (48%). Although one out of four participants was Brazilian, very high HDI countries were overrepresented (58%) compared to medium and low HDI countries, accounting for 8% and 5% of the respondents respectively. All respondents were highly educated, holding a master’s degree and in some cases a PhD, in environment and development

studies (29%), public administration and political science (18%) or economics and finance (16%). It was therefore difficult to engage with actors beyond those that already had the knowledge and skills to participate: participation from grassroots organizations and individual citizens remained low, the latter being the most marginalized.

‘If you go on these online platforms, it means that you are already informed. If you have the motivation to contribute, it means that you are already involved in the process and that you are part of civil society networks. It’s not for the general public.’

Civil society representative

However, the organizers of the online dialogues were more successful in including people from outside of the UN’s institutionalized civil society participatory channels such as the Major Groups. This is illustrated by the fact that only three respondents out of ten had previously taken part in a civil society consultation.

It is clear that ICT has a positive impact on inclusiveness, so long as people have access to the Internet and the ability to use it. The digital divide is still important both between and within countries. Globally, 4 billion people are not yet using the Internet, more than 90% of whom are from the developing world (Figure 4). The quality of Internet access is also unequal as differences in broadband speed persist between developed and developing countries.

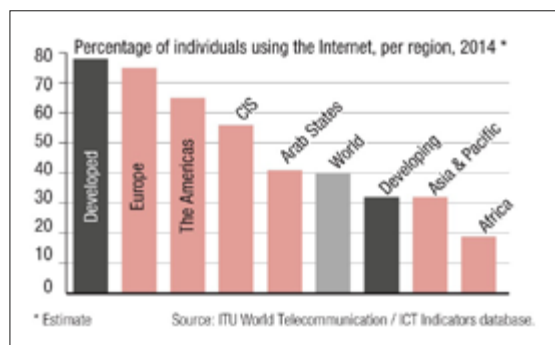
The impact of ICT usage in civil society consultations on inclusiveness also depends on the outreach policies of the organizers. In the first phase of the dialogues, the online platform was based on an invitation system which was not completely open, as UNDP staff acted as gatekeepers reviewing the registrations according to the instructions given by the Brazilian Government. The latter wanted to include in the dialogues: (i) those accredited to participate in the Conference, (ii) those nominated by the facilitators, (iii) those nominated by and affiliated to the universities that were supporting the dialogues, (iv) those with an email from a pre-authorized server (e.g. usp.br; oxfam.org; weforum.org), (v) those invited by the Brazilian Government or by the Offices of the Executive Coordinators of the UN for Rio+20, (vi) those nominated by a UN Major Group, and finally (vii) those invited by people already registered to the platform. It therefore seems that ICT can serve to promote inclusiveness if the organizers are willing to reach out beyond organized civil society networks.

ASSESSING THE IMPACTS: IS QUANTITY OF PARTICIPATION INFLUENTIAL?

Influence on the negotiation process

The Rio+20 Dialogues took place too late into the negotiation process to influence either the negotiation agenda or the positions of key member states. The agendas and the Conference themes were defined ahead of the first preparatory committee meeting for the Rio+20 Conference, held in May 2010 in New York. Civil society consultations

FIGURE 4 Political and digital divide



Of the 4 billion people without access to the Internet, 90% live in developing countries, limiting their participation.

and advocacy may have influenced the agenda setting for the negotiations when the preparatory committees, informal consultations, intersessionals and the UNCSD Bureau meetings were held in New York. However, given that the results of the online and onsite phases of the dialogues came out respectively on 15 and 19 June, immediately after the third preparatory committee and before the high-level segment of the conference, when the negotiations and the outcome document were being finalized, they could not possibly have triggered the inclusion of new items for the negotiations.

‘When Brazil announced it would hold the Dialogues a few months before the Conference, our delegation already had doubts about their potential impacts on the official process leading to the summit and its outcomes. We faced a classical pattern where an ambitious process for civil society engagement is organized but its results in terms of influence on the official negotiations are minimal.’

Member state representative

Similarly, by the time the dialogues were carried out, the positions of member states had already been defined and concluded, sometimes in consultation with civil society at the national level. In Rio de Janeiro, delegates were too deeply involved in the negotiations to be able to attend the dialogues and to listen and reflect on the ideas generated by civil society. In addition, it would be naïve to believe that the positions of key member states can be modified overnight, without a government consultation on what such position-shifting would imply for the country’s socioeconomic structures.

‘Influencing negotiators ‘on the spot’ during international conferences is very complicated. It’s a long-term job, and it’s not in organizing these consultations back-to-back with the negotiations that civil society’s voice will be heard. A consultation system should allow negotiators to have time to digest civil society’s message, because the recommendations delivered by a highly diversified civil society, coming from many countries, should be analysed in light of the impacts these recommendations have on each country’s territory. For instance on the recommendation on fossil fuel subsidies, it’s not by getting the information on Monday that we will be able to decide whether we insert it or not into the negotiating text on Tuesday. Because there are a lot of impact assessments that we need to look at closely before agreeing on incorporating civil society input into negotiation outcome documents.’

Member state representative

Another indicator that further demonstrates that the dialogues had very little influence on the negotiating process is the reference to this mechanism in the statements delivered by the heads of state and government during the conference's plenary meetings. Indeed, the only country that referred to the dialogues in its statements is Brazil, the host country and dialogue organizer. In the fourth plenary meeting of the conference, Brazilian Minister for the Environment Izabella Teixeira hailed the results of the dialogues, hoping the formula would set a path for future conferences, while Brazilian President Dilma Rousseff, in the closing session, highlighted the link between the results of the conference of heads of state and government and the dialogues and the Peoples' Forum. While some heads of state and government highlighted the importance of including civil society in decision-making processes at all levels in their statements – 30 countries out of 187⁶ – only Brazil explicitly referred to the dialogues.

Influence on the negotiation outcome

Although Izabella Teixeira stated that 'the outcome document of [the] conference [was] undeniably influenced by the process that allowed people from all over the world to have their say', most of the civil society representatives who participated in the dialogues, as well as negotiators, did not feel the same way. Civil society actors regretted the lack of robust linkage between the dialogues and their outcomes with the high-level segment of the conference. A member of the team in charge of coordinating the dialogues even acknowledged that 'the dialogues and the negotiations were parallel processes. [...] There was no time and no way that they could actually influence each other at that time.'

The results of the dialogues did not have any influence on the substance of the outcome document of Rio+20 simply because the final text of 'The Future We Want' was produced by Brazil during the night of 18-19 June, and agreed *ad referendum* by the delegates on 19 June, before the conclusion of the dialogues and before the recommendations from civil society were presented in the high-level roundtables (20-22 June). However, it is interesting to note that there is some congruence between certain recommendations from the dialogues and 'The Future We Want': for instance, the issue of fossil fuel subsidies was already mentioned in the zero draft of the outcome document⁷ and 'The Future We Want'⁸, although in a less radical wording than the recommendation from the dialogue⁹.

At the closing of the Rio+20 Dialogues, Gilberto Carvalho, the Secretary-General of the Presidency of Brazil, stressed the following: 'this method of participation in the UN is here to stay.' The dialogues have indeed been more successful in influencing

6. Only 142 statements out of 187 were available.

7. §126: 'We support the eventual phase out of market distorting and environmentally harmful subsidies that impede the transition to sustainable development, including those on fossil fuels, agriculture and fisheries.'

8. §225: 'Countries reaffirm the commitments they have made to phase out harmful and inefficient fossil fuel subsidies that encourage wasteful consumption and undermine sustainable development.'

9. 'Take concrete steps to eliminate fossil fuel subsidies.'

the procedures for civil society participation in subsequent intergovernmental policymaking processes on sustainable development issues. In particular, many civil society consultations carried out in the framework of the definition of sustainable development goals and a global development agenda beyond 2015 have built upon the methodology and participatory tools developed by the Rio+20 Dialogues.

'We have no doubt that the Rio Dialogues became the model that was used for the post-2015 consultations. The post-2015 consultations went even further in that the process was more driven by civil society, whereas the Rio Dialogues process was led by the Brazilian government only.'

UN officer

The UNDP for instance has used the Rio+20 Dialogues web platform as a basis to launch 'The World We Want' platform, a digital tool on which eleven thematic consultations were held. In co-designing the MY World Global Survey, the UN team on the post-2015 development agenda and the Overseas Department Institute (ODI) have drawn upon the voting system used for the Rio+20 Dialogues website.

'I think the combination of the Rio Dialogues and MY World has engendered a certain excitement and enthusiasm and recognition that these are valuable methods. For the UN it's a way to better engage with its principal constituency, it's a way for the process to genuinely be more representative, and it is without question forging new processes, new language and new literacy.'

Partner organization of the Rio Dialogues and MY World 2015

Among civil society and member state representatives, opinions about the procedural influence of the Rio+20 Dialogues are slightly more mixed. While some think the dialogues have created a precedent, others do not consider them as a milestone for civil society engagement in intergovernmental policymaking.

Conclusion

The Rio+20 Dialogues have complemented rather than replaced traditional forms of civil society engagement in the UN activities on sustainable development. Compared to the Major Groups, these direct participatory mechanisms theoretically allow everyone to engage in intergovernmental decision-making, through their openness and non-hierarchical nature, and contribute with fresh and innovative ideas. However, these new methods also have substantial limitations. First, they enhance access only for certain civil society actors, leaving the most marginalized behind, and may therefore favour the representation of the most powerful voices over those of a broader and unspecialized public. Second, when they are held back-to-back with intergovernmental negotiations, their influence on the process is minimal. It therefore makes it difficult to determine whether the lack of influence of the dialogues on the Rio+20 negotiation process and outcome is correlated to the lack of inclusiveness of the participatory mechanism.

To foster inclusiveness and influence, direct civil society participatory mechanisms should be organized at an early stage of the negotiation process. Participation can be further broadened and diversified by strengthening the capacities of civil society actors and by systematically combining web-based participatory methods with offline or ICT-based methods (i.e. SMS and ballot paper surveys, face-to-face dialogues) to bypass the digital divide. Improving the quality of participation is also key to more effectively influencing the negotiation process and outcome: while the organizers should establish a formal link to the official process and provide spaces for a real dialogue between civil society actors and member states representatives, civil society actors should refine their recommendations towards more practical objectives, with quantifiable targets and clear timelines.

By promoting interaction between civil society actors, the Rio+20 Dialogues have allowed participants to learn about new issues and build their capacities. In this way, the Rio+20 Dialogues have increased mutual understanding and forged new partnerships between civil society actors. It is through these new partnerships between different constituencies that civil society actors will have more influence on intergovernmental negotiations. ■

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Negotiating a common future – what we have learned from the SDGs

Csaba Körösi, Ambassador, Permanent Representative of Hungary to the United Nations

In January 2013, the United Nations (UN) General Assembly formed a thirty member Open Working Group (OWG) that was tasked with preparing a proposal on the establishment of a landmark set of Sustainable Development Goals (SDGs). In a departure from the way that earlier membership bodies of the General Assembly were organized, the OWG is based on an innovative, constituency-based system of representation. Essentially, this means that several countries share most of the seats in the OWG. To provide a diversity of perspectives and experience, the OWG was expected to develop modalities to ensure the full involvement of relevant stakeholders and expertise from civil society, the scientific community and the UN system (UN-DESA, 2014).

On 10 September 2014, the UN General Assembly adopted the Report of the OWG on SDGs (UN, 2014). This package is far from perfect, for instance, the current draft is not well suited for mass communication. Nonetheless, agreement was reached in some crucial areas: the outcome document proposed 17 goals and 169 targets that covered a broad range of sustainable development issues, such as energy, economic growth, inequality, cities, sustainable consumption and sustainable production. The most important aspect of the SDGs is that they contain the key components of a major transformation. If anything close to these goals can be implemented by 2030, then nothing short of a huge reorganization will have taken place. The transformation potential of the SDG package is so great that many of the countries involved in the negotiations may not even fully comprehend the possible magnitude, which may be similar to that of the industrial or digital revolutions.

This article focuses on the mechanics of the negotiation process that led to the establishment of the SDGs. A number of lessons on trust building, power relations and civil society involvement can be learnt from the experience and these issues are discussed below.

The challenges of (re)building trust among stakeholders

Relatively weak trust existed among some member states at the beginning of the negotiation process. This was understandable as many countries had in mind previous frustrations, such as fights against colonialism and economic struggles with wealthy and powerful nations. Quite simply, a number of developing countries consider OECD countries to be unreliable because, with a few exceptions, they frequently fail to deliver on their promises.

Some developing countries were also very concerned about the inclusion of non-governmental actors, such as civil society and the major groups. The inclusion of these groups in decision-making processes is an alien concept in some countries and therefore the matter of who should be allowed to participate in discussions was the subject of fierce debate. Superimposed on this mistrust was an ideological struggle: a number of states essentially viewed the discussions as an opportunity to register their opposition to capitalism or to take issue with moral and social values that they found unacceptable.

Politics, power relations and economic sticking points

Some countries involved in the SDG negotiation process believe that there will be different world leaders by 2030

and they envisage themselves as being part of this new leadership. For these countries the main question is whether sustainable development can help bring about this transition. The negotiations were about setting the rules of the game for the sustainable development path ahead, so for these countries it was absolutely crucial to see what kind of rules would be in place for a transition they believe to be inevitable.

While the sustainable development negotiations cannot be separated from the political context, they should not be separated from the real economic context either. Changing the development trajectory basically means reshaping markets and reshaping market rules, and this causes anxiety with a number of players, and also enthusiasm from others.

It became apparent during the negotiations that several countries were seeking to change their role and position in the global value chain. Those who were not part of the chain wanted to join it, while others sought to upgrade their positions. These countries saw the negotiations as an opportunity to expand their economies and GDPs and gain better market access. This made some member states anxious about the economic fallout of goal setting, because an improvement for one country's position in the global value chain means taking the place of another.

Another important factor that arose in the negotiations concerned the reduction of the growth of economic and social inequalities. Although all countries agreed on the need to achieve this goal, some considered it as primarily an internal task, while others viewed it as an external one. This made it a controversial issue since there are many devices to reduce internal inequalities, such as taxation systems, laws, social policies and incentives, all of which can be under the control of national governments, but there are fewer available tools to reduce international inequalities, and it is very difficult to make decisions that change the global flow of goods.

Last but not least in relation to the economic context, the negotiations highlighted the need to rethink the roles of governments and markets. To depart from a development mode that uses much more resources than are globally available requires intervention. Markets alone

will not suffice. The transition to a sustainable economy will not take place without regulation, taxation, cooperation, different incentives for R&D and different types of investment that are encouraged, and possibly initiated, by governments.

Innovations in the participatory nature of the OWG process

At the beginning of the negotiations the aim was to get everyone into the same room and to assign speaking slots to all those who wanted to participate, including member states, international organizations, major groups, etc. The problem with this approach was that the time constraints of having so many participants in the same session meant that major groups and civil society had very little time to get their messages across. Therefore, groups were invited to attend special dedicated days to enable these important discussions to take place.

The major groups were asked to organize themselves regarding what points they wanted to make during their time slots, to estimate how long this would take and whether or not they had internal agreement on these points. In addition, a website was set up to give everyone the opportunity to contribute at the same level as member states and to share their suggestions and notions with every stakeholder. Also, so-called 'intersessional meetings' were organized for civil society, with the objective of including those who were not represented by the major groups.

With this kind of negotiation process, only a tiny part of the work was done in the negotiating room. Around 80% of meetings and consultations took place in between sessions, with the majority of discussions being bilateral or involving stakeholders other than member states.

The participatory nature of the OWG was not only innovative, but also proved to be a valuable learning experience for the stakeholders. Initially, many groups came to the table with 'silo' (single issue) proposals. This was not a realistic approach as it was impossible to give a significant amount of attention to so many issues. Instead, the groups learned to link their main concerns with other issues, so they could be considered as part of an integrated picture.

FIGURE 1 From MDG to SDG

Millennium Development Goals (MDGs)	Sustainable Development Goals (SDGs)
 <p>Eradicate extreme poverty and hunger (1.2 billion have less than \$1 a day, 800 million are hungry)</p>	<ul style="list-style-type: none"> - End poverty in all its forms everywhere - End hunger, achieve food security and improved nutrition, and promote sustainable agriculture - Ensure healthy lives and promote well-being for all ages
 <p>Achieve universal primary education (113 million children are not in school)</p>	<p>Ensure inclusive and equitable quality education and promote life-long learning opportunities for all</p>
 <p>Promote gender equality and empower women (60% of children not in school are girls, women have on average only 14% of seats in parliaments)</p>	<p>Achieve gender equality and empower all women and girls</p>
 <p>Reduce child mortality (every day 30,000 children die of preventable causes.)</p>	<p>---</p>
 <p>Improve maternal health (In Africa, a woman has 1 chance in 13 of dying in childbirth)</p>	<p>---</p>
 <p>Combat HIV/AIDS, malaria and other diseases (40 million are living with HIV/AIDS, 75% of them in Africa)</p>	<p>---</p>
 <p>Ensure environmental sustainability</p>	<ul style="list-style-type: none"> - Ensure access to affordable, reliable, sustainable and modern energy for all - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation - Reduce inequality within and among countries - Make cities and human settlements inclusive, safe, resilient and sustainable - Ensure sustainable consumption and production patterns - Take urgent action to combat climate change and its impacts - Conserve and sustainably use the oceans, seas and marine resources for sustainable development - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
 <p>Develop a global partnership for development</p>	<p>Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>

The SDGs adopted in September 2015 are not only a follow up to the Millennium Development Goals. They open new fields for coordinating the international community and new transformational priorities for states. This figure shows the 17 SDGs that the open working group proposed to UNGA members.

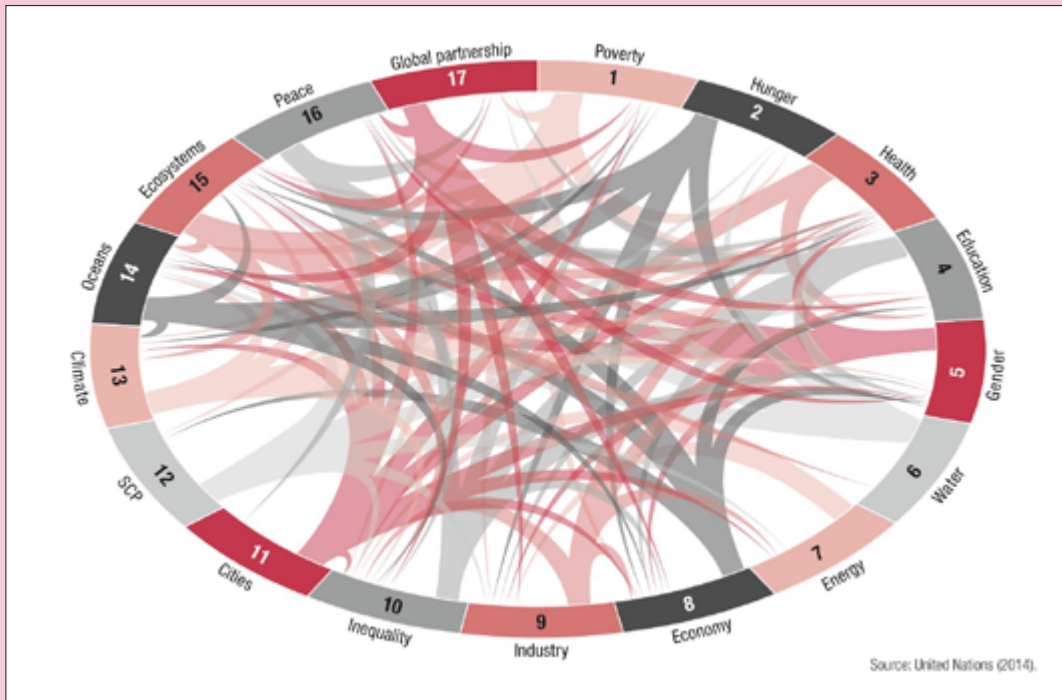
Looking ahead to the future

Even though the General Assembly has adopted the OWG's report with its goals and targets, ensuring that it will become a vital part of future negotiations, this in itself will not generate a movement of capital and knowledge. Only national and local plans and projects can achieve this redirection of funds. Banks and institutions will not finance the SDGs; finances and other implementation means will be targeted at actual, tangible projects. On this aspect, there is still much work to be done. The SDGs are in place, but most countries do not have national plans and there is certainly a lack of projects.

The implementation of pilot projects must begin as soon as possible so that time is not lost at this critical juncture; and for this to happen, support mechanisms are required. However, the national and international institutions that will

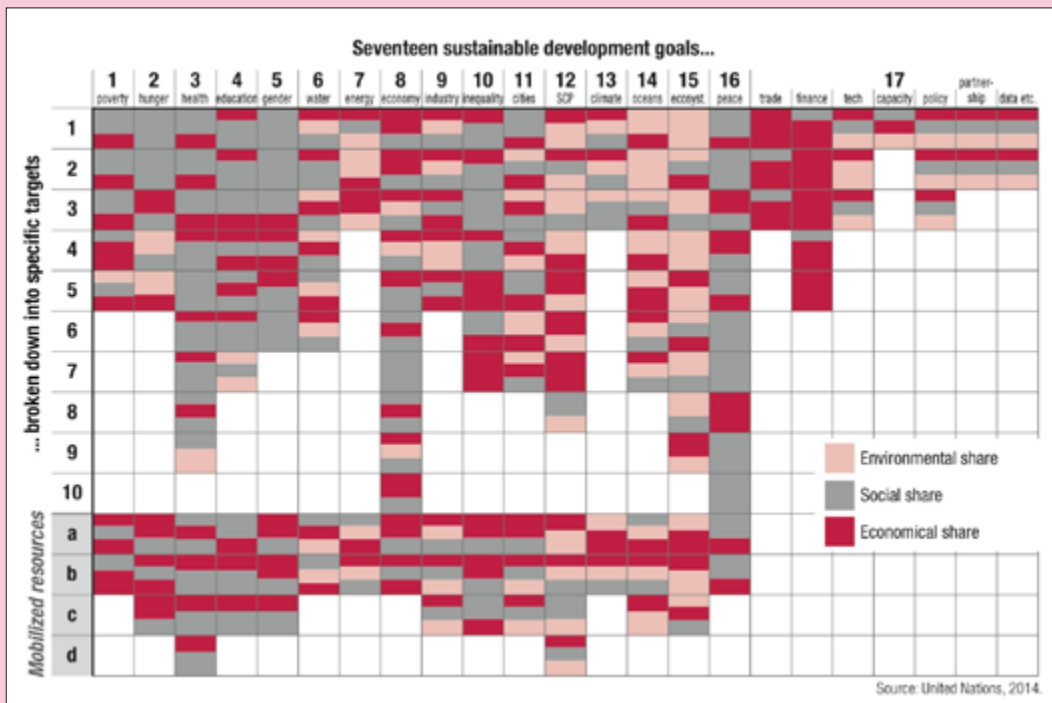
support the transformation towards sustainable development were not expressly created for this function. Instead they were designed for a range of different purposes, typically for a mono-dimensional goal such as fighting Ebola, malaria or HIV, or making sure that every child goes to primary school. While such institutions are engaged in work of the utmost importance, they are not well equipped for complex three-dimensional goals such as the SDGs.

There are three possible scenarios for the difficult negotiation process ahead. The first is that agreement is reached on a genuinely transformative agenda, on strategic work and on the distribution of roles. This optimum scenario would set out a clear process for the future. A second possible scenario is that a written agreement is reached, but one that is not legally binding. This would be insufficient to bring about a change in the development trajectory

FIGURE 2 **Interrelated goals**

SDGs were not designed as isolated targets but to be mutually supportive. Taking action in one area will have positive repercussions for other objectives, thus supporting a broader overall global transformation.

FIGURE 3 The three dimensions of sustainable development and SDGs



The three dimensions of sustainable development (economic, environmental and social) are present to varying degrees in each SDG. However, promoting a three-dimensional approach is indeed a challenge for most national and international bodies, which have generally been designed to meet a mono-dimensional objective, such as education or the fight against Ebola, malaria or HIV.

and thus would be very costly in the long term. A third scenario is that no agreement is reached, an outcome that is certainly possible. And if no agreement can be found on at least some basic elements, then the biggest risk is that the international moderator system will fall apart, and it will be a different world after that. ■

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Part 2

**How territories
are addressing
the issue of
sustainable
development**

The search for sustainable development in India aims to develop not only a response to climate change but also more inclusive growth, effectively elevating the poorest populations towards better living conditions. The management of the energy supply, a critical issue for continued economic growth, as well as the control of greenhouse gas emissions are essential starting points on this journey.

The pursuit of sustainable development in India

India is at the crossroads of opportunities and challenges in her pursuit of sustainable development. It is among the largest economies and promises to experience high economic growth. India is also the world's largest democracy. But at the same time, a large section of the population does not have access to the bare minimum of the benefits of economic development, which in turn also affects lower penetration of the political and economic freedoms that a democracy promises. Maintaining high and inclusive growth rates is therefore a prime political, social and economic imperative for India. The prospects, and need, of high economic growth however, come with a potential conflict with the global imperatives of climate change. India is one of the lowest emitters of greenhouse gases (GHGs) in the world on a per capita basis. At 1.4 tCO₂/person in 2010, India's emissions were less than one third of the world average of 4.5 tCO₂/person, less than one fourth that of China and one twelfth that of the US. However, India has now become the third largest GHG emitter. At the same time, the large demography of the country is also highly vulnerable to climate change. The fact that the poorest of the poor are comparatively more vulnerable to climate change, even if public adaptation services are available, makes it all the more important for India to attain a higher level of economic growth with rapid poverty eradication as soon as possible. Thus India is in dire need of charting out a new political economy of sustainable development to balance these imperatives that are seemingly conflictual in the short run, but certainly mutually reinforcing from the perspective of long-term human development. Broadly this will imply a development process with a deepening of economic activities at a large scale so as to include the entire population in the development process. Arguably, with time

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the development trajectory is becoming increasingly environmentally efficient. For example, the emission intensity of GDP has improved in recent decades, primarily due to development and the deployment of efficient technologies. The concerns of climate change require the development process to overcome the time barrier alongside the barriers to scale. In other words, the climate change imperatives require that both development and deployment of climate friendly technologies happen in a shorter time frame and at a global scale. In a globally integrated economic order faced with global environmental challenges with serious national implications, to what extent India can craft and pursue such a political economy of sustainable development is the key question today, not only for India, but arguably for the world too. In this chapter we explore some contours of this challenge.

India's development challenge

The UNDP's Human Development Index (HDI) in its comprehensiveness of criteria capturing the aspects of economic well-being, social dignity and political freedom is arguably the best indicator to assess the developmental challenge a country faces. The 2013 Human Development Report ranks India at a low 136 out of 186 countries in terms of its HDI, indicating that India's development needs are still huge, and significant progress is needed for ensuring a better quality of life for her people. There is a positive relationship between HDI and per capita energy consumption. A minimum per capita energy consumption of 2.3toe/year is needed today to achieve an HDI of 0.9 (see Figure 1). However, it has also been observed that the late bloomers usually achieve transition to higher levels of human development at lower levels of per capita energy consumption. It could reasonably be argued that there is a high probability that an HDI of 0.9 could be achieved in future at a per capita energy consumption of 1.5 toe/year. In comparison to such an optimistically reduced need for energy, per capita consumption in India was 0.4 toe/year in 2011-12 with a corresponding HDI of ~0.5. The lower per capita consumption is constrained by, in addition to poverty, low levels of energy supply, which was 0.6 toe/capita/year in 2011-12. Moreover, it is not merely about low per capita energy consumption but also about access to energy services. There are close to 300 million people in India without access to modern energy services for cooking and lighting.

Although it is difficult to quantify sustainable development, its directional and procedural meaning is clear. It is progress on human welfare while maintaining balance between multiple social, economic and environmental concerns. Holden et al. (2014) have assessed the status of many countries with regard to sustainable development as a combination of four parameters: HDI (minimum 0.64), ecological footprint (maximum 2.4 global hectare/capita/year), Gini coefficient (maximum 40), and share of renewable energy out of total energy (minimum 26%). They found that in terms of its welfare distribution and ecological footprint, India is very much within the boundaries of sustainable development. However, the overall level of welfare is too low to be sustainable and India's energy system is on the boundary of sustainability. Hence, what India needs to move into the sustainable development

zone is to rapidly improve its HDI and share of renewable energy. Given the positive relationship between HDI and energy consumption, India's HDI challenges can be summed up with one infrastructural goal, i.e. increasing the share of renewable energy at an accessible price.

India and environmental policy

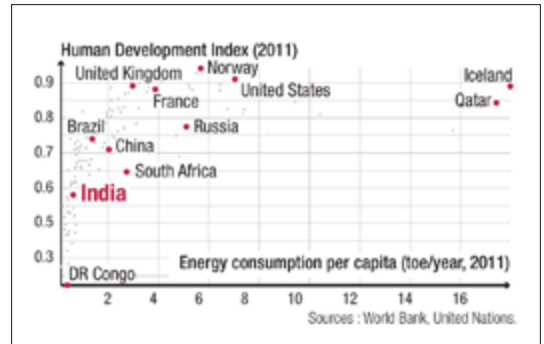
The question of environmental degradation in India, be it at the national or global level, has always been understood as integral to developmental challenges. India articulated this view, along with other developing countries, right at the beginning of the setting of the global environmental policy agenda at the UN Conference on Human Environment, held in Stockholm in 1972; and restated this perspective at the 1992 Rio negotiations. The global community has also accepted it in similar terms to varying degrees. India has been a strong advocate of Article 4.7 of the United Nations Framework Convention on Climate Change which recognizes poverty eradication and socio-economic development as an 'overriding priority of developing countries'.

India's policy response to environmental challenges, by and large, has also been a response to its developmental challenges. The mainstay of India's strategy to address environmental issues, particularly climate change, is to increase its share of alternative non-traditional energy options and promote energy efficiency. This policy response began in the early 1970s, driven by the then immediate vulnerability to energy security in the light of the 1973 oil crisis. What, however, has changed because of climate change is that the development benefits that have been achieved so far, are likely to be undermined due to the risks to the natural, physical and economic infrastructure. The range of vulnerabilities relating to health, nutrition, access to potable water, sources of traditional livelihoods, ecosystem services, and life and biodiversity in and around the coast leaves the existing infrastructure inadequate to protect the gains of progress. Hence, climate change has superimposed a time and magnitude constraint on India's pursuit of development. India needs to develop quickly and at a higher rate, which in turn implies aggressively pursuing renewable energy and energy efficiency so that the necessary infrastructure can be built with lower GHG emissions.

Key stakeholders advocating sustainable energy

In the early 1970s it was the national government which recognized the need to promote new forms of energy with a view to protect the national economy from fluctuations in the international energy market. Being a party to the key international

FIGURE 1 Combining human development and energy conservation



Ranked 136th out of 186 developing countries, India still has a long way to go in terms of human development. With existing technologies, it may nevertheless realistically hope to improve the living conditions of its population at a lower energy – and therefore environmental – cost.

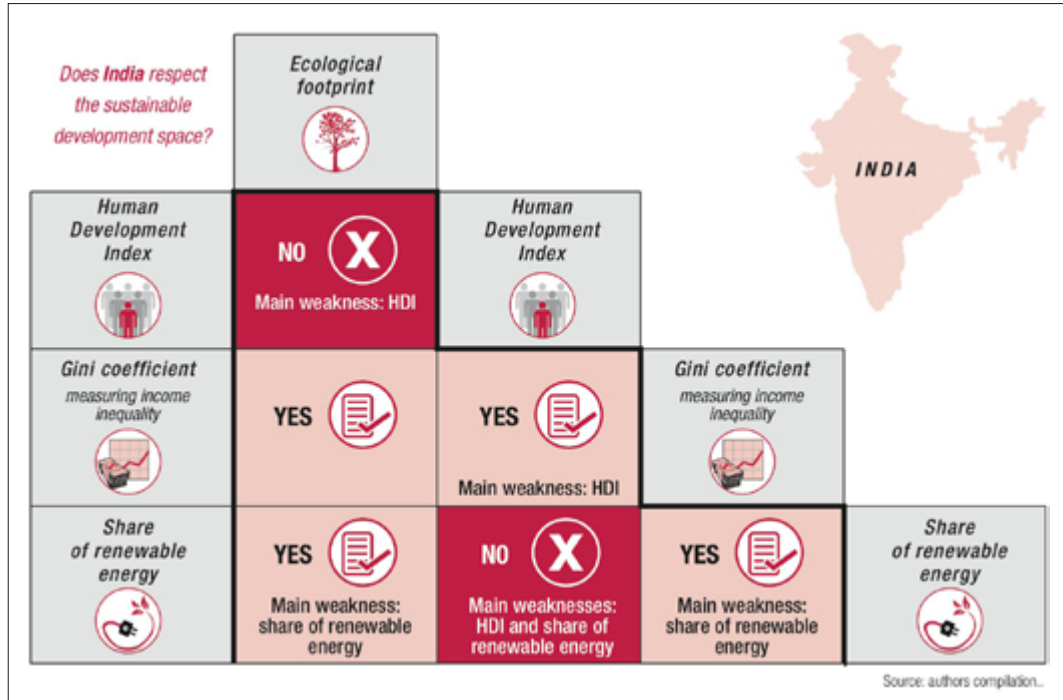
environmental agreements, beginning from the Stockholm Declaration in 1972 up to the signing of the Kyoto Protocol in 1997, India introduced legislation and policies to integrate environmental protection into development policies and programmes, specifically referring to international agreements in the preamble paragraphs (ATTERIDGE et al., 2012).

From the late 1980s with the launch of modernization and renovation programmes to improve efficiency in industrial units along with the liberalization of the economy, the private sector also emerged, albeit slowly, as an important stakeholder. With increasing integration into the global economy and rising competition, private sector companies began to realize the importance of energy efficiency, along with the technological and cost barriers to achieve higher efficiencies yet remain competitive in the global market. Accordingly, the private sector has increasingly advocated policies to support energy efficiency. The success of demonstration projects with international support from Denmark and Germany in wind energy since the late 1980s, along with the rise of companies like Suzlon has also given impetus to the demand for policies supporting renewable energy. The experience of the Clean Development Mechanism (CDM) has been an added factor to build confidence among the private and public players in the economic viability of renewable and energy efficiency options.

During the last decade, particularly after the launch of the Fourth Assessment Report of the IPCC and India's National Action Plan on Climate Change, civil society and state governments have also emerged as key stakeholders. Civil society is primarily motivated to demand more aggressive action by the national government due to the safety and security concerns of the vast vulnerable population in light of the IPCC report and increasingly lower expectations from international climate negotiations. The state governments, on the other hand, are required to implement the National Action Plan on Climate Change (NAPCC) through their respective State Action Plans on Climate Change (SAPCCs) as well as policy targets (such as renewable purchase obligations). Given the resource and capacity constraints of states, as well as the opportunity that the SAPCCs provide for better integration with national policy implementation and hence availability of resources, states too have become very important advocates of climate relevant energy policies. All this experience has also led to the emergence of a significant number of experts and policy researchers which proactively advocate considered climate policy and energy policy integration.

Overall, transformation in India's energy sector has followed a top down approach where the national government has played a decisive role by not only setting the policy direction, physical targets, building infrastructure but also providing necessary incentives to other actors. The Accelerated Power Development and Reforms Programme (APDRP), initiated in 2002-03 to address the losses in power transmission and distribution is a good example of this approach. It resulted in a reduction in losses by a factor of over 9% during 2005-2014. Increasingly, the national government has followed a consultative process of policy and programme formulation to address the concerns of various stakeholders. The Perform, Achieve and Trade

FIGURE 2 Sustainable development in India



India is fully within the limits of sustainable development, but needs to improve its results in terms of energy supply and the fight against poverty, which are two interrelated goals.

(PAT) scheme under the National Mission on Enhanced Energy Efficiency (NMEEE) is a very good example of how a central government body, the Bureau of Energy Efficiency (BEE) facilitated all these stakeholders to provide broad based inputs to policy-making, resulting in a very specific and complex, but ambitious, climate policy (NANDAKUMAR and SHRIVASTAVA, 2013). Although, in some cases the issues between central and state governments remain difficult to resolve due to an inadequacy of resources and jurisdictional issues e.g. electricity subsidies.

Context of energy supply

The imperative of increasing the energy supply poses two types of challenges for India. First, India’s energy supply is highly import dependent, and this dependency is likely to increase. According to the report of the Expert Group on Low Carbon and Inclusive Growth (PLANNING COMMISSION, 2014), 40% of India’s commercial energy supply comes from imported fuel. More than 70% of the petroleum requirement is met by imports, which is expected to increase to more than 80% by 2027. Even imports of coal, the fuel that accounts for 70% of India’s electricity generation, are expected to increase from 10% in 2011-12 to 30% by 2027. Other studies

also conclude in the same direction (e.g. TERI, 2014). The high import intensity of India's energy supply therefore not only poses concerns of energy security but also of the nation's current account balance. The fossil fuel import bill as a share of total export earnings for India has grown from 35% in 2000-01 to 60% in 2012-13. The total trade deficit in 2012-13 was \$190 billion.

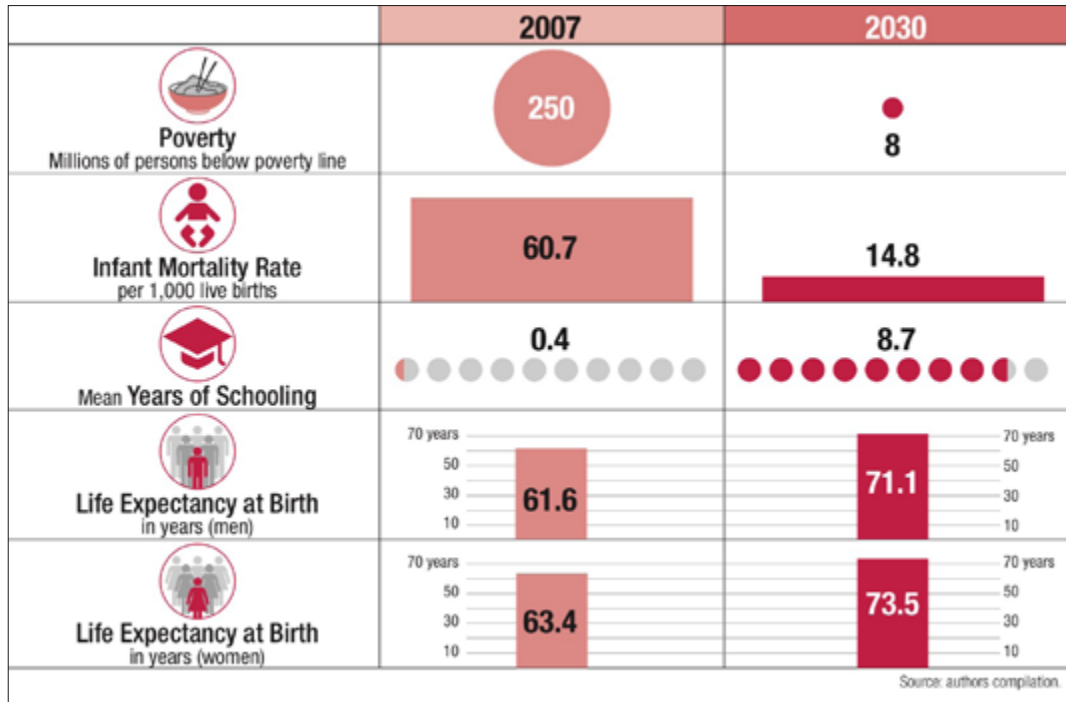
The second challenge relates to the contribution to CO₂ emissions from the energy sector, in addition to the impact on air pollution and water resources that are associated with the extraction and use of these fuels, both globally and at a local level. The energy sector is the largest contributor to India's total GHG emissions. In 2007, the energy sector contributed 1,100.06 million tons of CO₂ equivalent (CO₂e) emissions out of a total of 1,904.73 million tons. Of this, 65.4% of the emissions were from electricity generation, 3.1% from petroleum refining and solid fuel manufacturing, and 2.9% from fugitive emissions due to the handling of coal, oil and natural gas. About 15% of total CO₂e emissions (or 128.08 million tons of CO₂e) were from fossil fuel and biomass combustion in both rural and urban residential households. Given that much of the infrastructure growth across sectors, whether it is in built-up infrastructure, power generation and transmission capacity, mobility provision, education or health related infrastructure, still needs to happen, India must plan a new development model to prevent long-term lock-ins into emissions-intensive infrastructure, fuels and technologies.

India's development challenge in a climate constrained world is therefore to enhance access to energy services for its vast population, aiming to improve HDI without compromising the macro-economic imperatives of a growing national economy as well as the ecological imperatives of global atmosphere.

Energy pathways for development till 2030

Different modelling studies estimate that India's energy supply requirements range from 1,146 million toe (PLANNING COMMISSION, 2014) to 1,700 million toe (GOVERNMENT OF INDIA, IEP, 2006) by 2030, compared to 819 million toe in 2011-12. According to the Integrated Energy Policy (IEP), economic growth of 8% to 9% through to the year 2031-32 will require an increase in India's primary energy supply by a factor of 4 to 5, and its electricity generation capacity by 6 to 7 (both compared to 2003-04 levels). While this implies a primary energy supply growth of around 5.8% per year, commercial energy supply will need to grow at a faster rate of 6.8% per annum, as non-commercial energy sources will be replaced over time. According to the report of the Expert Committee on Low Carbon and Inclusive Growth, in a 'business as usual', or 'baseline inclusive growth' (BIG) scenario, the emissions intensity of GDP in PPP terms falls by 22% in 2030, compared to 2007; while in the low carbon inclusive growth (LCIG) scenario it falls by 42%. The per capita emissions are expected to be 3.6 Mt of CO₂ by 2030 in the BIG, but could be reduced to 2.6 Mt of CO₂ in the LCIG scenario. This is on account of: (a) a significant improvement in the energy intensity of GDP through demand-side measures (the energy intensity of GDP falls from 0.121 kgoe/\$ GDP 2007-PPP in 2007, to 0.071 kgoe/\$ GDP

FIGURE 3 The indicators of inclusive growth



2007-PPP, in 2030); and (b) changes in the energy mix that result in a reduction in demand for coal and crude oil by 20% and an increase in demand for natural gas by 11%, along with a six fold increase in the supply from non-fossil energy sources. Another source of reduced emissions however is the lower GDP that results from a change in the investment pattern in the LCIG scenario compared to the BIG. The report estimates that, compared to the BIG scenario, the LCIG will have a 0.16% lower GDP growth rate and a GDP of 3.33% less in 2030. Furthermore, to achieve a higher development indicator by 2030 compared to 2007, as shown in Figure 3, cumulative investments in the two scenarios are estimated to be more or less equal, but the LCIG scenario will require a 50% higher investment in the energy sector. This is on account of the fact that to generate the same amount of power from renewable energy sources, a comparatively larger installed capacity than from thermal sources is needed. This, however, also implies foregone investments in other sectors of the economy, particularly the social sector.

It is important to note that out of an estimated 27% reduction in emissions in the LCIG compared to BIG, 24% comes from a change in the energy supply mix. Hence, the outlook for 2030 is highly focused on renewable energy. The studies, however, rely greatly on the early availability of next generation technologies particularly in storage, concentrated solar thermal and bio-fuels.

The technological predicament

Theoretically, harnessing more and more renewable energy sources with a simultaneous improvement in energy efficiency can help achieve the twin objectives of energy security and climate change, in addition to addressing the pressure of India's increasing energy imports bill. India has already realized the significance of promoting renewable energy and energy efficiency. Over the last two decades, the energy intensity of the economy (measured in terms of the total final energy consumption in toe per million rupees of GDP at 2005 prices) has reduced by 50%. The share of renewable energy (excluding large hydro) in the total installed capacity has increased from 0.05% in 1992 to 12.7% in 2014. The two targeted missions, namely the National Solar Mission and the National Mission for Enhanced Energy Efficiency under the NAPCC have provided further impetus to this trend. A range of support instruments have been introduced to accelerate the uptake of renewable energy including subsidies for off-grid renewables, fiscal incentives for wind and solar power, and renewable purchase obligations with premium tariffs. In terms of energy efficiency the instruments include standards and labelling for appliances and cars, mandatory efficiency improvement targets for energy intensive industries (including power stations), performance contract based demand management measures, etc. Despite this rather commendable progress in terms of efficiency improvement and the inclusion of renewables in the energy system, India still has a long way to go. There are a number of barriers that make India cautious before it blindly pushes ahead with a green technology transformation, even though it is widely recognized to be in the national interest in the long run. To be able to realize the transformation of the energy supply mix, in addition to the timely availability of alternative commercially viable technological solutions across sectors, a rapid scaling-up of these options together with an accelerated build-up of supporting infrastructure, appropriate skill-sets, regulatory and institutional frameworks, and adequate renewable manufacturing capacities will also be needed. The development experience of many developing countries over the last seven decades suggests that there are three types of challenges that need to be addressed:

HIGHER COSTS OF TECHNOLOGIES

Although renewable energy options have become cheaper there are still significant cost barriers. In particular, the initial costs of green energy are very high. There are three types of barriers: (a) the already high cost of capital in developing countries deters investors from options with high capital costs, (b) the limited ability and willingness to pay for high cost energy makes these options economically less attractive, and (c) the feasible electricity tariffs – due to the need to provide energy services at accessible rates – do not cover the costs of supply and distribution and there is a limit to offset the impacts of these high costs through subsidies, particularly if the target is high. Similar barriers are faced in promoting energy efficiency measures. The high costs of most efficient products often do not meet the criteria of capacity and willingness to pay of the consumers and the acceptable pay-back period. To put

the challenges posed by the costs of technology alone in perspective, at the macro level, the Expert Committee on LCIG estimates an additional energy investment of 1.5 % of GDP over and above the BIG scenario. The TERI study estimates the total undiscounted technology investment cost for the 100% renewable (REN) scenario to be about 42% higher than in the Reference Energy Scenario, requiring an additional investment of around 4% of the cumulative GDP between 2011 and 2051.

INNOVATION CHALLENGES

Very often the available technologies in the global market are not suitable for use in the Indian context, due to the specific climatic conditions that make certain technologies less appropriate. For example, India's high summer temperatures mean there would need to be a doubling of the current efficiency levels of air conditioners, while maintaining current prices to make an economic case for a high level of penetration. The full reliance on hydropower is difficult due to its dependence on the monsoon cycle, which requires compensatory fossil fuel-based electricity. The poor quality of available raw material can also offset the efficiency promises of new technologies. For example, the advanced clean coal technologies do not generate the same level of efficiency with Indian coal. Hence, green technology transformation in India cannot happen without research and development efforts to customize technologies to Indian conditions. With this background the transition of India's energy mix towards renewable energy poses grave innovation challenges. The theoretical possibility of 100% renewable by 2050 relies on the uptake and scale-up of several options that are currently not mature enough. For example, technological breakthroughs in third generation biofuels within the next two decades are critical for transforming the transport sector. Similarly, the REN scenario involves meeting all industrial heating requirements up to 700°C through CST technologies by 2051. This implies that CST technologies will have to be a commercially viable option even for small to medium manufacturers by 2031 in order to gain popularity and become the prevalent option in the next two decades. Furthermore, given the large share of renewables in the electricity mix, apart from the development of storage technology, improved grid integration and load management systems would be required with immediate effect (TERI, 2014).

INSTITUTIONAL CAPACITIES

India is a federal state and has been pursuing incremental decentralization of governance. It is necessary that institutional capacities exist at all governance levels to facilitate and accelerate transition. Unfortunately, there are large gaps in capacities, human as well as institutional, at these governance levels. The experience of designing the Perform Achieve and Trade (PAT) scheme of the National Mission on Enhanced Energy Efficiency revealed the capacity gaps in state agencies, financial institutions and the private sector, in relation to project evaluation and effective monitoring and verification (NANDAKUMAR and SHRIVASTAVA, 2013). A general capacity gap in designing comprehensive policies and programmes has been observed

at the state level in the process of the development of various State Action Plans on Climate Change (DUBASH and JOGESH, 2014; MISHRA et al., 2012). Although, many states have introduced policies that are relevant to climate change, their implementation remains a challenge on account of the limited institutional and financial capacities of states (SRINIVAS, 2013). In addition, it is critical to recognize from the beginning that the implementation of action happens at different levels of governance and at each level an issue is important for different reasons. Accordingly, challenges are also different. Any solution therefore must be built on this diversity of reasons at different levels and address the associated challenges.

India's strategy for sustainable development

India's Twelfth Five Year Plan has sustainable development as its core focus and outlines various approaches to integrate sustainability into national development goals. It identifies economic growth, poverty eradication and employment, education, health, infrastructure, and environment and sustainability as national development goals. These are further unbundled into 25 specific parameters such as institutional capability, regional balance, reduction in inequality, productivity growth, agricultural growth, infrastructure investment, water resource management, science and technology, human capital and so on. These parameters can easily be mapped onto the various sustainable development goals being negotiated under the Rio process as well as the imperatives of climate change. For example, the development goals of energy access can be integrated into the mitigation imperative through efficient and clean energy technologies, along with reducing the demand for energy. Similarly, the goals of higher agricultural productivity and access to clean water can be integrated into the adaptation imperative through high yielding and heat resistant seed varieties, and water storage technologies and practices. Hence the Twelfth Five Year Plan successfully integrates the imperatives of sustainable development and climate change in India.

A closer look at national development goal parameters suggests that India's road to sustainable development could be through the rapid and urgent deployment of green technologies with a view to address the issues of infrastructure development and the enhancement of productivity and sustainability. The Plan in fact suggests that actions should be thoroughly informed by science and technology and emphasizes the promotion of technological leapfrogging. Accordingly, the Plan has identified twelve focus areas which in a way encapsulate the principal development imperatives. In Figure 4, these twelve focus areas are assessed in light of the key challenges for transition discussed above. It is evident that except for the 'advanced coal technologies' focus area, the lifetime cost for sustainable development interventions in India is not a significant barrier. The major barriers are first cost and innovation capabilities. Except for the National Wind Energy Mission and the Vehicle Fuel Efficiency Programme, high initial costs are major impediments to India's quest for sustainable development. In areas where the success is dependent upon a large number of participants and multiple levels of governance – such as

FIGURE 4 The priorities of India's 12th Five Year Plan (2012-2017)

Development Imperative	12 th Five Year Plan Focus Area	Key Challenge			
		FIRST COST	LIFE TIME COST	INSTITUTIONAL	INNOVATION (TECH. CAPABILITY)
Infrastructure, sustainability	Advanced Coal Technologies	Diagonal	Diagonal		Diagonal
	National Wind Energy Mission				Diagonal
	National Solar Mission	Diagonal			Diagonal
	Improving the Efficiency of Freight Transport	Diagonal		Diagonal	
	Better Urban Public and Non-motorized Transport	Diagonal		Diagonal	Diagonal
Productivity, sustainability	Technology Improvement in Iron and Steel Industry	Diagonal			Diagonal
	Technology Improvement in Cement Industry	Diagonal			Diagonal
	Energy Efficiency Programmes in the Industry	Diagonal		Diagonal	Diagonal
	Vehicle Fuel Efficiency Programme			Diagonal	Diagonal
Sustainability	Lighting, Labelling and Super-efficient Equipment Programme	Diagonal		Diagonal	
	Faster Adoption of Green Building Codes	Diagonal		Diagonal	
	Improving the Stock of Forest and Tree Cover			Diagonal	
Option for International cooperation to address the challenges		Market creation		Demonstration	Financial support / Market guarantee

Source: authors own compilation and assessment.

energy efficiency programmes, efficient faster adoption of green building codes, lighting, labelling and super-efficient programmes, improving the stock of forest and tree cover – institutional capacities need to be built for better awareness and penetration of the initiatives. The need and scope of technological innovation is equally relevant for the identified focus areas.

Levers for sustainable development

The challenges depicted in Figure 4 for deepening sustainable development in India raise an important question: can India on her own, and to what extent, accelerate the implementation of the identified strategies? India's experience so far suggests that it can certainly create positive momentum, but it may not be able to overcome the time barrier. For example, while the Jawaharlal Nehru National Solar Mission has been able to bring down the benchmark tariff for solar PV, from INR 17.91 per Kwh in 2010-11 to INR 8.75 in 2013-14, and for solar thermal from INR 15.31 to INR 11.9, it still does not make sense to go for significantly large-scale uptake until 2030 on account of high undiscounted system costs and a high subsidy component. Technological breakthroughs hold the key. While tariffs for wind have grown comparatively at a slower rate compared to thermal power during 2005-06 and 2013-14 (39.47% compared to 97.09% in Andhra Pradesh, and 23.53% compared to 67.11% in Karnataka) the average tariff for wind is still marginally higher than

the average unit cost of thermal power. There is still a need for deployment at a higher scale.

Experience suggests that a large market for products and technologies not only brings down costs but also encourages innovation. In the process institutional capacities also develop through learning by doing. What is needed therefore is to build institutional capacities to provide a big push to market for new technologies which can simultaneously address the challenges of high initial costs and innovation. Such a large push to market is difficult for India to provide, particularly to attain the required level of penetration within a short time frame. Therefore, the lever to speed up sustainable development in India lies with strategic international cooperation to create sufficiently large markets for new technologies so that the economic process could gain a self-sustaining velocity for transformation.

There are already a number of international cooperation initiatives that support technological interventions. A list of these initiatives within the United Nations system and of partnerships focused on promoting technological change highlights the apparent lack of support for pilot projects (O'CONNOR, 2014). From India's perspective, it would be preferable if international support were mobilized for demonstration projects with considerable overlap with development and market formation. This could be done by undertaking large enough demonstration projects that send out clear signals for the private sector and to innovators on these 'new markets for new products'. Large scale demonstration projects would necessarily involve a meaningful policy and institutional engagement which in turn build capacities.

Conclusion

Integrating concerns of climate change and sustainability into development goals requires addressing barriers to development processes, as well as barriers to climate-friendly development strategies. Broadly, the barriers to the development process are concerned with those of a deepening of economic activities at a large scale so as to include the entire population in the development process. Arguably, with time the development trajectory has been growing in an environmentally efficient manner, for example there has been an overall improvement in the emission intensity of GDP due to the development and deployment of more efficient technologies. The concerns of climate change require the development process to overcome the time barrier alongside the barriers to scale. In other words, the climate change imperatives require that both development and deployment of climate-friendly technologies,chnological options in as many places as possible with adequate participation of relevant stakeholders. Accordingly, one possible way forward could be to develop targeted business models, based on bilateral/multilateral cooperation, that address the challenges of high cost and institutional capacity and promote innovation and deployment of targeted technologies. Identification of lessons from the existing bilateral initiatives towards building multilateral cooperative business models may be a useful way forward in this direction. ■

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China: its 'ecological civilization' objective for the twenty-first century

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China's development path has followed the typical route of western industrialization, but over a much shorter timescale. By 2011 it had become the world's second largest economy, completing an industrialization process that began in 1978 with its 'opening and reform' policy. It consumes the world's largest share of most raw materials and forms of primary energy, and is the largest emitter of greenhouse gases (GHGs). China now faces many challenges, such as energy security, water and atmospheric pollution. One symptom of this situation is the deterioration of air quality in Chinese urban areas in recent years. This represents an unprecedented challenge for China, given the speed and scale of its environmental changes and the limited time available to tackle the issues.

Figure 2 illustrates the relationship between GDP per capita and SO₂ and CO₂ emissions from 1978 to 2013. This graph shows that China's SO₂ emissions peaked in 2006, but CO₂ emissions are continuing to increase rapidly, despite China's considerable efforts in the energy and emissions fields. Regarding the latter, GHG mitigation can provide significant co-benefits in terms of local pollutant control, health and energy savings, etc.

China's growth has been accompanied by severe pollution that is proving costly today in terms of human and environmental health, causing a change in the Chinese government's agenda.

In environmental economics there is a hypothesized relationship between development and the environment known as the 'Environmental Kuznets Curve'

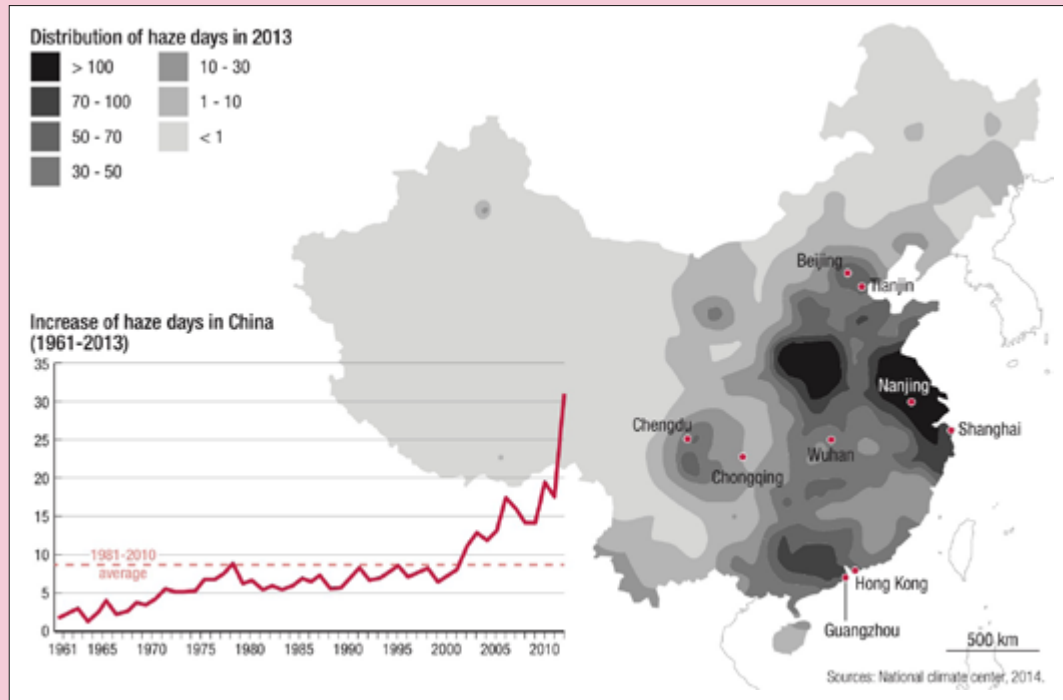
(EKC). According to this theory, the relationship between economic development and environmental quality follows an inverted U-shape curve, i.e. as economic growth occurs in a country, environmental degradation tends to get worse until average income reaches a certain point, at which the environment begins to recover (GROSSMAN and KRUEGER, 1995). One of the questions that must be asked is whether the EKC is an inevitability? And if so, how can we bring about the turning point sooner rather than later? Also, when will China reach this turning point?

Identifying the causes

What specifically has led to the exacerbation of China's problems in relation to resources and the environment in recent decades? Essentially, there are two types of driving forces: economic and political factors. The economic driving forces apply equally to China and to developed countries, these factors include rapid industrialization, urbanization and lifestyle change, along with the pursuit of a trade and export-oriented economic development path.

However, many of the political driving forces are unique to China. For example, the low prices of natural resources, heavy subsidies for fossil fuels and lax environmental regulations. These problems have many deep-rooted historical causes, for example: resources are owned by the state as public properties; prices are controlled by government rather than formed in markets; resource prices are kept low to subsidize state-owned enterprises (SOEs); and the promotion of local governors largely depends on delivering growth in GDP (often at the expense of the

FIGURE 1 The deterioration of air quality in Chinese cities



Air quality is worsening in Chinese cities and the phenomenon continues to expand geographically.

environment) (Qi et al., 2009). Although many of these issues originated after the 1978 opening and reform policy, the path-dependence effect means that even today they remain relevant in many fields. Only by understanding this background can one gain a better understanding of China's recent reforms in terms of resources and the environment.

Addressing the causes

In energy, environment and climate fields, political institutions lie at the heart of policymaking, implementation and performance. There are three tiers of the political institutions: the central government, the local government, and other stakeholders such as enterprises and societies.

Since the Chinese government is a unitary system with a strong hierarchy (Qi et al., 2009), a number of experts regard China's public policymaking in the fields of energy, the environment and climate to be an example of 'authoritarian environmentalism'. This means that public

policies tend to be led by elites within executive agencies, seeking to improve environmental outcomes with only limited public participation (BEESON, 2010). In practice, this 'command-and-control' pattern has many pitfalls (it is typically rigid and cost-inefficient), although it does have benefits in terms of effectively mobilizing the state and social actors to achieve goals set by central government (GILLEY, 2012). For example, to achieve the annual energy intensity target, the central government divides the total target into secondary ones for each province and key state-owned enterprises; these provinces and SOEs then subdivide their targets to obtain goals for counties or affiliated enterprises, and so forth.

In the energy, environment and climate fields, different institutional actors are involved. For example, in the National Climate Committee on Climate Change, there are fifteen bureaucratic units including the National Development and Reform Committee (NDRC), the Ministry of

Environment Protection (MEP), the National Energy Administration (an affiliate of the NDRC), the Ministry of Finance (MOF), etc. All of these different bureaucracies have their own ideas and objectives. For example, with regard to future carbon policy tools, the NDRC promotes the carbon emissions trading scheme because the NDRC will be in charge of it, while the MOF prefers the carbon tax because its implementation would mean it would bring in more through tax income.

The central government (composed of different bureaucratic departments) plays a decisive role in the policymaking process, while local governments (provincial, municipal, community levels, etc.) are in charge of policy implementation. However, local governments at different levels have their own interests, which may not be the same as those of central government or other higher-level authorities. There are two main reasons for this disparity. The first is that there are conflicts between the interests of local government officials and the environmental targets. For example, the government's

promotion scheme has previously prioritized GDP as the most important criterion, which means that local officials tended to increase GDP in any way possible. However, on top of this there are now environmental and energy targets within the promotion scheme, and failure to achieve these new goals damages an official's promotion prospects. Officials must therefore consider these environmental goals while still focusing on GDP (because the central government has not dropped the GDP criterion). The second reason is the institutional setting. At the central level the MEP is in charge of environmental issues, while at the provincial and county levels, the local environment agencies are subordinate to the provincial and county governments. Local environment agencies play a marginal role and usually have to adhere to the orders of local officials who often call for a relaxation of environmental regulations and for environmental agencies not to stand in the way of GDP growth. This situation is changing as the central government (MEP) is currently seeking more power for itself and more independence for local environment agencies. In 2014, in order to work towards clean air in Beijing, the MEP sent supervision teams to adjacent provinces, and the local environment agencies played a leading role in policymaking, coordination and implementation to tackle pollution.

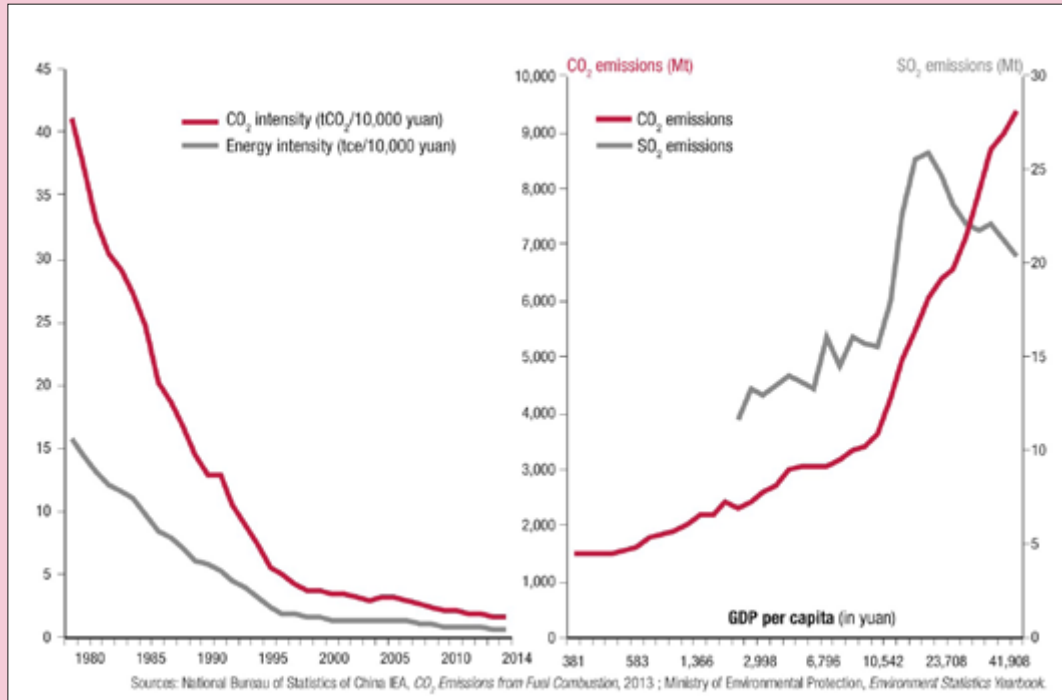
BOX 1: ECOLOGICAL CIVILIZATION

The concept of the ecological civilization was used by the former president Hu in 2005. It is now part of various policies and discussions that are ongoing in China. Ecological civilization is a new form of social civilization with a universal ethic and value; it is based on industrial civilization but with higher ambitions. Firstly, it emphasizes the equality and harmony of humans and nature, shifting away from the traditional anthropocentric view. Secondly, it calls for new production models and lifestyles, promoting a move away from traditional sources of energy and pollution-intensive modes of production towards efficient, low-carbon and recycling industries. The concept encourages the transition from extravagant, unsustainable lifestyles towards greener and healthier ways of life. The ultimate goal of the ecological civilization is to follow a path towards comprehensive human development and sustainable development in terms of society, the economy and the environment.

China's transformation to ecological civilization in the 21st century

The Chinese government has made great efforts to address the issues of energy, pollution and GHGs, and some significant achievements have been made under the broad concept of 'ecological civilization' (Box 1). During the period of China's Eleventh Five-year Guidelines (2006-2010), the country's energy intensity (energy consumption per unit of GDP) decreased by 19.1% (Figure 2) and the main pollutants (SO₂ and Chemical Oxygen Demand) decreased by over 10%. The Twelfth Five-year Guideline (2011-2015) targets include a 16% reduction in energy intensity; a decrease of between 8% and 10% of the main pollutants (including ammonia, nitrogen and NOx); an increase from 8.3% to 11.4% in the portion of primary energy consumption derived from non-fossil fuels; and a decrease in CO₂ intensity (a newly established target) of 17%.

FIGURE 2 Growth and pollution in China (1978 - 2013)



In 2014 the State Council released the *Energy Development Strategy Action Plan (2014-2020)*, which announced new goals and plans to curb coal consumption, increase natural gas supply and the use of non-fossil fuels. These targets are only a part of the 'energy revolution' that has been initiated by President Xi.

China's new Standing Committee, led by President Xi Jinping and Premier Li Keqiang, is now focusing a great deal of attention on the ecological civilization concept, with greater emphasis being placed on well designed institutions. For example, of the eleven top national security issues raised by President Xi in 2014, ecological and resource security matters are among them. Furthermore, in 2013 the third plenary session of the 18th National Congress of the Communist Party of China plans to enhance both the role of government and the market in the fields of natural resources and the environment, for example, it will build a national balance sheet of natural resource assets, establish ecological and environmental carrying capacities and

set corresponding development limits for different regions, implement ecological compensation mechanisms, gradually increase the prices of natural resources and the taxes on pollution, levy consumption tax for energy and pollution-intensive products, and replace the current pollution fee with an environment tax, etc. The market policy tools, such as the emission trading scheme is underway and will play an increasingly important role in the future.

In the new government promotion scheme, the energy performance (energy-intensity, and also the renewable energy ratio and coal-consumption quantity control) and pollutant targets (SO₂, COD, NO_x, CO₂, and probably PM_{2.5}) will be critical criteria to rein the performance of local officials. China's strategy is to initiate an 'energy revolution', to reform its environment policies and to set ambitious targets for CO₂ emissions. In this way, China hopes to speed up its transformation to an ecological civilization and to reach the downward side of the EKC as quickly as it climbed up it. ■

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The Arab Spring caused upheavals that questioned the economic development model that Arab countries had known for over two decades. Another model must be reinvented in a social and political context that continues to be unstable. The '2015 juncture' is an opportunity for these countries, but also for Europe.

Challenges of a turning point in development: Arab countries after the Spring

Arab countries have experienced major upheavals in recent years. The 'Arab Spring' swept away the incumbent powers that had been exceptionally stable for several decades and plunged several countries into civil war. Most observers agree that the origin of the current turmoil is due to failures of governance in these countries, i.e. the rejection of dictatorships (BROWNLEE, MASSOUD and REYNOLDS, 2013, pp 29-44), and geostrategic elements, i.e. the transfer of the Arab world's centre of gravity towards the Gulf countries (ALCARO and DESSI, 2013), and the increasing power of Turkey (BANK, KARADAG, 2012) and Iran (GAUSE, 2007). However, very few commentators have focused on the demographic and socio-economic changes that are part of the cause^{1,2}, although these changes are so profound that they are causing a historical rupture that will take time to reach a new equilibrium.

The year 2015 will be a turning point. All eyes will be on Tunisia, which completes its transition to democracy, but is struggling to find a new development model³ even though the problems it faces are much simpler than those in Egypt, Yemen and Syria. Furthermore, this issue of a new model of growth that could be described as inclusive, concerns even those countries that have not experienced dramatic changes.

1. Chloe Mulderig, April 2013.

2. Jahanzeb Hussein, 1 November 2013. It should be noted that the Gulf satellite channels, the various 'think tanks' and social media have played a major role in favouring the interpretation of the 'Arab Spring' as a quest for democracy and for freedom, at the expense of socio-economic ('dignity' in the language of the revolt) and geostrategic interpretations.

3. Government Presidency, Tunisia, September 2014.

Samir Aita

President of the Arab Economists Circle, Tunis, Tunisia

Models of growth challenged

THE DEMOGRAPHIC DIMENSION

The momentum of economic and social development during the period following the gaining of independence of many states has produced significant population growth. Population growth rates have increased together with the improvement of human development indicators, that reached high levels in the 1980s, to more than 3% annually for some countries. A real baby boom. These growth rates later decreased, in most cases to less than 2%. However, at the beginning of the third millennium these children of the baby boom have now reached working age. The age pyramid has profoundly changed: we are now seeing the so-called ‘youth bulge’ (AITA, 2011).

This rejuvenated Arab world, which is now in crisis, has grown to a significant size. By 2050 its population will have reached 600 million, which is roughly the size of the population of the European continent, which is in population decline. Egypt alone will exceed 120 million inhabitants; Algeria, Saudi Arabia and Iraq will each have populations similar to that of France. The Mediterranean would then border two equally populated worlds. A situation that has not occurred for a long time in human history. But today there are marked differences in resources and living standards.

Some demographers (COURBAGE Y., TODD E., 2007) emphasize the demographic transition to explain the current political upheaval. But it is more at the level of the social transformations that are accompanying the ‘wave of youth’ that we should try to understand the issues and long-term developments (MIRKIN, 2013). The importance of the demographics fuels the thesis of the ‘civilization clash’ (LEWIS, 1993; HUNTINGTON, 1993), the demographic transition leads to a turning towards democracy (FILIU, 2011), and the ‘wave of youth’ stimulates the need for a new development model (AMIN, 1980) and a new social contract (AITA, 2011).

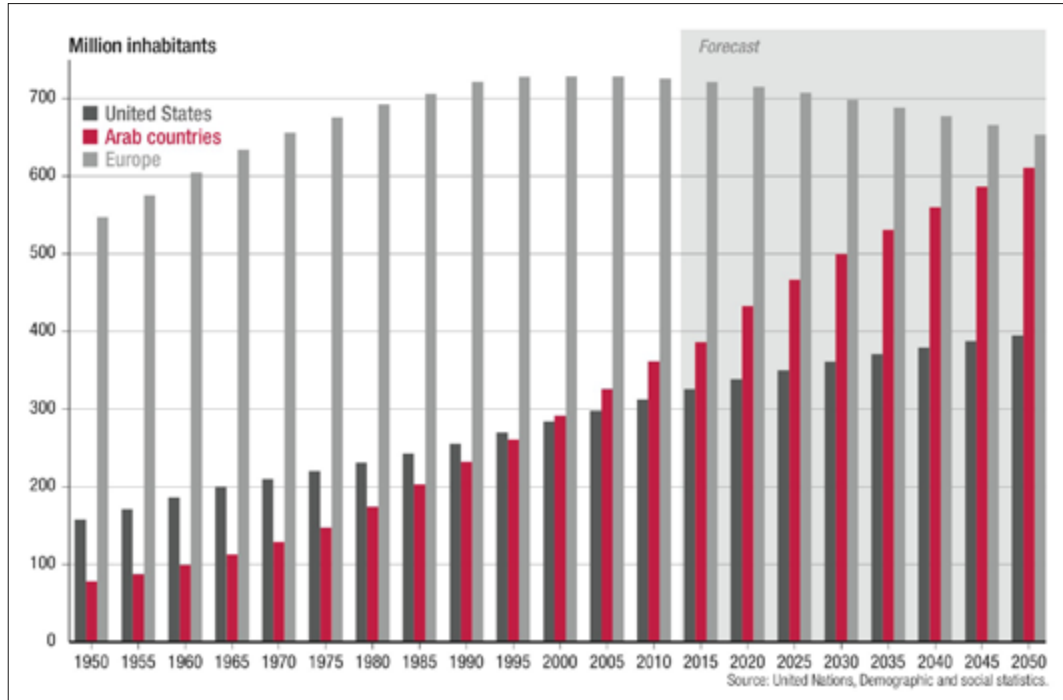
THE RURAL-URBAN MIGRATION

The first period of independence brought electricity and telephony to rural areas, and especially education and the improvement of health and hygiene conditions. Also, land reforms were made, even in countries that had not adopted ‘socialist’ development models. These improvements had positive effects on the rural population, but could not be maintained over the long term.

Families that gained ownership of land increased in size two generations later. The income derived from the land became no longer sufficient to support the descendants, who were even more numerous as rural areas had experienced the highest population growth rates. Furthermore, the models of development and land use gave insufficient attention to the creation of alternative economic activities on this land; and it is essentially the centres of large cities that have experienced the most sustained economic growth. The rural exodus towards big cities therefore began, firstly seasonal and circular migration by men to find work, and later more permanent movement towards the outer suburbs of small and medium-sized cities (AITA, 2009).

The rural exodus accelerated in the 1990s after the fall of the Berlin Wall, due to the entry of Arab countries into globalization and the adoption of neo-liberal

FIGURE 1 A young and growing population



Since independence the Arab world has experienced major population growth that has led to a catching up in populations between the two sides of the Mediterranean. The economic context however remains very different.

agricultural production modes. And it is through access to water for irrigation, a scarce resource in this part of the world, that the greatest transformations have taken place. The management and control of water resources have been gradually abandoned by states. The former large landowners and stakeholders with the means to invest in irrigation networks, in deep drilling and pumping, seized control of the industry. They therefore industrialized agricultural production. Smallholders lost their access to water resources and the title deeds of land could only be used to negotiate agricultural tenancies with unfavourable conditions.

In human history it was in these lands that the very concept of state was born, in Mesopotamia, from the need to organize irrigation for agricultural production and the livelihoods of its people. However, the modern Arab state has started, as in Africa, to offer large tracts of land for farming to large companies that come mainly from the Gulf region.

Thus, during the last two decades it is the agricultural sector that has become the economic activity that has undergone the most dramatic productivity jump in Arab countries. Meanwhile, peasant populations have been consigned to poverty, forcing them to migrate in huge numbers to the suburbs of large cities and to small

and medium-sized towns that have experienced rapid and informal urbanization. Within twenty years the populations of some of these urban areas have increased from 2,000 to more than 200,000 inhabitants, the majority being young people.

With this rural-urban migration, the wave of youth has become a 'tsunami of young people' in some places, changing socio-economic data and causing significant challenges ranging from education to employment and urban planning, but also to ideological radicalization (KHASHAN, 2010, pp 7-18).

These issues of rural-urban migration, their socio-economic rationale, and their impact have received little attention in the debate on the ongoing transformations in the Arab world.

THE ISSUE OF INTER-REGIONAL MIGRATION

To these rural-urban migrations must be added other migratory phenomena, each having an impact on the transformations in progress.

First, there is internal migration caused by war. For example, during the civil war in the 1990s, one million Algerian citizens were displaced, which is about 3% of its population. A decade earlier, Lebanon had undergone an even more significant phenomenon during its own civil war. While Palestine and Syria suffered in similar ways following the 1967 war. Most recently, Syria is experiencing a huge scale internal displacement of its population, again due to civil war. Half of the country's total population is affected.

In addition, several Arab countries have welcomed the refugees in large numbers. Initially there were two waves of Palestinian refugees that fled the Israeli invasions in 1948 and 1967, and who settled in Jordan, Lebanon, Syria and elsewhere. They now form a significant proportion of the population of these countries, up to one third for Jordan. The second major wave was that of Iraqi refugees to Syria and Jordan after the US invasion and the civil war that followed. At one point, they made up 10% of the populations of the countries concerned. Subsequently, there has been a further flow of refugees following the Arab Spring upheavals: two million Libyans in Tunisia (20% of the population); two million Syrian refugees in Lebanon (30% of the population); and a million and a half in Jordan (25%). These inward migrations, which are huge in scale, result in shocks to societies and economies of the countries affected. Moreover, these migratory flows are much greater than those towards Europe, which raise public policy and even identity problems for European societies.

In addition, Arab countries are experiencing significant outward migration. Since independence, these migrations are mainly a result of economic causes, those from the Maghreb (North Africa) flow towards Europe; while those from the Mashriq (Arab Middle East) head into the Gulf. Twelve million first generation immigrants were divided between these two major destinations. These immigrants make a major contribution to the economic balance of their country of origin. Their financial transfers are much higher than the flow of foreign direct investment (FDI), making up a significant proportion of the gross domestic product, up to 20% for Lebanon.

They constitute an important ‘socio-economic safety net’, especially for the most disadvantaged populations.

Outgoing immigration has remained significant in recent years, despite draconian restrictions by Europe and the Gulf countries. It is estimated that of all the new entrants onto the labour markets of Arab Mediterranean countries, 15% emigrate each year. The phenomenon has even taken on a dramatic dimension with the Arab Spring upheavals. Everyday, the ‘boats of death’ scatter hundreds of immigrants onto the north Mediterranean coast, without any public policies in southern coast countries that can really do much to stop this happening in the medium term.

To all this must be added the seasonal or circular cross-border migrations and the passage of African migrants through Arab countries.

Some of these migrations have therefore become structural, and others cause major shocks. They represent major challenges for public policy in the countries concerned.

Some aspects of these migrations are the subjects of intense debate. First, there is the attention given to Palestinian refugees, especially as the UN specialized agency (UNRWA) that supports these people is no longer able to deal with the totality of their growing needs, especially since they lack social rights in many countries. Also, in Europe, the focus is on cross-Mediterranean migration, leading to public policies of ‘cooperation’ that limit migration and which tend to erode with current events (LENART, 2012). This aspect has become one of the most sensitive issues in the internal political debates in European countries, where civil society organizations call for an opening of borders in response to the humanitarian catastrophe in the South, while politicians react to the extreme right and budgetary difficulties by calling for border closures. Migration will cause long-term damage to the Euro-Mediterranean ‘partnership’ (EYLEMER and SEMSIT, 2007). It contributes to the radicalization of the South, especially since Southern countries themselves have to support migratory waves of an unprecedented magnitude.

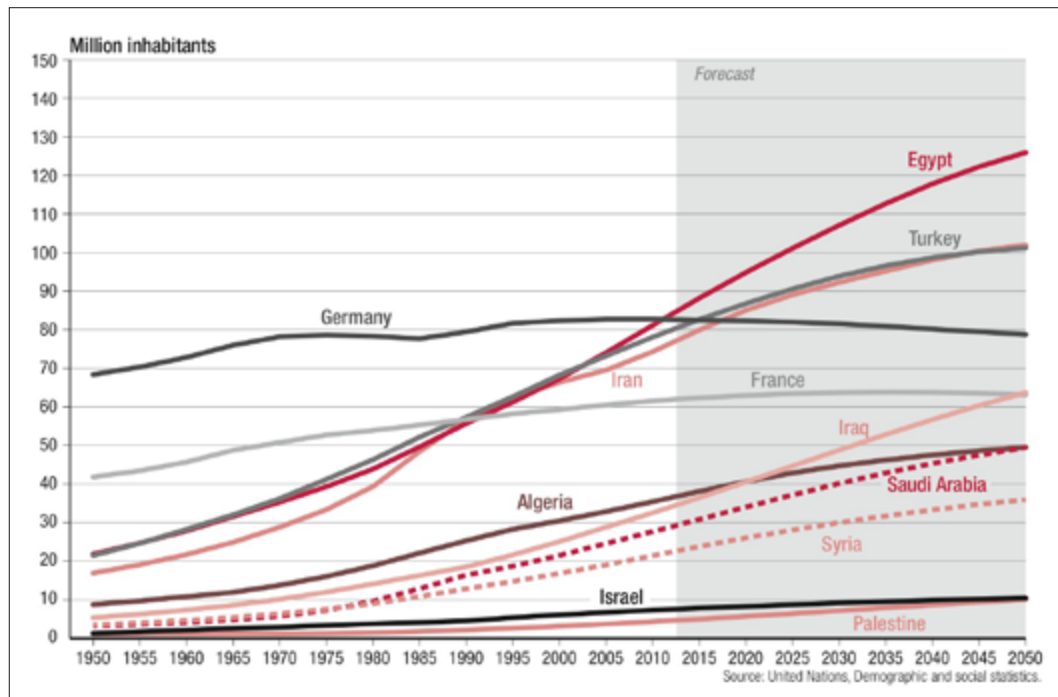
Employment, particularly among young people

With the arrival of the ‘wave of young people’, the share of the population of working age has increased dramatically, from around 50% in the 1950s to around 70% at the turn of the millennium. This has resulted in a significant growth rate of the labour force, between 3% and 4% per year (CHAOU, 2013). These rates are even higher if we consider participation in non-farm work, because of the massive abandonment of agricultural labour. This growth would be even greater still if the participation of women increased significantly, as in Arab countries it is currently one of the lowest in the world (AITA, 2008).

However, the rate of job creation has been low in these countries, generally between 1% and 2% annually, and therefore largely insufficient to absorb the demand for work. Average unemployment rates are high, and those of young people and women even more so: more than 20% for the former and around 50% for the latter.

Their situation is even more severe than this depiction and cannot be understood only through the measurement of the unemployment rate obtained through surveys

FIGURE 2 **Tomorrow's demographic challenges**



The Mediterranean will in future be dominated by demographic heavyweights (Egypt, Iran and Turkey). This evolution means that equivalent economic development is crucial.

(because people who work at least one hour during the week preceding the survey are considered as non-unemployed, according to the definition adopted by the International Labour Organization). Indeed, most of the new jobs created are informal, whether self-employment or non-contractual employed labour. Thus, if we exclude those in administration employment (the public sector generally constitutes between a quarter and one third of total employment), and those in agriculture, informal employment represents a large majority, up to 70% of the total.

For example, between 2000 and 2007 in Syria, around 300,000 newcomers entered the labour market, which had a total workforce of five million people. Economic growth, although estimated to be between 4% and 5% per year, has only created 105,000 jobs per year (90,000 for men and 15,000 for women). In reality, much fewer jobs were created since there was simultaneously an annual loss of 25,000 agricultural jobs for men and 44,000 jobs for women. Among the employment generated, there were only 8,000 formal jobs per year. These figures show the seriousness of the situation that led to the Arab Spring, regardless of any political considerations.

The concept of employment is thereby called into question (KADRI, 2012), in particular in relation to salaried employment, since most informal jobs are in the

self-employment sector. It is in this context that we must remember that Mohamed Bouazizi, who set himself on fire in December 2010, triggering the Tunisian ‘revolution’, was not regarded as unemployed in statistical surveys. Coming from a family who had to stop working on the land, this young Tunisian, aged just 27, was self-employed as a street vendor of fruits and vegetables in a small provincial town, Sidi Bouzid.

It is young people like him that took to the streets to ignite the Arab Spring. It is also these young people that took up arms in Syria, Yemen and Libya, thus finding a means of remuneration from the war economy or external funding. The outcome of the upheavals that are currently underway in Arab countries will largely depend on the outlook that they can hope for, particularly the economic prospects. This is the case not only in countries where the war took hold, but also where the transition was made in a less destructive way. Indeed, young Tunisians of Sidi Bouzid live today, three years after the ‘revolution’, in an economic and social situation that is much worse than before.

It must be remembered that extremist organizations, which have led to, among other things, the creation of the ‘Islamic State’, have taken root within a young population that has been abandoned and left idle in the countryside and suburbs; and not only in Iraq, Syria and Yemen, but also in Tunisia, which has ‘exported’ the largest contingent of jihadists. This leads to the current debate on how to combat jihadism: through war or development?

The issue of education

Since the 1990s, all Mediterranean Arab countries had launched structural adjustment policies, that aimed to control public spending. The education sector has suffered directly, undergoing major budget cuts.

Indeed, there has been a lively debate on education spending (WORLD BANK, 2008), especially regarding some of the most educated groups, which have high unemployment rates. Someone like Bourguiba would have replied: ‘It is better to have educated unemployed people rather than non-educated unemployed people.’ But there were strong arguments among the leaders of modernization regarding the value of investing in education when the best-educated people emigrate abroad (Lebanon is a typical example of this situation) and where unemployment is more prevalent amongst better-trained people. There was often a focus on the inadequacy of the education system to address the needs of the labour market and on ‘vocational training’ (GALAL and KANAAN, 2010).

However, the debate was partly misguided. It was based on global comparisons, without taking the two aspects of the ‘youth tsunami’ into account. The stagnation of the total of investment expenditure at a time when the number of young people increased dramatically has had serious consequences. The wealthiest turned to private education, and the middle classes to private courses; all to the detriment of the most disadvantaged.

Moreover, the education system has struggled to follow the social transformations: there has been a lack of new schools in response to demographic developments and

rural-urban migration; and of new universities in smaller towns where the populations have increased; and insufficient modernization of education based on new technologies, etc.

The mismatch between training and the labour market must also be balanced by the major gap that has been created between the supply and demand of jobs, regardless of the level of training. Also, labour has to be a real market, because there is a severe lack of institutions that govern mechanisms. Jobs are found mostly through networks of friends and family, without any connection to educational structures.

In this era of the 'youth tsunami', the challenges of education are therefore acute in all Arab countries. They are even dramatic in Syria, Yemen and Libya where war has led to a mass exodus of young people away from education.

THE ISSUE OF THE PARTICIPATION OF WOMEN

While the human potential represented by the youth of the population struggles to find expression in terms of economic development, the situation is even more serious for the potential of women.

It has often been argued that cultural considerations, particularly those related to Islam, explain the low participation of women in the labour market in Arab countries. At around only 20%, this rate is the lowest in the world. However, this interpretation has been challenged (ARTA, 2009) by the observation that participation rates are higher in other Muslim countries, and that the low rates were in particular due to rural-urban migration. Women work in the fields, especially when men are engaged in seasonal or circular migration, and it is not until they eventually migrate to the crowded suburbs and cities on a permanent basis that they no longer engage in economic activity. And it has often been observed that women have a greater propensity than men to choose administrative and public sector work. These sectors account for a large proportion of new job opportunities for young women, especially educated ones – up to 50% in some countries – although they are rare because of budget restrictions.

Also, the average age of those getting married for the first time has increased to 28 in some countries. This points towards the fact that young women are being discouraged from working due to a lack of employment opportunities and non-compliance with labour rights.

URBANISM AND LAND-USE PLANNING

These major demographic and social changes have had a significant impact on the development of cities and territories. New migrants have crowded themselves into the peripheries of major cities in informal settlements that are becoming increasingly numerous. It has not been possible for public utilities (water supply, wastewater collection, electricity, telephone, etc.) to keep pace with the growth in construction, which is often illegal and lacks any master plan; giving rise to real slums. For example there are now twelve million people living in Cairo; around six million in Baghdad, Khartoum and Riyadh; three million in Sana'a in Yemen, where the

population is growing at 5% annually (!). Even cities like Hama (Syria), Marrakech (Morocco), Medina (Saudi Arabia), Dubai (United Arab Emirates) already exceed one million inhabitants.

The management of urban cities as places of social and economic life has thus become a major issue (UN HABITAT, 2012). It is noteworthy that the first Euro-Mediterranean cooperation project, launched in the framework of the Union for the Mediterranean, is a wastewater treatment project in Cairo, which is an issue that concerns the city's municipality. Of course, the main impact of this project is on public health; but all other social and economic development matters are contained within the issue of urban and land-use planning.

The Arab Spring has highlighted these issues. The Tunisian, Egyptian and Yemeni revolutions originated in the urban peripheries, which marched to occupy the public squares in the hearts of their capitals. The Battle of Aleppo that was waged by insurgents, was a military conquest of disenfranchised youth from satellite towns and disadvantaged districts against the metropolis of the middle and upper-classes. Conversely, the turmoil in Libya has seen a particularism of cities, reviving the models of the city-states of antiquity. Some trends in national identity have also awakened in Yemen, as well as in Kurdish-majority regions of Syria, raising the issue, just like in Iraq after the US invasion, of the internal cohesion of the Arab states derived after independence.

The development model of the past fifty years is highly centralized. The heart of economic growth is in the capital cities, along with two or three smaller cities. The centre is globalized. The few industries are located in the surrounding area, and water and energy is brought there at great cost and at subsidized prices. And as this is the only place of employment creation, it is the centre which attracts migration. Satellite cities begin to grow in its vicinity, as property in the centre is essentially a primary source of economic rent. But these satellite cities are rarely served by efficient public transportation, and utilities are often failing. The regional transportation infrastructure puts a heavy emphasis on the car; this infrastructure starts from the centre and spreads out in a star-shaped arrangement. This excessive centralization is not sustainable: rampant pollution, car traffic congestion, power cuts and shortages of drinking water, etc. Moreover, it is contrary to the social history of these countries, which were built in the image of Italy or Germany: a set of city-states, each with its economic specialization and identity particularism. Social cohesion of the centre has been shaken up by recent events.

The typical example is Lebanon, a small country with a dense population. All development has been concentrated in Beirut. Going to Tripoli, the country's second largest city, is a real adventure that first involves the negotiation of huge traffic jams to get out of the big metropolis. There is no public transport between the two cities. The development of Tripoli has been neglected; its city centre is the place of religious irredentism, while that of Beirut offers the image of a globalized Dubai.

Escaping from this economic blockage, resulting from waste and inefficiency, and from the social one, that creates chronic instability, is a real dilemma. Should

we invest primarily in urban transit networks in large cities or create efficient inter-regional transport networks linking not only the satellite towns to cities, but also these satellite towns to each other? How can we move from a highly centralized, but failing, mode of governance to one that is more cooperative and empowers local communities to define their own priorities? How can we develop regional production of goods and services to reduce inequalities that exist primarily between the centres and the peripheries of each country? How can decentralization, which is necessary today, be made to function, while keeping unity within each country?

These dilemmas are felt more acutely in the current turmoil. The transition period in Egypt and Tunisia has seen an explosion of informal constructions. In the advent of peace, should the half of the Syrian population that was displaced by the civil war reintegrate into the same suburbs and informal cities that have been destroyed?

Changing the development model

The upheavals of the Arab Spring have questioned the model of economic development that Arab countries have experienced, especially over the last two decades. Another model must be reinvented in a social and political context that is unstable over the long term.

The first priority today is certainly to find ‘decent jobs’, possibly with training, for the millions of young men and women that arrive each year on the job market. Without this, no political stability can be expected in the medium term, and the flow of refugees will continue to pour from boats onto the north shore of the Mediterranean. Everyone agrees on this priority, but not on the policies needed to achieve this objective.

The case of Tunisia is exemplary in this regard, because the issues are less acute here. The three years following the revolution were marked by a deterioration of the economic and therefore social situation. Private investment has stagnated. As for public policies, during the transition they have continued, for the most part, to address an old systemic problem: how can public spending be reduced in terms of subsidies for essential commodities, including petroleum products, in order to free up resources for public investment policy? This focus on a reform that is difficult to achieve in times of economic recession, has diverted attention away from other issues that would have enabled governments to have a margin of intervention. Thus, rentier sectors that had allowed the previous authorities to maintain their power have not been truly reformed. By this we essentially mean the telecommunications and real estate sectors. Moreover, Tunisian banks are in trouble, burdened by non-performing debts, to the tourism sector in particular. These debts, and the banking sector as a whole, must be restructured to free up resources for financial intermediation for both the private and public sectors. However, these two issues are determined by political economy considerations, which were difficult to address in the context of negotiations on the new constitution and democratic processes. Nevertheless, the focus on subsidies is particularly controversial, especially in the absence of economic tactics, even opportunistic ones, to take advantage of ‘opportunities’

created by other Arab upheavals, for example by taking into account the fact that Tunisia has become a refugee country for Libyans and their funds.

There was little outside assistance for the transition process. European countries, while recognizing the importance of the need for a successful democratic transition in Tunisia, have not been magnanimous. It is true that the Tunisian upheaval has taken place in a period of economic crisis in Europe. But making a difference in Tunisia would have had a much lower cost than the provision of assistance to the democratic transition in Spain and Portugal, or lower than the cost of the current support for such a transition in Ukraine. Clearly, Europe still looks eastwards, instead of worrying about its southern Mediterranean borders. The US and Japan have provided some support, notably through loans to the Central Bank. While the assistance from Gulf countries has remained low.

Assuming that the means exist, which public policy should be designed to address the first priority of youth employment? The case of the Spanish transition to democracy can be an example. Two major axes were its pillars: land-use planning through large infrastructure projects and the reform of local governance, allowing for more effective decentralization. These pillars must be priorities for future development.

Land-use planning could enable the better integration of the population and economic production (inclusive development) by facilitating the geographical mobility of employment and capital within each country. Neighbourhoods and informal cities must become true living spaces, or more organized living spaces must be developed. But this major project cannot be developed today in a highly centralized way, as has been done since independence. It can only be negotiated and realized in discussion and partnership with local societies and actors, who must build their own local governance structures and put forward their priorities. This is one of the main missing links in the development model that has followed independence.

But the development of decentralization is not easy in times of social and political turmoil. In Libya, Syria and Yemen, separatist tendencies are emerging, as well as movements to eradicate borders. Decentralization can only be carried out by a stable central government, based on a real social consensus, ensuring the cohesion of the country through the physical links of the infrastructure.

Thus, the decentralization reform has been established in Tunisia's new constitution. However, this reform has to wait for the end of the political negotiations in Tunis, the capital. The land-use planning scheme also awaits the stabilization of state institutions and... financial resources.

Finally, there is little chance that all this could be implemented without a regional integration perspective that is stabilizing and mutually beneficial. However, the Arab integration schemes, or even those of sub-regional cohesion (such as the Arab Maghreb Union) are more blocked than ever. Furthermore, differentiation is widening between the oil countries of the Gulf Cooperation Council (that are fairly well integrated) and other countries that are much more populated and suffer with employment and development problems. In the region it is as if capital and labour

had been separated. New modes should be designed to encourage these elements to be brought together again.

Integration should be rethought between the two sides of the Mediterranean. Europe has a vital interest in a return to stability of the southern Mediterranean coast. However, in nineteen years of the Euro-Mediterranean partnership, there has been little effort dedicated to the labour market. And it is clear that those who have focused on institutional reforms are now suffering the after-effects of the Spring. The so-called 'neighbourhood' policy must be rethought because Arab and European Mediterranean countries are not only neighbours but share a common history. A dimension must be integrated that fosters sub-regional cooperation in the South, and partnership between regions in different countries. Indeed, Europe is also a Europe of the regions of the countries that constitute it. And it is in this context that we should consider structural funds that would help decentralization in conjunction with land-use planning. Also, in the same perspective, Europe should merge its 'partnerships' between Gulf Arab countries and the others.

The Arab countries are today living through a turning point in their history and development. This turning point is materialized by an unprecedented crisis, which has not yet seen its full development. But it also presents an opportunity, for Europe as well. The gap cannot widen further across the Mediterranean, nor between the Mediterranean and the Gulf. ■

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Russia's search for a new growth model

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Sustainable development of the Russian economy should be viewed in the context of finding a new growth model, based on knowledge and technologies. The current raw materials export-led growth has exhausted its potential and cannot address the social and environmental challenges of long-term development. Addressing climate change risks is essential for long-run sustainability, and consistent with the transition to development based on innovation.

Evolution of a model based on the export of natural resources

The resource-based character of Russian economic growth has been dominant for the last two centuries.¹ Tsarist Russia, until the 1917 revolution, was a large exporter of grain, seeking rent from an abundance of land resources and cheap labour. The entire economic development of Russia during the twentieth century relied upon the exploitation of cheap resources for the purposes of modernization. During the first half of the century, the main cheap resources were the labour of collective farmers and forced labour; during the second half of the century, new resources were discovered – the energy commodities of oil and gas.

The demand for reforms grew with the exhaustion of resources. In the 1960s, the former agricultural power became a net importer of food, which pushed forward economic reforms. However, as the USSR started to export oil and gas in the 1970s, the revenues helped to make up for a shortage in the domestic production of food and consumer goods through imports, while there were also

unsuccessful attempts at modernization. During this period economic reforms initially receded, to be reintroduced by the end of the 1980s alongside a fall in oil prices, but this was too late to prevent the economy from collapsing and the political system from radical, revolutionary transformation.

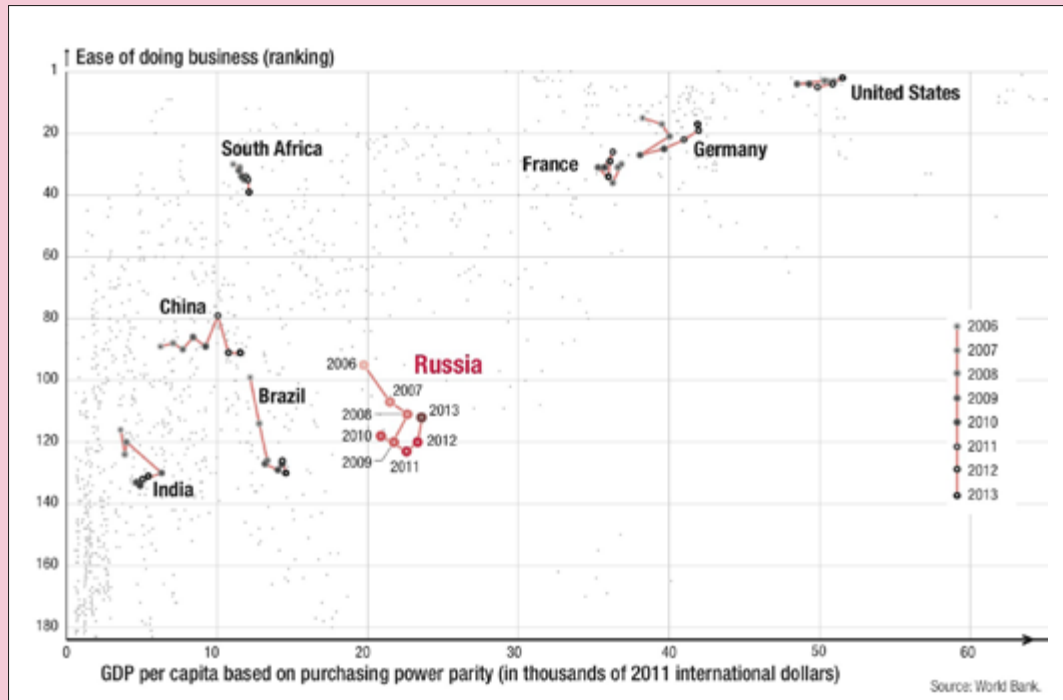
The 1990s were years of deep institutional changes (sometimes defined as liberal reforms), during which revenues from the export of oil were not very high, though played a sizeable role. On the one hand, the inflow of foreign currency helped with the supply of consumer goods, reducing social tensions. On the other, imports were increasing competitive pressure while the appreciation of the rouble undermined the already weak position of domestic producers, which contributed to a deep drop in output. The dependence on the export of raw materials exposed the economy to external shocks, such as the plummeting oil prices in 1997, which triggered the large-scale economic crisis of 1998.

Russia started the twenty-first century with a rapid economic recovery, backed up by several factors.² The first of these was that following years of dramatic transformational slowdown, Russia had a great amount of unused productive capacity that could now be put back into production. Second, the reforms that had been implemented formed a platform for new businesses. Third, the five-fold nominal devaluation of the rouble raised a barrier against imports, increasing the competitiveness of domestic production. These positive aspects in terms of economic recovery and growth factors were accompanied

1. See Gaidar (2012).

2. See Entov, Lugovoy (2013) for analysis of economic growth factors in Russia after 1998, including recovery component and oil prices.

FIGURE 1 Russian business



The attractiveness of Russia as a country for doing business with remains average, in comparison to the rest of the world. While there has been some slight improvement, it has recently deteriorated again.

by soaring oil prices, resulting in almost a decade of notable growth rates from 4% to 8%.

It is symptomatic that during the decade of impressive growth, the modernization of production facilities was quite modest, with the exception of some export-oriented industries and non-tradables. The share of investment in GDP remained at a fairly low level, with the relatively small amount of private investment being offset by public investment made possible by increased revenues from oil and gas export.

The negative aspects of a booming resource sector are well established.³ Known as the 'resource curse', the idea is that initial windfall gains and short-term revenue growth are accompanied by: a slowing down of long-term economic growth due to a higher share of consumption;

services with a relatively lower productivity growth potential; an appreciation of the national currency which compromises the competitiveness of domestic tradables production; delay or even deterioration in terms of institutional development; inflation in public spending; inefficient public administration; rent-seeking behaviour; high macro-economic risks; and a vulnerability to external shocks since the authorities lack control. The Russian economy has exhibited all of these effects, surging until 2008 when the global financial crisis peaked, world recession began and oil prices fell.

As Russia experienced the limits to its transformational growth, along with falling oil prices and economic stagnation, it became increasingly evident that the natural resource export-led model of growth was no longer viable. At the turn of 2010-2011 President Vladimir Putin called on the expert community to devise alternative strategies

3. See Auty (1993), Sachs and Warner (1995).

for the period up to 2020 since it had become clear that 'The Conception for Long-term Economic Development'⁴ (the Concept), formerly adopted in 2008, did not meet the challenges that the economy faced during the crisis.

Modernization of the Russian economy: issues and priorities

Unlike the ministry-developed 2008 Concept which, rather than being a guide for action was a set of indicators and targets for different growth scenarios, the so-called 'Strategy'⁵ was developed in 2013 by a wide range of experts and established a blueprint for the required reforms. It aims to form a basis for new sources of long-term growth and sustainable development up to 2020 and beyond.

The Strategy gives priority to qualitative rather than quantitative growth and acknowledges that the economy can no longer rely on the export of raw materials, the further expansion of which would not only create instability but would also foster technological and institutional backwardness. Instead, the Strategy's new growth model for Russia aims to stimulate supply by improving the business environment and promoting investment in R&D and human capital.

The major barrier to Russia's future development is the low quality of its economic institutions. During the first decade of the 2000s the country has undergone remarkable change: GDP grew by a factor of 1.7 and private disposable income increased by a factor of 2.3; however, the quality of institutions did not improve and by some indicators even deteriorated (see Figure 1). These circumstances can lead to the 'middle-income trap'⁶, which is where labour costs reach the level of middle-income countries, while the level of institutional development remains similar to that of low-income countries. As a consequence, an economy loses out through competition for investment to both middle and low-income countries. Moreover, insufficient domestic demand for skilled labour

leads to a 'brain drain' and the relocation of high-tech companies and profit-centres to other countries.⁷

The development of institutions and human capital must be prioritized in the transition to a new growth model, which also requires a more intensive and efficient utilization of resources. Energy efficiency and the environment should also be given prominence in economic policy since they can become a tool to stimulate innovations, health improvements and living standards. This approach will yield a 'double dividend', i.e. the simultaneous solution to socioeconomic and ecological problems.⁸ The policy should create economic incentives for 'green growth', such as the taxation of ecologically harmful products and fuels, the fixing of quotas, prohibition of the import of obsolete technology, and support for energy-conservation programmes, energy efficiency and the development of renewable energy. Environmental constraints, coupled with a high-quality, competitive institutional environment will create incentives for innovative solutions.

Another feature of Russia's growth during the 2000s was the slow growth of energy demand and CO₂ emissions. Official and independent forecasts anticipated a significant growth in the consumption of primary and secondary energy. Whereas a doubling of GDP over the period 1999-2012 was in fact only accompanied by a 30% increase in primary energy consumption and electricity demand.⁹ This decoupling of economic growth and energy consumption was due to changes in the economic structure, particularly a reduction in the share of energy-intensive industries, and also to the significant energy saving potential that began to be unlocked.¹⁰ Many opportunities for energy savings had, until then, remained mostly untapped due to institutional problems: a high level of investment risk, the low quality of the institutional environment, short-term planning horizons, and the inefficient organizational structure of some sectors of the economy (for example, the lack of incentives for energy-saving in the housing utilities services).

4. http://economy.gov.ru/minec/activity/sections/strategic_planning/concept/ (in Russian).

5. See Mau, Kuzminov (2013).

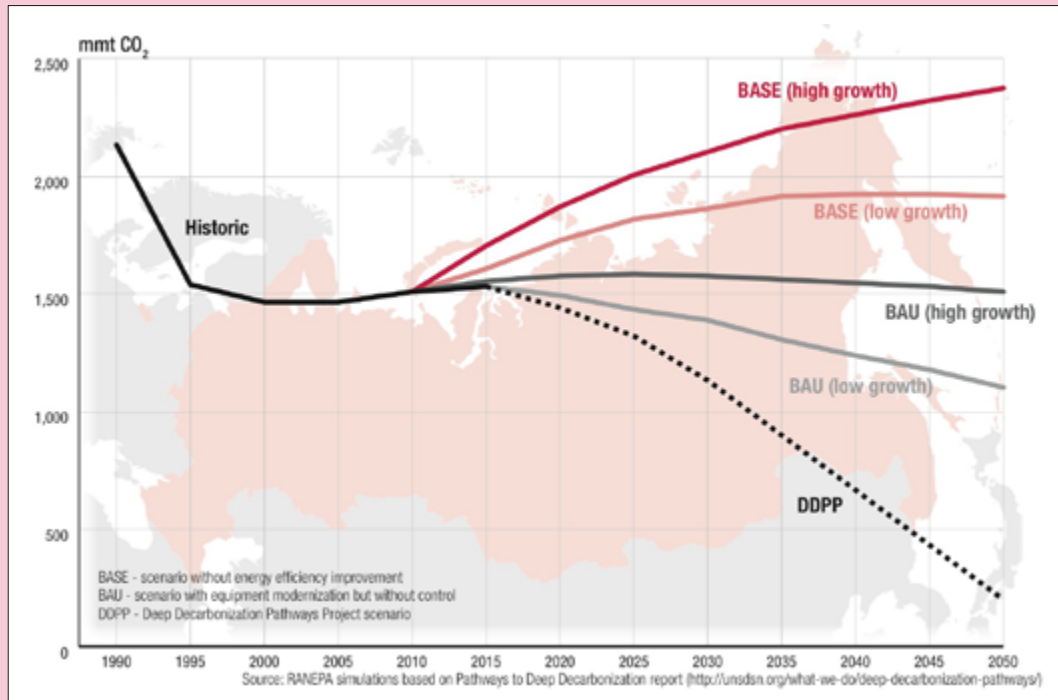
6. See Gill et al. (2007), Eichengreen et al. (2011, 2013), and Mau (2012, 2013) relating to the Russian economy

7. For further discussion see Mau (2013, 2014).

8. This idea is discussed in details in D.W. Jorgenson et al. (2013), *Double Dividend: Environmental Taxes and Fiscal Reform in the United States*.

9. Energy Balances of Non-OECD Countries, IEA, 2014

10. See f.e. Sargsyan, Gorbatenko (2008).

FIGURE 2 Reducing CO₂ emissions: an environmental and economic objective

Russia has a real potential to reduce its CO₂ emissions. Moreover, improving its energy efficiency and modernizing its production facilities would be beneficial for the whole economy.

In future, growth in energy demand and greenhouse gas emissions will be determined by the nature of economic growth and the resolution of institutional problems. A number of forecasts¹¹ suggest that significant growth should not be expected, even in the case of the extensive nature of economic growth. The natural renewal of obsolete equipment would provide significant energy savings even in energy-intensive industry. International experience over the last decades provides real-world evidence that energy and ecological constraints do not constitute a serious obstacle to development, but rather encourage innovations that stimulate development.

Energy prices and a climate change agreement: triggers of change?

As Russia approaches 2015 it is entangled in a number of deep and unresolved problems that are holding back the transition to a new growth model. The growing awareness of the necessity for institutional and technological modernization has not yet resulted in real action. In fact, the priority remains the resource-led development model and the selection of a number of 'favourite' industries and companies, rather than shifting the focus on to the development of a high-quality business environment.

The current state of the economy is reminiscent of the late 1980s with low oil prices, economic slowdown and high macroeconomic risks. As history suggests, economic reforms are largely dependent upon conditions in the international energy markets. The most likely scenario favouring modernization and innovation would involve low prices for

11. Alternative forecasts of Russian GHG emissions up to 2050 are summarized at Bashmakov (2014).

primary energy resources. The current decline in oil prices might be another such trigger.

Another factor that could facilitate a transition is the adoption of a new international agreement on climate change commitments, to succeed the Kyoto Protocol. The EU, the US, China and a number of other countries have already pledged to make major efforts towards the mitigation of greenhouse gas emissions. While the Kyoto agreement may once have been seen as a burden that limits economic growth, today many countries consider carbon emission reduction targets as an opportunity for modernization and innovation. The Russian Federation has declared that it will limit greenhouse gas emissions to 75% of the 1990 level by 2020, with a stabilization of energy consumption of between 70% and 75% by 2030.¹² This certainly represents a positive step towards the decarbonization of the economy, although it remains a net increase since current emissions are about 35% less than the 1990 level.

Russia has significant potential to reduce greenhouse gas emissions (see Figure 2), particularly through improvement in energy efficiency and the upgrading of equipment (shown by the difference between the BAU and BASE scenarios in Figure 2). Furthermore, Russian business is fully aware of the risks of doing nothing and the government must take the necessary steps to minimize risks and to allow the country to benefit from taking early action. The significant potential of renewable energy, including tidal, geothermal, hydro and bioenergy, will not be developed without appropriate regulation and international cooperation. Capitalizing on this potential is consistent with the transition to the new long term and sustainable path of growth.

The adoption of real measures for limiting greenhouse gas emissions, and participation in new international agreements could greatly strengthen Russia's position in global competition for investment, provide incentives for modernization, and unlock opportunities for cooperation in clean energy. ■

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12. <http://eng.state.kremlin.ru/face/23006>

In response to international agreements and the influence of environmental movements, Brazil has implemented measures to protect the Amazon rainforest including the regulation of logging and the pursuit of a ‘sustainable agricultural growth model’. This chapter examines whether Brazil is now on a pathway to sustainable development.

The future of the Brazilian model of ‘sustainable agricultural growth’

Strong ruptures have marked the Brazilian model of agricultural development since independence. Sustainability has been a salient issue, especially since the Rio Earth Summit in 1992. For over twenty years, significant progress has been made on the environmental and social agendas. The significant decline in deforestation rates, the development of a diversified energy matrix, and the sharp decline in poverty rates are all undeniable achievements of public and private actors. However, do these advances allow one to say that Brazil is on the path of ‘sustainability’? Moreover, what does sustainable mean?

To provide some answers to these questions, we initially trace the major changes in the Brazilian development model. Then we discuss how Brazil took up the thorny issue of Amazon deforestation, through effective public action. In a third step, we analyse the consequences of the model of ‘sustainable agro-industrial growth’ implemented by Brazil, highlighting some key challenges it will have to face. We then show that this model cannot be taken for granted. Its ‘success’ is conditioned by tensions existing at the national level, between socio-environmental forces and the ‘ruralists’ who are pushing to develop Brazilian agribusiness; and at the international level between the Brazilian government and developed countries. Finally, we conclude by pointing out the limitations of this model and the transformations that seem necessary if Brazilian agriculture is to commit to the path of sustainable development.

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Colonizing and developing the Amazon in the 20th century

Historically, agricultural development in Brazil has been largely based on policies aimed at occupying sparsely populated areas and promoting the exploitation of their rich natural resources. From the late 1930s, the ‘march to the west’ was the guideline of the Getulio Vargas government, leading to the boom in rubber cultivation in the Amazon. But it was really from the mid-1960s, under President Kubitschek that this strong desire to promote the settlement of the Brazilian backlands has materialized, the most striking symbol being the creation of the capital Brasília in the heart of the Cerrado.

Before the 1960s, the Brazilian Amazon was relatively well protected because of its isolation. The settlement of this vast inaccessible territory, which represents 40% of Brazil, was underdeveloped, and logging and agriculture was limited to the immediate vicinity of waterways. The project to colonize and develop the North, especially to consolidate Brazilian sovereignty over that territory led the government to implement a comprehensive plan for infrastructure construction. In 1958, the launch of the construction of the road connecting the port city of Belém to the new capital, Brasília, and that connecting Cuiabá, Porto Velho and Rio Branco in the Southern Amazon, as well as the construction of hydroelectric dams and finally the construction of regional airports, has gradually had the effect of opening up the Amazon forest area (KIRBY et al., 2006).

From the mid-1960s, the military government’s efforts to occupy the Amazon rainforest primarily for geostrategic reasons – an objective that was encapsulated by the famous slogan *‘Integrar para não entregar’* (integrate not to surrender) (DE MELLO and THERY, 2003) – took place through the deployment of economic instruments, such as subsidized loans or tax exemptions granted to investors, through the allocation of plots of 100 hectares to families with a temporary title of ownership, and through the construction of new infrastructure. In 1967, the city of Manaus, in the heart of the forest, was awarded the special tax status of ‘free zone’.

The colonization was organized by the National Institute of Colonization and Agrarian Reform (INCRA) that was created in 1970 as part of land reform, based on the slogan ‘a land without people for the people without land’, supported by the military regime until 1985 (ELOY et al., 2009). Colonization was therefore considered a conservative way to alleviate land concentration. It avoided land redistribution where concentration was high, and focused on the agricultural colonization of the sparsely populated Amazon rainforest (YOUNG, 1998).

This policy has had the effect of quickly attracting migrants, mostly landless peasants from the Northeast and smallholders from the South, who sold their lands due to the pressure from agricultural modernization and the spread of large-scale soybean plantations. Twenty years after its construction, two million settlers had settled along the Belem-Brasília highway (KIRBY et al., 2006). The INCRA reserved plots in the Amazon region for private agricultural projects for small poor farmers. But much of the spontaneous settlements occurred without any formal titles, which

led INCRA, from the mid-1990s, to increase the number of *assentamentos*¹ projects. Between 1994 and 2002, the number of families who received land from the state grew by just over 160,000 to over 750,000 in 2003 (FEARNSIDE, 2005).

In the early settlement movement, land clearings were made in small areas mainly around roads to establish subsistence crops. However, the occupation of the Amazon rainforest was quickly extended by the arrival of wealthier settlers who did not hesitate to occupy the land of the early settlers who lacked property titles, through widespread illegal practices known as *grilagem*.² Then, these new farmers slashed and burned large parcels of forest of more than one hundred hectares to convert it into pastures (NEPSTAD et al., 1999). A spontaneous colonization of land by large soybean farmers has also changed the landscape on the Amazon frontier. Between 1990 and 1999, the planted area increased by 129% in the northern part of Mato-Grosso state, exceeding 1.8 million hectares in 2000 in this region. This movement is particularly linked to land speculation on cheap Amazonian land. Some cities like Sinop and Alta Floresta emerged following this private settlement movement. Radical land-use change truly began in the 1970s (FEARNSIDE, 2005) and within three decades, an area of rainforest higher than the French metropolitan territory was gone.

From the 1990s, the low cost of land, the creation of new cultivars better adapted to soil and climatic conditions by the Brazilian Corporation of Agricultural Research (EMBRAPA³), and new financial incentives for the agribusiness sector were the basis for a new phase of large-scale soybean cultivation on the Amazonian pioneer front. The growing global demand and attractive prices pushed Brazilian farmers to seek cheap new land to extend this crop (NEPSTAD et al., 2006).

Generally, soybean farmers bought land previously cleared by small farmers, who moved to urban areas, or occupied forest areas to establish properties on unclaimed public lands (KIRBY et al., 2006).

This phase of recent colonization in the Brazilian Amazon, largely driven by growth in global markets, was nevertheless supported by public policy. The government plan *Avança Brasil* launched in the early 2000s has allocated over \$40 billion to strengthen and modernize the Amazon territory infrastructure (FEARNSIDE, 2002). This plan aimed to pave existing roads, to build new ones and to develop new energy sources such as gas exploitation and hydroelectric dams. The expansion of the road network has linked the ports of Amazonian rivers to major centres of agro-industrial production, including the complex of soybean production in the southern Amazon basin. Thus, for the Brazilian authorities, the colonization of the Amazon is no longer about occupying an empty territory, but rather to ensure that it becomes an engine for export-oriented farming and ranching.

1. Plots located on public lands or expropriated lands for the installation of family farmers.

2. Public lands and settlements were occupied illegally by new capitalized settlers who created fake ownership documents. The term *Grilagem* describes the common practice of printing fake title deeds and then putting them into a box of crickets for several weeks. This gives the papers an aged and genuine appearance.

3. EMBRAPA is the acronym for the *Empresa Brasileira de Pesquisa Agropecuária*, the Brazilian Corporation of Agricultural Research.

Fighting deforestation in the Amazon over the last 20 years

Until the end of the military regime in 1985, conservation measures for the Amazon rainforest were mainly related to considerations of state control over the territory and the integration into the nation of large areas with low population densities. It was only after the emergence of democracy that true environmental measures have been implemented. These were closely related to the mobilization of Brazilian social movements and the activism of international environmental non-governmental organizations (NGOs), which together formed a broad coalition to fight against the advancing agricultural frontier in the Amazon.

The most emblematic example of the influence of this non-governmental coalition is the fight of the National Council of Rubber Tappers under the leadership of Chico Mendes (SMOUTS, 2001). The movement became famous worldwide for its struggle against ranchers who acquired large tracts of forest that were traditionally occupied by rubber tappers. Mendes's murder in 1988 raised a huge wave of protest around the world. The mobilization of national and international NGOs led the Brazilian government to take measures to protect traditional and indigenous populations. Arguably, the most important of these measures was the creation of special status protected areas (extractive reserves, known as Reserva Extrativista or RESEX) where local communities can live and develop their traditional farming systems. RESEX are a particular type of agrarian reform designed to solve a set of problems related to land use, the reduction of social inequalities and environmental sustainability. They are part of the Brazilian 'socio-environmentalist' paradigm that promotes an alternative model of development (SANTILLI, 2005).

However, the main protective measure for the Amazon rainforest was the decision in 1996 to reform the 1965 Forest Code. Following the announcement of an all-time high deforestation record of 29,000 km² in 1995, President Fernando Henrique Cardoso increased the legal reserve (LR), which is the share of native vegetation that landowners must maintain on their properties, from 50% to 80% in Amazonia. This measure, however, was difficult to enforce and therefore had only a temporary effect on the rate of deforestation, which increased again to reach more than 27,000 km² in 2004.

From that date, the federal government has intensified its efforts to protect the Amazon rainforest through the Action Plan for Prevention and Control of Deforestation in the Amazon (PPCDAM). New forest conservation areas have been created, bringing the total protected area to two million square kilometres, or 46% of the Brazilian Amazon biome forest areas, which corresponds to more than 50% of the remaining forests (SOARES-FILHO et al., 2010). Meanwhile, the federal government has strengthened control measures, land regulation and punishment. There have been many police operations against environmental crimes, leading to the imprisonment of hundreds of people, including some IBAMA (Brazilian Institute for the Environment) officials, and the seizure of hundreds of thousands of cubic metres of illegally harvested timber.

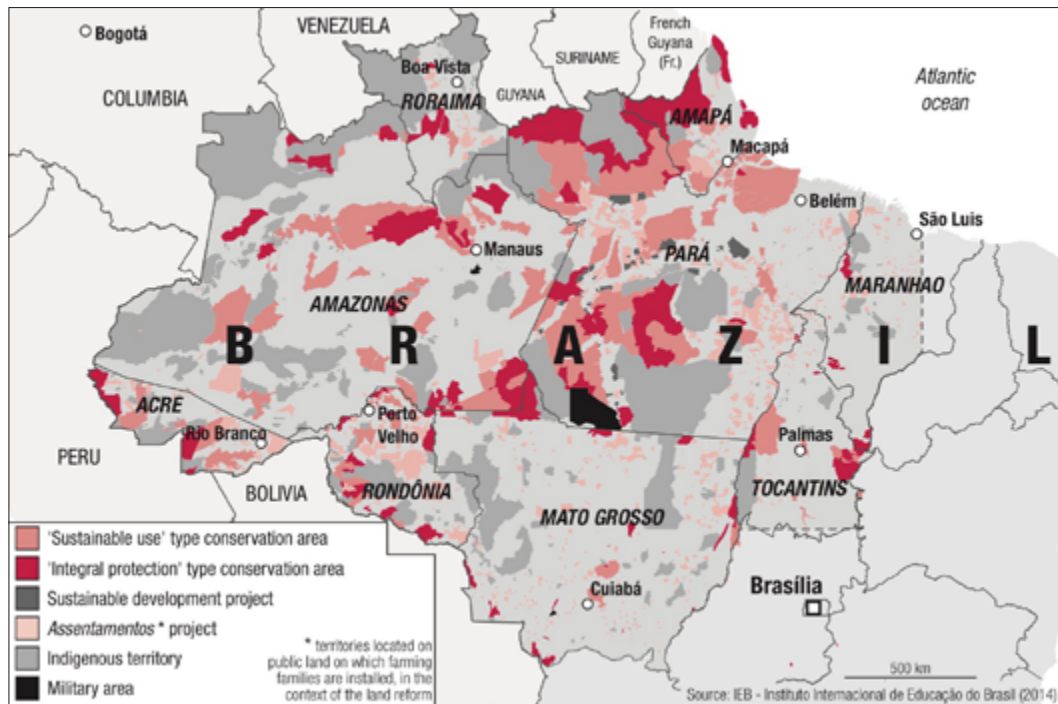
The involvement of NGOs has also contributed to the strengthening of public action for the preservation of the Amazon rainforest. The soybean sector was particularly targeted in the mid-2000s. Following actions of civil resistance, such as the blocking of the Cargill port in Santarem, in the Brazilian State of Pará, and the occupation of McDonald's restaurants in Europe, ecologists put pressure onto the Brazilian Association of Vegetable Oil Industries (ABIOVE) – which includes the major soybean exporter groups. On 24 July 2006, they announced a moratorium on the commercialization of soybean planted in deforested rainforest plots from October 2006 (GUÉNEAU, 2006).

A return to higher rates of deforestation between 2007 and 2008 led the federal government to strengthen its policy for the preservation of the Amazon rainforest. A second phase of the PPCDAM was launched. Due to advances in satellite communication techniques, which allow very accurate real-time data to be obtained on areas where forests are converted into pasture or crops, the government is now able to take action to control and sanction operators who do not comply with regulations.

In December 2007, President Lula issued a decree calling on the Ministry of the Environment to develop an annual list of municipalities most affected by deforestation in the Amazon and to impose public policy measures that focused on these areas. In 2008, the 36 worst hit municipalities were specifically covered by enhanced IBAMA control measures. These operations led to the closure of wood production units, the confiscation of production equipment (vehicles, etc.) and the seizure of 20,000 cubic metres of timber and 3,000 heads of cattle from illegal exploitations and farms on protected areas. In addition, the Federal Public Ministry of the State of Pará has arrested dozens of farmers and managers of processing and meat packing plants (ARIMA et al., 2014).

In addition to enforcement actions, the federal government has issued measures to restrict access to credit for the farmers in municipalities that are facing charges. One of the conditions necessary for the removal of a municipality from the deforestation blacklist is the requirement to prepare an environmental cadastre of agricultural plots that clearly indicates the areas of LRs and Permanent Preservation Areas (PPAs) where deforestation is prohibited because of their ecological value, such as pirarian areas and steep slopes. The government of the State of Pará, where producers were particularly affected by this measure, has developed a programme of 'green municipalities' (*municípios verdes*) to help affected municipalities to ensure compliance with legislation. Some NGOs have been involved in the programme through the provision of technical support to landowners to develop the environmental cadastre. The programme has had some success in a few municipalities, such as Paragominas where illegal deforestation has decreased by 80% between 2007 and 2010 (CARNEIRO, 2013), paving the way for its replication at a broader scale. However, according to some authors, the success of these credit-related measures must be put into perspective because the total amount of credit has risen sharply between 2007 and 2011 in the Amazon, while the number of credit agreements has remained constant (ARIMA et al., 2014).

FIGURE 1 Land Use and Protection in Brazil



Twenty years of public action against deforestation have created a mosaic of forest and agricultural statutes, each with specific characteristics in terms of conservation, farming methods or funding.

In addition to enforcement actions, the federal public prosecutors and leading environmental NGOs have increased their pressure on the main meat distribution chains. For example, Greenpeace launched a boycott of beef from ranches that do not respect the law (GREENPEACE, 2009). The federal Public Attorney Office has conditioned the withdrawal of lawsuits against slaughterhouses and meatpacking companies to an obligation to verify that their suppliers are not in contravention of the law.

Finally, in 2009 the federal government set a target of reducing annual Amazon deforestation by 80% by 2020, compared to a baseline historical average annual loss of 19,500 km² between 1996 and 2005. This target falls within the general framework of the international debate on reducing emissions from deforestation and forest degradation (REDD). As a major contributor to the loss of global forest, Brazil has been blacklisted for its major contribution to forest carbon emissions.

Between 2011 and 2012, 4,571 km² of the Amazon rainforest has been lost, which is in fact the lowest level since 1988, which was the year when systematic measurements of annual deforestation were started by the Brazilian Institute of Space Research (INPE) using remote sensing techniques. The deforestation reduction that

occurred between 2004 and 2007 is due in part to the overall decline in agricultural commodity prices, the correlation between the evolution of the loss of forests and the prices of beef and soybean being relatively strong (ARIMA et al., 2014). In contrast, during the next phase of reduced deforestation (2008-2012), this causal link is no longer seen, leading to the conclusion that the implemented public action measures have been effective (ARIMA et al, 2014; NEPSTAD et al, 2014).

After a temporary increase in the rate of deforestation between 2012 and 2013 (over 28% compared to the previous year), it seems to have started declining again (-18% between 2013 and 2014), although the latest estimates are tentative and controversial.⁴ In addition, nearly a quarter of the forest area that has been lost since the late 1980s is currently in a reforestation phase. Ultimately, through the strengthening of public policies since 2004, Amazon deforestation appears to have reached its turning point, which suggests a forest transition now in its recovery phase.

The evolution of the agribusiness model and its consequences

Brazil's efforts to fight against Amazon deforestation have had encouraging successes. However, Brazil will have to intensify its efforts in the fight against deforestation if it is to achieve the goal set out in the national plan of action against climate change. In terms of environmental effectiveness, the question for the future is that of sustainability and of the strengthening of actions undertaken since 2004 to bring an end to deforestation.

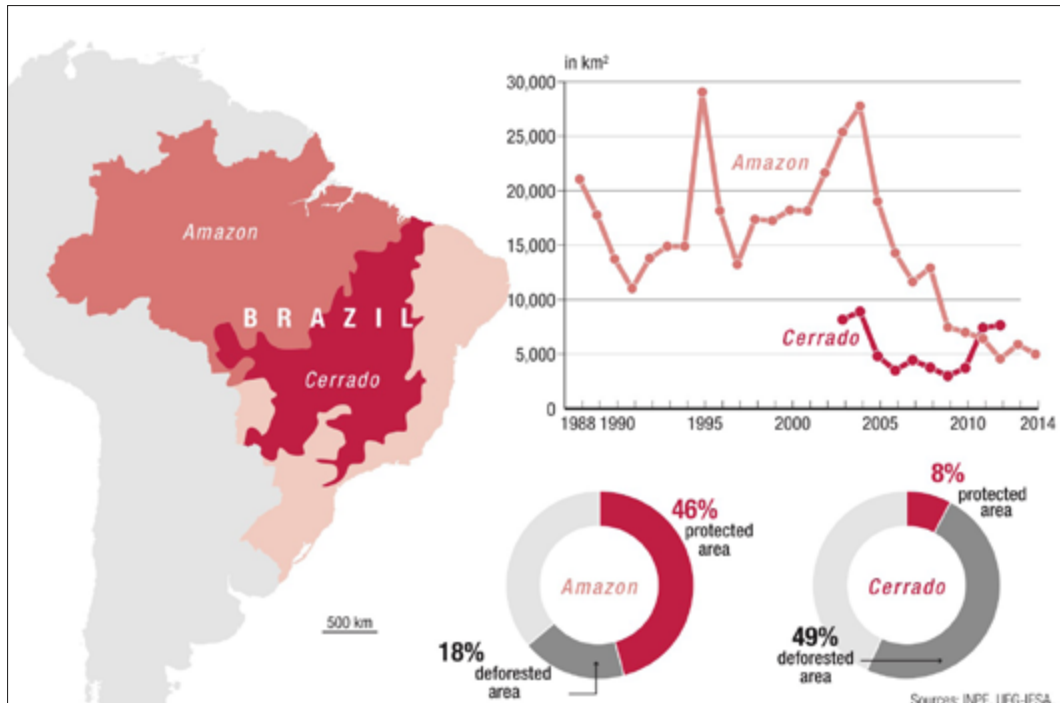
THE IMPACT OF THE AMAZON FOREST PROTECTION POLICIES ON THE CERRADO BIODIVERSITY HOTSPOT

To increase its supply of agricultural products without further extending its utilization of the Amazon rainforest, Brazil will have to rely on available land. However, the Cerrado, a vast area of wooded savannah in the centre of the country which has served for several years as a 'safety valve' to the deforestation restrictions in the Amazon (SAWYER, 2008), is becoming steadily more degraded and is increasingly the subject of national and international attention.

Conservation biologists consider the Cerrado biome to be one of the world's 34 biodiversity hotspots (MITTERMEIER et al., 1999). However, it has experienced profound changes related to the conversion of half of its original vegetation into agricultural monocultures, fast-growing tree plantations and pastures. (AUBERTIN and PINTON, 2013). While deforestation in the Amazon has been declining since 2004, it is growing in the Cerrado to the extent that since 2011 the loss through conversion of forest area in this biome is greater than the loss of Amazonian rainforest.

4. Data collected by INPE are subject to certain adjustments, but these adjustments should not affect the results by more than 10%. These data are inconsistent with those collected by the NGO Imazon, which showed a deforestation increase of 9% using a different satellite data collection system

FIGURE 2 Deforestation in the Brazilian Amazon and Cerrado



While Amazon deforestation now seems to have reached a turning point, other agricultural pioneer fronts such as the Cerrado are currently undergoing significant forest conversion.

Half of the Cerrado biome has already been colonized by crops and pasture, well above the 18% of Amazon forest converted to other uses in relative terms. In addition, while protected areas cover about half of the Amazon, they represent only 8% of the Cerrado biome.

Like the Amazon a few years ago, the Cerrado is becoming an international issue⁵, especially since 2009 when Brazil pledged in Copenhagen to reduce the rate of deforestation of this biome by 40% by 2022, compared with the average deforestation over the period 1999-2005.

THE NECESSARY INTENSIFICATION OF LIVESTOCK FARMING

There is still a large area of land in Brazil that is available for agriculture, including abandoned or underutilized degraded pastures, which represent about 12 million hectares. According to some estimates, only a quarter of this available area would be needed to meet the demand for meat until 2022 with no further contribution to

5. <http://epoca.globo.com/colunas-e-blogs/blog-do-planeta/noticia/2014/10/bdesmatamento-do-cerradob-o-novo-vilao-ambiental-do-brasil.html>

deforestation (BARRETO and SILVA, 2013). However, this would require an adaptation of the technical model, particularly with respect to cattle breeding.

With a stocking rate of about one animal per hectare, livestock farming is considered to be the main cause of recent deforestation (WALKER et al., 2013) with about 210 million head of cattle at present (IBGE, 2014). Cattle ranching has colonized the largest areas of the Brazilian territory: pastures cover about 20% the country's area, while agriculture and forest plantations cover only 7%.

Indeed, the potential productivity gains are much greater in this sector than in highly mechanized agricultural sectors such as soybean. Livestock farming is still currently a predominantly extensive activity, which has developed historically through an unconstrained and under-regulated access to land, although this situation is changing gradually with the professionalization of the entire industry, upstream (genetic improvement, nutrition, safety...) and downstream (slaughter, preservation, processing, distribution...) (RUVIARO et al., 2014).

Some models show that the productivity of Brazilian pastures reaches only 32-34% of its potential. If this could be increased to 49-52%, it would be sufficient to meet the future demand (including both internal consumption and exports) for meat, agricultural products, plantations timber and biofuels at least until 2040, without the need for new conversions of natural areas (STRASSBURG et al., 2014).

For government, the challenge is therefore to show that it is possible to develop a competitive and intensive farming activity, which would no longer encroach on the forest. The intensification of livestock production is part of a strategy that shows the continued efforts of Brazil in the fight against climate change, but also in a strategy to respond to the requirements of certain markets.

Through the 'avoided deforestation' made possible by the intensification of livestock production, and through the recovery of degraded pastures, Brazil intends to continue its agro-exporter development model while responding to criticism from environmental NGOs. Some studies show that by 2030, targeted public policies focused on the livestock sector, through instruments such as taxes and subsidies, would enable significant reductions in CO₂ emissions (COHN et al., 2014).

THE FOCUS ON LARGE AND MEDIUM SIZED HOLDINGS: A PRAGMATIC OR RESTRICTIVE APPROACH?

The 'sustainable agro-industrial model' that the Brazilian government intends to promote is based on action that has focused primarily on large and medium-sized holdings. Such a focus may be relevant, insofar as these holdings are responsible for the bulk of the loss of Brazilian rainforest. Only about 12% of deforestation in the 2004-2011 period resulted from smallholders with less than 100 hectares (GODAR et al., 2014).

Subsequent to this strategy, the size of the forest polygons converted to agricultural uses had significantly decreased: according to INPE data, cleared plots of more than 25 hectares accounted for 70% of deforestation in 2003, compared to less than 30% in 2012. In other words, the rate of decline of deforestation has

been much faster in capitalized large rural holdings than in small ones. Thus, over time, areas where small land settlement projects predominated became the ones with the highest deforestation rates in the Brazilian Amazon (GODAR et al., 2014).

The future of small family farmers remains at present a subject that is rarely taken into account in Amazon development policies. However, these actors play a significant role in the implementation of a strategy for the sustainable development of the Amazon (POKORNY and PACHECO, 2014). Family farms are established according to a well-known procedure that involves burning the forest to plant food crops. However, the organic input to the soil derived from fire has a limited duration and the soil productivity decreases rapidly, which encourages farmers to convert these plots into pastures and to move on to new forest areas that they burn as before. Brazilian legislation authorizes the clearing of areas smaller than three hectares per year. Therefore, given that 460,000 small farmer families are present in the Amazon, this could have a major impact on deforestation. An agreement authorizing the transformation of one hectare of forest into farmland per family would involve the deforestation of 4,600 km², an area that is larger than Brazil's unilateral commitment that it aims to achieve by 2020 as part of its fight against climate change (SIST et al., 2012). It is therefore necessary to consider these family farms in the region's strategies for sustainable development.

Technical models combining agriculture, livestock farming and forestry could be implemented to ensure the sustainability of smallholder agriculture (SIST et al., 2012). But it is also important to consider the changes in the balance between rural and urban that results from the gradual introduction of the sustainable agro-industrial model of growth in the Amazon. At present less than 30% of the population of the northern region live in rural areas, and migration from the countryside to cities is increasingly common, especially family farmers (LAPOLA et al., 2014). For the Brazilian government, sustainable urban development is also becoming a key issue, even in the remotest areas of the Amazon.

A model under domestic and international pressure

There have been significant successes in the fight against deforestation. The continuing forest conservation efforts undertaken by successive governments for over a decade rest however on a very fragile balance of power, both internally and externally.

On the domestic front, the discussions seem to be turning in favour of the so-called 'ruralists' in Congress⁶ who are gradually rolling out a set of environmental measures, while lobbying the government to strengthen its agribusiness development policy. Faced with the strong growth in domestic and international demand for Brazilian agricultural products (GARRETT et al., 2013) advocates of a 'hard' development

6. The recent elections (2014) have strengthened the *Bancada ruralista*, a majority group of Congressmen that supports the agribusiness sector; some elected members of this group are part of the major Union boards and/or large farm owners and producers.

focused on production are indeed trying to remove a number of obstacles blocking the revival of agribusiness based on the under-regulated exploitation of the country's natural resources. The pressure they impose on the government is particularly strong in the context of the reduction in the growth rate currently plaguing Brazil.

Following the recent elections, the ruralist parliamentary front is more powerful than ever before, now representing the majority in Congress. There is a risk that the balance of power, which is already very much in favour of agricultural interests, could be shifted, leading to the challenging of the socio-environmental progress made so far. The Growth Acceleration Programme (PAC) initiated by President Dilma Rousseff will direct investment towards the construction of infrastructure (roads, ports, hydro-electric dams...) to facilitate the flow of Amazonian agro-industrial products to the south of the country and abroad. Pressures to reduce conservation areas and limit the rights of indigenous peoples are also increasing (ARIMA et al., 2014).

The reform of the 1965 Forest Code is also part of this ruralist pressure on the federal government. For several years, the ruralists sought to reduce the environmental constraints to agricultural development in the northern region of Brazil, in particular through a more flexible implementation of forest conservation public policies. Passed by Congress in 2012, the reform was initiated by the widespread non-compliance of the Forest Code, particularly with regard to the LR and PPAs.

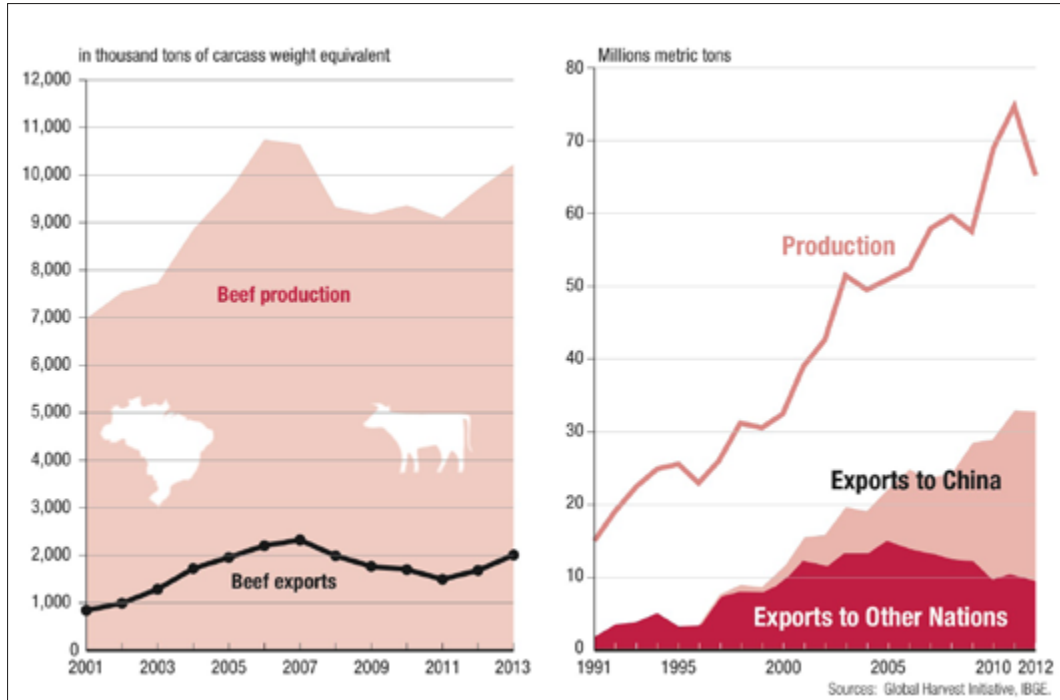
Some observers point out that the Forest Code was so rarely respected that it became unworkable (NEPSTAD et al., 2014). The new Forest Code provides amnesty for landowners whose crimes predate 22 July 2008. In other words, deforestation in the LR and PPAs is now legalized provided that landowners commit to the regularization of their status register and to the restoration of degraded areas. This restoration can be considered as part of a compensation system, whereby landowners maintain more than the legally authorized percentages of forest cover⁷ on other rural properties that they own. Through this reform, the government demonstrates its will to maintain the agro-exporter model, which satisfies the demands of reducing deforestation and CO₂ emissions by making the Forest Code more flexible.

Environmental NGOs are particularly concerned about the potential environmental and social impacts of these developments, particularly with regard to the new Forest Code and major projects such as the Belo Monte hydroelectric dam in the heart of the Amazon.

Despite these objections, Brazil does not intend to allow NGOs and foreign governments to dictate its development model. Instead, its status as an emerging power puts it in a position of strength in multilateral discussions. The country aims to show that its development choices are sound, despite the uncertainties still surrounding its ability to further reduce deforestation. Brazil has also refused to sign the agreement reached in September in New York at the UN summit on climate that was

7. The legislative provisions relating to the LR have also been made more flexible: in the Federated States which have more than 65% of the territory occupied by conservation units and/or indigenous territories, and in the municipalities (*municípios*) where these protected areas occupy 50% of the territory, the LR percentage may now be reduced from 80% to 50% by local authorities.

FIGURE 3 Brazilian agriculture remains export-oriented



Cattle rearing and soybean production are the two activities historically responsible for deforestation in Brazil. Both activities are strongly driven by exports, increasingly towards external markets that are more dynamic and less sensitive to environmental issues than Western markets.

adopted by more than 130 governments, businesses, civil society organizations and indigenous peoples, including some Amazonian state governments (Amapa, Amazonas and Acre). This agreement, which aims to halve deforestation by 2020 and then bring it to an end in 2030, has no binding commitment. It is a simple statement of intent, one that the Brazilian government has rejected on the grounds that it was not involved in the negotiations that led to the text of the agreement. This refusal also comes from the fact that the Brazilian legislation allows a certain level of deforestation on private property, as long as the LR thresholds are met (in the Amazon, 50% to 80%).

It is getting more difficult for international cooperation to influence the direction of Brazilian development. This is partly because Brazil no longer relies on international funding programmes that can be unlocked through devices like REDD that are negotiated in multilateral environmental agreements (AUBERTIN, 2012), but also because exports of Brazilian agricultural products are less dependent on European and North American countries, which are the most sensitive to environmental issues. This is particularly true for the Brazilian beef and soybean sectors, which have an

increasing number of opportunities in emerging countries (China for soybean, Russia and the Middle East for meat).

Finally, the ruralists are influential on matters of external intervention that they regard as similar to new forms of ‘green’ colonialism. This sovereignist position, which regularly enters the internal debate⁸, considers environmental NGOs as agents of Northern governments, trying to wrap the Amazon in cotton wool to limit growth opportunities for the supply of Brazilian agricultural products that compete directly with the subsidized agricultural products from rich countries. This is the sentiment expressed by MP Aldo Rebelo⁹, the rapporteur of the Parliamentary Committee that is examining the relevance of a forestry code reform (REBELO, 2010).

Conclusion

Brazil has been subjected to a great deal of pressure regarding the Amazon, but today the public action that has been carried out for over a decade is often presented as a success story. Obviously, the strengthening of control policies has greatly reduced the loss of Amazonian forests over the last ten years. However, this is nuanced by the relocation of deforestation to the Cerrado.

The rise of the ruralists and the very unequal treatment of players is questioning Brazil’s ability to meet its medium and long-term commitments. In addition, the slowdown in economic growth leads to lower fiscal revenues dedicated to expensive operations to control illegal deforestation.

Despite these uncertainties, the return to deforestation levels close to those observed in 2004 seems unlikely. However, the consolidation and continued efforts made so far require real changes in strategy, particularly with regard to changing the practices of small-scale and poorly-capitalized rural actors. Public policy has so far mainly sought to accommodate a development model that is based on the growth of agribusiness, without fundamentally challenging this model.

Brazil’s transformation towards sustainable development also needs to be based on the sustainable use of its rich biodiversity and the valuation of ecosystem services, which has been demanded by Brazil’s social and environmental forces. ■

8. In 1960 Arthur Cezar Ferreira Reis published *A Amazônia e a Cobiça Internacional* (Amazon and the international covetousness) and then various theses were later taken up by the ruralists, including *Mafia verde o ambientalismo ao Serviço do Governo Mundial* (Carrasco, 2006), published in 2001, and *Mafia Verde 2: ambientalismo, novo colonialismo* (Carrasco et al., 2005).

9. The discourse on sovereignty and development is based on broad ideological foundations that transcend political parties, which is demonstrated by the alliance between Aldo Rebelo, a member of the Brazilian Communist Party, and the conservative *Bancada ruralista*.

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Sub-Saharan Africa: making health sustainable

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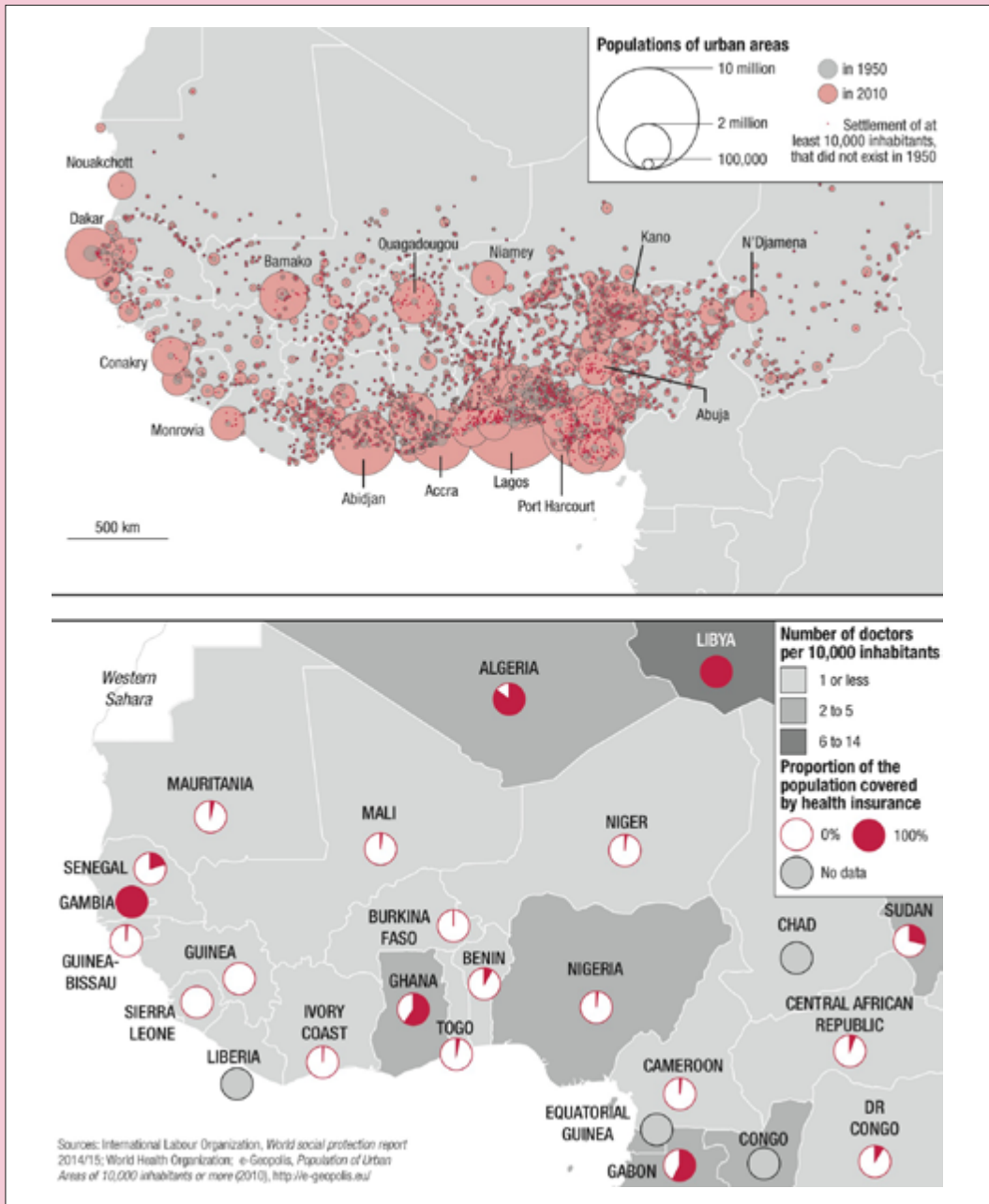
A characteristic of the 2015 juncture is that sustainable development is becoming the paradigm of international cooperation. For the first time, targets will apply to all countries of the world. There are several uncertainties that concern public health actors in developing countries: (i) after the political attention given to health issues, in particular the fight against AIDS, in the framework of the Millennium Development Goals (MDGs), what will be their status after 2015? (ii) how will the specific health situation of poor countries, particularly African populations, be encompassed by a universal format? These issues are acute, particularly because it appears that there are no prospective studies that would enable policy makers, from the African continent or from international cooperation organizations, to understand and anticipate what will be in the coming years the health effects of dramatic economic and social changes that Africa is undergoing as a result of the dual demographic and epidemiological transition, where the population growth is the fastest ever known in the history of mankind. The future of West and Central Africa is key: these regions are the furthest behind in achieving the MDGs and also the most politically unstable. The countries in these regions are either entering into armed conflict one after another (Ivory Coast, Mali, Central African Republic, Nigeria, etc.) or into a long-term mixture of post-conflict and development situations (Democratic Republic of the Congo).

The perception of pandemic risks and the notion of 'global health'

From the beginning of 2000, the fight against AIDS, rather than health strategies as a whole, benefited from the largest amounts of funding, through the Global Fund and the US President's Emergency Plan for AIDS Relief (PEPFAR). AIDS was included, for the first time in its history in January 2000, in the agenda of the UN Security Council meetings, because the African pandemic was perceived by the US government as a threat to national, and even global, security, which was relayed by the Secretary-General Kofi Annan in his speech at the G8 in Genoa and Okinawa (KEROUEDAN D., 2013). During the creation of the world initiatives or innovative funding mechanisms such as UNITAID, patient associations and pharmaceutical companies formed an unlikely alliance to demand respectively access to treatment and the creation of a solvent market to reassure the industry. This public private advocacy was keen to perpetuate and export a treatment model, particularly as this is the dominant model in the health sectors of rich countries, which place little importance on prevention and health promotion.

In 2011, the debates of the UN General Assembly (GA) on chronic diseases did not end up with any pledges of funding from the international community. These scourges of the modern world, because they are not communicable, do not induce a major global response. It is low and middle-income countries that carry more than 80% of the

FIGURE 1 African challenges related to access to health



Rapid and uncontrolled urbanization, a severe lack of health personnel, coverage of medical costs still in its infancy... West Africa needs specific intervention to sustainably meet the needs of its population.

attributable burden of these diseases (WHO, 2010). At the 2011 GA, there was no mention of alcohol abuse, which ranks as one of the most alarming risk factors for cancer. Other industrial lobbies are also in action. Thus, is the willingness to fund health on a global scale directly related to the pandemic risk, or to the perception of a health threat, as we have observed during the emergence of episodes of SARS, H5N1 and H1N1, or the Ebola outbreak in West Africa in 2014?

These phenomena, which were regarded as potentially destabilizing in political and security terms, helped establish the definition of the concept of 'global health', which appeared for the first time in 1997 in a publication of the US Institute of Medicine, *America's Vital Interest in Global Health*, in which chapter 2 states the following: 'the world's nations, the US included, now have too much in common to consider health as a merely a national issue. Instead, a new concept of "global health" is required to deal with health problems that transcend national boundaries, that may be influenced by circumstances and experiences in other countries, and that are best addressed by cooperative actions and solutions' (...) 'The risks are being transferred too, HIV is by far the most important of the new infections, both globally and in the United States.'¹

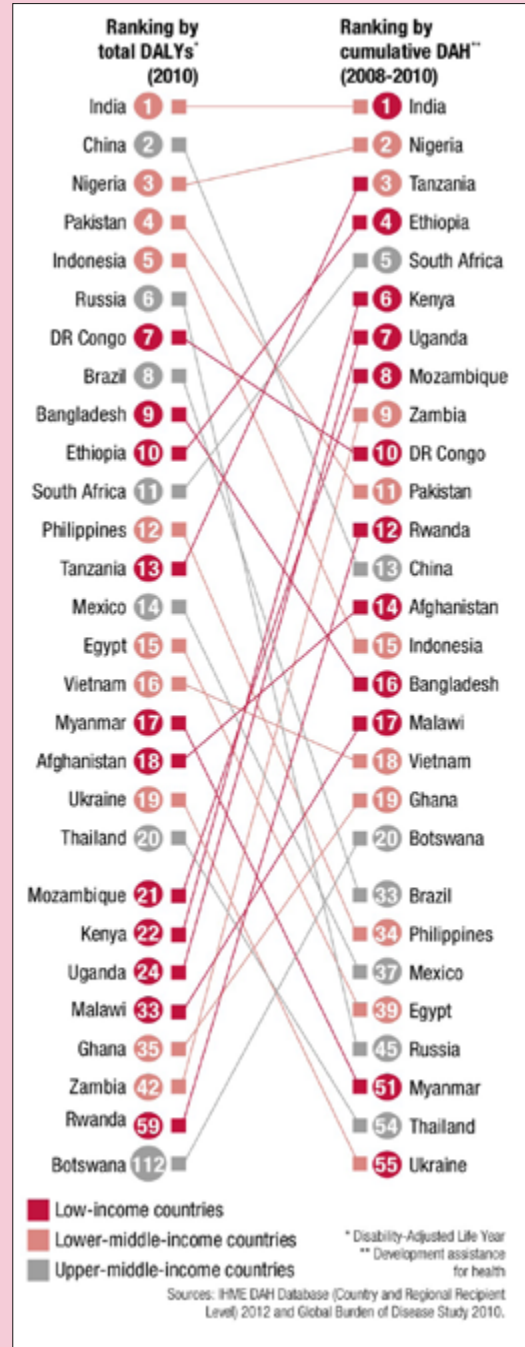
An alternative model of 'sustainable health'

This global health perspective is relatively recent. Since the origin of the 'development' concept², it is the economic argument, followed by the fight against poverty, which

1. Institute of Medicine, 1997, in the Chapter 'The globalization of health: common problems, common needs'.
 2. Founded by the American President Harry Truman in his Inaugural Address in 1949: 'We must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. More than half the people of the world are living in conditions approaching misery. Their food is inadequate. They are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas.'

► Development assistance is only rarely appropriate to the health needs of developing countries. The most funded countries are not those where the need for medical treatment, expressed in lost years of life in full health, is greatest.

FIGURE 2 International assistance out of step with need



underlie the concept of 'health and development'. This concept is a dimension of development policies rather than sustainable development, the latter having long favoured environmental issues, 'the recommendation for social justice being forgotten in the discourse' [LE MONDE, 2013]. The challenge of sustainable development after 2015 will be to keep the promise to grant an equal amount of political attention to the three pillars of sustainable development, including that of social justice, both thematically and geographically.

The 2012 Rio Summit Resolution states that: 'health is a precondition for, an outcome of, and an indicator of all three dimensions of sustainable development' (GA/UN, Resolution 66/288). Indeed, health is among the listed sustainable development goals after 2015: '*Ensure healthy life and promote well-being for all at all ages*'.³ Nevertheless, the stakes are high and the trade-offs are uncertain between priorities and countries. Social and health inequalities stem from policies and structural sources (COMMISSION ON GLOBAL GOVERNANCE FOR HEALTH, 2014). African economic growth is not accompanied by poverty reduction and job creation.⁴ The poorest countries are also the orphans of aid (KEROUEDAN D., 2014). Some health problems that are not common from the point of view of their scale and their nature have not, so far, fallen under the paradigm of sustainable development: the intellectual and mental development of children with malnutrition or malaria, the death of pregnant women, all forms of violence against girls and women, the security of the civilian population and care providers in war zones, deaths outside hospitals in the absence of health insurance, inequity in the distribution of global aid, health inequalities that are transmitted over generations, etc. These unique situations call for specific answers.

Universal health coverage (UHC) appears as a solution for a world that is expected to 'converge' from a health point of view (THE LANCET COMMISSION ON INVESTING IN HEALTH, 2013). While UHC can help reduce poverty, health improvement is more a result of policies that enhance, rather than

frustrate, the right to health and a vision of life and the world that establishes a model of 'sustainable health', which inspires democratic debate involving people and patients striving for 'the health we want'. Amartya Sen was already suggesting this approach in the late 1990s: '*The public has to see itself not merely as a patient, but also as an agent of change. The penalty of inaction and apathy can be illness and death*' (SEN A., 2000). By refocusing the debate on human health policy, rather than relentlessly reducing it to that of the financing of the systems or the sector, societies will be prepared, not to have to deal with an increasing number of patients, but to build societies producing fewer sick people. The sustainable preservation of health could possibly be the only common ground, which is hopefully universally shared.

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3. Goal 3. Open Working Group on Sustainable Development Goals, Outcome document, p. 7, New York, 19th July 2015. <http://sustainabledevelopment.un.org/focussdgs.html>

4. See B. Arma., 2013 and V. Ramachandran, 2014.

California is a pioneer state in terms of environmental protection and also for specific action on climate and the promotion of the green economy. Its choices have been a lever for changing national and regional policies in this area. The Brown administration that is currently in power is working to define and implement a climate trajectory for 2050, the influence of which should go beyond state borders.

California plans for its 2050 climate future

California has been a leader on environmental policy since the 1960s, when it adopted the first-ever regulations to control automotive emissions in an effort to combat the state's air pollution problems. In the 1970s, California led the nation in efforts to increase energy efficiency. Since that time, California has continued to lead in these efforts, and to build on them to combat global climate change. While the state has taken its position as a forerunner, the state's economy has continued to grow and the state has reaped economic and environmental benefits.

The state has taken a comprehensive approach to addressing climate change, leading efforts to reduce greenhouse gas (GHG) emissions, to prepare for unavoidable climate impacts, and to support research into climate change, options to reduce emissions, and to safeguard the state from unavoidable climate impacts, which are already being experienced across California. The state's leadership has also led to the development of several interstate and international agreements for cooperation on climate change policy. California is working, on a global scale, to demonstrate the important and meaningful impact that subnational entities are having in addressing global climate change. This chapter outlines the evolution of California's climate change programme, progress to date, and next steps for the state as it looks to achieve deep emission reduction by the middle of this century.

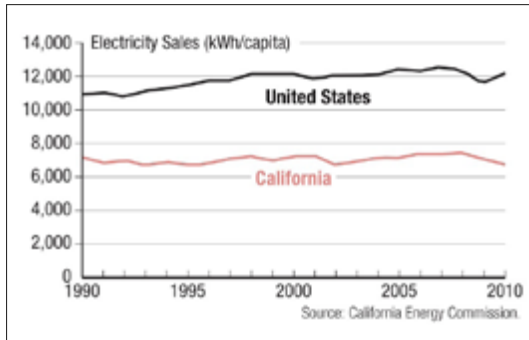
A brief history – California's environmental leadership

California has been an environmental leader for many years. Two key areas of leadership include improving air quality and increasing energy efficiency. Work in these

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FIGURE 1 A pioneer in electricity efficiency



For over twenty years the electricity consumption per person in California has been stable and is less than half the average per capita consumption of the United States.

areas has been underway for several decades and has resulted in significant benefits for the state, while serving as the foundation for the state's actions on climate change.

TACKLING AIR POLLUTION

In 1960, California established a board to test and certify emission control devices for motor vehicles as a response to the state's unhealthy and severe air pollution problems in the Los Angeles area. Following that, the state established a series of vehicle technology requirements and tailpipe emission regulations. These regulations preceded any action on the federal level by several years. This leadership was ultimately reflected in the first federal Clean Air Act, which granted California the

ability to establish its own, more stringent standards for passenger vehicle emissions control. The Clean Air Act also allows other states to opt to follow California's standards instead of federal standards, a choice that many, particularly northeastern, states have made. California's special status was granted because of the state's 'unique' air quality challenges and 'pioneering efforts' (Clean Air Act of 1967 as cited in HANEMANN, 2008). Each time California establishes new vehicle emission standards, the US Environmental Protection Agency grants the state a waiver that allows the state to implement the rules.

With this authority, California has designed increasingly stringent requirements for reductions of smog-forming emissions through emissions control technology and advanced vehicle technology, including strict tailpipe standards and requirements to limit evaporative emissions from vehicles. As part of its low emission vehicle programme, the state also developed a zero-emission vehicle (ZEV) programme. Most recently, the state has combined its programmes into an Advanced Clean Cars programme, which focuses on reducing smog-forming and GHG emissions from the passenger vehicle fleet and to promote broader dissemination and adoption of advanced vehicle technologies.

IMPROVING ENERGY EFFICIENCY

During the Energy Crisis of the 1970s, California led the way in establishing energy efficiency standards for buildings and appliances. California has remained out in front on energy efficiency, setting standards that are models for other states, the federal government, and other countries. As a result of these standards, California's per capita electricity consumption has remained nearly constant since 1975 and well below the national average since 1990. One study has estimated that the energy savings that have resulted from California's energy efficiency policies have

added approximately \$40 billion to the economy from 1972 to 2007 (ROLAND-HOLST, 2008).

California's continued efforts to improve energy efficiency are reflected in its loading order, or the order in which the state dispatches resources to meet electricity demand. The state's loading order places energy efficiency in the first priority, meaning that energy efficiency measures including efficiency standards and demand side management will be the first methods deployed to meet increasing demand. Following energy efficiency, the state prioritizes renewable electricity sources, followed by clean, efficient natural gas. The loading order has been in place for several decades and was reaffirmed in the 2003 Energy Action Plan (STATE OF CALIFORNIA, 2003).

To facilitate its efforts to increase energy efficiency, the state's electricity rate structure also benefits from *decoupling*, which is a structure designed to alleviate the disincentive that utilities have to promote energy efficiency. Under this structure, a utility's profits are not tied to the amount of electricity sold, but rather rates are adjusted to meet specific revenue targets. These revenue targets are set to allow utilities to recover their fixed costs and are periodically reviewed to ensure cost recovery (for more information on decoupling, see NARUC, 2007). California has the longest experience of any state with decoupling, since it adopted the approach in the early 1980s.

TAKING ON CLIMATE CHANGE

Climate change has been a part of California's policy landscape since the late 1980s, when the State Legislature requested the first assessment of climate change impacts on the state and assessment of options for reducing GHG emissions (FRANCO et al., 2008). Following that legislation, two reports were issued that outlined climate impacts and options for reducing GHG emissions in 1989 and 1991 (FRANCO et al., 2008). However, it was several years until the state took formal steps to address climate change.

From these initial steps, California's climate change programme has evolved into sector-specific emission reduction programmes and then into the comprehensive climate policy that is in place today. The state began its climate activities building on its leadership in transportation and energy (HANEMANN, 2008). From here, the state's policy has further evolved and developed, leading to stronger regulations to reduce emissions and greater investments in research to support climate policies. Building on these focused successes, the state then adopted a comprehensive, economy-wide GHG emission reduction target.

ASSEMBLY BILL 1493: CONTROLLING VEHICLE EMISSIONS

In 2002, California adopted Assembly Bill (AB) 1493, a law directing the California Air Resources Board to set tailpipe emission standards to limit GHG emissions from passenger vehicles (CALIFORNIA STATE ASSEMBLY, 2002). These regulations were developed and adopted using California's special status under the Clean Air

Act, which had enabled decades of strong standards to control passenger vehicle emissions of so-called ‘criteria air pollutants’, which are a set of pollutants for which the US Environmental Protection Agency (EPA) sets national limits.

These regulations were the first of their kind in the world. The regulations set fleet average standards for passenger cars and light trucks, starting with the 2009 model year. The standards are designed to be phased in and become increasingly stringent, to achieve a 30% reduction in GHG emissions from new cars by 2016. Despite a lawsuit by the automobile industry and initial delays from the US EPA in granting California the waiver needed to implement the standards, the regulations have been adopted by a number of other states.

California’s motor vehicle emissions standards demonstrate the far-reaching effect of the state’s environmental leadership. While the Clean Air Act only gives special authority to California, other states are able to choose to follow California’s vehicle standards instead of the federal ones. Shortly after their adoption, enough states had opted for the Californian regulations (including the GHG standards) to account for about one third of the US vehicle market. Ultimately, the US government established fuel economy standards for new vehicles that harmonized with California’s rules and now all new vehicles sold in the US achieve the GHG emission targets that were set in California.

Building a market for renewable energy

In addition to pushing for increased energy efficiency, California also established a programme to encourage the production of clean, renewable sources of electricity. In 2002, California adopted its first Renewable Portfolio Standard (RPS). The RPS required all investor-owned utilities, electric service providers, and community choice aggregators¹ to procure 20% of their electricity from renewable sources by 2020. The 2003 State Energy Action Plan accelerated this timeline, calling for 20% renewables by 2010 (STATE OF CALIFORNIA, 2003). This more aggressive target was codified into law in 2006 (CALIFORNIA STATE SENATE, 2006a). More recently, the state has adopted stronger goals, which are discussed below.

Alongside its goals for renewable energy, California also established an emissions performance standard for long-term contracts for baseload power (CALIFORNIA STATE SENATE, 2006b). Under these rules, utilities cannot enter into contracts with entities that exceed the state’s performance standard. The guidelines are set at a level that will eventually result in the phase-out of electricity from coal (CALIFORNIA ENERGY COMMISSION, 2014).

California has also taken a comprehensive, multi-stakeholder approach to siting large renewable energy projects in the state’s desert region. The Desert Renewable Energy Conservation Plan (DRECP) includes state, federal, and local governments

1. Community choice aggregators (CCAs) are cities or counties that buy power on behalf of an aggregated group of customers. Residents can opt out of participation. CCAs enable communities to purchase contracts for alternative energy supplies.

as well as conservation groups. The plan has identified areas for renewable energy development and priority areas for species and habitat conservation. The goal of the plan is to enhance and restore natural ecosystems, while also providing renewable energy developers with more predictable and certain permit timing and costs (DRECP, 2014).

Bringing it together: adopting a GHG emission target

California's vehicle and energy policies laid strong groundwork for the adoption of a comprehensive climate mitigation programme. In 2005, then-Governor Arnold Schwarzenegger announced that California would take steps to reduce GHG emissions economy-wide. Through Executive Order (EO) S-03-05, Governor Schwarzenegger established emission reduction targets for the state. This included a directive to reduce statewide GHG emissions to 1990 levels by 2020 and to reduce emissions to 80% below 1990 levels by 2050 (EO S-03-05).² These deep emission reductions by the middle of the century are on the order of those believed to be necessary to achieve climate stabilization and limit the impacts of global warming.

ASSEMBLY BILL 32: THE GLOBAL WARMING SOLUTIONS ACT OF 2006

In 2006, California took steps to codify the 2020 emission reduction target into law. AB 32, The Global Warming Solutions Act of 2006, established the 2020 emission target to reduce GHG emissions to 1990 levels. The bill placed the responsibility and authority for implementing AB 32 with the California Air Resources Board (CARB), the agency that has led California in its efforts to address air pollution. The bill also included a 'safety valve', which allowed for a delay in meeting the target under specific circumstances. The safety valve was included as part of the negotiation of the legislative language (HANEMANN, 2008). AB 32 also included language that allowed for the use of market mechanisms (e.g., cap and trade or a carbon tax) as part of the state's effort to reduce emissions. The law directed CARB to develop a Scoping Plan, outlining how the state would achieve the 2020 emission reduction target (CALIFORNIA STATE ASSEMBLY, 2006)

CARB adopted the first Scoping Plan in 2008, outlining the programmes that would be implemented to meet the 2020 target. The foundation for the state's emission reductions lay in its well-established programmes, including the state's vehicle emissions standards, the renewable portfolio standard, and energy efficiency measures. The Scoping Plan also included a number of new programmes, including a low carbon fuel standard for transportation fuels, programmes to reduce GHG emissions from medium- and heavy-duty vehicles, and programmes to reduce high global warming potential gases. The Scoping Plan also called for the development and implementation of a cap and trade programme to be implemented to reduce a portion of the state's GHG emissions (CALIFORNIA AIR RESOURCES BOARD, 2008).

2. Text of the Executive Order is available here: <http://gov.ca.gov/news.php?id=1861>

Following the passage of AB 32, CARB adopted a series of regulations to limit GHG emissions. In addition several new laws were enacted to reduce GHG emissions from several sources.

LAND USE AND TRANSPORTATION

In 2008, California adopted a law to require the reduction of per capita GHG emissions through the integration of land use and transportation planning at a regional scale. Senate Bill (SB) 375 directed CARB to develop regional GHG emission reduction targets (CALIFORNIA STATE SENATE, 2008). Regions demonstrate compliance with these targets through the preparation of sustainable communities strategies. These strategies include efforts to reduce vehicle miles travelled through a combination of efficient land use and investments in transit and other alternatives to driving such as biking and walking.

RENEWABLE ENERGY

When Governor Brown took office in 2010, he reaffirmed the state's commitment to reduce GHG emissions and adopted several additional laws and goals to achieve this objective. This includes a bill that increases the state's renewable portfolio standard to 33% by 2020 (CALIFORNIA STATE SENATE, 2011). Governor Brown also set a goal to encourage the deployment of zero emission vehicles (ZEVs), setting a goal of reaching 1.5 million ZEVs on the road by 2025 (EO B-16-2012, for more details see Governor's Office, 2013). He also set goals for distributed generation (i.e., rooftop photovoltaics and small renewable systems) and combined heat and power. The state also aims to increase building energy efficiency in new buildings to reach a zero-net-energy standard by 2020 in residential buildings and by 2030 in commercial buildings (CALIFORNIA ENERGY COMMISSION, 2007), which has been reaffirmed in recent energy planning exercises.

As the state increases its reliance on intermittent renewable sources of electricity, it is developing a programme to procure and install energy storage technology. The California Public Utilities Commission (CPUC) was instructed to set a target for energy storage (CALIFORNIA STATE ASSEMBLY, 2010). In 2013, the CPUC adopted an energy storage procurement target of 1,325 megawatts by 2020 for the state's three investor-owned utilities. The storage is to be installed by 2024 (CPUC, 2013). California's plan for energy storage is the first of its kind in the US.

CAP AND TRADE

AB 32 gave CARB the authority to use market mechanisms to reduce GHG emissions. As a result, California has developed a cap and trade programme. The cap covers about 85% of the state's emissions and is responsible for about 15% of the emissions reductions necessary to meet the AB 32 target. The emissions cap was set in 2013 and declines annually from that initial point. The programme began with the free allocation of emissions allowances, but subsequent allowances have had to be purchased by auction. The state held its first cap and trade auction in 2012. In its first two years, the

programme covered electric utilities and large industrial customers. In 2015, transportation fuels will be included under the cap (CALIFORNIA AIR RESOURCES BOARD, 2011).

Revenues from the cap and trade auctions are used to support programmes to reduce GHG emissions. To identify potential areas where this income can be invested, the state has developed a cap and trade investment plan. Auction proceeds must be invested in projects that will lead to demonstrable GHG emission reductions. In addition, state law requires that 25% of auction proceeds be invested in projects that benefit disadvantaged communities and that 10% be invested in projects located in disadvantaged communities (CALIFORNIA STATE SENATE, 2012).

INTERSTATE AND INTERNATIONAL ENGAGEMENT

California has long partnered with other states and countries to share information, coordinate programmes, and advance environmental goals; and climate change has been no exception. These agreements span broad geographic scales and include a range of elements. One of the most recent and complex agreements is between California and the Canadian province of Quebec. In January 2014, California and Quebec linked their cap and trade systems, enabling allowances from both jurisdictions to be used in either programme. The two governments held their first joint auction in 2014.

In addition, California has agreements with several other US states and Canadian provinces through the Pacific Coast Collaborative. Through this agreement, the states of Washington, Oregon, and California, along with the Canadian province of British Columbia have committed to accounting for the cost of carbon pollution and adopting and maintaining low carbon fuel standards. Where feasible and appropriate, the signatories will link programmes.

California also has agreements with a number of Chinese government entities. These include agreements with the Chinese Ministry of Commerce, the National Ministry of Environmental Protection, the provinces of Jiangsu and Guangdong, and the Beijing Ministry of Environmental Protection. The Memorandums of Understanding include cooperation on addressing air pollution, low-carbon development, clean transportation, and investment in clean energy technologies.

California has also developed agreements with the government of Mexico that address energy, climate change, air pollution, and carbon pricing. These agreements were signed in July 2014. California has additional agreements with numerous other states and regions throughout the world, including several countries in South America, India, Japan, and Israel.³

OPPOSITION TO AB 32

When the law was passed in 2006, California had a strong economy with low unemployment (below 5%) and a steady, but slowing real estate market (CALIFORNIA

3. A full list of California's current Memorandums of Understanding can be found here: http://climatechange.ca.gov/climate_action_team/intergovernmental.html

DEPARTMENT OF FINANCE, 2006). AB 32 was supported by all major environmental groups in California, as well as many local governments, industrial leaders, several labour organizations, and members of California's congressional delegation, including the US Senators Boxer and Feinstein. It also received the editorial support of the state's major newspapers and the *New York Times*. On the other side, the largest opponents were generally those with the most to lose – oil companies.⁴ However, some companies that were also greatly affected by the bill, including Pacific Gas and Electric, one of the state's largest investor-owned utilities, supported the passage of AB 32.

Opposition to AB 32 has manifested in several ways. The most public being a 2010 ballot measure that would have delayed the implementation of AB 32 until California's unemployment level remained at or below 5.5% for four consecutive quarters. Most viewed this to be an indefinite suspension of the law and the proposition, which was supported by two large oil companies and several individuals, was soundly defeated by California voters, with nearly 62% of voters opposing the proposition.

Many oil companies, led by the Western States Petroleum Association (WSPA), continue to wage an ongoing campaign against AB 32 and many elements of its implementation. For example, the oil companies have supported an economic analysis, prepared by the Boston Consulting Group (BCG), of the fuel provisions under AB 32. The BCG study, which has become the focus of the debate for opponents, argues that AB 32 will result in increasing fuel prices, refinery closures and the loss of jobs, and a large wealth transfer (BOSTON CONSULTING GROUP, 2012). In 2013, the University of California, Davis was engaged by WSPA, the Rockefeller Brothers Fund, and the Alliance of Automobile Manufacturers to review the BCG study. The peer review group, led by academic experts in economics, climate policy, and refineries found that the report was based on a set of unlikely assumptions and scenarios, but that policy-makers should remain on alert for signals that the costs of compliance are too high (UC DAVIS POLICY INSTITUTE FOR ENERGY, ENVIRONMENT, AND THE ECONOMY, 2013).

Without doubt, this debate will continue alongside California's implementation of AB 32 and the steps the state takes to achieve GHG emission reductions beyond 2020. In fact, these arguments have been in full force as the state is expanding its cap and trade programme to include transportation fuels under the cap beginning in January 2015. Furthermore, it is not likely that this debate will be confined to California's policies, but will take place on a global scale. Achieving deep emission reductions will require fundamental shifts in global energy supplies away from high-carbon energy sources. Businesses who choose not to engage in that transition stand to lose.

Nonetheless, even as this debate continues, California has proceeded with the implementation of AB 32 and is seeing progress in many arenas, including in the development of clean energy businesses and jobs.

4. A list of supporting and opposing parties can be seen here: <http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml>

Progress: implementing California's Global Warming Solutions Act: AB 32

Since California's adoption of AB 32, the state has updated its policies and made significant progress. An updated Scoping Plan was adopted in 2014, showing that the state is on track to meet its 2020 target (CARB, 2014). The state's emissions have declined and the economy has rebounded from the recession, while much success has been achieved in areas such as renewable energy and investment in clean energy.

GHG EMISSIONS IN CALIFORNIA

AB 32 sets a target for emissions to reach 1990 levels by 2020. Considerable progress has been made on this front with California's GHG emissions currently falling below the 2000 level and moving closer to the 1990 figure (Figure 2). The transportation sector remains the largest source of emission reductions in the state, accounting for 37% of emissions in 2012.

Per capita GHG emissions have also declined over the same time period and are well below the national average. However, California's per capita emissions remain higher than countries with a similar standard of living (Figure 3).

RENEWABLE ENERGY, CLEAN TRANSPORTATION, AND ENERGY EFFICIENCY

In 2013, California's three largest investor-owned utilities procured nearly 23% of their electricity from renewable sources (CALIFORNIA PUBLIC UTILITIES COMMISSION, 2014) and these sources are accounting for an increasingly large share of the state's power mix. The generating capacity from renewable energy sources in California has increased dramatically over the past ten years and almost doubled in 2013. By the end of 2013, over 8,000 MW of generating capacity was commercially available from renewable sources.⁵ Utilities report that they are on track to meet the 33% RPS target in 2020 and the state is actively exploring options to set goals beyond 2020.

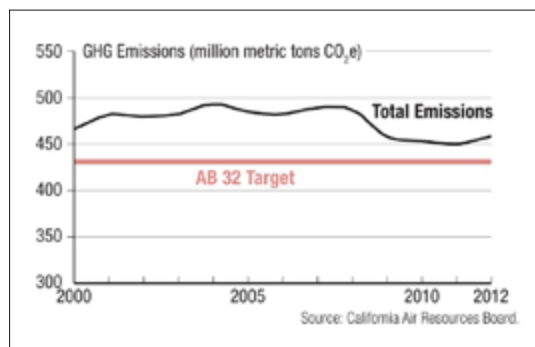
There has also been significant progress in the deployment of distributed renewable energy systems. The California Solar Initiative began in 2007 with the goal of encouraging widespread installation of rooftop solar systems. The programme provided financial incentives through utilities for installation. Since then, the programme has seen a tremendous success in the number of systems installed, in an increase in the generating capacity, and a decrease in the operating costs of the systems. California leads the nation with over 240,000 solar systems installed, which accounts for almost 2,300 MW of installed capacity. Since 2007, the operating cost for these systems has declined by half, from close to \$11/Watt down to just over \$5/Watt (all data from CA SOLAR STATISTICS, 2014).

ECONOMIC IMPACTS: INNOVATION AND INVESTMENT

Due at least in part to its environmental leadership, California continues to lead

5. Generation Capacity from Renewable Sources from the California Public Utilities Commission: http://www.cpuc.ca.gov/RR/rdonlyres/384E3432-6EAB-4492-BF88-992874A7B978/0/2013_Q1RPSReportFINAL.pdf

FIGURE 2 California: A pioneer in reducing greenhouse gas emissions



GHG emissions in California have declined since 2000 and are approaching 1990 levels, while remaining above the targets set by the AB 32 and the emissions of many countries with similar living standards.

the US and the world in attracting private investment in clean energy technologies, with more than double the number of clean energy patents than the next most-innovative state (NEXT10, 2014). The state's core clean economy, which includes private-sector jobs in clean energy fields, has grown faster than the economy as a whole, with a 20% increase in the number of jobs between January 2002 and January 2012 (NEXT10, 2014). While definitions and methodologies vary, all analyses show that California has the largest number of clean economy jobs in the country (NEXT10, 2014; BROOKINGS, 2010; and PEW CHARITABLE TRUSTS, 2009).

Continuing the journey: achieving deep emission reductions

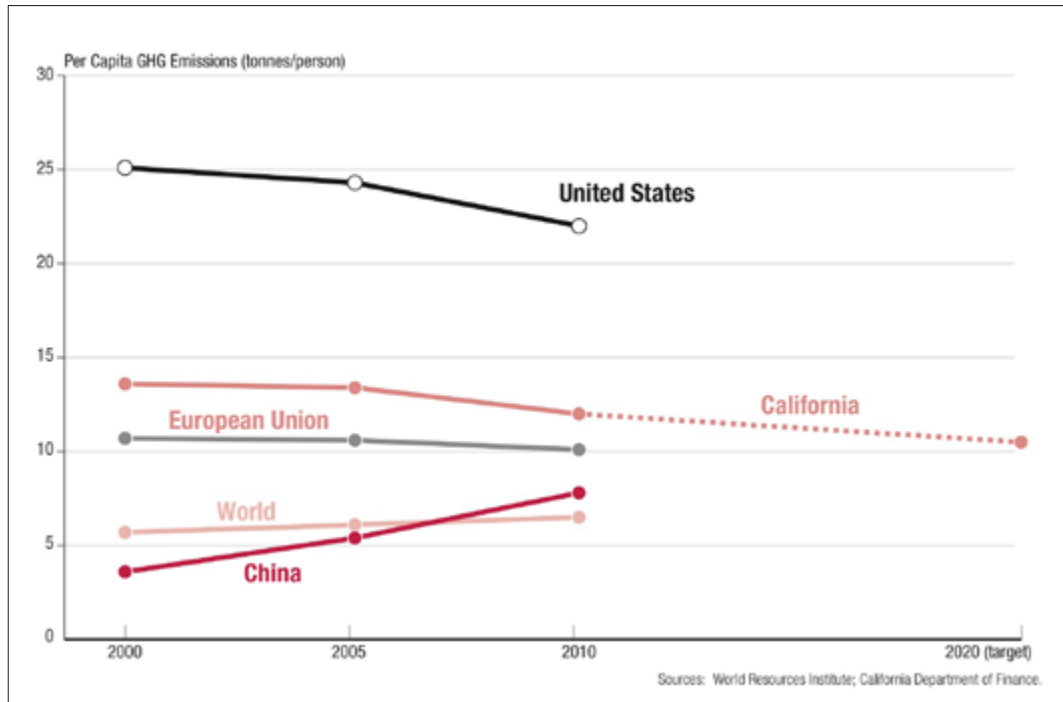
California is on track to meet its 2020 GHG emission goal, but that is only one stop on the way to achieving deep emission reductions by the middle of this century. Scientists estimate that emission reductions of around 80% to 90% below 1990 levels are needed to stabilize the climate and minimize the disruptions caused by the emissions in the atmosphere. Reductions of this magnitude are needed on a global scale in the developed world but even with these reductions, many impacts of climate change are already underway and are unavoidable and irreversible.

ACHIEVING DEEP EMISSION REDUCTIONS IN CALIFORNIA

California already has many programmes in place that will be needed to achieve its 2050 goal of 80% below 1990 levels by 2050, but it will need to ramp up the rate of implementation and the pace of emission reductions. The state will need to continue to reduce emissions from transportation and electricity generation and increase energy efficiency. In addition, the state will need to manage natural systems in a manner to maximize carbon storage potential in forests, wetlands, and other natural areas.

To further reduce GHG emissions the state needs to decarbonize its electricity supply. This means increasing the amount of clean and renewable sources of energy and drastically reducing the use of carbon-emitting fossil fuels. At the same time, the state must reduce the energy demand through efficiency measures and by shifting as many direct fuel uses from fossil fuels to electricity as soon as possible. This requires a transition to electric vehicles and hydrogen fuel cells powered by low-carbon sources. To meet its long-term GHG target the state will need to generate nearly three-quarters of its electricity from non-GHG producing sources – meaning renewable sources or,

FIGURE 3 California in the international climate race



California aims to reduce the state's GHG emissions to those of the European Union by 2020.

potentially, nuclear power or fossil fuel combined with carbon capture and sequestration (WILLIAMS et al., 2012).

Massive and sustained energy efficiency measures – amounting to 1.3% per year – will also be critical for transforming the state's energy and transportation systems to enable the long-term target to be reached (WILLIAMS et al., 2012). These energy efficiency improvements will be particularly needed in the state's existing building stock and also in relation to water usage, since nearly 20% of California's electricity consumption is devoted to water-related energy use.⁶ These reductions will also go a long way to boosting the state's resilience in the face of climate change.

Efficiencies in transportation infrastructure and land use planning will also be important for reducing emissions. Investments in public transit and communities are needed to provide viable alternatives to driving. Diversifying land use, designing neighbourhoods that are easier to walk in, and creating closer proximity between housing and jobs all have a significant effect on travel behaviour and can reduce the distances people drive (EWING and CERVERO, 2001). In addition to building communities that make it easier for people to use alternatives to single-occupant

6. <http://www.energy.ca.gov/research/iaw/water.html>

vehicles, major investments are needed in how we move between the state's regions. Investment in the state's high-speed rail system combined with advancements in vehicle technology and efficiency will reduce the environmental impact of the state's transportation system. The state's high-speed rail will connect the state's regions, providing alternatives to highway travel and interregional air trips. Tying these investments to robust local transportation networks will be key for realizing their maximum environmental benefits. However, this is contingent upon efforts to ensure clean electricity generation to power the high-speed rail system (CHESTER and HOVARTH, 2012).

The order in which the state makes these investments and transforms the energy and transportation systems is important from both an economic and environmental perspective. Therefore, it is essential that the state is taking steps to continue this transition and to set the direction for future investments and programmes. Setting in place goals for energy and water efficiency improvements will help to avoid an over-investment in new, clean electricity generation to meet energy demands. Cleaning up the state's energy generation mix is key for insuring that increased electrification, especially in the transportation sector, does not result in an increase in GHG or air pollution emissions.

CHARTING A PATH TO 2050

Meeting the state's 2050 GHG emission goal will require a pace of reduction of around 11.4 million metric tons CO₂-equivalent per year, which is nearly two and a half times the pace of reductions required to meet the 2020 AB 32 target (CALIFORNIA AIR RESOURCES BOARD, 2014).

California has committed itself to making these emission reductions and doing so in the most cost-effective manner. Getting the state onto this path is certain to continue the debate and conversation around the costs and benefits of making this transition and the impacts on California's economy. As discussed earlier, oil companies have been active and vocal opponents of California's GHG emission reduction policies, which is sure to continue. Public support for AB 32 and its associated policies has generally been very high among likely voters in California. However, it is unclear how this support will fare as the public experiences both the benefits and costs associated with emission reduction efforts. These are factors that the state will have to consider and address internally as it moves forward to tackle climate change. However, considering these factors in state policy efforts is just part of a calculus that includes working with other regions and countries worldwide. By broadening its efforts, California is demonstrating that subnational actions can make a big contribution towards the fight against global climate change, to the promotion of low-carbon development and the encouragement of the international community to take similarly aggressive steps. ■

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The city as an actor in social development: Johannesburg

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The seventh World Urban Forum (WUF) held in Medellin, Colombia in April 2014 helped to showcase the social issues of urban development within a particularly full international urban agenda, which will culminate in 2016 with the third UN Conference on housing and sustainable urban development (Habitat III). The WUF took place in a city that has made 'social planning' the guiding principle of its urban development. This innovative vision has allowed Medellin, a city that is facing increasing territorial fragmentation, to escape from two dark decades in which it had become one of the most dangerous cities in the world.

The numerous actors present at the WUF shared a conviction that cities that are accessible to all and that promote social cohesion are a necessity to enable sustainable development over the coming decades in a context of growing urbanization. Indeed, projections of UN-Habitat show that cities will need to accommodate an additional 2.5 billion people by 2050, 90% of which will be in Asia and Africa. Given that this trend reflects the attractiveness of cities for people that aspire to find work and better living conditions, how can rapid population growth and social inclusion be reconciled? The example of Medellin, which has become internationally well known, shows that an ambitious social policy at the heart of an urban development strategy can enhance the attractiveness of a city. It also reflects the fact that urban fragmentation is not inevitable and can be, if not eliminated, at least reduced. Other cities are responding to this challenge and are also making social priorities the engine of their development strategies: Johannesburg is one example.

The regeneration of the city centre as an engine of urban development in Johannesburg

With 4.4 million inhabitants, Johannesburg is the economic heart of South Africa and a magnet for the sub-region. Historically, it is also one of the most unequal cities in the world in terms of income distribution. Spatial segregation, consolidated by apartheid, was accompanied from the 1960s onwards by a broader phenomenon of urban sprawl, based on the North American automobile dependency model. This was subsequently exacerbated by the development of new economic centres in the 1970s and the post-apartheid policy of the mass construction of social housing in low quality, single function estates in the remotest suburbs. Today, these large social housing districts, which are remote and isolated, exist alongside locked and secure gated communities, with no possible transition between the different areas. With the exception of the city centre, public areas are almost exclusively transit areas. Soweto, for example, exists as an island in the middle of the metropolis. Sprawl and spatial fragmentation of the city have led to the maintenance of the various forms of exclusion.

Since 1994, more than 2.7 million houses have been built, which is enough to provide homes for 15% of South African families. However, this policy has failed to take into account the growing demand for housing that is estimated to be in the region of 2.1 million homes. Moreover, half the population of the city lives in substandard housing, and nearly half of this group live in precarious neighbourhoods. Today, the most marginalized people have three options for accommodation: (i) the social home ownership

programmes in the remote outskirts of the city, where land is available and inexpensive but entails very high transport costs (more than a third of their budget); (ii) informal housing in shantytowns or backyard townships; (iii) 'hijacked buildings', which are city centre buildings taken over by gang leaders who charge extortionate rents for very small living spaces that lack privacy and have disastrous sanitation and safety conditions.

Successive attempts by local authorities to regenerate the city centre have not always had the desired results, but they have enabled the launch of private initiatives such as those of housing operators, associations or private, that have supported city centre restructuring. One such example is the Affordable Housing Company (AFHCO), a private social housing operator that manages an estate of more than 4,000 apartments and commercial premises. Its first operations were carried out in 1996, at a time when the city centre was crime-ridden and many homeowners wanted to sell their properties at any price. AFHCO's innovative approach has enabled it to provide social housing on a large scale: this approach involves the progressive rehabilitation of abandoned office buildings while promoting the functional diversity of these rehabilitated areas. Indeed, AFHCO almost always provides ground floor shops in its buildings and promotes the rehabilitation of public facilities in restructured districts, either directly (construction and management of schools, nurseries and parks) or through interaction with the municipality.

AFD supported AFHCO by funding two communal housing projects that have been recently completed in the city centre (for more than 2,000 tenants). These social rental homes, which have shared bedrooms and sanitation facilities, are aimed at vulnerable low-skilled workers that are eligible for social housing (approximately 85% of the South African population). These people can thus access secure and good quality housing that is close to their place of work.

A comprehensive long-term strategy targeting inclusive access to the city

Beyond these initiatives, Johannesburg is building an ambitious long-term strategy known as the Growth and Development Strategy 2040. Its primary objective is the

eradication of poverty through a better integration into the city of deprived populations (access to services, housing, employment, skills development, etc.). In addition, for the first time in the city's history, this strategy aims to meet the challenge of spatial transformation towards a more compact city, supported by an economy that is more competitive, inclusive and consumes less natural resources.

These objectives may seem ambitious given the severity of the population's vulnerability and the difficulty entailed in the restructuring effort. However, the two initiatives that define the strategy – the inner city roadmap (regeneration of the city centre) and the 'Corridors of Freedom' (densification around public transport corridors) – demonstrate that the city is willing and able to achieve these objectives. The initiatives indeed aim to concentrate city development (prioritizing municipal investment in transport, infrastructure, public facilities, public services and social housing) in a clearly defined zone that has the city centre at its heart and encompasses the townships of Soweto and Alexandra. These two townships are home to almost half the city's population and more than two-thirds of the poor.

Beyond the social priorities at its core, the value of Johannesburg's urban restructuring strategy is that it is part of a wider objective to reduce natural resource consumption and the carbon footprint of this high emissions city (estimated at 6.4t CO₂/capita¹). It has the advantage of combining emissions reduction with local public policies that target social priorities.

The promotion of public transport (Bus Rapid Transit) and the urban nodes densification strategy along transport corridors aim to facilitate mobility for disadvantaged populations but also to limit travel by private cars or vans and therefore to reduce emissions. It is attached to a housing supply policy that includes social housing and activities that target the functional diversity of these urban nodes.

City centre regeneration projects, such as the AFHCO-led example, can also have a real impact on greenhouse gas emissions by reducing the distance between people's

1. For comparison, CO₂ emissions per capita is 4.2 for Barcelona, 4.9 for Tokyo, 10.5 for New York, 1.4 for Sao Paulo and 1.5 for Delhi.

homes and their places of work, thus limiting travel. Such projects participate in the reconstruction of the city on the land it already occupies, rather than contributing to urban sprawl, especially because its various actions enhance functional diversity and make neighbourhoods more dynamic. Other associations and public operators, including JOSCHO, the city's social housing subsidiary, conduct similar actions at various scales.

The challenge of maintaining cities as places of opportunity

Today, the challenge facing the city of Johannesburg is to integrate and coordinate over a long time scale these different initiatives that are implemented in various distinct sites into an overall spatial transformation strategy. There is also a need to apply the overall objectives to the operational level of the district: the coherence of the various interventions will be crucial to ensure a real effect on the city scale. The difficulty here is to bring together major planned public investment, to target this investment so as not to dilute it, and to ensure that it has a leverage effect on private action. It is only under these conditions that the city will manage to 'patch up' some areas of its territory, through 'catalyst' districts that will trigger a dynamic to enable the city to switch to an optimized urban morphology. It is with this objective that AFD provides support to the city. To do so, its financing is backed by the organization of exchanges with French cities that have completed transformations of similar magnitude (contacts with local elected officials, public and private partners such as planning agencies, development corporations, public land management institutions, etc.).

A sustainable urban development strategy based on social priorities with climate co-benefits

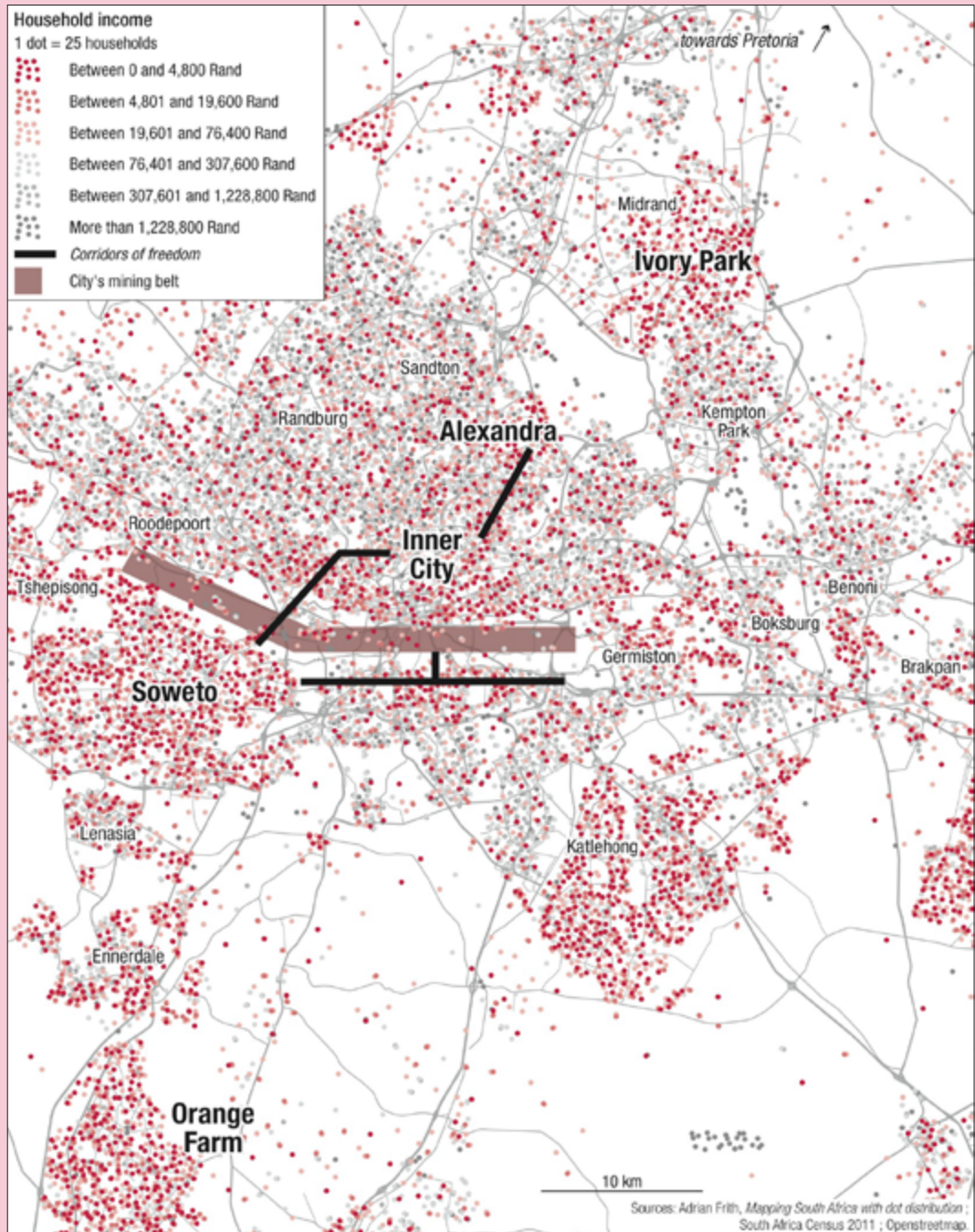
Similarly to Medellín and Johannesburg, other emerging and developing cities are currently facing the challenge of carrying out a spatial transformation to relocate their inhabitants to the heart of a more sustainable city: Porto Novo, Antananarivo, Casablanca and Izmir are also pioneers of this path to a more environmentally-friendly development trajectory and the integration of vulnerable populations.

Many experiments show that densification and urban restructuring, combined with effective public transit projects and favourable policies for social housing, promote both social inclusion and urban development that produces less emissions and is more sustainable.

AFD is convinced that social priorities and climate issues must be combined as part of an integrated approach to urban development. Through the proliferation of the financing of projects that combine these two objectives (i.e. public transport that provides disadvantaged populations with access to employment areas, social housing that is integrated into an urban restructuring strategy, etc.), AFD wishes to capitalize on these experiences and to enrich the debate by showing that projects with a primarily social focus also produce climate co-benefits. Through its current support for Johannesburg, and tomorrow for other cities, AFD puts this principle into practice with spatial transformation projects that provide compactness and diversity. ■

► The dual strategy of regenerating the city centre and the densification of public transport aims to fight against the persistent spatial segregation in Johannesburg. Infrastructure investments thus aim at improving the living conditions of the poorest populations.

FIGURE Johannesburg: Targeting investments based on household income



For two decades, Japan has been seeking answers to questions raised by an increasing number of European countries in terms of economic growth, energy choices and adaptation to an ageing society. Japan aims to be anthropogenetic by 2030, combining societal needs, innovation and education objectives.

Japan: from frugal production to an anthropogenetic regime

This decade has been marked by the emergence of new questions. Is the European Union at risk of falling into deflation and a long period of virtual stagnation? Is an economy without growth compatible with an era of prosperity in which the improvement of well-being is the central purpose of governments? What would the complete abandonment of nuclear power mean in terms of a reorganization of the energy system: an acceleration of the transition to renewable energies or a return to old techniques that contribute to global warming? Will population ageing bring about a crisis in public financing and result in a drying up of the sources of innovation, thus jeopardizing long-term growth? Is inequality in terms of income, wealth and the capacity to influence public decisions, an inevitability?

For over two decades, although not quite providing definite answers, Japanese society has delivered many insights into these various questions. This chapter offers some important lessons that can be drawn from the analysis of a trajectory that was once regarded as fairly unusual, but that is today proving to be an illuminating model for many countries. In the 1980s Japan served as a reference for new industrial models, but the country is enlightening in many other respects, in particular for the exploration of a socioeconomic system that is more in harmony with nature and takes into account the preservation of the social fabric to which education, culture and health especially contribute. This regime, which can be described as anthropogenetic, is not the result of the implementation of a theoretical model but the result of a series of adjustments in response to internal economic, social and demographic changes, but also of changes in the global economy over the decades since World

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War II. This chapter explains the main stages of its emergence by highlighting the components of the regime. Such an analysis would be incomplete without a discussion on the diffusion capacity of the Japanese configuration and an examination of the possibility that the anthropogenetic regime is one of the options for the reorganization of development models.

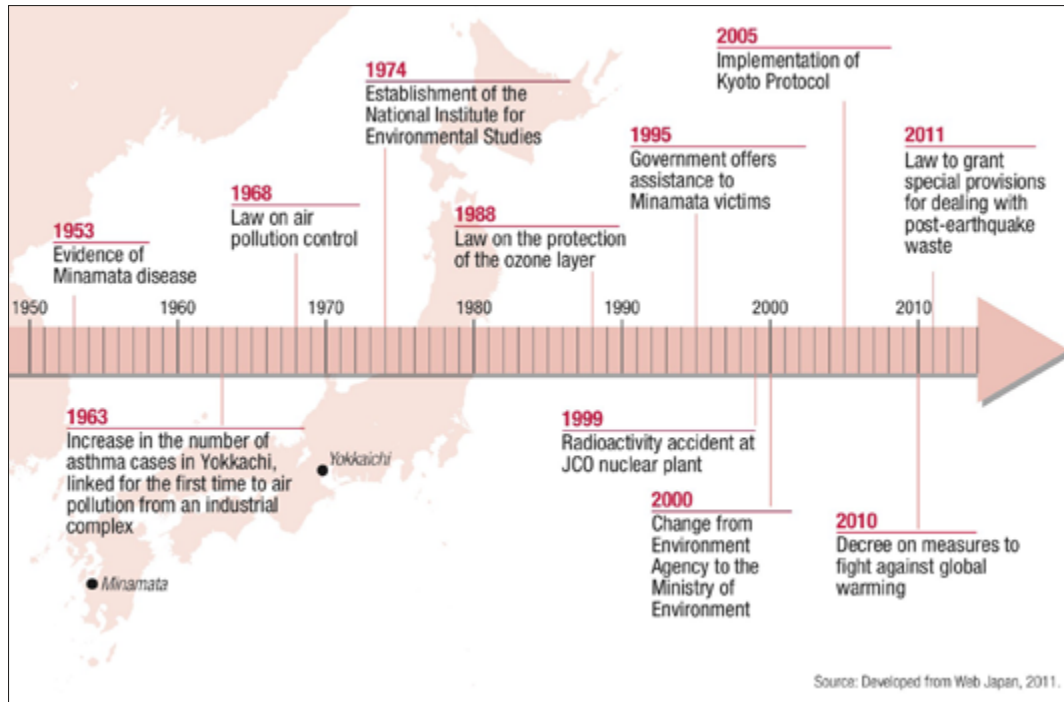
Accelerated modernization raises ecological issues at an early stage

After World War II, the Japanese authorities instigated a catch-up process in the country with a focus on imports, followed by a hybridization of the techniques of mass production. It was also an era of a great transformation in Japanese society (SABOURET, 2004). As a result, Japan grew rapidly which, however, led to considerable environmental damage. Such damage was all the more acute given the country's small size, making the coexistence of industrial facilities and cities difficult to organize. It was in this context that Minamata disease was discovered in 1953, a neurological syndrome caused by mercury poisoning that leads to the degeneration of the nervous system. With its striking although geographically-limited nature, this ecological disaster was one of the earliest factors that raised awareness on the relationship between human activity and the environment. Similarly, the demonstration of the link between increased asthma-related diseases and air pollution triggered the implementation of a protective law as early as 1968. Equivalent movements were observed in other countries, but the specificity of the Japanese geographical environment along with a vision of the world that links human and environmental processes, led to the threat being taken seriously, as demonstrated by the creation of an institute, then an agency, followed by a ministry, with a dedicated responsibility for the environment. The Japanese authorities were also aware of regional, and even global, interdependence in this field, as shown by the negotiation of the Kyoto Protocol (OKUMA, 2013). Finally, accidents involving radioactivity also contributed to this awareness, not forgetting the way in which the recent tsunami and the Fukushima incident has brought environmental risks to the fore (Figure 1).

The lack of natural resources encouraged energy frugality and technological innovation

A second step in the development of the Japanese economy came in response to the two oil shocks of 1973 and 1979. Firstly, at the global scale, the analysis of the Club of Rome pointed strongly to a long-term incompatibility between the finiteness of natural resources and the possibility of unlimited growth. This message was particularly apt for Japan as the country has virtually no energy resources or raw materials. Secondly, Japan's public authorities reached the conclusion that it was important to redirect technical change towards greater frugality, and from this date onwards increased efforts to make more efficient use of natural resources and to recycle. At the macroeconomic level it was therefore important to aim for a strong external trade surplus for industrial products, to offset a structural deficit in energy products

FIGURE 1 Awareness and Japanese environmental policy



Three out of four voters were from high HDI countries, giving them a disproportional influence on decision-making: nine out of ten dialogues have adopted the same recommendations as the Internet voters.

and raw materials. In essence, the Japanese economy is the antithesis of ‘rentier regimes’ which not only produce but also consume energy because its price is kept low, helping to contract the industrial productive base of those countries. Japan has taken the opposite direction and this is what has guided its overall growth strategy.

Therefore, considering its high standard of living, Japan is one of the world’s most efficient countries in terms of energy intensity (OECD, 2014). In this way, the technological footprint is reduced for a variety of components: environmental damage grows at a significantly slower rate than production.

Thus it can be said that a complementarity existed between innovation, energy policy and a limitation of environmental damage. This represented the beginnings of a shift away from the American model of mass production and consumption. Industrial organization experts then diagnosed the emergence of an original production model that became known as ‘frugal’ insofar as it was based on a continual search for economies in all areas. This corresponded to an original configuration of the manufacturing sector in terms of incentive and remuneration and also of information flow and decision-making (AOKI, 1988). It was at this time that Japan was said to have explored an alternative path to that of a deepening of Fordism. What was

the result of a series of pragmatic adjustments became a model that many other countries tried to emulate. In retrospect, several production models coexisted in Japan and their diversity is an enduring feature of industrial history (BOYER and FREYSSNET, 2000). This point deserves attention because it is also likely to be relevant for emerging development models.

Financialization, a major crisis and a long stagnation

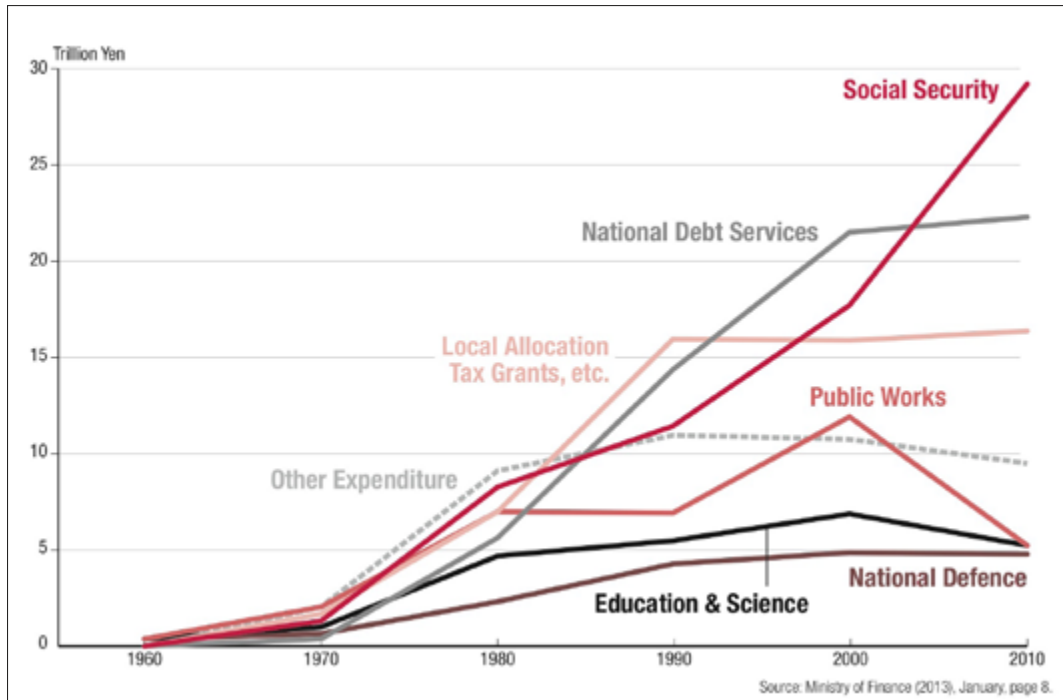
This enthusiasm was short-lived. Indeed, given the accumulation of major trade surpluses, the Japanese authorities were forced to open the country's economy and to liberalize the financial system. Thus, liberalization and international financial openness in the 1980s precipitated a speculative bubble in property (AVELINE, 1995) and the stock exchange, of such a magnitude that the economy underwent a major crisis due to excess credit that could only be absorbed through a long period of restructuring of the balance sheets of banks and companies (Koo, 2009). This resulted in a loss of competence and legitimacy of the Japanese government, a government that blocked a quick exit from the crisis through recapitalization and restructuring of the banking and financial system (BOYER, YAMADA, 2000). In addition, the increasing heterogeneity of the Japanese economy made it difficult for new coordination mechanisms to emerge (LECHEVALIER, 2011).

In the 1990s, two lessons were drawn about possible successors to the post-World War II growth regime. Firstly, it was during these years that the corrosive nature of financial liberalization was highlighted: enabling the possibility of indebtedness created a succession of speculative bubbles, which destabilized Japan's dynamic regime. Secondly, the disarray of the authorities responsible for economic policy, as well as the magnitude of the imbalances accumulated during the expansion period, led to a long period of quasi-stagnation. Japan was the first of the old industrialized countries to involuntarily experience an economy without growth. For over two decades, social and economic actors developed an original configuration that in some ways achieved the transition to an economy of prosperity.

Slow growth and the preservation of the social fabric

Following the rationale of the post-World War II model, the widespread access to education and the extension of social security coverage were seen as the result of dynamic growth, the benefits of which could be distributed between direct wages and the contribution to the financing of public goods and services. Indeed, when growth considerably slowed down, deficits in the public budget and the social security coverage accounts appeared and have accumulated until the present day. One of the peculiarities of the Japanese trajectory is that the cumulative growth of the public debt to GDP ratio has been acknowledged to be a result of a strategy based on two pillars. The first being that the continuity of the innovation strategies of companies is promoted by the state because it is the condition for sustainable integration into the world economy without reducing the standard of living, which is the most satisfactory definition of the concept of competitiveness. The second pillar is the importance of meeting the needs of society,

FIGURE 2 Education, science and above all social security are the Japanese priorities



The Japanese government carried on accruing debt to continue to ensure access to quality education, investment in research and to maintain extensive social security coverage, including for the elderly.

first through a widely accessible education system: in fact, Japan is very well positioned in the international student performance ranking, not only when looking at the average but also when considering the low number of poor performing students (OECD, 2013); and also through a rise in expenditure on health, pensions and more recently those related to dependency. It is worth noting that these types of spending are continuing to represent an increasing share of total public expenditure (Figure 2).

Social fabric is preserved due to the originality of the Japanese wage labour nexus. Indeed, large companies exposed to international competition maintain the stability of the employment relationship: facing a reduction in the order books, they reduce hiring, working hours, bonuses and eventually the base salary, with redundancies being an instrument of last resort. In addition, the service sector has implemented a variety of employment contracts, including part-time and fixed-term, and the corresponding flexibility has avoided the explosion of mass unemployment. This configuration is the antithesis of the American-style model in which downsizing is the first tool in defence of profitability and for company survival.

Since the 1990s, inequality has increased significantly in Japan, prompting many analyses from researchers and causing public concern (TACHIBANAKI, 2009). Yet,

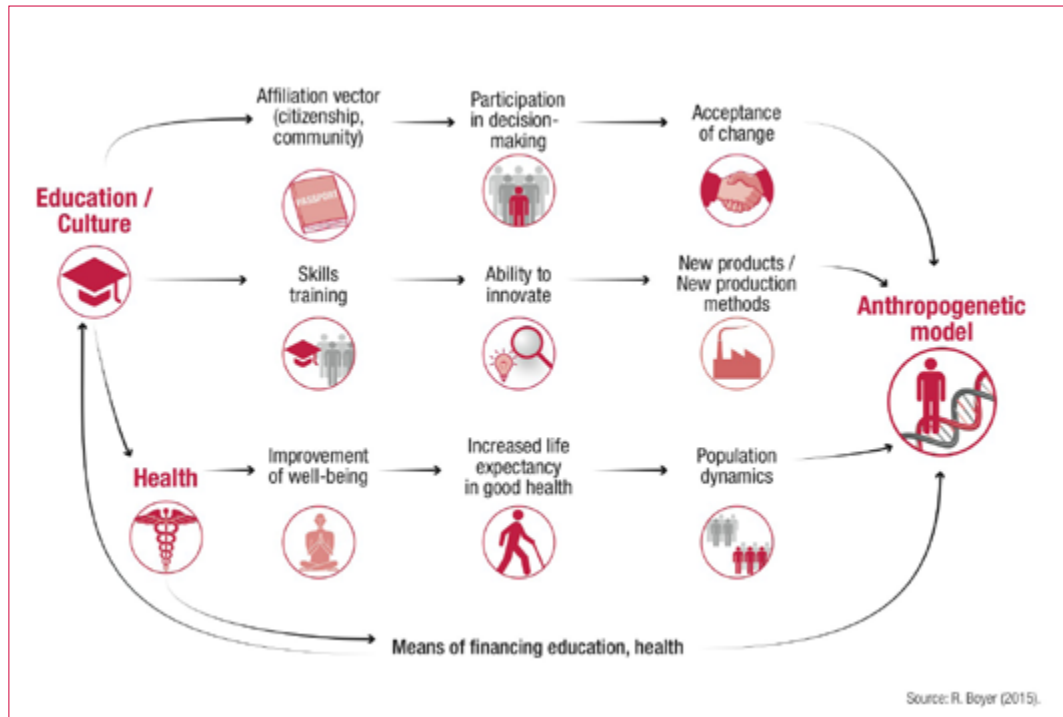
in international comparisons, Japan, together with the Nordic countries, are the ones in which the growth of inequality has been contained (PIKETTY, 2013, Figure 9.3). One of the reasons for this is that the return on capital and the growth of inheritance are far from being major sources of rising inequality, even if they pose a threat for the future (HAYASHI, 2014). Thus, during this period, the public budget has shown a dual priority: strong incentives for innovation to ensure competitiveness; and steady growth of social spending to safeguard the well-being of an ageing population. Quality of life can thus be maintained despite the absence of growth, on the condition, of course, that the deficit would be financed by the savings, that are essentially domestic, and that such savings would have a low return. However, this inability to curb the growth of public debt undermines the long-term viability of this original regime. This explains the reasoning behind Prime Minister Abe's government's attempts to revive the economy to better ensure the financing of social security. This can be interpreted as a defence of a socioeconomic system that favours well-being ahead of economic orthodoxy (WOLF, 2013).

Synergy between innovation and anthropogenetic rationale

Does Japan's current configuration define a transient regime specific to this country? Or is it part of a general movement aiming to account for the historic characteristic of the post-World War II growth regime and for indicators aiming at measuring the performance of each economy? Many indices argue for the generality of this transformation of representations and the recognition of emerging economic systems based on a better integration of welfare objectives. Improving health and efforts to universalize the provision of education are increasingly considered as vectors of development and not merely its consequences, especially given that the analysis in terms of human capital has been overtaken by approaches equating economic development and capacity building through the provision of basic goods such as access to education and health (SEN, 1999). The human development indicators that are regularly published by international organizations (UNDP, 2014), including the World Bank, demonstrate this evolution. These indicators are no longer simply a reflection of the success achieved in terms of the acceleration of growth, they can instead reflect the conditions of a better quality of development. This paradigm shift is not only true for emerging countries, it applies equally if not more so, to the more advanced countries for which the pursuit of prosperity could gradually replace that of growth (CASSIERS, 2011).

Conceptually, these considerations may be the basis for a new representation of the economic circuit in contemporary societies: shouldn't they aim for the mobilization of human capabilities in order to reach a higher level of development, according to a recurrent and cumulative process? Natural resources, technology, products, services, capital and credit, namely the central concepts of economics, would only constitute intermediates in this ongoing process of creation and regeneration of modern society. To highlight its originality, namely the creation of humanity by

FIGURE 3 Health, education and culture at the heart of the anthropogenetic development model



The anthropogenetic system is based on the synergies between education, culture and health to support innovation, which itself stimulates the production and mobilization of the necessary financial resources.

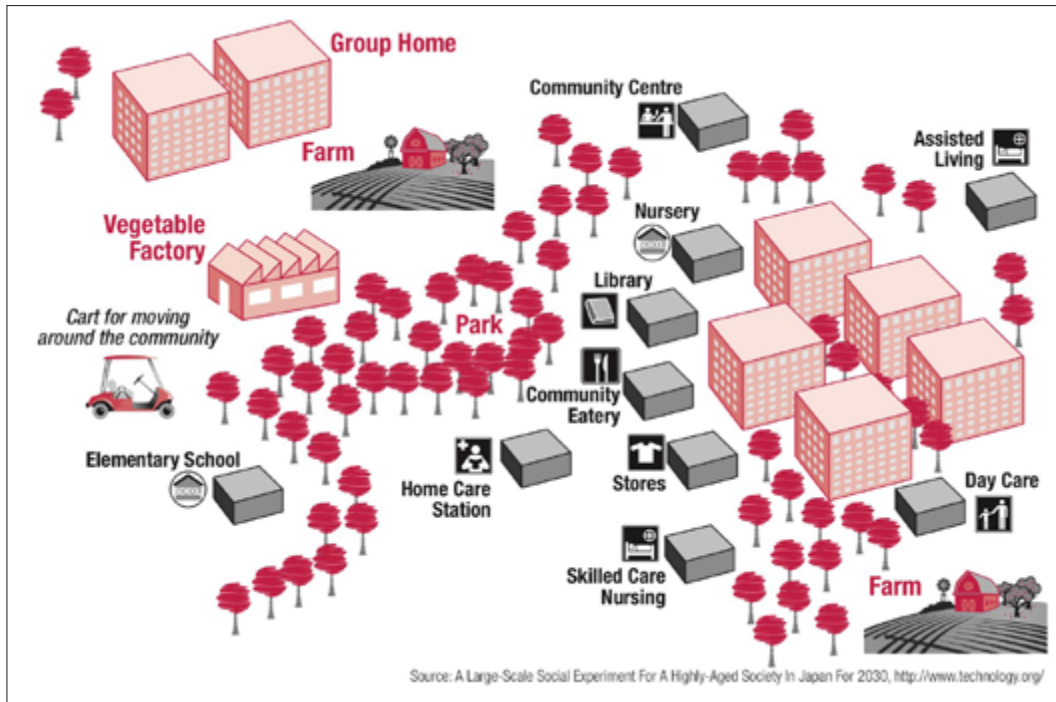
human labour, it has been proposed to classify such a rationale as anthropogenetic (BOYER, 2002), in line with the founding intuition of Bruno Théret (THÉRET, 2011), who called it anthropomic.

In a more analytical way, we can also show that the economics of innovation is itself a component of the corresponding process, by incorporating logically the demographic phenomena and highlighting the synergy between education, culture and health. The consideration of innovation is important as it stimulates production and provides funding for public services and social security, which are at the basis of the model (Figure 3). Its success is no longer measured in terms of the GDP growth rate, but of the observation of improved well-being as perceived by members of society. It does not prejudge the end of growth or the need for degrowth: it will be a result of a specific institutional configuration.

A change of society and era

Japan's situation is characterized by an ageing population, the beginnings of a slow population decline and almost flat economic growth. As a result, most institutional

FIGURE 4 Designing an anthropogenetic city



The anthropogenetic matrix enables the city to be designed as a meeting place for different generations of inhabitants, while developing specific services for senior citizens.

forms and policies have to adapt (MATSUTANI, 2006). In the past, the benefits of growth were fairly evenly distributed and while the social protection was relatively limited, public infrastructure works allowed the homogenization of the evolution of the different regions and consequently of the various social groups: this is how solidarity was expressed. The 2000s marked a breakdown, the use of public works decreased while spending on social coverage accelerated (see Figure 3). This era is now over for a variety of reasons.

“Japan’s GDP will no longer be in itself the foundation that is able to maintain a sense of national unity (...). However, even in the absence of economic growth, Japan will have another asset in increasing quantities. This asset is leisure time. (...) This additional leisure will give more opportunities for individuals to pursue their interests and a new individualism will emerge. While the common pursuit of economic growth implied shared values, pleasure related to leisure will develop a wider range of values. The reference to “I” will replace the perspective of “We the Japanese”. People will begin to see themselves more as members of their communities than as citizens of a nation. (...) To maximize the benefits of increased leisure requires the organization of appropriate spaces. Urban planning will have to take into account the local culture and traditions

and different types of recreation. (...) The reduction of the Japanese population opens an interesting promise of richer and more fulfilling lives.” (MATSUTANI, 2006, 186-187).

This vision is already at work in some local experiments such as in the Toyoshikidai district in Kashiva city in the Chiba prefecture (TECHNOLOGY.ORG, 2013). It aims at organizing a community designed for senior citizens including not only medical and care services, but also employment opportunities, while ensuring that different generations of residents are able to meet, for example through a community restaurant (Figure 4). In 2009, the Institute of Gerontology at the University of Tokyo, which supervises this project, launched a consortium on gerontology bringing together universities and industry, in which are involved most of the major companies from all sectors of the Japanese economy. These companies perceive an old age society as an opportunity for new activities and they anticipate that the knowledge acquired in Japan will be exported to other Asian countries that will experience their own period of rapid population ageing, soon after Japan.

This example highlights three features of the emerging regime. Firstly, it does not only involve costs to the public budget and social security because it can be an opportunity for new sources of innovation, in biotechnology and health, but also in all other sectors (home automation, transport, urban development and recreation). Secondly, it carries the potential of the local integration of policies previously conceived as sectoral actions derived from central government, the interdependencies of which could have appeared in the field as malfunctions. Finally, in seeking to integrate various activities (work, consumption and leisure) at the local level, this strategy may be efficient in terms of energy and the environmental footprint. The anthropological rationale is not contradictory with the search for ecological sustainability. Thus Japan, although often blamed for its delay in implementing economic policies to exit the crisis, may in fact be exploring a possible route for the future (SABOURET, 2011).

From a series of adaptations to a reflexivity effort: what are the vectors of this emerging model?

The analysis of changes in Japanese society since World War II brought forward an overall reorganization which distances the country from the typical industrialist model of Toyotism. To a theoretician, these transformations are likely to define a system and an original socioeconomic regime. However, what about collective actors and individuals who shape the daily transformation of organization forms: do they adhere to such a perspective and do they adapt their behaviours and strategies accordingly?

If the vision of a society without significant social tensions is adopted, in which most people recognize themselves as belonging to a large middle class that relies on the political and economic elite, then piloting such a transition is, a priori, easy. This is because it would be a reiteration of the modernization strategies of the post-World War II era. In fact, success has gradually transformed Japan's social structure into one where the interests of various social groups are no longer necessarily convergent.

Given the economic downturn and the drop in job creation, it is more difficult for the younger generation to gain access to the wage/social status of their parents: the university system delivers more graduates than the corporate sector can recruit under the privileged status of 'salarymen'. The proliferation of non-standard employment is causing a fragmentation of employees and, in some cases, the few who are left behind by the education system reject the status of employee. This, a priori, goes against the anthropogenetic model. However, the cultural component of this model contains a corrective factor, since a proportion of the young people who reject the old model may serve as the vector of the new one in the cultural field (design, publishing, music, performing arts, gastronomy, etc.). We refer here to some of the successful diffusions of Japanese innovation (manga, karaoke, cinema...).

The status of women is a second major issue. Indeed, Japanese society does not make the most of female expertise because, despite performing better at university than their male counterparts, the traditional social norm prevails over gender equality, even though this equality is inscribed in law. Indeed many women have to choose between pursuing a professional activity and the education of their children. The insufficiency of public nursery systems and the lack of funds dedicated to family policy largely explain the low Japanese birth rate of about 1.3 children per woman. A declining population goes hand in hand with an ageing one, therefore the problem lies in the purely demographic component of the anthropogenetic model in the strictest sense.

Pensioners are theoretically the beneficiaries of a system in which life cycle is integrated into the organization of social security coverage. Two other favourable factors for senior citizens are the Confucian philosophy of respect for elders, and secondly that the rural population (which is relatively large and ageing) has a significant impact on the electoral process. However, other factors are obstacles: given the increase in life expectancy, the retirement age has had to be raised and low pensions mean that some must continue working, while others fall into poverty if they have not had a salaryman career. Given that beyond a certain threshold health expenditure grows very rapidly with age, those responsible for economic policy are concerned that ageing is a major cost to public finance.

Large Japanese companies specializing in the production of manufactured goods that are typical of modern lifestyles continue to play a key role in the macroeconomic regime: the surplus of the trade balance that they allow provides the necessary funds for the importation of natural resources and agricultural products, a dependency that the shutdown of nuclear power plants has increased. Therefore, the stepping up of social security coverage should go side by side with the preservation of an export sector that is structurally competitive beyond short-term exchange rate fluctuations. This sector can continue to benefit from the spillovers resulting from the dynamism of innovation in mature industries, favoured by the adaptation of the school and university system, which can also be extended to innovations derived from the establishment of the anthropogenetic model (biotechnology, automation, urban planning and the network organization of healthcare services).

The objective is to somehow disseminate and generalize the experiences mentioned above (Figure 4) and to bring about a system of innovation and production that is consistent with extensive insurance coverage. This is, it seems, the recipe for success in social-democratic societies (BOYER, 2015).

The task of researchers is to unravel the multiple causalities inherent to this new regime. While the most important work relates to the capacity of politicians to arbitrate between contradictory interests and to attempt to reach a consensus that can guide actor strategies and social groups.

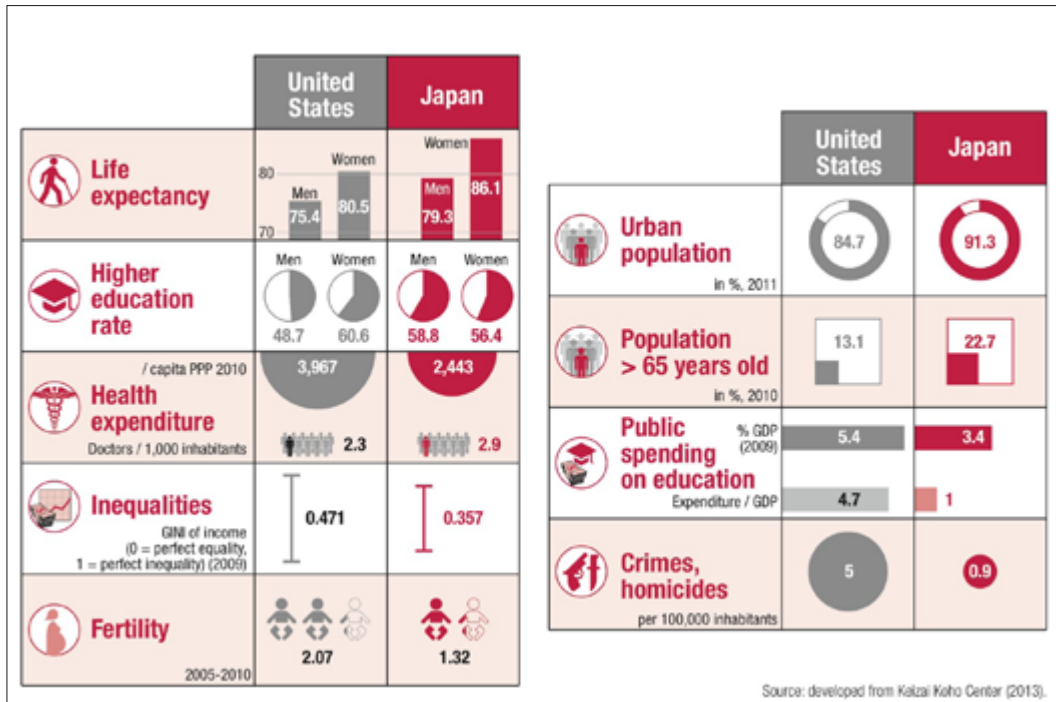
The dynamics of local solidarity and the loss of trust in politicians

Between World War II and the 1980s, Japan had a reputation for high quality management assured by the trinity of competent bureaucracy, political stability ensured by the continuous leadership of the same political party and powerful industrial groups supporting technological modernization. In view of Japan's remarkable economic performance, public opinion was generally convinced that these elites were working for the good of the majority of the Japanese population. If this remained true today, it would be sufficient to update this configuration to establish a new mode of development. Research on social movement in Japan provides a somewhat different picture: at the local level, new demands have periodically emerged, which have been inconsistently dealt with over time (BUISSOU, 1997; 2012; CHAN-TIBERGHEN, 2008). They have led today to a loss of confidence that is particularly focused on the ability of governments to meet the expectations of citizens.

A first breach of confidence occurred when the property bubble burst in 1990: not only did citizens question the competence of the public authorities to overcome the crisis, but they suspected that collusion between banks and the government had been instrumental in the genesis of the problem. In 1995, the Kobe earthquake dramatically highlighted the disorganization of the public authorities, given that most of the emergency assistance was provided by a local solidarity movement. The readiness to pass laws promoting the solvency of insurance companies and the slow pace of reconstruction suggested that the government did not defend the general interest of the population. In March 2011, the nuclear accident in Fukushima once more revealed the weakness of government control over large companies for electricity generation and the difficulty to define and fund a reconstruction programme to address the challenge posed. On the other hand, this government weakness led to a new anti-nuclear movement of unprecedented proportions, which itself is part of a long history.

Opinion polls revealed a collapse in the credibility of government spokespersons that was even more dramatic than the falling trust in media or energy producing companies. International comparisons show that a similar trend has been observed in most countries, but it is especially marked in Japan (EDELMAN, 2014; WORLD VALUE SURVEY, 2014). This is of course a handicap for the exploration of a development path that requires coordination around expectations shared by a large number of actors.

FIGURE 5 The anthropogenetic regime: Japan better than the US



The results of Japan in terms of well-being are much better than the results of the US at lower costs.

In contrast, sociological analyses confirm the resilience of a high degree of trust and solidarity at local and sectoral levels, which allows social experimentation to be carried out in response to the demands and aspirations of citizens. It is currently difficult to scale these experiments up into a national strategy, but they are one of the two components of the processes which, in the past, have led to the emergence of new development modes (BOYER, 2014).

Making the best use of models

Is the Japanese trajectory general? A priori, it is close to the design implemented by the social democratic Nordic economies, given that social security coverage has for a long time been thought to be a possible contribution to a growth regime that makes equity and efficiency compatible (VISSER and HEMERIJCK, 1997). In fact, many statistical analyses confirm this similarity: Japan and the Nordic countries are the most advanced in ecological terms and also show the lowest economic and social inequalities). However, institutional analysis confirms they do not belong to the same variant of capitalism (AMABLE, 2004; HARADA and TOHYAMA, 2011). For some reason there is no canonical configuration of anthropogenetic regimes. Is this assumption called into question if one takes the United States into account?

Indeed, the United States is at the technological frontier in most areas: education and university system, health and leisure industry. However, the response is largely negative (Figure 5).

The life expectancy of Japanese people is significantly higher on average than that of Americans, health spending appears lower by nearly 40% compared to those of the United States, even though the proportion of the elderly population is much higher. In Japan, the share of public expenditure on education is lower, but access to higher education is better than in the United States. A comparison of the incidence of crime and homicide shows that Japanese society is more peaceful than that of the United States. Finally, inequality is much lower in Japan. As noted earlier, the only area where Japan falls short, which is an important one, is the low Japanese fertility rate that leads to an ageing and declining population. This trend derives largely from the unequal economic status between men and women (LECHEVALIER and ARAI, 2005), and feminist movements have not been able to eradicate this inequality (FUJIMURA and KAMEDA, 1995). This is one of the weaknesses of this version of the anthropogenetic model. However, given that the return to rapid growth seems unattainable, why couldn't a prosperity economy be organized that centred on the pursuit of the quality of life? It is possible that this strategy could be applied to Europe in its present and future state. However, it must be remembered that those who tried to import the Japanese model of production in the 1980s encountered many problems. This difficulty is even greater when considering a complex socioeconomic system, which should be part of every national trajectory, because it requires the reconfiguration of a large number of institutions and organizational forms that have been inherited from a past that is no longer with us today. ■

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South Korea: green growth as a development strategy

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Spurred on by the strong momentum created by a presidential initiative, an ambitious plan of green growth has been underway in South Korea since 2008. The Green Growth Strategy aimed to shift the development paradigm from fossil fuel dependent growth to a more environmentally-friendly one, utilizing low-carbon and renewable energy resources. South Korea tried to reach its energy security by increasing the supply of low-carbon energy resources, including nuclear energy, and boosting the green energy industry. While emphasizing the synergy between low-carbon measures and economic competitiveness, green growth strategies also triggered a strong industrial boost in the renewable energy sector, which showed a particular focus on the ‘growth’ side in addition to the ‘protection’ side of sustainable development.

However, South Korea’s Green Growth Strategy is also facing a number of challenges. The ‘top-down’ strategies of green growth have had to be readjusted according to changing administrations and policy priorities. Furthermore, moving from the policy vision to actual policy implementation also brought challenges, both to the government and to the related industries. Nuclear energy, one of the key pillars of South Korea’s low-carbon measures, began to be discussed more cautiously under a new socio-political atmosphere in the Post-Fukushima era.

This chapter surveys the evolution of South Korea’s green growth policies since 2008 and discusses the challenges and tasks of its implementation. This study also explores the recently announced ‘Second Five-Year

Plan for Green Growth (2014-2018)’ and concludes with perspectives for a more coherent implementation of the Green Growth Strategy in South Korea.

The evolution of the Green Growth Strategy (2008-2013)

South Korea’s Green Growth Strategy has multiple policy objectives to address the issues of climate change, energy-import dependency, fossil fuel depletion and global economic slowdown. It was also designed as a development paradigm to create a new engine for economic growth beyond the ICT industry through green technology and renewable energy. The transition to a low-carbon economy implies a transformation of key economic sectors, the deployment of new technologies, as well as many lifestyle changes throughout society (LEE, 2013b). In compliance with the new paradigm of green growth, the government also announced the ‘Green New Deal’, an economic stimulus package to cope with the global financial crisis by making use of green technology and investing in environmental industries (LEE, 2013a).¹

Driven by a strong political initiative, South Korea’s Green Growth Strategy made noticeable progress in building up its legal base and institutional structure. The Framework Act on Low Carbon Green Growth provided an overarching legal base, while more professional government agencies such as the Presidential Committee on Green Growth (PCGG) enabled more systematic green-growth policymaking. Regarding the energy mix, the first National Basic Energy

1. Green New Deal Project targeted at creating 956,420 jobs. Presidential Committee on Green Growth, ‘2008-2009 Progress Report,’ p.9.

Plan (NBEP, 2008) set a renewable energy target of 11% of the primary energy supply in 2030, a sharp increase from the previous target of 2.14% in 2006 (LEE and Yu, 2012; LEE, 2013b). In the second NBEP (2013), this 11% target for renewable energy remained unchanged in the new plan for 2035 (MOTIE, 2014).

As a key instrument for renewable energy development, the government introduced the Renewable Portfolio Standard (RPS) in 2012, replacing the existing feed-in-tariff system.² The RPS target would be increased from 2% in 2012 up to 10% by 2020. It was expected to provide a stable framework for domestic market expansion together with a number of green growth policies such as the Emissions Trading System (ETS), Green Home Project, etc.

The nation's well-developed industrial infrastructure was regarded as an advantage that could nurture green energy industries. South Korea's leading heavy industry companies entered the wind power business, while major electronic companies announced their participation in the photovoltaic (PV) cell industry. Furthermore, South Korea's advanced IT and electronic technology capabilities were able to galvanize the projects in the smart-grid field. In addition, the government's R&D investment plan was expected to play an important role in filling a technological gap between South Korea and the world's leading green energy countries (LEE and Yu, 2012).³

As part of its national contribution to combat climate change ahead of the Copenhagen COP in 2009, the South Korean government confirmed a commitment to low-carbon green growth by announcing a midterm target of a 30% GHG reduction by 2020 (according to the business as usual (BAU) scenario). In addition, national GHG reduction targets were established for specific sectors, including transportation (26.7%), buildings (26.9%) and the power generation sectors (34.3%) – again compared to 2020 BAU levels – while the industry sector as a whole was given an 18.2% reduction obligation (LEE and Yu, 2012).

2. The South Korean RPS mandates power generators operating at over 500 MW to produce a certain amount of their electricity from new and renewable sources.

3. Key energy technologies of green growth include: new and renewable energy (PV, wind, fuel cell, IGCC, biofuel); energy efficiency/carbon reducing technologies (clean fuels, energy storage, efficient lighting, green cars, energy efficient buildings, heat pumps); and electricity/nuclear (nuclear, smart grid, clean thermal power) (LEE and Yu, 2012).

Since the introduction of green growth, there has been a notable development in solar PV and wind energy in South Korea. However, the contribution of wind and solar energy is currently not significant, accounting for 2.2% (wind), 2.7% (solar PV) and 0.3% (solar thermal) of the total new and renewable energy supply (KEMCO, 2014).

The challenges to the Green Growth Strategy in an uncertain environment

The Green Growth Strategy has largely evolved as a new vision and a policy paradigm. As a strong top-down initiative, the idea of green growth has rapidly established itself as a 'sacrosanct' political doctrine, serving as a representative symbol of the Lee Myung Bak administration. Low-carbon schemes and the promotion of clean and renewable energy are now widely accepted as best practice in government, business and civil society. Furthermore, a generous budget allocation has broadened the platform of R&D and policy discussion. The Green Growth Strategy has also resulted in the establishment of the Global Green Growth Institute (GGGI) and the Green Technology Center (GTC), while South Korea has also hosted the Green Climate Fund (GCF) – all of which are regarded as major institutional achievements at the global level.

However, South Korea's Green Growth Strategy has also faced growing challenges, especially in the aftermath of the end of the Lee Myung Bak administration. These challenges lie in the management of the transition from a fossil fuel-based energy structure to a greener one, which often bear a huge economic and social cost. A series of external variables, such as the global economic downturn and an overall recession in global renewable energy industries, has also affected the progress of green growth in South Korea.

Much of the criticism has centred on the overblown expectations of the outcomes. For example, the Four River Revitalization Project, to which the largest share of the Green New Deal budget has been allocated,⁴ has often

4. Under the Green New Deal, the Four Major River Revitalization project comprises 28.9% of the total budget.

FIGURE 1 South Korea's Green Growth Strategy

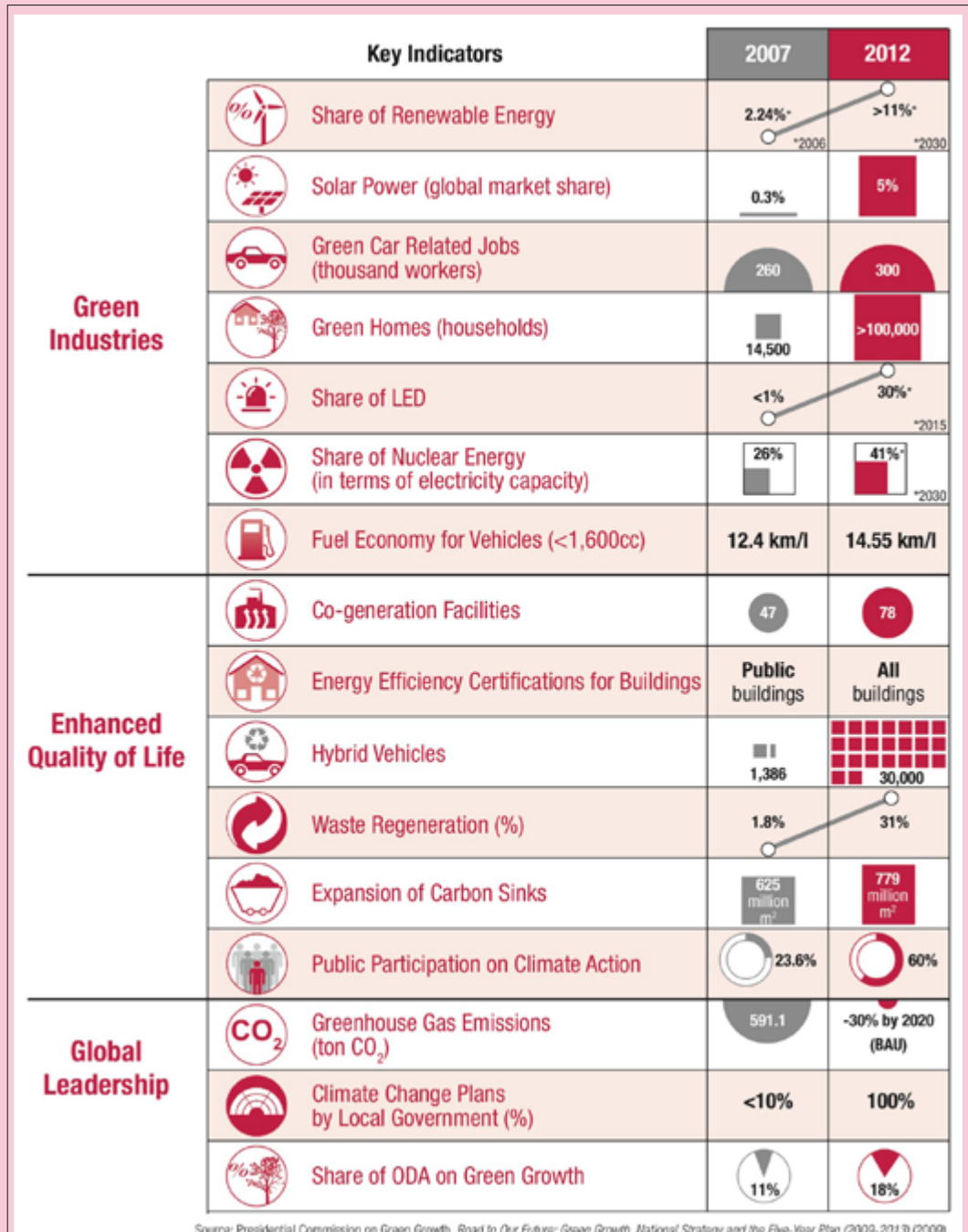
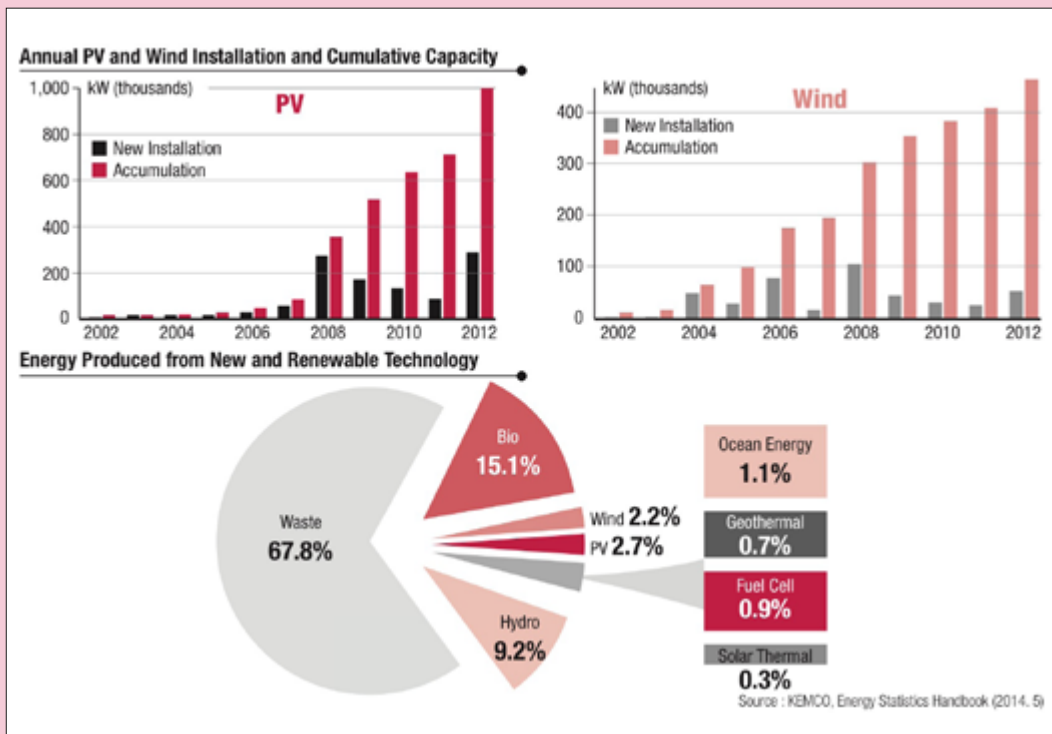


FIGURE 2 Ongoing energy diversification



The Green Growth Strategy has enabled a significant development of renewable energy in South Korea, but without totally changing the country's energy landscape.






been criticized for its adverse effects on the environment. In addition, nuclear energy was included in the Green Growth Strategy as one of the most important low-carbon measures, but the government's commitment to nuclear expansion is now facing increasing challenges on safety grounds in the wake of the Fukushima nuclear accident. From an industrial viewpoint, the structure of South Korea's economy remains unfavourable to low-carbon growth given that the country's main industrial sectors are energy intensive and export-oriented. On top of this, there are concerns about the effectiveness of the ETS and on the shale gas boom in North America which is forcing renewable energy sectors to compete with the growing use of natural gas. It seems that the ride along the greener path may not be as easy and smooth as we might have hoped.

Reshaping the framework of the green path

The Park Geun Hye administration has reaffirmed on several occasions its continued support for the green growth paradigm in South Korea. The government adopted the Second Five Year Plan for Green Growth (2014-18) in July 2014, announcing three policy objectives: 1) establishing a low-carbon economy and social structure; 2) realizing a creative economy through the convergence of green technology and ICT; and 3) constructing living conditions that are clean and resilient to climate change. The key contents of the Second Five Year Plan are summarized in Figure 3. Furthermore, it is intended that the ETS will be introduced in January 2015.

However, the perceived priority of green growth policies seems to have decreased and the government appears to have cooled down on the ambitions of the previous

FIGURE 3 Green growth: the second five-year plan

	<i>Policy Direction</i>	<i>Key Contents</i>			
	Effective greenhouse gas (GHG) reduction	Achieving the GHG reduction goal (30 percent reduction by 2020 relative to the BAU) by implementing the National GHG Reduction Roadmap Constructing GHG-reduction infrastructure to implement and establish an efficient emissions trading system Devising a long-term national GHG reduction goal after 2020 Ensuring carbon sinks in domestic forests and the ocean			
	Building a sustainable energy system	Strengthening energy demand management by energy tax, actualized electricity prices, and advanced demand-responsive market Expanding renewable energy supply by a renewable mandate and a set of supporting institutions Building a distributed generation system Securing safety in energy infrastructure			
	Building the ecosystem of green creative industries	Developing and commercializing green technologies to cope with climate change Promoting green creative industries by encouraging new start-ups and markets based on green technology Establishing an economic structure of resource recycling by creating green energy villages			
	Realizing a sustainable green society	Strengthening adaptation capabilities by constructing climate-resilient industrial systems Expanding environmentally friendly living conditions by encouraging green consumption and low-carbon practices Creating green country space by an environment-friendly land-management system Ensuring cooperative green governance of different social groups			
	Strengthening global green cooperation	Devising an effective scheme for the post-2020 climate change regime Strengthening regional and global cooperation on green growth Increasing cooperation with developing countries through Green ODA Supporting the successful establishment of GCF and expanding cooperation among GCF, GTC and GGGI			

Source: Commission on Green Growth (2014).

administration. The government agency in charge of green growth has been transferred from the Presidential Committee on Green Growth (PEGG) to the Prime Minister's Office; while, among some policy actors, the nuance of green growth has shifted implicitly from being regarded as a 'sacrosanct doctrine' to that of a 'political taboo'. The politically overstated nature of the green growth framework has led to negative repercussions, with the consequence that the remobilization of political, industrial and social stakeholders has, for the time being at least, become another priority for the continued implementation of the Green Growth Strategy.

The uncertainties regarding global climate change negotiations present an additional external challenge. South Korea has taken a proactive stance in the discussions on the post-Kyoto Protocol mechanism. In her address at the UN Climate Change Summit in September

2014, President Park announced South Korea's contribution of \$100 million to the GCF and underlined the country's active role in global cooperation to tackle climate change. However, the specific scope and terms of South Korea's participation in the post-2020 climate change regime have not yet been fixed and the country's position will be significantly affected by the stances of other major industrial countries.

South Korea's Green Growth Strategy is still undergoing a process of consolidation and at this stage it is too premature to make judgments on whether it has been an overall success or failure. In terms of a paradigm shift, the idea of green growth has certainly built a solid platform as a new growth model in South Korean society. Faced with a dual challenge of a high dependence on imported fossil fuel and increasing GHG emissions, the Green Growth Strategy remains a valid policy framework. The successful

pursuit of the Strategy will depend on reconfirming the social consensus and political momentum to implement the action plans raised in the Second Five Year Plan. The politically overblown expectations of previous years are being scaled down as South Korea's Green Growth Strategy currently faces a moment of truth, undergoing a reshaping in terms of its contents and scope so that it can become a more durable long-term national agenda. ■

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Part 3

Reinventing development and its financing

Financing for sustainable development is one of the major subjects of negotiation on the ‘post-2015’ agenda and a key to its implementation. The most commonly proposed technical options are presented here, and their relevance discussed in relation to the constraints specific to certain sectors and countries – particularly the least developed countries.

Financing the post-2015 sustainable development agenda

In 2015 the United Nations General Assembly is expected to propose a new development cooperation framework and to draw up a list of universal sustainable development goals (SDGs) to be achieved by the year 2030. This event is a unique occasion to put environmental challenges at the heart of a universal agenda of development model transformation. It offers the opportunity to re-open discussions on the socio-economic trajectories of countries and their environmental impacts.

The SDGs will dramatically change the international official development assistance (ODA) agenda. They cover many more topics than the Millennium Development Goals (MDGs) that were established in 2000. The SDGs are more ambitious – for example they include ‘zero poverty’ and ‘zero hunger’¹ objectives – and they are placed within a universal perspective. The widening and deepening of the development agenda raises specific questions on implementation, particularly regarding funding.

The issue of development financing has been the subject of a separate report (UNITED NATIONS, 2014), in which an intergovernmental committee of experts (ICESDF) examined the issue and drew up an inventory of funding needs and sources. In the report’s final section it outlines some options for an integrated strategy. The ICESDF report is relatively consensual and draws to a close the cycle of discussions between finance experts on what we might call ‘technical’ issues; while it opens a cycle of a different nature – a political one, punctuated by the Addis Ababa conference in July 2015 and by the discussions on the financing of climate

1. The list of SDGs is not fixed; we therefore refer here to the most recent document produced by the Open Working Group, dated 12 August 2014: <http://sustainabledevelopment.un.org/focussdgs.html>

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policies ahead of the COP 21 in Paris, and the finalization of the list of SDGs and the resources required with respect to those goals.

During this pivotal period that is now opening, the purpose of this article is to present the technical elements that make up the major reports on development financing, and to consider them in a political perspective that is relevant for the planning of ODA within the global development financing ecosystem.

Framing the financial debate: what the recent studies tell us

The ICESDF report should be understood as a common and solid working basis from which to expect all cooperation actors to produce a number of concrete proposals in terms of resource mobilization and efficiency. In view of the adoption of the SDGs and the Addis Ababa conference, the works of the committee have resulted in the production of a set of intellectual outputs that have recently enriched the discussions through complementary reports and accounts.²

All highlight that the funding issue is not limited to a quantitative assessment of the needs and resources that are available, or are potentially available. Most of the major reports do not, however, resist the tempting and yet perilous exercise of carrying out such a quantification; and many find that the issue is not so much about 'how much' or 'why', but more to do with 'how'.

They place particular importance on the mobilization and utilization of domestic public resources through the identification of specific needs in terms of efficiency (capacity building of tax administrations, fighting against corruption) and/or the tax base (the ICESDF especially encourages the taxation of CO₂ emissions). The focus is then put onto the strengthening of local tax administrations and the fight against the illicit funding flows out of developing countries.

These resources should encourage local public authorities to mobilize private resources for the financing of long-term sustainable development, in particular by improving access to financial services and the promotion of business loans to small and medium-sized enterprises (SME). The complexity of the issue is not so much related to the recommended 'recipes', but more to do with the conditions of application to difficult environments. In countries with the least well-established banking sectors one solution consists of promoting the development of innovative payment systems such as mobile banking (GUILLAUMONT-JEANNENEY/KPODAR, FERDI, forthcoming).

The same applies for private external resources, including foreign direct investments (FDI). Here the central question concerns how to direct these funds to finance sustainable development. In the absence of a real response, the various reports identify the necessary conditions, as well as the potential sources of financing

2. See OECD (2014), SDSN (2014), the European Report on development (*Financing and other means of implementation in the post-2015 context*, forthcoming) and FERDI (*Financing sustainable development by addressing vulnerabilities*, forthcoming).

for sustainable development and global public goods: pension funds, insurance companies, sovereign wealth funds (OECD, 2014), or for the IMF to finance the Green Climate Fund through the creation of annual reserve assets in the form of additional Special Drawing Rights (GIRAUD, FERDI, forthcoming). The remittances of migrants are often mentioned as an underutilized resource that international cooperation should promote through addressing transfer costs and by providing suitable financial innovations to direct these funds effectively.³

Most reports recognize that ODA still has an important role as long as concessional public resources are used where most needed, especially in favour of the least developed countries (LDCs).⁴ At the same time, the question of how to ensure that the funding effort is fairly distributed between public stakeholders naturally arises. While most reports only mention a ‘need for all stakeholders to take responsibility’ in the financing of SDGs, the OECD (2014) proposes to increase the effort of each country to 2% of GDP (ODA included) and the Sustainable Development Solutions Network proposes a formula to determine the distribution of contributions to fight against climate change (SACHS and SCHMIDT-TRAUB, forthcoming).

Beyond the discussion on the amount of financing, the debate on development financing offers an opportunity to observe the progress of the construction of international cooperation efficiency, South-South and triangular in particular. While the ICESDF mentions the invitation from the United Nations to its General Secretary to take ‘concrete actions’ to strengthen this type of collaboration, the differences in the design of international cooperation between traditional and emerging donors may be an obstacle: while the former cooperate according to rules that are common to Development Assistance Committee (DAC) members, a sort of ‘gentlemen’s agreement’ on development⁵, the latter see international cooperation through the prism of the comparative advantages of each partner (LIN, CCER Beijing, FERDI, forthcoming).

The accounting equation and its limitations

The ICESDF has evaluated the financing needs to be between \$135 billion and \$195 billion per year to eradicate extreme poverty, between \$5 trillion and \$7 trillion to cover investment needs in infrastructure, to which is added \$2.5 trillion to \$3.5 trillion for the development of SMEs (UNITED NATIONS, 2014, p. 10).

This raises at least three types of questions:

- What is the scientific value of the measurement of these ‘needs’? What method of calculation and what economic rationality underlie them? Does the measurement

3. Docquier (FERDI, forthcoming) estimates that the proportion of migrant remittances in the GDP of low-income countries is already significant and – at the very least – should not decrease. Depending on the international migration scenario, this amount could be multiplied by four by 2100, or perhaps even by ten in an optimistic scenario.

4. The OECD proposes to target LDCs and fragile states with funding of up to 0.25% of the GDP of each donor state; Serge Tomasi proposes to allocate between 50% and 70% of ODA to the poorest countries (FERDI, forthcoming).

5. Hiroshi Kato (JICA, FERDI, forthcoming) emphasizes the importance of knowledge sharing between actors and the potential role of traditional donors in a triangular scheme of cooperation, including on the basis of the experience of their development practitioners.

of financing needs – for roads, schools, vaccines, salaries, risk premiums, etc. – have any relevance on a global level?

- Assuming that such a measurement gives us relevant and useful information, how can such a financial windfall be mobilized and channelled into projects or policies for poverty reduction, access to care, sustainable economic growth... (to mention only a few of the SDGs, the negotiation of which continues), given that such projects and policies (which although have high social returns) are weak and uncertain in terms of the returns on private investment?
- Finally, how can we ensure that the use of these funds is focused on long-term sustainable development?

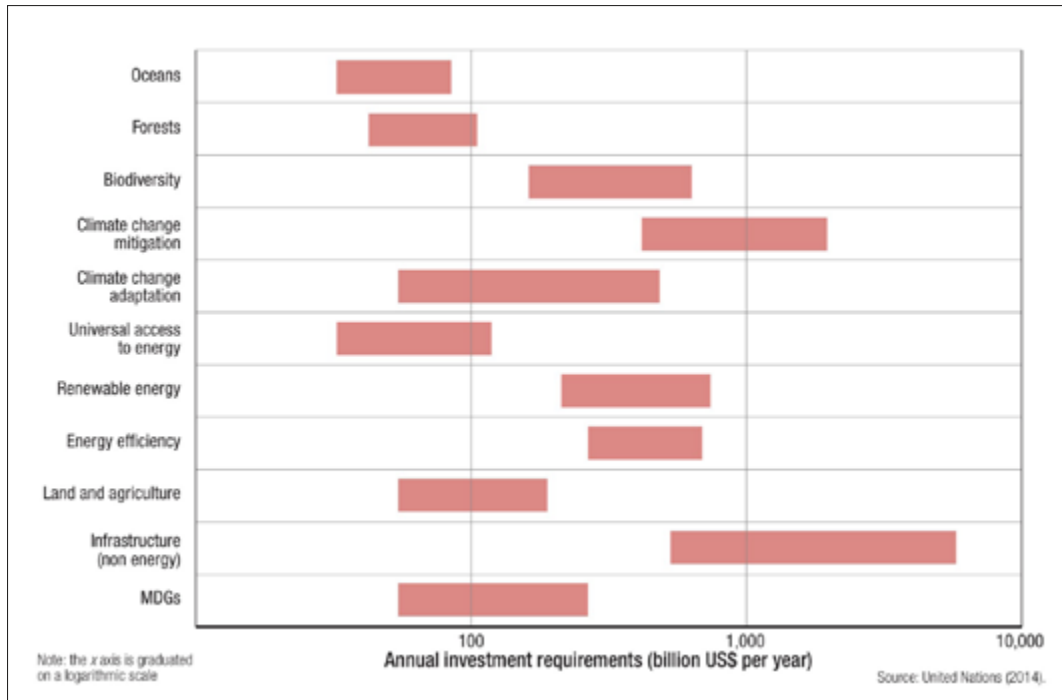
The usefulness of such evaluations is questionable, firstly from a scientific point of view. Methodologies are unclear or approximate because they are based on assumptions that consider the future as a continuation of the present, even though recent crises have shown that changes in current trends are both likely and unpredictable. From a political perspective, some consider the results to be counterproductive because the financial sums arrived at are huge. While for others these figures enable the manoeuvre room and necessary changes to be put into perspective, along with the allocation criteria for loans and grants, and public and private funding, which depend on the extent of local or global public goods that make up each basket of needs (Figure 1).

Estimates of the order of magnitude found in the literature and compiled by the ICESDF are that the annual needs are at least twenty times higher than the annual ODA amount, which reached a record level in 2013 of \$134 billion. This ODA will grow only slightly – due to the current and future burden on the public finances of donor countries – and will never equate to the financing needs in the broadest sense. It is possible that the announcement of the new goals will have a mobilization effect – such an effect occurred between 2000 and 2005 following the launch of the MDGs and the implementation of the Heavily Indebted Poor Countries (HIPC) initiative – but it is unlikely to cause a bifurcation or a profound change in the long-term trend of net ODA, which follows a very steady trajectory.

One of the possible options to increase the amount of international public funding is the use of innovative financing mechanisms focused on international taxation. Although the idea of using such mechanisms is often raised during discussions, there have not yet been any significant developments in this field. The airline ticket tax, which remains national but involves several countries, is a step in this direction, but its magnitude is limited. Similarly, the tax on financial transactions proposed by the European Commission that will come into force in January 2016, part of the revenue of which must be allocated to assistance, lost even more of its ambition at a recent meeting of Finance Ministers of the eleven European countries that support the initiative. The revenue generated will therefore be limited, as will no doubt the proportion allocated to assistance.

The bulk of the additional funds required to cover the financing needs of the post-2015 agenda must therefore come from other sources of long-term financing

FIGURE 1 The investment requirements associated with the post-2015 agenda

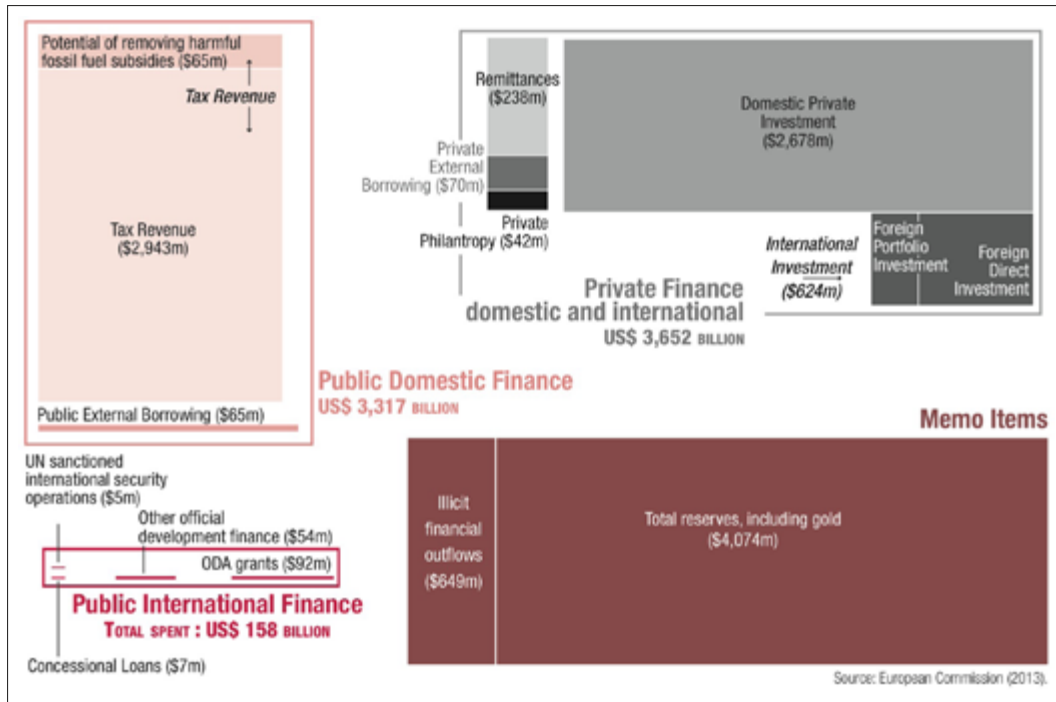


The estimation of funding needs for some major goals or sectors raises numerous conceptual and methodological difficulties. The orders of magnitude proposed here are taken from the report of UN experts on sustainable development (GIEFDD) based on a literature review of institutions or organizations that conducted this estimation exercise for a specific sector or topic (IEA, UNCTAD, Lancet...)]

– pension funds, insurance companies, sovereign wealth funds, among other institutional investors. The ICESDF has stated that public and private savings amount to \$22 trillion and financial assets amount to \$218 trillion: a reallocation of a share of these sums would theoretically cover all of the estimated needs (UNITED NATIONS, 2014, p. 11). Again, one may wonder about the changes that the SDGs will trigger – will their announcement help to redirect a small proportion of these available savings? And if so, why? Can SDGs serve as credible guidelines for decision-makers to ensure that the public policies of each country promote more efficient allocation mechanisms (from a sustainable development perspective)? What are these mechanisms, or what should they be?

The UN estimates that institutional investors alone hold between \$75 trillion and \$85 trillion of financial assets. Pension funds, life insurance companies and sovereign wealth funds (\$60 trillion in assets) have financial tools (long-term liabilities) that are compatible with the long-term horizon required for some investments in the post-2015 agenda (UNGA, 2014). As highlighted in the UN report on the implementation of the Monterrey Consensus and the Doha Declaration (UNGA,

FIGURE 2 Domestic public financing in developing countries



On average, official development assistance flows represent one quarter of the funding sources of LDCs, while private domestic financing provides a similar proportion. This is compared to only 1% in middle-income countries where national funding capacity (public and private) is much higher.

2014), these 'long-term investors today do not invest enough in the long term direct investment necessary for sustainable development, both in developing countries and rich countries – regardless of the institutional and regulatory framework. For example, the overall infrastructure investment represents less than 3% of the assets of pension funds' (UNGA, 2014, p. 7; Table 1).

The obstacles are well known and the subject of much analysis – weak local regulatory and institutional frameworks, lack of data, inappropriate risk sharing and transfer, etc. (OECD, 2013; WORLD BANK, 2014b). However, the solutions to overcome these problems will come from major principles rather than implementation. This is examined below.

It should, however, be noted that sums that are mobilized domestically in developing countries currently exceed international funding (EUROPEAN COMMISSION, 2013). According to data gathered by the European Commission, the ratio of domestic public resources and international resources is around 20:1 (Figure 2). The overall total of international public finance dedicated to developing countries only represents 2% of the available funds in these countries. Domestic

sources of funding are very heterogeneous, varying from one country to another. The mobilization of domestic resources is not a rhetorical agenda or an excuse to be used by impoverished international donors; it corresponds to the proximity of the readily available resources.

Given the accounting difficulties associated with balancing needs and funding opportunities, the need for the diversification of sources blurs the distinction between public and private sources – a distinction that has been the essential reference of ODA since 1972. In a dynamic perspective, what matters more is the nature of funding and whether a financial return on investment is expected or not, and with what yield. Taken to its extreme, this distinction in the nature of funds requires an answer to the question of who ultimately pays: the taxpayer or the user? Like Russian dolls, this question contains other questions, is the taxpayer from the North or the South? Is it the rich user or the poor user...? SDGs funding in the long term is comparable to the issuance of a debt for which the underwriters and the schedule must be specified from the outset.

Discussions on development financing are not new. The latest commitments of the international community date back to the Monterrey Conference in 2001 in the wake of the MDGs. As a reminder, the discussions were focused around six means of action: 1/ mobilizing domestic public and private financial resources; 2/ mobilizing international private financing; 3/ the role of trade; 4/ official development assistance and other innovative sources of international public finance; 5/ management of external debts; and 6/ international financial governance. The MDGs have undoubtedly led to a refocusing of assistance on some priorities, but they did not have the desired effect on the overall resource mobilization and its geographic allocation (Figure 3) (NUNNENKAMP and THIELE, 2013; UNGA, 2014). A paradox of the current situation is that ODA funding capacities have never seemed so limited considering the scale of the issues and the potential private contributions, and never as essential given the challenges of designing and implementing alternatives and autonomous financing modalities – including innovative financing.

BOX 1 THE DYNAMIC PROBLEM

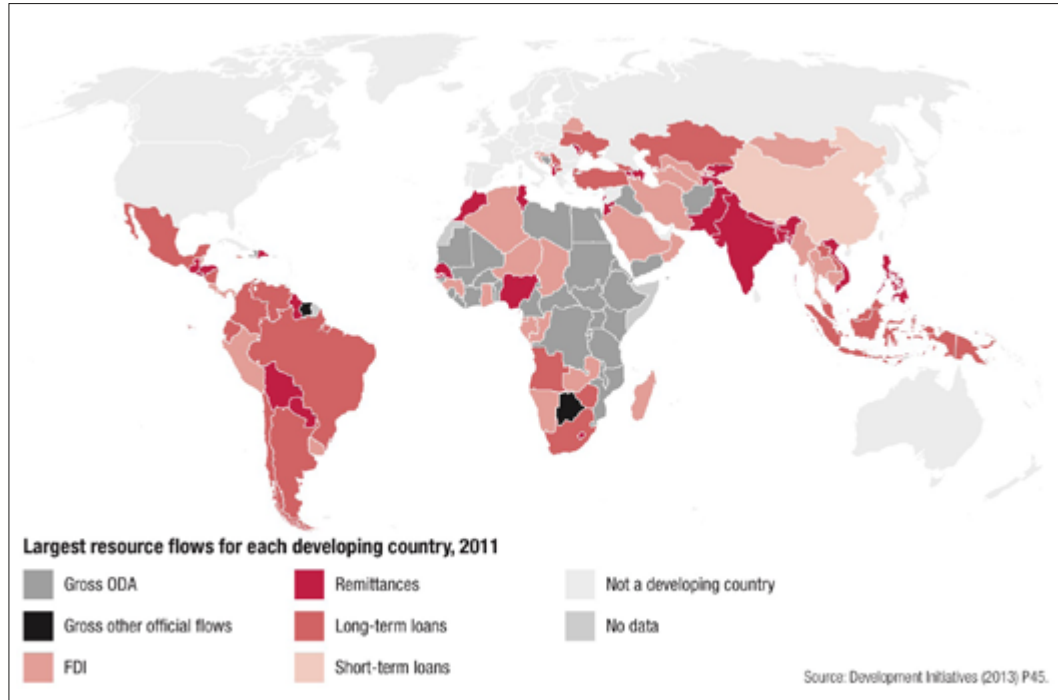
Ongoing public private partnerships demonstrate that the inflow of private capital in the form of grants or investments towards the SDGs cannot be taken for granted and that the SDGs and countries will not receive equal shares from the available capital.

The accounting perspective also suffers from a number of short-

comings. It is not very prescriptive, given the state of knowledge of the exact needs that each country associates with the different SDGs. The level of ignorance on this matter leads donor countries to adopt a cautious stance, stating that SDGs, in the same way as the MDGs, cannot be 'bought'. The accounting perspective, by dealing with large

masses, complicates more than it facilitates the political discussion, confining it to humble injunctions to the fund holders. Finally, this approach leads to implementation problems being hastily identified as funding problems, disregarding the thorny question of how. In short, once the money is there, what do we do with it?

FIGURE 3 Mapping the financial resources



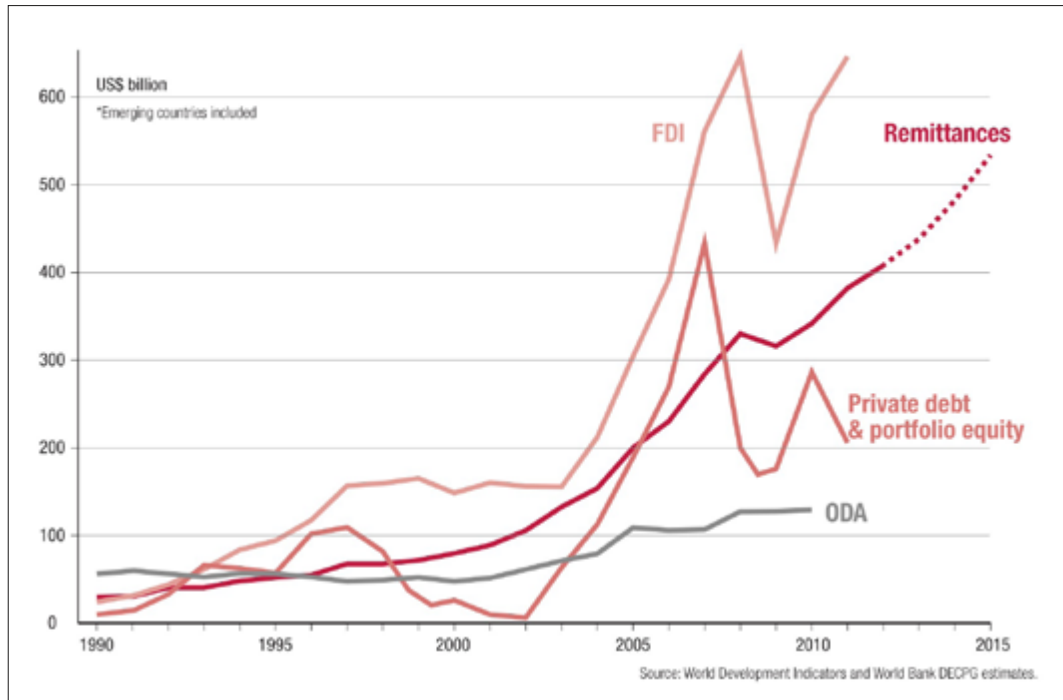
This map shows the priority allocation of international funding. It reads as follows: migrant remittances are the largest source of external financing in Nigeria, ODA is the main source of external financing of Benin and Mali. ODA is the main source of external financing of continental Africa, private external financing remains predominant in Latin America and Asia.

The roles of ODA in the ecosystem of development finance

How can a large pool of savings be redirected into long-term investments (GLACHANT, LORENZI, QUINET, TRAINAR, 2010)? This universal challenge is particularly difficult for LDCs for several reasons: 1/ almost all of these savings are located in developed and emerging countries; and 2/ competition on the global savings market between developed and emerging countries increases the probability of an exclusion of the poorest countries, that already exists – according to the paradox highlighted by Lucas (1990). Global capital does not flow into sectors and regions where it is most scarce and where, in theory, for this reason, its marginal returns should be the highest.⁶ At the heart of the Lucas paradox is the risk, or rather the uncertainty: too many uninsurable risks deter investors from undercapitalized sectors and regions. In other words, money goes to money – and economists from Lucas to Piketty have documented to varying degrees of

6. For further explanation of recent examples, see Azemar and Desbordes, 2013.

FIGURE 4 The nature of financial flows to developing countries



Taken together, developing countries are the recipients of international financial flows that are primarily private (FDI remittances). ODA is marginal in terms of international flows and its relative contribution has shrunk significantly since the mid-2000s with the exponential growth of private funding to middle income countries.

refinement and elegance the concentration of wealth regardless (or almost) of merit and needs over time.

Can ODA contravene the fatal law of capitalism, can it reduce risk and bring closer together the expected return on capital and its theoretical return? What actions should be funded for this purpose – because it is understood that it is not the role for public subsidies to replace private capital – in order to increase private flows, which are the majority in gross volumes directed to developing countries (Figure 4)? What multiplier effect can be expected?

For example, it is often suggested that feasibility studies for infrastructure projects should be financed by public funds to facilitate private investment, which is typically between 5% and 10% of the total project cost. The multiplier effect can then reach 1:20 – which is huge – if the project is then funded entirely by private means. The EU experience of blended finance has demonstrated attractive ratios (1:30), but these ratios can decrease drastically (1:8) depending on the method of calculation used (BILAL and KRÄTKE, 2013). Furthermore, most blended financing mechanisms set up by the EU almost exclusively involve public finance partners, which means

that the above mentioned ratios provide a rather poor estimate of how much private financing can be leveraged by blending. This highlights the different definitions of blended finance: it can mean a blending of grants and loans (within a given institution or across different institutions – public or private) or a blending of public/private financing, or a combination of the two.

Other case studies presented by the World Economic Forum as successful examples of public-private partnership suggest that such a ratio is exceptionally high and cannot be generalized for all sectors (WEF, 2013). The World Economic Forum report gives some order of magnitude derived from projects on photovoltaic infrastructure (India), water treatment (Jordan) and agricultural development (Tanzania): the ratio is very high in the first case, 1:44, but it drops to 1:13 in the second example, and 1:1.6 in the last (WEF, 2013).

Therefore, it is possible to distinguish at least two roles for ODA, without these roles being mutually exclusive. The first aims to directly promote capital inflows towards developing countries by tackling the failures that affect the project cycle – asymmetric information, moral hazard, lack of collateral, etc. It may then involve either the direct reduction of the risks associated with project development (financing of all or part of the R&D, of the feasibility studies or pilot projects) or responding to market failures (concessional loans, offer of warranty, etc.) and creating the necessary capital inflow conditions, by addressing the factors explaining the Lucas Paradox: availability of human capital that is additional to the flow of physical capital, quality of institutions, role of macro-economic policies, etc. (AZEMAR and DESBORDES, 2013). In this perspective, the strengthening of institutions and the funding of public policies are essential, although they are targets for which ODA performance is difficult to measure (TREYER et al., 2014; VOITURIEZ et al., forthcoming)⁷.

The second role is to influence the direct mobilization of the available funds by putting development agencies at the heart of intermediation and financial innovation (TOMASI, 2013). In practice, this consists of aid agencies purchasing securities issued by companies and issuing others to investors, while ensuring a better sharing of long-term risks between underwriters. A few examples are provided below.

Green bonds issued by the World Bank or the European Investment Bank are part of the process. However, their volume is limited, although undergoing rapid growth – the World Bank has issued \$6.4 billion of green bonds since 2008, including \$3 billion in 2013/2014 – and most importantly, these bonds have, until now, only been used to fund projects in middle-income countries (WORLD BANK, 2014a). In September 2014, the French Development Agency issued its first climate bonds at €1 billion for a ten-year maturity.

In the health sector, the International Finance Facility for Immunization (IFFIm) was created in 2006, which differs from climate bonds insofar as it is a pre-financing mechanism. It issues bonds that enable the funding of the Vaccine Alliance (GAVI), the

7. This can be illustrated in the health sector, where strengthening health institutions for instance provides long-term and heterogeneous results which are difficult to measure with a simple metric.

bonds being secured by future donor commitments. The Alliance was founded on the assumption that the financial cost of borrowing on the capital markets will remain below the benefits associated with obtaining the full amount promised at the beginning of the period and with the deductibility of aid. While GAVI is presented as a classic public-private partnership, it differs from this description in practice because the risk is not borne by the private sector but by the public sector. Therefore, the ability of the IFFIm to raise funds ultimately depends on the creditworthiness of the donor states: IFFIm has been rated AAA by the rating agencies, which explains its success. A rating downgrade, that could follow the downgrade of a contributor's rating, could undermine the initiative. The replication of this initiative in other sectors (climate, infrastructure or education) is not a trivial matter (KETKAR, 2014): firstly, the benefit of having all pledges in advance must be demonstrated for sectors other than health; secondly, the credibility of donor pledges could erode as their number increases to cover the various SDGs.

This initiative has led to the extension of advanced financing mechanisms by the private sector based on guarantees from either the public sector (donor or recipient countries) or private non-profit organizations (foundations): the Development Impact Bonds (Center for Global Development & Social Finance, 2013). These bonds are accompanied by performance targets that are measurable on the model of Social Impact Bonds (SIBs). There are SIBs pilots in the field of health, housing, education and justice services. A first experience of SIBs was recently launched in the education sector in India.⁸

It is fair to say that many innovations have emerged in recent years in terms of development finance. However, specific to certain sectors or certain problems, they are far from being transferable to others. Without providing a blueprint – in particular for the thematic funds – these innovations have had the benefit of encouraging the self-examination of donors, without leading to a profound revision of the objectives, means and practices that would today enable the huge needs of SDGs to be met.

Conclusion

ODA seems essential for the implementation of the post-2015 agenda, to directly finance projects, programmes and policies and to attract funding, and also to ensure that funds, regardless of their origin, 'produce' development. We have also seen that ODA has been too low in comparison to the needs, and therefore should (non-exclusively) either be increased (as was done in the UK) or be used as a vehicle of mobilization, with conclusive examples that can be demonstrated.

However, questions remain beyond this observation. Is blended finance the appropriate vehicle to finance sustainable development in LDCs? Are there specific experiences transposable to other countries, other sectors and other scales (in terms of volume mobilized)? Beyond blended finance and public-private partnerships, which assessment methods and learning frameworks should be used? Can an assessment of the relevance of different funding instruments be carried out according to each country and sector?

8. <http://www.cgdev.org/blog/first-development-impact-bond-launched>

Our review raises one last important issue, that of tools for joint experiments (from research to implementation) and learning. Building capacity in developing countries, and particularly in LDCs, to plan and mobilize funding with the priority given to domestic resources is a pre-requisite for making the post-2015 agenda really deliver. ■

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Beyond the financing of sustainable development through public aid

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It seems very unlikely that the new development agenda and the fight against climate change will be adequately financed. Official development assistance peaks at around 0.3% of the GDP of donor countries, which is a long way from the commitments made in Monterrey in 2002. Furthermore, six years after pledging \$100 billion per year from 2020 to fight against climate change in the South, ‘developed’ countries are still unable to show firm evidence of how they will keep this promise. Finally, encouraging avenues of so-called ‘innovative’ financing, such as taxes on financial transactions, container traffic or air travel, have almost stalled. In the spring, the European Union adopted a tax on financial transactions which, because it excludes the majority of derivatives, will only bring in a few billion euros per year, far from the €7 billion revenue estimated by the European Commission. As it stands, therefore, this is not the lever that the South can depend upon.

We could continue to list the bad news. And indeed we must keep this negative background in mind to understand why there is little trust on the part of the poorest countries in these negotiations; and also so that we do not absolve the policy makers of rich countries for their performance in this area. However, the future of development financing and the fight against climate change, which are the two crucial concerns for 2015, cannot be addressed by simply ‘cutting and pasting’ from the past.

The new map of donors

Firstly, the mapping of donors is rapidly changing. For example, a country in Africa today has a choice of three

funders to finance infrastructure projects, including very large ones: the system of bilateral and multilateral banks, which are often gathered around the same table, the Gulf countries and China. Moreover, in many UN organizations China is shifting from the status of a recipient country to that of a donor. And if the New Development Bank, formerly the BRICS bank, which was politically launched during the summer of 2014, really emerges at an operational level, the donor mapping changes taking place will accelerate further as this bank plans to have a capital of \$100 billion, when that of the World Bank is now \$223 billion.¹

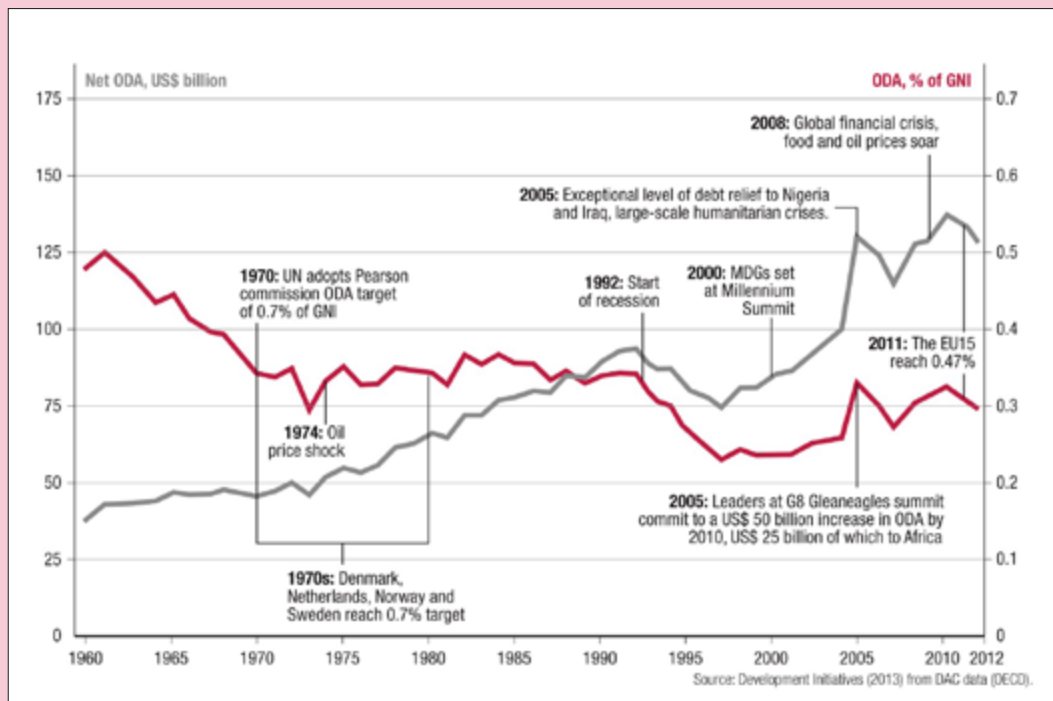
It is difficult to accurately measure this evolution because none of the new donor countries are subject to the rules of the OECD’s Development Assistance Committee (DAC), which only includes traditional donors. This means that these donors are not required to report their assistance in the same way and are not subject to the DAC principles, such as ensuring that assistance is not motivated by economic interest. Without going so far as extending the DAC principles to new donors, an objective that now seems somewhat overly utopian, one of the major challenges of development funding for the 2015 to 2025 decade is to advance towards a common system of assistance measurement.

The fight against tax evasion, an issue of the post-2015 agenda

The second issue to emphasize here is the vital importance of ‘domestic resource mobilization’. Indeed, while there is

1. This refers to disbursed capital and the callable capital of the Bank.

FIGURE 1 Overall official development assistance (ODA) trend since 1960



Despite decades of renewed commitments, ODA has remained at about 0.3% of the GDP of donor countries, which is why poor countries have lost confidence in international negotiations.

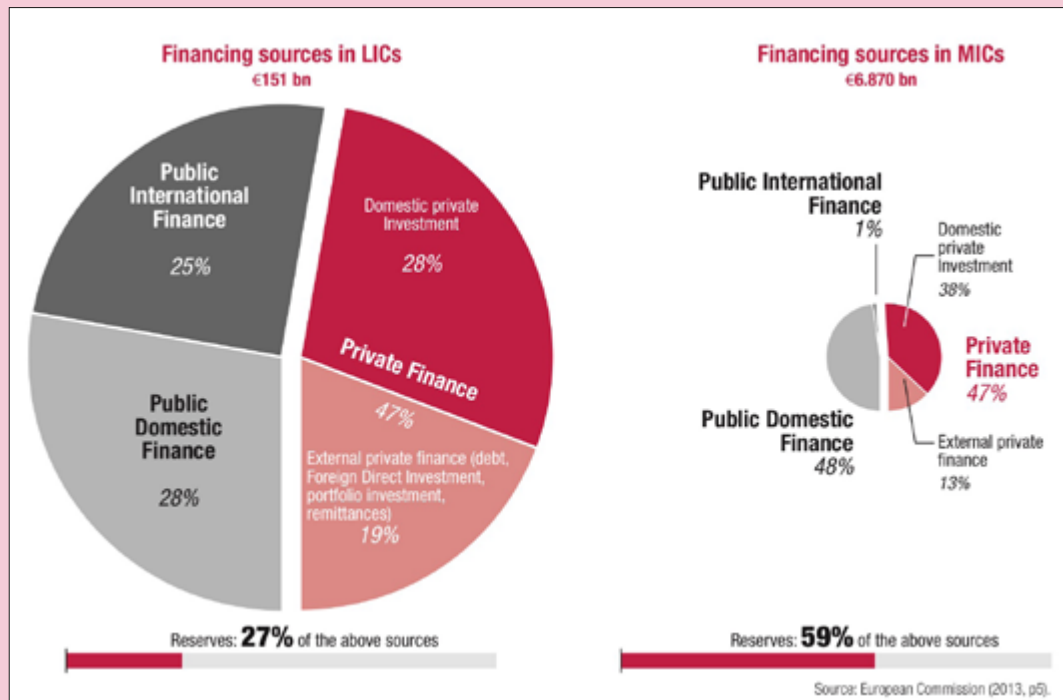
no development without private or entrepreneurial investment, there is also no development without the state. And there is no state without tax! However, while the average tax burden in OECD countries is 35%, it is about 15% in the countries of Sub-Saharan Africa (OECD, 2015). In addition, according to the NGO Global Financial Integrity, illicit financial flows coming out of Southern countries are eight to ten times greater than the amount of official development assistance (KAR and LEBLANC, 2013). However, while monetary transfers from the North to the South are suffering from the financial crisis that has affected developed economies, the same crisis has also significantly strengthened the political will to fight against tax evasion by multinationals. State treasuries must collect funds and tax evasion has become particularly unacceptable in the light of tax increases for households. Developing countries are the first victims of tax optimization by multinationals

operating in their territories, especially when such firms are exploiting the natural resources of their host countries, because these countries do not have alternative income streams and company taxes often constitute their main budget resources. Enabling Southern states to collect taxes to which they are entitled – for example by bringing an end to abusive transfer pricing that concentrates value in very low tax countries – is a high priority on an agenda that is progressing much more rapidly than we would have thought possible three or four years ago (SHARPLES, JONES and MARTIN, 2014). This is why account transparency for every country must be one of the targets of the on-going negotiations of the post-2015 agenda (EUROPEAN COMMISSION, 2011; FLETCHER, 2014).

Solving the COP 21 financial equation

A third challenge is the specific issue of climate finance

FIGURE 2 Funding for low and middle-income countries



LIC and MICs do not have the same capacity to mobilize domestic resources (public or private). These resources represent 86% of MICs financing, compared to 53% in LIC.

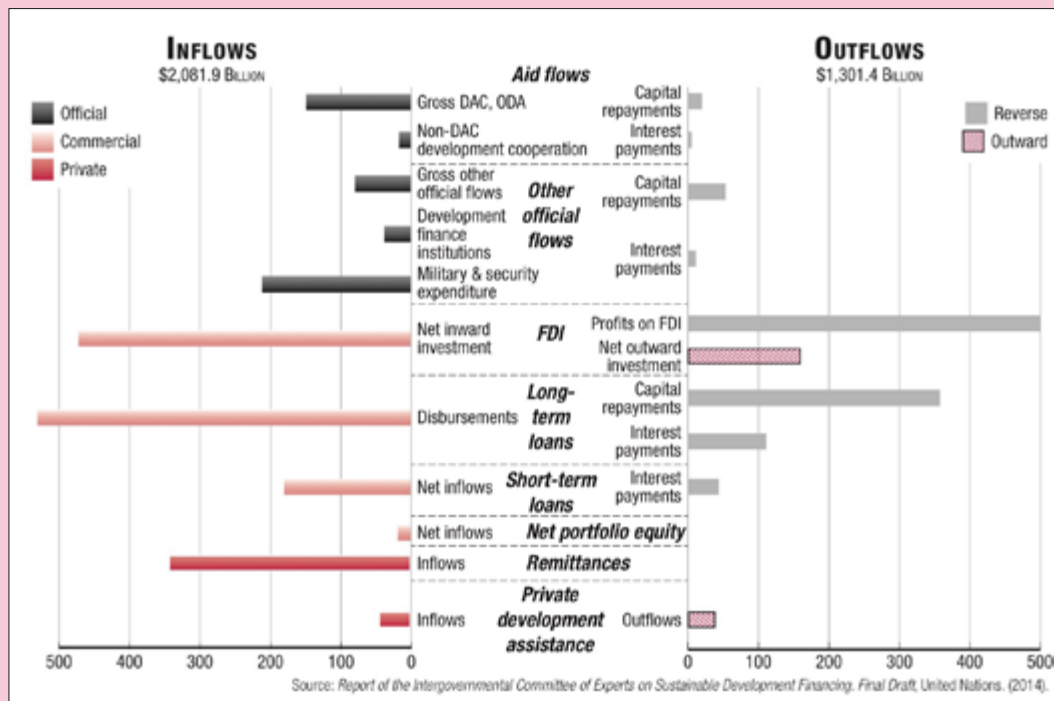
in the context of the COP 21 to be held in December 2015 in Paris, the objective of which is a much-needed international agreement on climate change. The view of the author is that the financial stakes in Paris are three-fold. The first issue is to show a credible pathway to the famous 'Copenhagen \$100 billion'. Indeed, it is utterly delusional to think that an agreement in Paris could be possible without showing Southern countries how this \$100 billion figure will be achieved by 2020. One could argue that a compromise is possible on the following principles: the \$100 billion will consist of public and private money that has been 'mobilized'² by public money; this sum can only be reached with additional public money but

also by including the part of current official development assistance that contains a high carbon element, such as transport, energy and urban planning. In no way is the objective the transfer of funds from health and education to the fight against climate change – which would be totally unacceptable – but the 'greening' of money that is already used to finance infrastructure. Indeed, it is unlikely that Northern countries will first pay to finance high CO₂ emitting infrastructure, and then pay again to mitigate the impact of these emissions on climate! The very meaning of the post-2015 agenda is to ensure consistency between the pursuit of development and global sustainability.

The second major financial issue for the Paris conference will be the definition of the new post-2020 architecture that will follow on from the \$100 billion. While its outlines are still unclear, there is no doubt that a battle will be played out between those who want a renewed

2. I use the term 'mobilized' to mean private money that would not be invested without the lever of public money in the form of grants, guarantees, bonuses, etc.

FIGURE 3 A financial flows schematic



Financial flows to developing countries are always accompanied by reverse flows ('outflows'): interest payments, capital repayments, legal or illegal capital outflows. The accurate measurement of these flows, partly illegal outflows, is becoming increasingly important in the development financing agenda.

financial promise, that extends and amplifies the \$100 billion in 2020; and those who consider that the issue is above all about the need to change the entire financial system in a direction that is more favourable to the fight against climate change, which involves not hundreds of billions of dollars, but hundreds of trillions! This is the third financial stake for Paris. The new climate economy report³ showed that the global financial investment required to return to an emissions trajectory that is compatible with the goal of a 2°C warming is only 5% higher than the 'business as usual' scenario that takes us into a world of plus 4°C. Finding how to finance this, both in the North and South, is a key issue in the financing of sustainable development.

As we can see, the very design of development finance cannot be reduced to a 'magic' number for official development assistance that does not take into account, for example, the flows from new non-OECD donors or the economic gains in Southern countries related to the fight against tax evasion. The new agenda of development financing should be an opportunity to go beyond official development assistance to move towards a concept that is both more ambitious and in line with the developments of the twentieth century, that of 'sustainable development financing'. All this will be played out in Addis Ababa in July 2015 and in Paris in December 2015. ■

3. See www.newclimateeconomy.net

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New international financial institutions: from multilateralism to fragmentation?

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The year 2014 saw the announcement of the creation of new international financial institutions originated by member countries of the BRICS (Brazil, Russia, India, China and South Africa), China in particular. The New Development Bank (NDB), the Contingent Reserve Arrangement (CRA), the Asian Infrastructure Investment Bank (AIIB) and the Silk Road Fund (SRF) have been created as a result of the frustration experienced by emerging countries with regard to the rigidity of the international financial architecture. It is also an expression of China's will to strengthen its regional and global geopolitical weight. However, while there is no doubt that these institutions have a geopolitical importance, their short-term impact on the architecture of aid is open to debate.

The recent proliferation of various financial instruments

The NDB, the 'BRICS Bank', was officially launched at the sixth annual BRICS summit in Fortaleza in July 2014. The original idea was proposed at the fourth summit in New Delhi in 2012, followed by a declaration at the Durban summit a year later, which reaffirmed the principle but did not provide specific guidance on future operating procedures. The Fortaleza NDB agreement specified the operational and governance procedures, while the bank is expected to become operational by 2016 following ratification by the founding countries. It will have an initial capital of \$50 billion, including \$10 billion of paid-up capital and \$40 billion of callable capital, which will be shared equally between the founding members.

The CRA, which was also created in Fortaleza, is an

agreement whereby the BRICS committed resources through 'swap arrangements', up to a total of \$100 billion, including \$41 billion from China, \$18 billion each from Brazil, India and Russia, and \$5 billion from South Africa. The objective is to build an instrument to relieve short-term pressure on the balance of payments of member states and to ensure mutual support and thus strengthen financial stability.

The creation of the AIIB – an Asian regional bank – was announced on 24 October 2014 at a launch ceremony in Beijing. The initial capital of the AIIB was \$50 billion but could soon reach \$100 billion. The 22 AIIB member countries now include China, the members of the Association of Southeast Asian Nations (ASEAN), Mongolia, India, Nepal, Sri Lanka, Bangladesh, Pakistan, Kazakhstan, Uzbekistan, Kuwait, Qatar and Oman.

The AIIB will cover the same geographical areas as the Asian Development Bank (ADB) and the same sectors as the ADB-supported ASEAN Infrastructure Fund.

In addition to these multilateral funds and institutions, China announced at the Asia-Pacific Economic Cooperation (APEC) summit the creation of the SRF, a bilateral fund of a regional nature. With the primary objective of financing infrastructure – mainly transportation – the fund will be provided with \$40 billion and will be managed by the China Development Bank.

The Silk Road diplomacy

Although small in comparison to the sums of money associated with the Bretton Woods institutions, the capital of these new financial institutions is nevertheless considerable, the latter therefore accentuating the already increasing individual influence of the so-called 'emerging'

donors for the financing of development, particularly infrastructure.

The declared intent of the new financial institutions is to foster a different perspective to that of existing financial institutions. Thus, measures have been taken to limit the participation and/or influence of developed countries in their governance. Moreover, the NDB's shareholding requirements de facto limit the bank's governance participation to its founding members (who may not represent less than 55% of the voting rights; while a single non-founding member may not possess more than 7% of the voting rights) and to the borrowing countries (which cannot represent less than 80% of the voting rights). These limits demonstrate the intention to avoid the World Bank/ADB situation in which the main shareholders – countries which therefore have an impact on the governance of these institutions – are non-borrowing countries; with the notable exception of China, which like the five main shareholders (United States, United Kingdom, Japan, Germany and France), has appointed an executive director at the World Bank since 2010.

Although the principle adopted at the launch of the NDB was that of the equal distribution of shares of the capital and the voting rights among the founding members, Shanghai was designated as the seat of the Bank after long negotiations. The AIIB headquarters is also in China (Beijing), its prospective director is Chinese (Jin Liqun, chairman of the China International Capital Corporation, China's sovereign wealth fund) and capital will be distributed according to a formula in which GDP is the main criterion, giving a prominent place to China. China is also the leading contributor of the CRA. Its therefore has an unchallengeable influence in these multilateral institutions and mechanisms.

In addition to the SRF, during the ASEAN+3 summit China committed to provide \$10 billion in preferential loans to countries within the organization, \$10 billion in loans for infrastructure, along with a second phase of the China-ASEAN Fund amounting to \$3 billion. Through trade agreements and investment in transport networks, China plans to interconnect Asian countries and thus build the foundations of Asian 'co-prosperity' led by Chinese growth. Through this action, together with the AIIB and the SRF, China is demonstrating its financial power in the region.

A strong political signal to reform international financial architecture

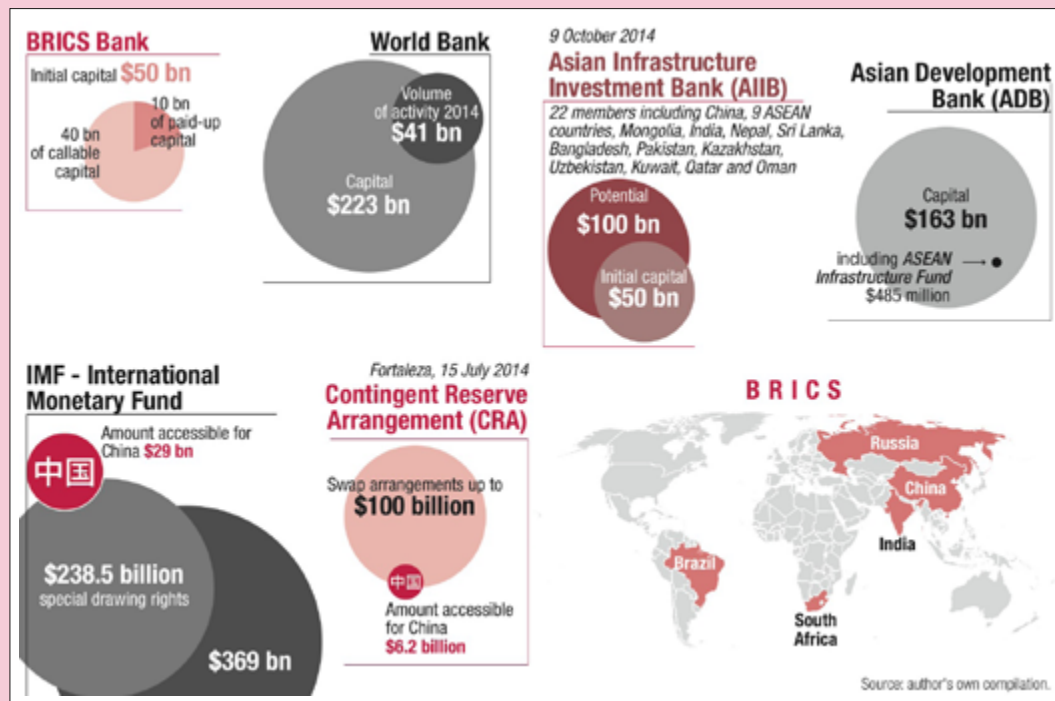
Officially, the BRICS Bank, CRA, the AIIB and the funds created by China are supplementary regional institutions and financial instruments, rather than intended to compete with existing international financial establishments. However, the creation of these institutions echoed the slow pace of governance reform of international financial organizations, dominated by the countries of the Organisation for Economic Cooperation and Development (OECD). At the ADB, China and India each have 11% of the votes, compared to 16% each for Japan and the United States; and since its establishment, the ADB presidency has been provided by Japan. As for the current reform of the International Monetary Fund (IMF), which aims to reflect changes in the relative influence of member countries in the global economy, it is still awaiting ratification by the US Congress before it can take effect. The realignment of share quotas should allow China to become the third largest member of the IMF, with Brazil, China, India and Russia becoming among the ten largest shareholders. This quota reform, which was agreed in 2011 by the IMF Board, requires ratification by three fifths of the membership (i.e. 116 members), representing more than 85% of the quotas. To date, 146 members, representing 77% of the quotas, have ratified the reforms, but the ratification of the United States is still required.

The creation of the BRICS Bank, the ARC and AIIB is thus an important sign of the political aspirations of the BRICS, especially China, to occupy a greater role in global financial governance that reflects their actual influence in the global economy. It is also a way of questioning the inherited post-war system that is organized around the Bretton Woods institutions, whose leadership is largely assumed by the United States, Europe and Japan.

Regionalization and multiplication of financing channels

The new institutions will strengthen the interdependencies among BRICS and their areas of influence, and also the convertibility of their currencies. Through the AIIB, China is accelerating the regionalization of its companies and of the yuan, thus promoting intra-regional trade. Ultimately, this

FIGURE 1 The BRICS Bank – competitor, alternative or complementary?



The new financial structures proposed by the BRICS seem more complementary and symbolic, rather than real competitors or alternatives to existing international and regional financial institutions.

will enable China to have a thriving area of influence that is external to the power of the dollar.

Moreover, the proliferation of infrastructure financing channels, in which the NDB and AIIB are a part, might contribute to address the considerable needs of investments in developing countries. In Asia alone, these channels are estimated to be worth trillions of dollars.

In the context of the preparation for the third UN Conference on Financing for Development (Addis Ababa, July 2015), there is a clear weakness of the public funds mobilized by the members of the OECD Development Assistance Committee (DAC) as official development assistance (ODA) with regard to the need for the realization of a universal agenda (which is estimated to be twenty times the current annual amount of ODA). Indeed, for many years there has been a call for emerging countries to make commitments to development funding. In this regard, the launch of these new financial

instruments of development assistance is a clear signal of the mobilization and involvement of emerging countries in financing development.

The challenges ahead for the new sources of funding

However, the proliferation of funding represents a high risk of aid fragmentation. Indeed, it increases the complexity of global governance. It is the result of a larger movement of public policy tightening towards national issues that affect both high-income countries and countries with medium or low income. In this context, efforts of reconciliation, dialogue and consultation are more useful than ever.

The consideration of environmental and social issues, in view of some form of convergence of practices, is an essential aspect of these collaborative efforts. Development financial institutions – both bilateral and multilateral – along the lines of the Bretton Woods organizations have established a set of

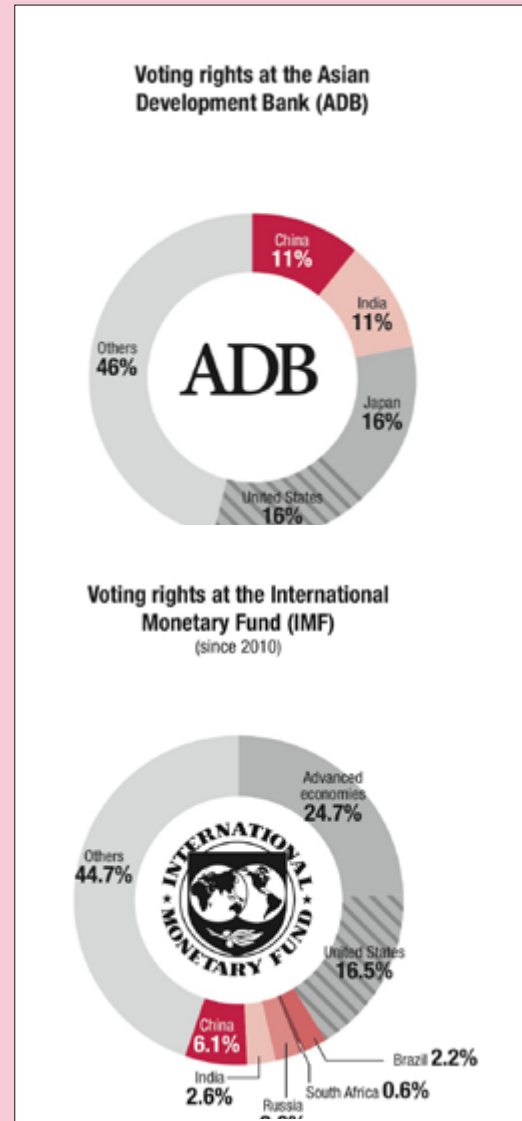
standards and regulations that can have a positive impact on the environment and society, or at least can limit the negative impacts of funding. The strength of this body of standards results from its recognition by all institutions. The development of new sources of funding, freed from these criteria, would be extremely detrimental to the effectiveness of these standards and the positive impact they can have.

In this context of increased complexity and fragmentation of the assistance landscape, a number of initiatives are contributing to the building of a new paradigm, based on coordination and complementarity between the different actors. This is the case of the International Development Financing Club that gathers bilateral public financial stakeholders from the member countries of the OECD-DAC but also national financial actors from emerging powers. This Club gathers Development Agencies from France, Germany and Japan alongside South African, Brazilian and Chinese agencies. ■

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FIGURE 2 BRICS are seeking an influence that reflects the size their economies



The voting rights in international or regional financial institutions still largely understate the political and economic weights of emerging countries, encouraging them to find alternative ways to demonstrate their new statures.

A mechanism for green recovery: carbon Eurobonds

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The challenge of the next Conference of the Parties of the Convention on Climate Change (COP 21) is to enable the international community to escape from the circle of distrust that has built up around the climate issue, and to deliver the 'paradigm shift' that was called for at Cancun (COP 16) for 'building a low-carbon society that [...] ensures continued high growth and [...] an equitable access to sustainable development'. In UN parlance, this means abandoning the framing of the negotiations that has dominated since Berlin (1995), through Kyoto (1997) and until Copenhagen (2009).¹ This framework was focused on the issue of the sharing of the global emissions budget and has made us lose sight of the benefits of cooperation and the spirit of Rio (1992), which included climate policies in the perspective of sustainable development.²

However, there is a risk that the circle of distrust could be re-established. In Copenhagen (2009), expectations were raised for financial transfers via the Green Climate Fund (\$100 billion per year). These expectations could be disappointed in a context of financial crisis, strained public budgets and 'fiscal fatigue', especially when some of the recipient countries have new middle classes and are therefore seen as competitors.

This text discusses the notion that success is only possible by considering climate finance as a financial system reform tool, rather than a marginal department

of global finance. Also, a low-carbon transition should be considered as a lever for transformation away from the type of economic globalization that led to the 2008 crisis.

Why do we need 'climate finance'?

It is only very recently that the economic literature on climate has tackled the financial issue. The Kyoto economy was characterized by a per-country allocation of the overall emission budget, efficiency was ensured by a single carbon price through a global carbon market, and equity was provided by a generous allocation of emission rights for low-income countries.

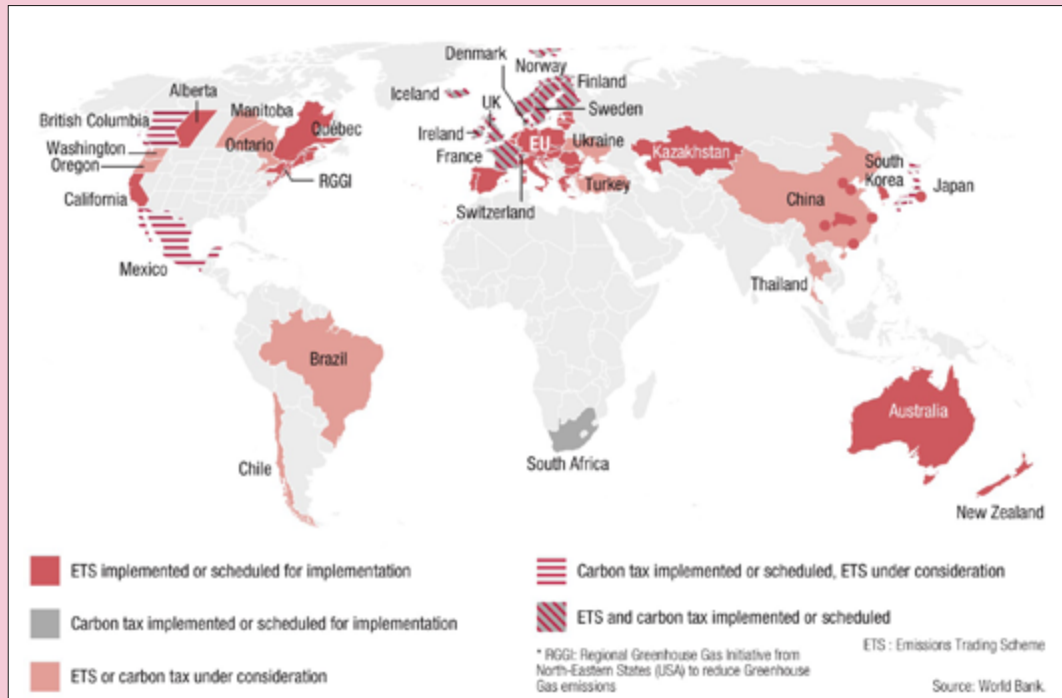
This article does not address the obstacle of the allocation of emission rights. Emerging countries are in a phase of development where the use of heavy industries is needed. They will be heavily penalized by any significant carbon prices and developed countries will be reluctant to give more than 1% of their current GDPs in compensation, given that they never met the objective of a 0.7% allocation of GDP for assistance during the post-war boom.

Instead this article focuses on another obstacle: the fact that carbon price provides an incomplete signal, which is drowned out by the noise from other signals (volatility of fossil fuel prices, property prices, evolving regulation of the electricity sector, etc.). In addition, carbon prices improve the profitability of low-carbon investments if all goes well, but they do not respond to the fact that technologies are often capital intensive and that, when investment costs are exceeded, the ventures can be perceived as overly risky, which threatens their capital value and makes additional loans very expensive.

1. Even if another Kyoto adaptation was possible, see R. Guesnerie and H. Tulkens (2009), J.C. Hourcade, (2000) and J.C. Hourcade, L. Tubiana, H Le Treut (2010).

2. Rio picked up from the Stockholm compromise (1972): to obtain the full participation of Southern countries in environmental policies, these policies must not be an obstacle to their development.

FIGURE 1 Carbon markets today



In parallel to the climate negotiations, different countries and regions have implemented, or started to think about, market instruments to encourage the reduction of carbon emissions (allocating emission rights, taxes, etc.). These instruments are insufficient to create the necessary change.

It is this deadlock that climate finance has to remove by reducing the risks of low-carbon investments based on the social value of avoided emissions. It needs to do so urgently because emerging countries are rapidly building infrastructure that will determine much of the century's greenhouse gas emissions. The challenge is to reorient the development choice for countries that are under the dual pressure of providing their middle classes with a decent standard of living, and the risk of confining three billion people to a poverty trap. This window of opportunity is rapidly closing.

Can climate finance exist in an unfavourable context?

Seizing this window of opportunity seems impossible given the state of public budgets and the fragility of the banking

system. However, we can look at the situation from the other way around: as the major decarbonization of economies requires a redirection of investment into 40% of the gross fixed capital formation (energy, construction, transportation, material processing and food production), it is therefore in accord with the latest IMF report that calls for a revival of infrastructure investments, a call that reflects a genuine concern for a sustainable recovery of the world economy.

The additional investment costs for a low-carbon transition are moderate, less than 1% of GDP by 2035. There is therefore no savings deficit blockage, but as is the case for other productive investments, there is a blockage due to a financial intermediation that prefers liquid assets to long-term investments. Combined with a business management system that is very sensitive to the immediate value of a

company, and given the risks associated with productive investment, this behaviour pushes savings towards speculative investments, particularly property.³

If the low-carbon transition could break this vicious cycle and accelerate the transformation of abundant savings into productive investment, then it would have a positive net effect on short and medium-term growth. This is especially true because this transition is 75% based on the better use of existing techniques and local labour, and concerns activities that are subject to little international competition. Although this requires a favourable business context.

The international debate around economic and monetary policies is well known: fiscal austerity versus the issue of currency. But easier access to credit may well revive the pattern of growth that led to an impasse: debt-financed consumption, competition through wages, property speculation, deindustrialization of many regions, agricultural modernization in tandem with the weakening of rural areas, technological choices with little regard for natural capital, costly imports of oil and fragile energy security. Even the idea of 'project bonds', i.e. bonds dedicated to the financing of infrastructure projects, can lead to a triggering of a lobbying game around random major projects that lack overall coherence. It is here that the climate-agnostic can see the value in financial intermediation based on carbon assets.

Towards the creation of carbon assets⁴

Suppose that governments could agree on a social cost of non-emitted carbon (SCC) and a volume of emission reduction accessible by projects avoiding greenhouse gas emissions. A new asset could then be defined: the Climate Remediation Asset (CRA). Central banks could then open lines of credit in amounts equal to SCC and the volume of CRA; they could accept repayment in the form of carbon certificates (CC) validated by an authority similar to that of the clean development mechanism. Banks could grant loans to low-carbon investments that are partly refundable in CC and not in cash, which are therefore less

risky, and their profitability would be increased by lower interest payments. Specialized investment funds could then issue bonds that are attractive to institutional and individual investors.

At the end of the process, central banks would transform CCs into CRAs, which would be counted as assets alongside gold and currencies. There would be no blind injection of liquid funds; the increase of carbon reserves would be correlated with a properly controlled production of wealth, and private savings would be deflected from speculative products by climate-dedicated financial products with a strong guarantee.

Such a system does not affect existing capital, as opposed to a carbon price, but guides the choices made towards the building of future capital. Thus, after a learning phase, the SCC level can be raised much faster than that of a carbon price, with lower transaction costs. Another advantage is the avoidance of discussions on the imposition of penalties on countries that do not respect legally binding commitments; such a country would simply be deprived of access to funding available within the system. Finally, even if only for the sake of the good management of public accounts, states will have an interest in the launch of climate policies, including through carbon taxes, to enhance the attractiveness of low-carbon investment.

Conclusions

It is possible to think that there is a danger of cluttering the climate convention process with sensitive monetary issues that will unfold in other forums of global economic governance. However, it would in fact be within the role of the Climate Convention to provide issues for climate-agnostic actors to seize upon, and the support of these actors is necessary. There now exists an opportunity to be grasped, that emerging countries seem fully aware of, as demonstrated by the Brazil submission in Lima.⁵

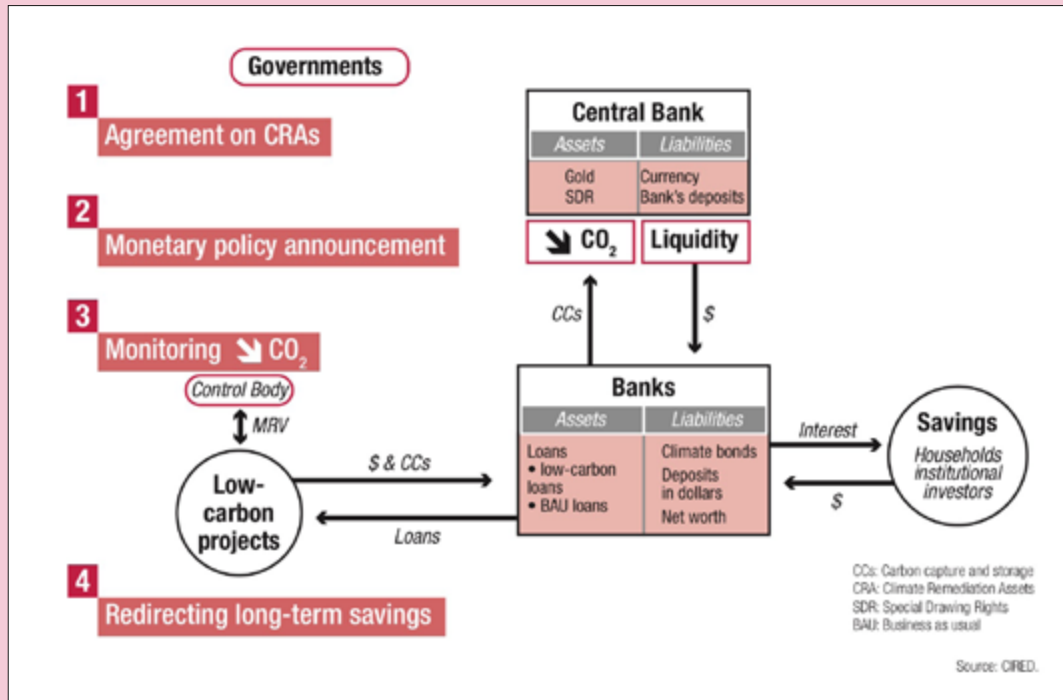
Distrust between countries would be re-established in the case where a minimal agreement was reached, accompanied by the staging of various initiatives that

3. Paul H. Dembinski (2014) on savings and sterile finance.

4. For a more complete development see: J.C. Hourcade, B. Perrissin Fabert and J. Rozenberg (2012). A comprehensive study is available at www.centre-cired.fr

5. This submission calls for the recognition of: *'the social value of mitigation activities [...] in line with the notion of environmental services [...] and to create a consistent, coherent and long-term system of results-based payment through attribution of a financial value to verified mitigation.'*

FIGURE 2 A pro-climate financial architecture



The establishment of a new 'carbon' asset that gives a value to non-emitted CO₂ would encourage all stakeholders to invest in cleaner technologies and behaviour, while generating the necessary funding for this transformation.

could only poorly mask the fragmentation of action, what J. Jacoby calls a 'favela approach'. We must be bold enough to very rapidly attract the interest of actors that are external to the climate issue and absorbed in other emergencies. Otherwise, it will take ten years to rebuild a negotiation process and we will drift further towards the terra incognita of a 3°C or 4°C warmer world. ■

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The consumption of fossil fuels is the equivalent of a tax burden: huge sums of money will have to be taken from state budgets to deal with the consequences of climate change over the coming decades. How can this ‘hidden’ burden be made visible? The polluter pays principle points towards a carbon tax for fossil fuel-intensive industries. Would this be a successful approach?

The expanding search for a carbon price*

Chaos and uncertainty are the characteristics of the natural world under the pressures being wrought by climate change. Normal patterns of rainfall, temperature, and extreme weather are changing so rapidly that past baselines for these primordial forces are decreasingly relevant.

Scientists call this state of flux ‘the end of stationarity’. We can no longer rely on past events to predict future probabilities.

Now it’s becoming increasingly clear that the volatility we’re seeing in our natural world is reshaping our financial world, too.

The past provides fewer and fewer clues to our future. Just as the migration patterns of songbirds no longer correlate to the hatching patterns of their insect prey, or mountain snow-packs no longer store water for the dry summer months, the economy faces similar miscues borne of the interactive loop between tumult in the atmosphere and tumult on the earth. New risks are entering into the equation, and new costs are creeping onto the balance sheets of corporations and nations. The elusive cost of carbon, paid out and fought over in so many different forms –including as one of the world’s newest and most unusual financial commodities – is in the process of becoming the greatest economic disrupter of the twenty-first century.

It’s not that carbon hasn’t always had a cost; it’s just that, until now, carbon’s costs have been mostly invisible. The current economic order, for the most part, does not

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* Adapted from the book: *Carbon Shock: A Tale of Risk & Calculus on the Front-Lines of the Disrupted Global Economy* (Schapiro, 2014, Chelsea Green)

account for them. Just as an optical illusion tricks the eye into seeing something that's not there, traditional accounting diverts our attention from invisible costs; we see only profits. Keeping these costs a mystery has been fundamental to our economic growth. Businesses benefit from a false ledger in which the environmentally corrosive impacts of the energy they use to produce, distribute, and dispose of everything from almonds to automobiles have been dramatically undercounted. The world's three-thousand biggest companies, according to the United Nations Environment Programme (UNEP), cause \$2.15 trillion in annual environmental costs (UNEP FINANCE INITIATIVE, 2011).

Most of those costs are the result of greenhouse gases (GHGs) emitted from the burning of fossil fuels, from which 82% of the world's energy is derived (INTERNATIONAL ENERGY AGENCY, 2013). In 2011, California Governor Jerry Brown shared his fears of climate change at San Francisco's Academy of Sciences. The governor cited Thomas Hobbes, the seventeenth century political scientist who saw government as an instrument of restraint upon mankind's 'brutish' self-interest. 'We want to avoid a Hobbesian situation,' Brown declared, 'the brutishness that happens as things get tighter' (CALIFORNIA ACADEMY OF SCIENCES, 2011). What Brown feared the most were the multiple billions of dollars that would be drained from the state budget to deal with the accelerating consequences of climate change and the clashes that would occur between the myriad powerful interests.

Globally, finding Hobbes at play throughout our climate-stressed world is not difficult – we're already paying what amounts to a tax on fossil fuels in all the many ways in which the public sector fills the financial void left by climate change. These costs hit us sporadically in different places and at different times, which is why they aren't perceived as a 'tax'. But every time we use fossil fuels, we increase our tax burden, a burden that unfolds like a sequence of trap doors, just like climate change itself.

The world's two biggest economies, the US and the EU, estimate hundreds of billions of dollars in costs from heat waves, floods, and an accelerating flow of refugees fleeing lands in which they can no longer sustain themselves. Both classify climate change as one of the foremost challenges to political stability. The

BOX 1 THE DANISH ENERGY AGENCY'S YELLOW BALLOON

During the 2009 Copenhagen climate negotiations, the Danish Energy Agency helpfully installed a huge yellow balloon over the city's main square that stated in bold black letters etched into the outline of a globe: THIS IS THE SIZE OF ONE TONNE CO₂. The installation was enormous – about two stories high and a block wide, the size of a

hot-air balloon that could carry you into the atmosphere. It would take fifty billion of those balloons – filled with the gases generated primarily by utilities and oil refineries, coal-powered manufacturing, transport, agriculture, and decaying and dying trees – to see what the GHG threat actually looks like. The balloons hang invisibly above our heads,

altering the atmospheric balance and thus the balancing act of life here on earth.

And every year there are more balloons. Those balloons full of CO₂ might as well contain cash, depleted from the world's coffers with each new ton. Up go balloons full of money.

World Economic Forum has identified erratic water supplies as one of the primary challenges to economic stability (WORLD ECONOMIC FORUM, 2014). The Food and Agriculture Organization predicts rising food prices as conditions shift toward a perfect storm – lower rainfall in already dry areas, and more torrential rainfall in areas that are already wet. In the US alone, recovery efforts from the 2012 hurricanes – the severity of which was attributed at least partially to climate change – amounted to more than forty billion dollars. President Obama’s Council of Economic Advisers foresees climate change costs rising forty percent for every decade that the level of GHG emissions continues on the current trajectory.

Somebody pays for those costs. Economists call these externalized costs – the costs borne not by the producer or the immediate consumer, but by society. Its primary characteristic is one of asymmetric risk – fossil fuel companies earn the profits while the public and public institutions (i.e. the government) bears the financial risks.

Climate geopolitics and the carbon price

Seeing climate change through the prism of its costs may be the only way to overcome the illusions that have constrained us from making an honest assessment of our options. Fossil-fuel-based production is favoured both through misleading accounting and an estimated \$500 billion in annual global subsidies to the fossil fuel industries (INTERNATIONAL ENERGY AGENCY, 2014). Using public funds to subsidize the fuel source that is undermining conditions of life on earth defies logic, not to mention free market principles. The combined effects of hiding fossil fuels actual costs with the market-distorting impact of subsidies contribute to the misleading calculation that fossil fuels are the most economically viable form of energy. The risks of this misleading economics for development in a carbon-constrained world are becoming clearer.

THE PERCEPTION OF RISKS AND THE DISCLOSURE OF EXTERNALITIES

When it comes to risk, our brains are generally wired to see those right in front of us; we perceive patterns of threat that spur the fight-or-flight instinct. But the threat from climate change is of a different order – it’s kaleidoscopic, occurring in dramatic and subtle forms, all over the earth simultaneously. ‘Our risk management patterns are still wired to search for lions in the Serengeti’, commented Mark Trexler, CEO of The Climatographers, a climate risk consulting firm. ‘See lion – run. That’s what we’re still doing in the climate space.’¹

But lions in the desert are not the threat. The Serengeti itself, that seat of human life that is a stand-in for the planet, is being transformed. The patterns we are now living through have never been seen before.

What we term a ‘carbon footprint’ can also be seen as the embodiment of financial risk. In 2013, the Geneva Association of Risk and Insurance Economics, an insurance industry research association, called for a new paradigm for assessing risk, because

1. Interview with author, November 19, 2013.

FIGURE 1 Collapse of European carbon prices



The European carbon market is the most advanced initiative in terms of including the economic cost of CO₂ emissions. It remains, however, overly dependent on external factors (economic crisis, location of activities, technological change) and institutional ones (fixing the volume of tradable credits) to maintain an incentivizing carbon price.

changes in weather and temperature are outpacing traditional actuarial calculations (THE GENEVA ASSOCIATION, 2013). Lloyds of London concluded in a report on climate risks: 'We foresee an increasing possibility of attributing weather-related losses to man-made climate change factors.' Add to that the potential disruption of production and supply chains; the reputational consequences of consumers and investors becoming more aware of the environmental underside of their favourite products; and regulatory moves by governments, which are fitfully but increasingly instituting penalties on GHG emissions – and the risks mount. Few of these looming triggers, however, is required to be reported to potential investors – though any one of them could seriously undermine the financial value of companies reliant on fossil fuels.

But these costs are for the most part off the official books of the companies most responsible because the public pays for them. 'Look at the discrepancies in financial disclosure', comments Pavak Sukhdev, former Special Adviser to the UNEP's Green Economy Initiative and senior banker at Deutsche Bank, who is now CEO of a New Delhi-based consulting firm GIST, which consults with the UN and other clients

on identifying environmental risks and costs. ‘Companies have to disclose things like contingent legal challenges, directors’ bonuses, new regulations, that might add up to millions of dollars in potential liabilities. But then you’ve got billions of dollars in externalities that they do not have to report because no one holds them to account for them. And those can add up to billions of dollars...Externalities have been the biggest free lunch in the history of the world.’²

THE CARBON ECONOMY AND THE ‘QUANDARY OF THE CUP’

For almost two decades, negotiators have attempted to redress that free lunch – the imbalance between who creates the risk and who pays for it – by forging a price reflecting the differences in responsibility for damage to the global ecosystem caused by GHGs, and that is steep enough to trigger a shift away from fossil fuel based energy. But the withdrawal of the US from the Kyoto process in 2001 left the world to improvise a carbon price. Instead of one price we’ve had wild price variations and a widening division between countries that have at least a minimal price for carbon and those that do not.

In the process, the varied responses to climate change have been shaking up the geo-political order just as it is shaking up the natural and economic order. New powers are rising and other powers diminishing.

If the centre of climate change action has been Europe for the past decade or so, it’s now expanding to many new centres such as Brazil and China, two rapidly growing developing countries that are outpacing both the US and Europe in their rates of economic expansion. This axis is ripe with kinetic power in the climate-induced shake-up underway. In 2010, Brazil was the widely recognized leader on climate policy among developing countries. The country’s vast low-carbon resources of water, trees, and agricultural bio-wastes made it seem the environmental harbinger; Brazil generates more than 80% of its energy from renewable sources, including hydro, thermal and wind, and only about fifteen percent from fossil fuels.

In that year I visited Brazil’s national environmental authority, IBAMA, and spoke to Biancha Bastos Americano, one of the government’s lead climate negotiators during the presidency of Luiz Inacio Lula da Silva (2003-2011). She commented on how Brazil would fare in a world in which carbon has a price.

Pointing to a ceramic coffee cup, she said: ‘See that cup. Brazil beats any country in a world in which carbon has a price. Including China! The energy used to process the clay for that cup was obtained from water-powered hydro dams in the Amazon. The cup was manufactured in a ceramic factory that is fuelled with biomass. It was transported here by a truck using bio-diesel. We will beat China every time in a world in which carbon has a price.’

The cup she referred to was a typical plain white espresso cup, much like any other espresso cup used the world over. Except that most of those cups are made

2. Interview with author, May 22, 2013.

in China, and this one was made in Brazil. It was a tiny bit more expensive than the cheap coffee cups imported from China, from factories most likely powered by coal.

The idea that this plain white Brazilian cup would become comparatively less expensive than its imported Chinese counterpart if the latter had to include the price of the energy used to make it seemed to encapsulate the central financial question posed by the climate conundrum: how does the coffee cup made with more renewable energy become at least equally competitive with cups made from more destructive sources of energy? This ‘quandary of the cup’ is a tiny microcosm of the central challenge that has bedevilled the world for two decades. It was a surprise to the Brazilians when, some three years later, a response to that economic quandary came from one of the most unexpected of places.

BRIC SHUFFLE

In September 2013 in Rio de Janeiro, a group of Brazilian, Latin American and other developing country officials gathered for a climate conference co-sponsored by the World Bank and the state of Rio de Janeiro. During the conference, Wu Delin, the vice deputy mayor of the Chinese city of Shenzhen, gave a talk that rocked the proceedings. The government in Beijing, he announced, had decided to start penalizing the producers of fossil fuels, asking the country’s most industrialized provinces to create their own cap and trade systems.

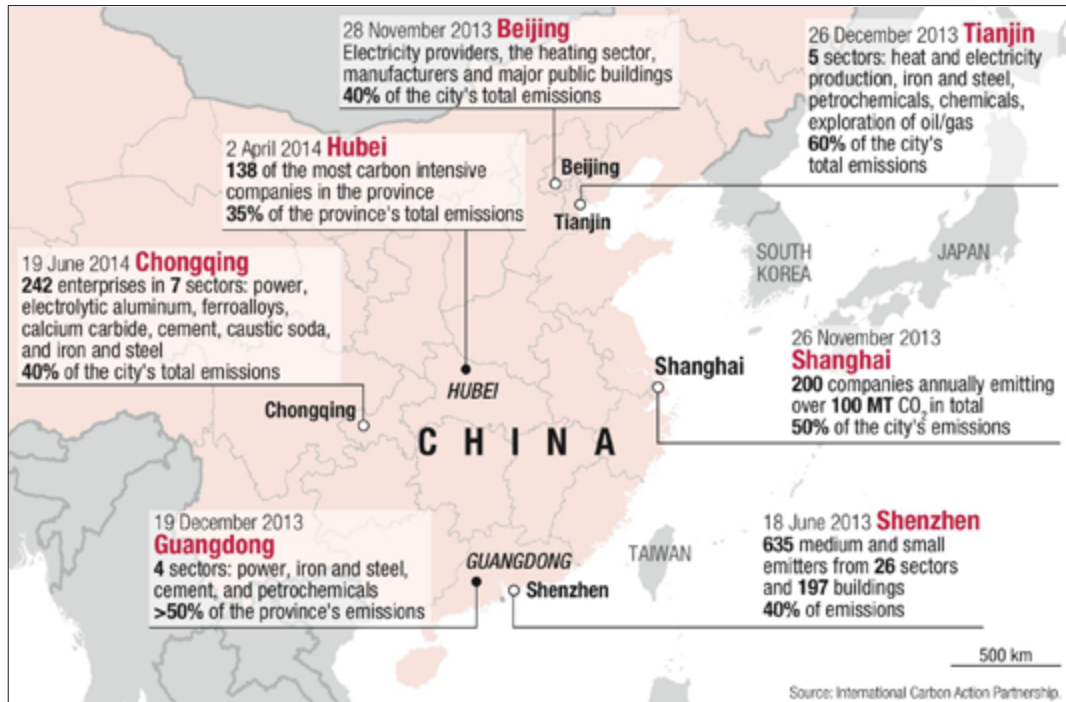
Delin described Shenzhen’s plan to be the first province to require the most fossil-fuel intensive industries to purchase GHG emissions allowances. His city was positioning itself to be a test run for a national programme. Two hundred of the province’s largest emitters would be subject to emission caps, and they would be expected to buy allowances on the new carbon market being created in Shenzhen. The aim was to reduce the carbon intensity of Guangdong industry by 25% by 2015.

‘We were stunned,’ said Walter Figueiredo De Simoni, Secretary of Environment for Rio de Janeiro state: ‘Our response was, “Wow! Just like that they’re going to have a carbon price”.’³

De Simoni, an economist by training, had spent the previous year negotiating with businesses in the state of Rio de Janeiro to kick-start a market or implement a minimal carbon tax. But he’d been foiled by industry opposition. Businesses claimed that such a move would put them at a competitive disadvantage with their global competitors, namely China. Now China was announcing it would unilaterally accomplish what De Simoni had been trying to do unsuccessfully for more than a year. ‘You look at the two countries,’ he said. ‘Brazil is seen as the greener one, but we’re not as prepared to act. China is seen as the dirtier one, yet they are preparing much more aggressively for this greener economy.’ Brazil, the ‘environmental powerhouse’, blessed with an abundance of ‘green resources’ had been upstaged by China, long seen as the global villain of climate change.

3. Interview with the author, October 17, 2013.

FIGURE 2 Chinese carbon markets



Seven Chinese local carbon markets have emerged since the end of 2013. They are field trials for a possible future national market. Together they represent the second largest market after the European Union's and help integrate carbon value into exported products.

It was a remarkable moment involving two of the most important countries in the evolving climate dynamic. Other markets were launched in 2014, in Shanghai, Beijing, Chongqing, and Tianjin provinces. The world's biggest manufacturer and user of fossil fuels was beginning to give a price to carbon. Of equal significance, for the first time industries in these provinces will have to keep a running inventory (although not yet publically available) of their GHG emissions. Practically overnight, the Chinese carbon markets became the second largest in the world after the European Trading System. Global consumers are starting to pay that price, as small as it is, in their Chinese imports.

China's initiative came just months after the Chinese Academy of Environmental Planning proclaimed that the cost of environmental degradation to the Chinese economy had by 2010 rocketed threefold since 2004, to about 3% of the nation's GDP. (One year after that, China would sign a historic climate accord with the US). And though carbon markets thus far have had a troubled history in actually leveraging a price high enough to trigger large-scale investments in renewables, they begin the process of lifting the lid on the accounting sleights of hand that have long kept the actual costs of fossil fuels out of sight.

As for the Brazilians, they've become a powerhouse in promoting renewable energy technologies in Latin America and Portuguese Africa. President Lula committed to reducing emissions by 39.1% from 1990 levels by 2020 – a goal accomplished largely through significant cuts in rates of deforestation, though those reductions have been partly offset by increased CO₂ emissions from transport and other sectors as the government embarked on an aggressive economic development plan under Lula's successor, Dilma Rousseff. The country commissioned its own mini-Stern report, which concluded that if current climate trends continue the country's GDP could drop by from five hundred billion to two trillion dollars by 2050.

Finally, climate change is registering in the language that politicians and industrialists understand – money. As our knowledge of the economic costs of climate change increases, the rigid Kabuki dance, in which each side behaves predictably along long-established lines, is being broken – as the 2014 accord between the US and China suggests.

GHG accountability and the polluter pays principle

But this new opening also comes with a new set of (surmountable) challenges. The polluter pays principle at the heart of the approaches thus far raises a fundamental question in a global economy in which goods are produced in one place and consumed in another: is the producer or the consumer accountable for the GHGs associated with that production?

'You cannot decouple production from consumption,' commented Cindy Isenhour, an Associate Professor of Environmental Studies at the Climate Change Institute at the University of Maine in Portland, Maine.⁴ The world may be 'flat' when it comes to production, but when it comes to GHGs it is definitely round – and the circle comes round to the world's consumers.

A brief portrait of three cities that are key players in this emerging dynamic offers a glimpse into the multiple ways of understanding the challenge of GHG accountability:

WHO'S RESPONSIBLE?

The city of Pittsburgh, Pennsylvania runs like a muscle through the industrial history of the US. Long the centre of American industrial production, Pittsburgh produced the steel that became the backbone to America's twentieth-century industrial might.

Then in the 1980s and early 1990s, the steel started leaving. Today, Pittsburgh has been transformed into a different kind of symbol – that of the modern 'green' city. Municipal brochures feature a glittering downtown skyline with one of the highest concentrations of 'green buildings' in the US. Alongside the Allegheny River, a route that once hosted a tramline carrying workers to the factories, there is now a tree-lined 'Greenwalk' for pedestrians. Just blocks off the Greenwalk the hulks of those steel mills are still visible. They, too, have been transformed – into

4. Interview with the author, January 3, 2013.

condominiums with a river-view, gourmet restaurants, music clubs and boutiques. Where there were once generations of families reliant on forging heavy metals, there is now an intellectual and creative class firing up innovations in the city's burgeoning high-tech and bio-med industries, backed by an assortment of world class universities.

A coalition of businessmen, city planners and environmental engineers staked out a development plan that positioned Pittsburgh as a hub of innovation in ecologically oriented design. The 2.3 million residents of 'greater' Pittsburgh were together found to be responsible for 6.8 million metric tons of GHGs let loose into the atmosphere; roughly 2.3 tons per capita. By 2013, the city was on the way toward its goal of reducing emissions by 20% by 2020 from 2005 levels, and aims for progressively steeper declines in the future. Pittsburgh is considered among the leading urban climate innovators.

Downtown, the skyscraper windows are angled to maximize natural light, heat is piped in from thermal pools deep underground, and solar panels line the roofs far above the bustling sidewalks. Public transit has been expanded, subsidies for solar and thermal energy have promoted an expansion of small and large-scale renewable energy for residents and businesses, and waste disposal services have been improved to enhance recycling and other energy-saving measures. Major property developers agreed to halve their 2003 carbon footprints by 2050; the city now has the highest concentration of LEED-certified buildings in the country. Even the US Steelworkers, one of the country's first industrial unions, now has a huge banner draped from its downtown headquarters promoting 'GREEN JOBS'. The city's transformation has been so complete that the G20 held its yearly conference there in 2012 and highlighted the city's 'green' strategy as a post-industrial model. Pittsburgh, once home to the industrial empires of Andrew Carnegie and Andrew Mellon, is now one of the 'greenest' midsize cities in America, according to the *Economist's Green City Index* (ECONOMIST INTELLIGENCE UNIT, SIEMENS AG, 2011).

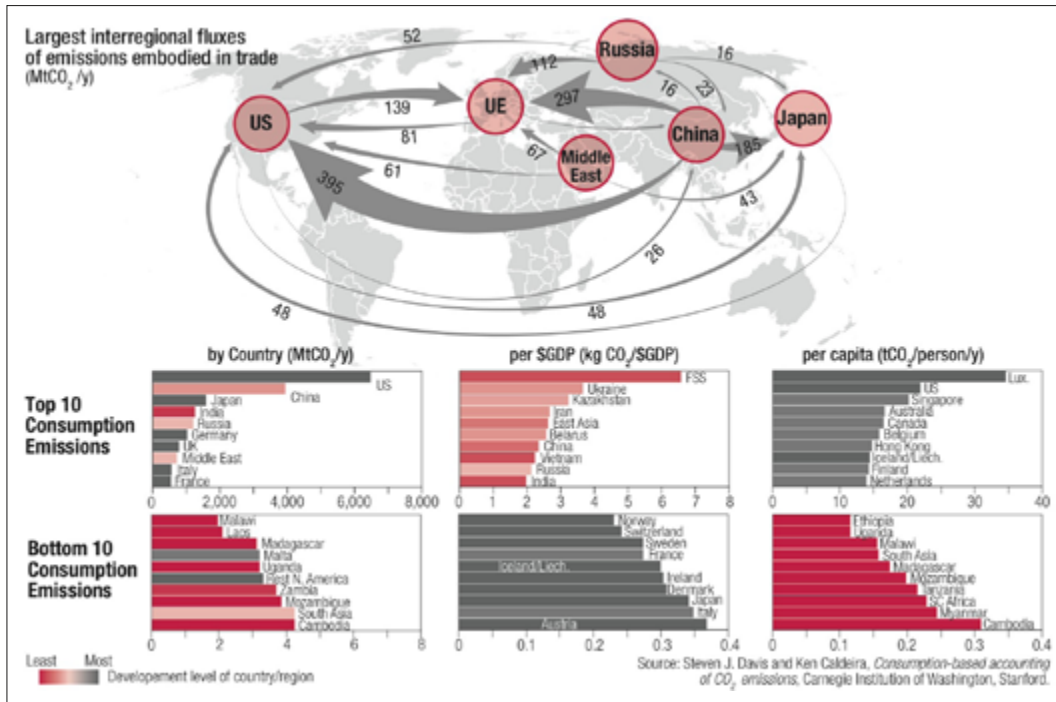
Court Gould, Executive Director of Sustainable Pittsburgh, a coalition that helped with the city's transformation, commented that in the old days, 'a father would take his son out to their yard, look back toward the mills and the smoke rising over them, and tell him, "Look there, that's my job. That smoke there, that's money".'

'Not any more. Pollution no longer has the smell of money. Now it's the smell of costs. It's the smell of someone not paying attention to the bottom line. It's a sign of inefficiency.'

Pittsburgh's GHG emissions plunged from the days when the sky was filled with waste gases that would, according to accounts of the time, turn entire afternoons into twilight. The city lost its manufacturing base, and it's a far nicer place to live as a result. It re-tooled its efficiencies, cast off the harmful by-products of manufacturing and refashioned itself as a city far more reliant upon brains than on brawn.

So whatever happened to all those inefficient pollutants that once came spewing from Pittsburgh? Where did the GHGs go?

FIGURE 3 Carbon in international trade



The exchange of goods accounts for 20% of global carbon emissions. The proportion of developed and developing countries engaged in international trade is very important in terms of these 'hidden' emissions.

THE PRODUCERS

Guangzhou is a city of ten million people on China's southeast coast. The freighters that come into the ports here and in the surrounding Guangdong province are loaded with a container about every second – some forty million crates a year of goods exported around the world. Industrial clusters throughout the province are home to more than a thousand steel manufacturing and trading companies. They produce the skyscraper girders, auto parts, appliances, ships, refrigerators, and even American bridges – all those steel products that once were made in Pittsburgh and other Midwestern cities.

Guangdong is also, in the UN's estimation, one of the top-ten carbon emitting provinces in a country that is itself the leading emitter. Some ten thousand miles from Pittsburgh, the CO₂ that used to come from that city now fumes into the atmosphere from Guangzhou. As industry migrated, so went their GHG emissions. The Chinese manufacturers are producing the emissions that would otherwise have been produced in Pittsburgh and, more broadly speaking, by all those factories that have either outsourced their production from the US or been crushed by Chinese competition. Between 1990 and 2010, reports the Center for International Climate and

Environmental Research, the emissions embodied in products imported by developed nations from developing ones – which for the most part means China – grew by an average of 10% annually.

The World Bank estimates that about a quarter of all the production in Guangdong province, and indeed throughout China, is destined for export to the US, Europe and Japan. The resulting GHGs are, in economists' terms, known as 'embedded emissions'. They are the pollution back-story to the goods we consume.

Guangdong's residents have a per capita annual footprint of 7.8 tons (WANG, ZHANG et al., 2012) – quite a bit more than the average Pittsburgher. But while only 6% of Pittsburgh's emissions come from industrial sources, the Chinese industrial sector accounts for 56% of the emissions in China – almost ten times higher, as a percent of the total, than those of Pittsburgh.

The discrepancy between the industrial emissions of Pittsburgh and Guangzhou, which started trading places as centres for steel production in the 1980s, suggests that the lifestyle choices of Pittsburghers have not changed as much as the economic support system, based on GHG intensive manufacturing, changed all around them. Urban Chinese residents, some of them people who have literally replaced those American steelworkers, have a far smaller personal footprint as a percent of the overall total than do their Pittsburgh counterparts. The Chinese, in short, are producing GHGs on our behalf.

The Carnegie Foundation estimates that Americans' per-capita footprint would jump by 2.4 tons annually if their consumption – mostly of goods made in China – is taken into account. Virtually every developed country, according to the Stockholm Environmental Institute, has seriously under-estimated its emissions by twenty to thirty percent because they have not accounted for increased consumption.

Globalization has flipped the calculus on the central question of who is accountable for GHGs. Richard Feldon, a San Francisco-based urban planner, worked with the US branch of the International Council for Local Environmental Initiatives (ICLEI) to design a set of emission reduction protocols. These protocols, adopted by American cities in 2012, are aimed at more than two hundred cities around the world. Feldon said that deciding how to include consumption in GHG calculations was the most controversial issue faced over the three years it took to identify the primary GHG sources in US cities, because it blurs the line between our contribution as consumers and industry's contribution as producers. It gives a new understanding to the 'greenness' of cities.

'Let's say Pittsburgh still had its industrial base, and that steel from Pittsburgh was being used in a city like San Francisco,' Feldon explained. 'Well, it would be unfair to say that San Francisco, under that scenario, is a greener city than Pittsburgh.' The same equation, he said, applies to Pittsburgh and Guangzhou – or, say, the US and Europe, jointly the world's biggest consumers, and China, the world's biggest producer. It also means that when you do the numbers, the US goes from being the second biggest GHG emitter to the first; Europe goes from third to second; and China flips from first place to third.

Urban dwellers will represent 70% of the world's population by 2020 – so reducing city emissions is one of the fundamental challenges of devising a new energy system that keeps GHGs to at least liveable levels. Just because emissions aren't happening in our backyard doesn't mean that they're not ours. This is a reality that at least one of the world's cities is facing head-on.

ACCOUNTING FOR CONSUMERS

Welcome to Manchester, birthplace of the industrial revolution. This city has experienced a trajectory similar to that of Pittsburgh. What steel was to Pittsburgh, textiles were to Manchester. Also like Pittsburgh, Manchester has dropped from being one of its nation's leading GHG emitters to a centre for high-tech innovation, and is host to a cluster of leading universities conducting cutting-edge research into renewable energy. The legacies of both cities are interwoven deeply into the evolution of GHGs and their contribution to climate change.

Manchester was home to the world's first coal-fired factory, ground zero in the historical allocation of responsibility for GHGs. In the eighteenth century that coal-fired energy was put into the service of processing the vast amounts of cotton that Britain was obtaining from its colonies in Asia and North Africa. Indeed, one can see Manchester as having assumed the industrial GHG contribution on behalf of the British colonies, which were expected only to send raw materials to the mother country for processing and manufacture. By 1850, Manchester was widely considered a model for the modern industrial city.

'From this foul drain,' wrote Alexis de Tocqueville of his visit to Manchester, shortly before his legendary foray to the US, 'the greatest form of human industry flows out to fertilize the whole world. From this filthy sewer pure gold flows.'

Today the textile companies are long gone – many returned to India and China. By the 1990s the city had rocketing unemployment. Practically an entire generation of workers were compelled to live on state benefits or leave Manchester. Their GHGs went with them.

Then in 1996, the IRA carried out a powerful bomb attack that injured more than 200 people and decimated the downtown neighbourhood. It was then, according to Sarah Davies, head of environment strategies for the Greater Manchester Combined Authority, that the city was compelled to decide how it wanted to rebuild itself.

There was a 'shift in the mind-set,' she said. Manchester would return to its role as a centre for technological innovation, but this time that innovation would be adapted to the emerging vision of the new low-carbon economy. 'There's the sense,' she said, 'that we created the energy-hungry economy. And now we have some responsibility for finding our way out of it.'

Pittsburgh and Manchester's industrial history may be similar, but the way they deal with their GHG accounting is not. Pittsburgh's Climate Inventory, a blueprint for emission reductions, states: 'Emissions resulting from many personal and business-related activities and decisions that might be evaluated in an individual, carbon-footprint-style inventory are excluded from a city-level GHG inventory approach.' In

other words, the city is not counting the carbon embodied in the goods and services its residents consume, or generated by their travel.

By contrast, the long-term plan published by the Manchester City Council calls for accounting for, and reducing, emissions by city residents ‘wherever those emissions take place.’ These embodied emissions include the energy needed in the growing and transport of food; the extraction and processing of oil used by the city’s automobiles and factories; the emissions generated through the manufacture of electrical devices; and estimates of aviation emissions. Adding these consumption-based emissions adds roughly 30% to each citizen’s GHG contribution, according to a 2012 estimate by the Greater Manchester Combined Authority.

The Authority, representing some three million people in the city and surrounding communities, launched an initiative to reduce the city’s footprint not only at home, but also in the countries producing the goods consumed by its residents. Its room to manoeuvre is limited; cities do not generally have a foreign policy. But within that limited space, Manchester’s procurement policies favour imported goods with lower GHG impacts than their competitors, and the city has embarked on an effort to educate employers and homeowners on precisely why purchasing goods closer to home, and reducing energy usage, is good for the city’s economy, as well as for the planet.

Davies’ office sponsors the city’s Carbon Literacy Project, which aims to educate residents on why reducing carbon emissions makes economic as well as environmental sense. ‘People want to earn more, pay less, have a decent quality of life, that’s what people aspire to,’ she said. ‘So carbon literacy must be put through these channels. They need to see “prosperity” as “green”.’ Manchester’s long-term aim is to reduce emissions 41% from 2005 levels.

‘Having this target makes us more attractive to investors,’ Davies explained. European, Japanese and other companies have been pursuing green R&D – drawing on the rich talent pool from local universities – and textile companies are being lured back to the city, attracted by new fuel-efficient ink and dye technologies. This creates jobs and shortens GHG-intensive transport costs. Between 2007 and 2012, the ‘green’ sector of the city’s economy grew by thirty-seven thousand new jobs, representing \$7.5 billion in money passing through Manchester that would otherwise have gone elsewhere – an ‘elsewhere’ that likely would have been using far less energy-efficient technology. The Greater Manchester economy grew 4% in 2012, fed largely by the infusion of green investments, Davies said, at a time when growth in the UK was flat.

Of course, cities, as well as nations, are circumscribed in their ability to influence the production practices of other countries: governments are accustomed to acting within the traditional confines of national jurisdiction.

But just as climate change is altering the fundamental conditions here on earth, it is also altering our sense of the limits to those traditional concepts. Pittsburgh and Manchester are both signatories to a commitment signed by more than three hundred cities worldwide that have committed to reducing GHGs. Both are largely unheralded leaders among the world’s cities in facing the challenges of climate

change. But Manchester is one of the few cities attempting to leverage its limited influence to ensure that dirty, GHG-intensive industries are not simply moved off our ledger books and onto others. Its approach suggests a way forward as urban areas around the world wrestle with the underlying inequities involved in the fight to slow their GHG emissions.

A CARBON PRICE FOR AN ACCOUNTABLE ECONOMY

Ultimately, climate change is the single most effective eye-opener to how globally connected we all are – the corrosive effects of climate change unite us across national frontiers, as does the fight to slow the rate of change down. Compel fossil fuel intensive industries to include their actual energy costs, and you create a far more level playing field on which renewables can compete. A uniform price for carbon would ensure that cities like Manchester are not outliers but in the mainstream. It could ensure that major production centres would also benefit; solar and wind energy in China and India are expected to account for as much as two-thirds of new power additions by 2030 (BLOOMBERG NEW ENERGY FINANCE, 2014).

The World Bank reports almost 25% of the world's GHG emissions are now subject to a carbon price– ranging from the Kyoto signatories, to several US states, two Canadian provinces, Korea, Mexico and the seven industrialized provinces of China, as well as various forms of carbon taxation in Sweden, the Canadian province of British Columbia and elsewhere (WORLD BANK, 2014). It's a diverse spread that is nevertheless sending a signal that GHG pollution henceforth comes with a price. That price is nowhere near enough to generate the funds necessary to aid the transition from fossil fuels and to shift investment patterns. But we can plausibly consider this a floor for a trend that will begin to erase the false accounting that has dominated until now.

You could inject a black dye representing carbon into the circulatory system of the twenty-first century economy and see it appear behind every major economic calculation by governments and by companies from here on out, rising with intensity and focus. Questions, then, will rise around the pivotal issue: Who pays? And how do we ensure that those costs are borne substantively by the fossil fuel companies and not by the society that has borne the burden of those costs for the past two hundred years? ■

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Managing risks to achieve sustainable development

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Sendai, the capital city of Miyagi Prefecture, Japan, will host the Third UN World Conference on Disaster Risk Reduction (WCDRR-3) during 14-18 March 2015, coinciding with the fourth anniversary of the Great East Japan earthquake. This earthquake battered the province with a complex cocktail of disasters – tsunami, flood and nuclear meltdown that led to the leakage of radioactive material into soil, water and ocean, threatening public health and safety in the region. For Japan, the conference is a perfect setting to showcase to the world the way it has been able to recover from an unprecedented disaster, just as it did a decade earlier when it hosted the WCDRR-2 in Kobe, the capital city of Hyogo Province that was flattened by the 1995 Great Hanshin earthquake.

For the global community, WCDRR-3 provides an opportunity to reiterate the importance of disaster risk reduction (DRR) for sustainable development, to connect DRR with the ongoing processes for the Sustainable Development Goals (SDGs) and climate change and to redesign the global framework on risk reduction, based on the experiences gained and the lessons learnt during the previous decades.

The emergence of a world action plan on DRR: the Yokohama Strategy

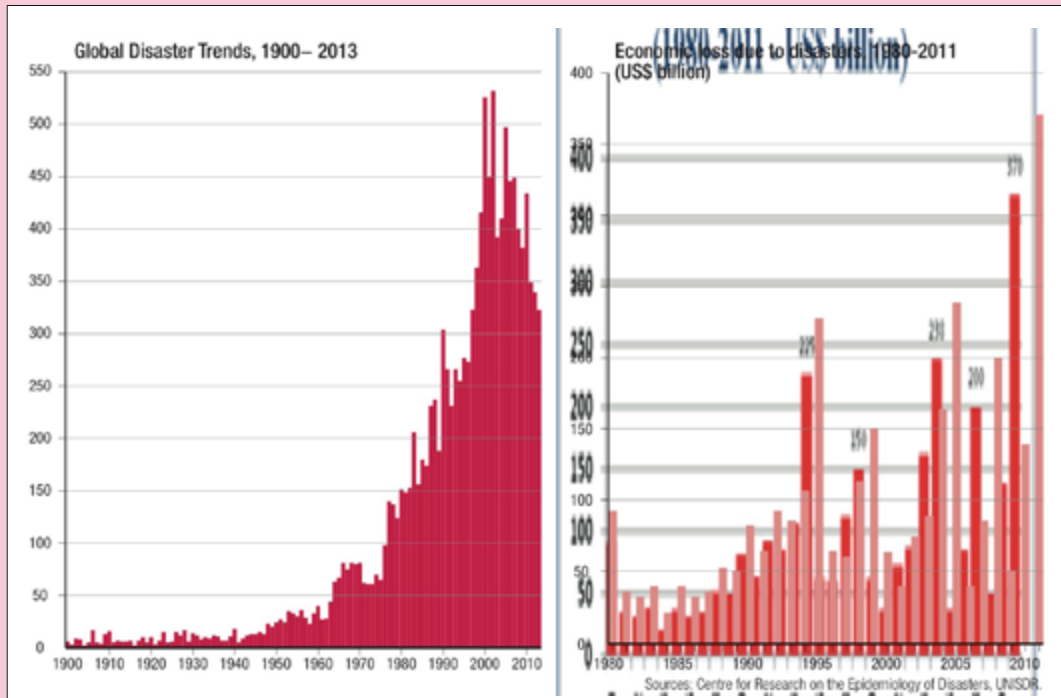
The global discourse on DRR started in 1987 when the World Commission on Environment and Development submitted its epoch-making report *Our Common Future*, highlighting the three million lives lost and eight hundred million people affected by disasters worldwide during the previous two decades, which resulted in damages

exceeding \$213 billion (THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, 1987). The UN General Assembly responded by declaring the 1990s as the International Decade for Natural Disaster Reduction (IDNDR).¹ During the middle of the decade the UN organized WCDRR-1 in Yokohama, which brought together senior policy makers, technical experts and representatives of non-governmental organizations ‘to develop an action plan to put the results of science and technology at the service of disaster-prone regions of the world’. The Conference adopted the *Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action*.

The Hyogo Framework of Action: building resilient nations and communities

A review of the progress of the Yokohama Strategy demonstrated that there was no quick fix technological solution to the spiralling disasters, which needed multi-pronged interventions (UNITED NATIONS, 2005). The Boxing Day Indian Ocean tsunami that killed more than two hundred thousand people across countries and continents, barely three weeks before WCDRR-2 in 2005, raised global concerns for DRR as never before. The Conference adopted the *Hyogo Framework of Action 2005-2015: Building Resilience of Nations and Communities to Disasters* (HFA) with Priorities of Action on five fronts – political, technological, social, economic and humanitarian. The decade long implementation of HFA delivered some progress across all priority areas. In particular, almost every country developed legal and institutional

1. UN General Assembly Resolution GA/ 54/219 dated 22 December 1999

FIGURE 1 The increasing frequency and cost of disasters

The combination of climate change and the lack of risk anticipation and management leads to an exponential growth of the economic cost of natural disasters.

frameworks for disaster management; many countries established national multi-stakeholder platforms; regional, national and local-level risk assessments were taken up; education and awareness on disasters was improved; and capacities for disaster preparedness and response were enhanced in most of the countries. All these measures have contributed to a downward trend in mortality risks, at least for those weather-related hazards for which early warning is possible. However, damages and losses due to disasters have increased manyfold. Economic globalization has led to a massive increase in risk exposure, as new private and public investments have been concentrated in hazardous areas, such as cyclone and tsunami-prone coastlines, flood risk river basins and in cities that are vulnerable to earthquakes. 'Intensive' risks of high-severity low-frequency disasters have accumulated in hazardous areas and are now transmitted around the world through supply

chains, representing a systemic global economic risk for businesses, governments and society at large.

Poorly planned and managed urban development, environmental degradation, poverty and inequality and weak governance mechanisms continue to drive rapidly increasing loss and damage associated with 'extensive' low-severity high-frequency risks. These types of risks are having a devastating impact on vulnerable low-income households and small and informal enterprises that provide the vast majority of employment in many countries (World Bank²; ILO 2012). Extensive risks are increasing even in countries and areas that are not exposed to major hazards, highlighting how both development and DRR have not been sustainable and effective; this is particularly detrimental to low-income communities.

2. <http://data.worldbank.org/indicator/SL.AGR.EMPL.ZS>

Linking disaster risks with sustainable development and climate change

Disaster risk management can no longer remain isolated from the overall strategy of sustainable development. A three-dimensional perspective of the disaster-development nexus is well established: first, disasters erode the hard-earned gains of development by damaging lives, livelihoods and assets of communities and countries; second, a lack of development perpetuates and aggravates existing social and economic deprivation, particularly of the poor and low-income people, making them vulnerable to disasters; and third, development often causes new disasters by creating new risks.

Mainstreaming DRR in development has often been talked about but there has been little progress in ensuring that development reduces rather than enhances disaster risk. Therefore, the post-2015 framework should explicitly include public policies that provide incentives and opportunities for risk sensitive investment across all sectors, public as well as private, households and communities. The creation of a more resilient humanity and environment requires strong international and local commitment, and drive to engineer the necessary changes in current development practices, processes and patterns. Risk management must be part of sustainable development policies and practices to reduce existing risk and prevent the creation of new risk accumulation.

Furthermore, the Special Report of the IPCC on *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (SREX) in 2011 has confirmed that anthropogenic climate change manifested in rising temperature, changing rainfall patterns, glacial melts and rising sea level has the potential to increase hydro-meteorological disasters, such as heat and cold wave, drought, flood, flash floods, cloudbursts, landslides, forest fires, cyclones, hurricanes, etc. Climate change may further increase the vulnerability of communities, particularly through ecosystem degradation, reductions in water and food availability, and threats to livelihoods. The report concluded that 'the interactions among climate change mitigation, adaptation, and disaster risk management may have a major influence on resilient and sustainable pathways' as presented in the diagram below:

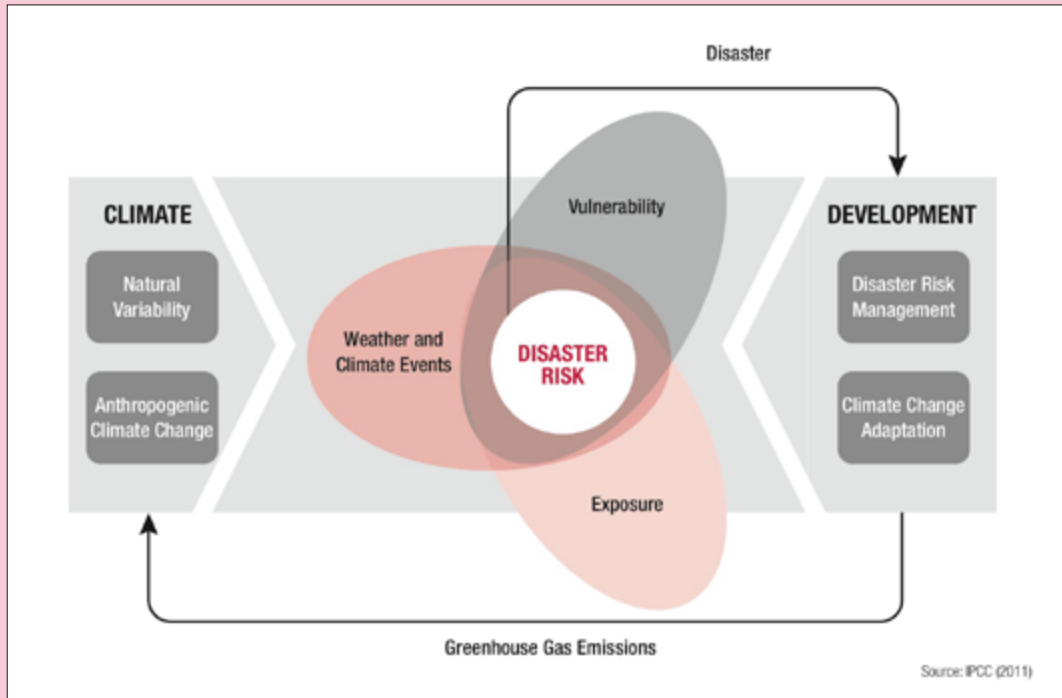
What is at stake in Sendai?

The adoption of the post-HFA framework on DRR at the WCDRR-3 – ahead of the General Assembly's SDG declaration in September 2015 and the expected climate agreement in COP21 in December 2015 – provides an opportunity to integrate DRR with SDGs and climate change mitigation and adaptation, something that the HFA lacked. As the global development paradigm shifts from general declarations to specific action programmes with clearly defined goals and targets; and as diverse approaches and actions are being integrated into common development goals, the post-HFA framework on DRR is likely to conform to this trend. Specifically, the new framework should address the following issues:

First, risks should be considered in their totality, both natural and man-made. The global initiatives so far – IDNDR, Yokohama and HFA – have all focused on natural disasters, leaving aside agricultural, industrial, environmental, nuclear, transport, health and other man-made disasters to be addressed separately. An increasing knowledge and experience of disasters have shown that they are not caused by nature alone. In fact, disasters result when man-made vulnerabilities, such as housing, infrastructure, transport, industry and health, are exposed to the hazards of nature. Often man-made hazards interact with natural hazards to create complex disasters. Anthropogenic climate change is the best example of the way greenhouse gas emissions have contributed to an increase in climate-related disasters, which may appear to be natural disasters but are essentially man-made. Each type of disaster has common elements requiring similar interventions, and therefore a common framework would avoid fragmentation and promote better coordination in planning, strategy and response.

Second, the global framework of DRR should be broadened to encompass every aspect of disaster risk management to include pre-disaster risk prevention, mitigation and preparedness (disaster risk reduction), along with post-disaster response, relief and recovery (disaster management). While different agencies may deal with specific aspects of risk management, all of these elements should be included in a common 'disaster risk management' framework as they are inter-related.

FIGURE 2 Climate change, risk and development



Development models directly determine the level of vulnerability of a society. As a result, development and risk prevention must now be considered jointly and over the long term.]

Third, the new global framework should encourage synergies between DRR and climate change adaptation (CCA), which share the common goal of reducing population vulnerability to extreme climatic events, but have diverse legal, institutional and policy mechanisms, creating an unnecessary fragmentation of initiatives. Improved synergies would not only avoid duplication and derive optimal benefits from scarce resources, but also add value to the process through lessons learnt from the two perspectives. More and more countries are developing policies and strategies for integrating DRR and CCA; the same approach should be applied to the post-2015 development agenda for a sustainable future.

Fourth, the vision of the post-HFA framework should not remain limited merely to saving lives and property; it should be far more positive and aspirational in aiming to secure healthy and resilient nations and communities. Therefore,

the strategic goals of the framework should be reformulated to emphasize that all existing overt and underlying risks are addressed, all new risks are prevented, and all residual risks are managed well to minimize impacts and maximise resilience. This may seem a tall order, but it is the way that this vision needs to be constructed. The priority areas of action should also be refocused to improve risk communication and risk governance through better accountability and monitoring and enhanced partnerships and alliances with all stakeholders at all levels.

Finally, the strategic goals and priority areas of the post-HFA framework should be reduced to a set of quantitative and qualitative targets to be achieved at the local, national, regional and international levels, which can be monitored and measured in the same manner as the SDGs are expected to be, based on the experience gained from the implementation of the Millennium Development

Goals. This will ensure that the post-HFA framework does not remain a loosely formulated agenda that is left to national governments to follow of their own volition, but that it contains clearly defined, commonly shared and easily measurable global goals and targets that would be achieved jointly by all stakeholders at all levels. ■

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Changing the way development is measured

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In 2009, the Stiglitz-Sen-Fitoussi Commission (STIGLITZ et al., 2009) submitted a report to the French President on the new measures of societal progress. Against a backdrop of financial crisis and the questioning of an unequal and unsustainable growth model, the critiques that for many years had been levelled against the Gross Domestic Product (GDP) resonated anew (MEADOWS, 1972). These critiques underline the inability of this key economic indicator to capture worrying developments such as widening income and wealth inequality or the degradation of environmental and public health.

Five years later, the Beyond GDP (BGDP) indicators have been adopted by the highest levels of state in several European and non-European countries such as the United Kingdom, Belgium and Bhutan. The current abundance of new indicators is helping to reshuffle the cards of political discourse, thus making it possible to legitimize new issues (such as biodiversity protection or concern over individual well-being). In fact, BGDP indicators offer political actors the possibility of constructing an innovative narrative: faced with the exhaustion of our current growth model (DEMAILLY et al., 2013.), they can help to open up a new space for public action and breathe life back into the democratic debate in a context of in-depth reconsideration of political action and discourse.

There are several obstacles to the effective integration into policymaking of the many initiatives underway. The discussion and efforts often focus on fine-tuning indicator methodology, while the prerequisites for their effective use in policymaking have received less attention, although a

few recent studies have addressed this issue.¹ This article focuses on BGDP indicators with a social aspect, i.e. indicators or dashboards with multiple dimensions – in particular economic, environmental and social – and not only sectoral ones. The indicators discussed here have been driven by public authorities at the national or regional level in six territories: Australia, Belgium, the UK, Wales, Wallonia and Germany, and excludes many initiatives taken by local authorities, non-governmental organizations and territories.

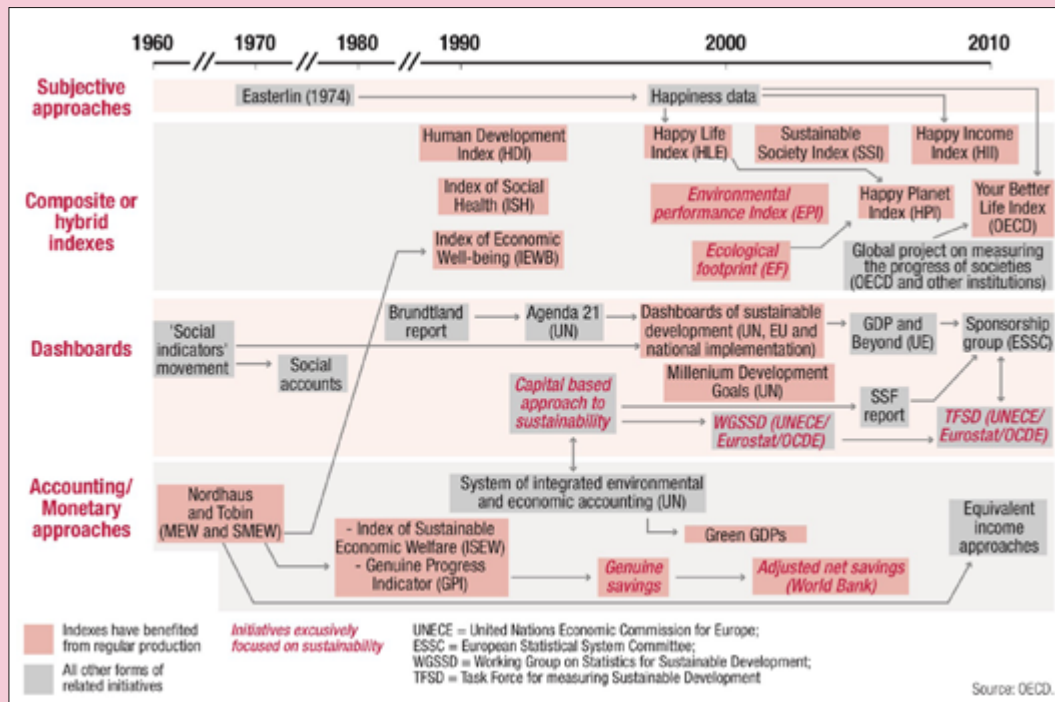
Six initiatives to fuel the discussions on BGDP indicators

Australia set up BGDP indicators as early as in 2002. They have been developed and supported by the Australian Bureau of Statistics and consist of a dashboard comprising 26 dimensions grouped around four themes: society, economy, environment and governance. The dashboard has been published frequently and holds particular interest for the media and the general public. Although the indicators were not originally designed to evaluate government actions, politicians and officials make regular use of them.

Since 2011, the **UK** has produced a comprehensive dashboard for BGDP indicators under a national programme for measuring well-being, which was initiated by Prime Minister David Cameron. Monthly reports are published to comment on the country's performance

1. Shift Project (2013), Carnegie Trust (2012) and BRAINPOoL (2014).

FIGURE 1 A proliferation of initiatives and approaches to measure prosperity



There is now a real proliferation of indicators and initiatives to measure prosperity in different ways. This has created political debate that has yet to be structured to influence the policies implemented.

on the different aspects of well-being and some indicators have been used to inform decision-making.










Wales has been using BGDG indicators since 2000. They currently take the form of a 29-indicator dashboard, synthesized into five key indicator groups, providing information on resource use, the environment, the economy, society and well-being. The establishment of this dashboard is in the Welsh constitution, and the indicators are published annually. However, they do not have a great resonance in the media or the political world.

In early 2014, **Belgium** ratified a law aiming to establish indicators to complement GDP. These indicators are currently being developed by the Belgian Federal Planning Agency. A review of the progress made on BGDG indicators is planned for the annual report of the *Banque nationale de Belgique*, and their development will be debated in parliament each year.

Wallonia adopted five key indicators in 2013, dealing with: social issues (the Social Situation Index and the Well-being Index), the environment (the Ecological Footprint and Biocapacity Index and the Environmental Situation Index) and economic capital. The initiative is supported at the ministerial level. The Walloon Institute for Evaluation, Prospective and Statistics (IWEPS) published a report on key indicators in May 2014, but this has not yet attracted a great deal of media interest.

In **Germany** the 'W3 indicators' were defined and proposed for use by a parliamentary inquiry commission. This set of ten indicators (GDP plus nine complimentary indicators) encompasses three dimensions: the economy, ecology and well-being. For each of these indicators, 'warning lights' have been defined to show whether critical limits have been exceeded. The inquiry commission suggested that the federal government should publish

FIGURE 2. The use of prosperity indicators – three levels of representation

TYPE OF USE	As applied to GDP			
SYMBOLIC	 Represent a country's power, wealth and progress	 Give credibility to initiatives, or discredit them, depending on whether they strengthen/weaken GDP	 Enable general public to evaluate government performance	
POLITICAL	 Set precise objectives		 Enable the media and political parties to evaluate government performance	
INSTRUMENTAL	 Support the preparation of national budgets, financial forecasts of major companies, etc.	 Enable the assessment of public policy options according to GDP data	 Define state contributions to supranational budgets	 Evaluate the level of public debt and deficit

Source: Authors based on Lachaze and Morel (2013), Point (2011) and BRAINPool (2014)

Three types of use for BGDPI indicators can be identified: symbolic, political and instrumental. Here, these categories are applied to GDP. Many decisions are made on the basis of GDP growth forecasts: structural investments, social security funding, private investment and decisions on individual savings. In people's minds, economic growth remains associated with economic stability and employment: although GDP growth no longer adequately reflects positive changes in living conditions, a drop in GDP in the short run correlates relatively well with a rise in the individual's feeling of malaise (STEVENSON and WOLFERS, 2008).

an annual well-being report, and that groups of government experts should be mandated to officially comment on these indicators on a regular basis.

Lessons learned from international experience

Other countries have already established such indicators or are planning to do so in the near future, such as Canada, Finland, New Zealand and Japan. These national and regional cases inform the debate on the formalization of BGDPI indicators, keeping in mind the different roles played by GDP, which remains the reference – implicitly or explicitly (Figure 2).

Firstly, it is clear that this issue of new indicators is not only a concern for some NGO activists and academics, it

receives support from the highest levels of governance: executive and legislative powers. While sometimes even statistical institutes seize the topic, as shown in the Austrian example.

It is also interesting to note that the promotion of these new indicators is no longer the preserve of the left-wing or environmentalists. In France with Nicolas Sarkozy, or in the United Kingdom with David Cameron, such indicators have received the support of conservatives. However, there is no general agreement on the type of indicators required: the Walloon indicators, backed by green and left-wing politicians, are obviously not the same as those favoured by David Cameron's Conservative party. Unlike the Walloon indicator dashboard, the

UK version, although comprehensive, has no indicator for income inequality.

Furthermore, the current examples of BGDP indicators do not seek to replace GDP, but to complement it with a battery of additional indicators, rather than a single one that would aggregate all relevant dimensions. The different national experiences have shown that the development of such indicators alone is not sufficient, they must be used effectively in order to have an impact on the structuring of the political debate, to challenge leaders, to steer public policies or develop new ones.

At present, these new indicators are used mostly as mass communication tools (such as in Australia and Wales) but increasingly they are becoming part of the political debate: for example, the UK government gives serious consideration to such indicators; the Belgian Parliament makes them the subject of an annual discussion; and independent experts in Germany will regularly review the evolution of the country's new indicators.

However, in most cases there remains a lack of appreciation of their real importance at this level. Some experts seek to conduct upstream assessments of policy impacts on these indicators, but this would entail much work for researchers and administrations that would need to develop new theoretical frameworks and conduct numerous empirical studies. It is worth noting, however, that GDP and the methods of standard national accounting also took many decades to establish and to become the heart of the system for evaluating public policy. ■

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In response to the multiple crises we face, marginal changes are insufficient. A civilization capable of radically changing the established modes of operation and to adapt to the challenges must put forward new values and institutions.

Reinventing civilization

What is a crisis? What resolves a crisis? These simple questions hide complexity. Was American slavery a crisis? For slaves, yes. For slave owners, no. Vantage point matters.

Most commentators have an elite vantage point. When they say ‘crisis’ they mean a painful deviation from established norms hurting them and their constituencies.

Elites therefore deem rising tides, howling winds, surging immigration, and of course falling stock prices crises precisely to the degree they live near the tides, endure the hurricanes, fear immigrants, or suffer portfolio depletion - or to the extent they fear dissent from others that would hurt elite agendas. Painful for them. Unfamiliar. So ‘crises’. Pain endured by others, however, is for them only rhetorically relevant.

We know this because to address crises, elites enact policies that protect, comfort, enrich, and empower themselves, while trying to preserve underlying social relations that benefit them, even if doing so worsens life for others. For not rich people things are different. The current ‘crisis’ is a perturbation on top of ‘what has been’, which is itself a permanent crisis. The not rich should mean by crisis a major harmful deviation from what ought to be, not from what has been. To be change-oriented seeking what ought to be rather than status quo-oriented trying to preserve what has been requires seeking new relations consistent with real civilization. But what qualifies as real civilization? And why would attaining real civilization end current crises? And what should we do, today, to attain real civilization?

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Values of real civilization

Here is a minimal list of core values for a civilized society, which, if attained, would have maximal implications.

SELF MANAGEMENT

All people should have a say over decisions in proportion to the degree they are affected by them. Different deliberation and voting methods may best approximate such self management in different situations.

Sometimes one person one vote majority rule can do an excellent job. Other times consensus will do better. Sometimes more deliberation, debate, and challenge will better propel self management, other times, we can do with less. Sometimes a single person should overwhelmingly decide an issue – as I decided to type this sentence. Other times a highly affected group should overwhelmingly decide, though in context of larger decisions taken by larger groups that set boundaries due to effects on them. A work team apportions its own tasks, but a workplace decides output levels, though in context of all society's preferences.

Self management means no person deserves more say due to being male or female, gay or straight, or having a different economic position, cultural affiliation, and so on.

The most typical criticism of self management is that some people can make better decisions so why forego their greater insights? To quickly address this opinion here: First, this ignores that fair say has social and personal benefits even in cases where it would yield less insightful choices. But, second, it also ignores that each of us is the world's foremost expert on our own preferences so that each of us expressing our personal preferences is warranted by the simple fact that we know best what we want. Crucially, it also masks that nothing in self management precludes expertise, and indeed personal and collective well-being requires ample attention to expert insights. I decide whether I want to undergo an operation but only after a doctor tells me the need and implications. The doctor's expertise should inform my decision. But the doctor shouldn't decide for me.

Who prefers to privilege the preferences of some people above the preferences of other people, subordinating the latter to the will of the former? Elitists will laugh at self management – but we can temporarily adopt it as a value, judging its worth as we discern its impact.

EQUITY

What is fair? Philosophers debate. Constituencies battle. We know that society produces stuff which requires effort. We know that enjoying what is produced conveys benefits and that the conditions under which we work affect us. Our value question is, how should we apportion it all?

Suppose we tally up the benefits and debits that each person receives, both from producing and from consuming, as individuals and socially.

Why should one person have a better mix of benefits versus debits than other people? Why shouldn't all people have a fair share of benefits for in turn shouldering a fair share of burdens?

As an example, for economic involvement this type of equity implies that we should each receive consumption rights to enjoy stuff in accord with the duration, intensity, and onerousness of the socially valued labour we contribute to generate stuff - unless, of course, we are unable to work for health reasons, in which case humanity dictates that we should get a full share, plus socially supported medical care, in any case.

This treats everyone the same. If you work longer, harder, or in worse conditions, you get more. If you work less long, less hard, or in better conditions, you get less.

Everyone has a mix of responsibilities to contribute to social benefits and in turn receives options to consume from the social product. Taken together, the total of our production and consumption should be comparably rewarding for us all. This is equity, and one can similarly decide what is equitable in households, schools, and even regarding conditions of dispute, and so on. One might hesitate to opt for equity thinking that inequity creates motivations to excel without which the total product will shrink. This is, however, an absurd myth. Rational incentives do not depend on, require, or even benefit from inequity. We certainly need incentives to work longer, harder, or in worse conditions – which is what equitable remuneration conveys. We do not need to get more for being genetically better endowed, or to produce something more valued, or to use better equipment, much less because we own lots of stuff.

SOLIDARITY

Another value is that people should feel solidarity, not simply in families or in small (or large) tribes, but also more broadly across humanity. Circumstances and options should not produce a zero sum rat race where our local or distant neighbour's loss becomes our gain. Instead, my well-being and your well-being should be intertwined so we each benefit in tandem enjoying feelings of empathy and benefits of mutual aid. Who would instead prefer anti sociality as a value?

DIVERSITY

Also uncontroversially, another value is diversity. We should not put all our eggs in one basket. Partly we want to insure against losing them all at once. Partly we realize that while we can each do only what we ourselves do, we can all vicariously benefit from others doing a wide range of things we do not do. Variety is the spice of life. Who would prefer social uniformity and even homogeneity to diversity?










ECOLOGICAL WISDOM

As a last value, we should of course want to live in the world without defiling it and compromising further survival. Our accounting of why something is worth doing should assess implications for the environment - and thus for life - immediately and into the future. Who would instead favour unsustainability?

Civilized institutions

If we assume the above are worthy values, pending evidence to the contrary, what institutions could make them real in people's daily lives?

FIGURE 1 **The Real Civilization**

Civilized Values	Civilized Institutions
<p><i>Self-management</i></p> 	 <p>Worker and Consumer Councils and Neighbourhood and Regional Assemblies</p>
 <p><i>Equity</i></p>	 <p>Balanced Life Circumstances</p>
<p><i>Solidarity</i></p> 	 <p>Equitable Distribution of Benefits and Debts</p>
 <p><i>Diversity</i></p>	
<p><i>Ecological Wisdom</i></p> 	 <p>Participatory Planning and Generalized Self Management</p>

Source: author's compilation.

The foundation of a 'real civilization' that breaks with the one in which we live and is able to deal with crises requires a new hierarchy of values, and the development of new institutions that are participatory, decentralized and equitable.

WORKER AND CONSUMER COUNCILS AND NEIGHBOURHOOD AND REGIONAL ASSEMBLIES

For each citizen living in a society, or each person working or consuming in an economy to be prepared to participate in arriving at decisions in proportion as he or she is affected requires a place to do that.

In workplaces, we opt for workers councils and divisions say, or teams. And for broad issues that transcend individual workplaces, each local workplace council is part of an industry council. The sum of industry councils is all workers in a whole economy.

For consumption each person consumes as an individual, often, but also typically as part of a family, a living unit, a neighbourhood, a region, or a country, including having a council for the collective consumption by each.

Politics is similar, but now the venues for decisions are geographical. There are, for example, neighbourhood, county, city, state, and country assemblies.

The structure and logic of each council or assembly are similar. Actors at the appropriate level express preferences, deliberate and debate, and finally tally their preferences fulfilling, as well as possible, collective, cooperative, self management.

BALANCED LIFE CIRCUMSTANCES

Next comes organizing and apportioning tasks. We want what people do to be fair, as well as people doing things they are able to do well and that are worth doing. But a subtle but profoundly important issue arises.

What we do affects how we feel and who we are, but also what else we are able to do.

If we spend most of our time doing acts that convey confidence, knowledge, skills, social connections, and access to decisions, it will prepare us for being creative and initiating. But if we spend most of our time doing acts that deskill us, bore us, reduce our knowledge, isolate us, and diminish our confidence, then beyond those acts we will be ill prepared for creative involvement.

Using the economy as an example, if our work is overwhelmingly disempowering, which is to say, if we do a few rote tasks over and over each day, then when we are not at work as well as while we are on the job, we will be prepared for little more than obeying orders. On the other hand, if our work is overwhelmingly empowering, then it will leave us ready to take initiative and exert influence both while at work and also beyond.

This is a major observation. In the economy, suppose we call those who do mostly empowering work coordinators and we call those who do nearly entirely disempowering work, workers. This maps a real and tenacious class difference. Not only will the coordinator class dominate the working class - setting agendas, determining options, etc. - but, strikingly, everyone will, at least by virtue of easily apparent data, tend to feel that the situation is appropriate. Coordinators will appear prepared and able, confident and initiating. Workers will appear unable, lacking confidence, obedient. The appearance will make it seem natural that coordinators rule and workers obey, even though, in fact, such a pecking order is not natural but instead a product of contingent social relations making some people more confident and prepared and other people less confident and prepared.

What this reveals is that class differences in the economy, and positional differences in the rest of society as well, that establish and even seem to justify harsh hierarchies, can arise not only from ownership relations, but also from the kinds of tasks we do for the greater part of our waking lives. Thus it is not only owning or not owning means of production that can relegate some people to rule and other people to obey, but also monopolizing empowering tasks or doing mostly rote and obedient tasks.

In the economy, we call the solution to this class division a balanced job complex. That is, we define jobs so that everyone gets a fair share of empowering and disempowering tasks. And we can apply the same logic, with only minor variations, in all realms.

We must also acknowledge, however, that until we all experience classlessness on a massive scale, some will say changing the division of labour to have balanced job complexes is insane. They will say some people deserve to be doctors, lawyers, engineers, decision makers, etc. - while others ought to be subordinate because they cannot make good decisions and will even be oppressed by being required to do so.

Of course, this is precisely analogous to sexists and racists claiming the same things about women and minorities. Dominators claim the dominated are subordinate due to

being inferior and to ask more of them would hurt them. They self-servingly mistake the effects of oppressive structures for the cause of those structures.

In short, while some will say that having balanced job complexes and life roles violates nature, they ought to be ashamed to harbour such classist views, just as others should be ashamed of harbouring racist or sexist views. We can all, with very rare medical exceptions, shoulder a fair share of both creative and decision responsibilities. If we want classlessness - and who will admit to not wanting it - balanced job complexes and life circumstances are essential. The unbalanced alternative creates rule by those who are structurally empowered.

EQUITABLE DISTRIBUTION OF BENEFITS AND DEBITS

The value we espoused earlier, equity, when writ into institutions, entails that society apportion its responsibilities and offerings in such ways that each member gets a fair overall package.

Taking the economy, for example, this means we should receive a claim on consumption from the social product in proportion to our duration and intensity of work contributing to the social product, and to the onerousness of the conditions under which we do it.

The inclination to resist this proposed innovation will be that such a remuneration scheme would cripple output. Who will want to be a doctor, even in a balanced job complex, if there is no large reward for doing so? This underlying belief is almost universal, but it is nonetheless utterly absurd.

Would you really, other things equal, prefer to skip college, skip medical school, and skip being a doctor (or having some other empowering position) to go straight from high school directly into, say, a coal mine, or to tending a stove in McDonalds? The claim implies you would. But would you prefer flipping burgers to being in college so much that you would have to be paid twenty or even fifty times as much for forty years, every year, to get you to undergo the so called hardship of college and empowering work? Would you opt for rote repetitive labour over some empowered role, if the pay for being a rote worker were half (rather than a small fraction) of the pay for doing some more empowering work? What about if it was the same? What if it was more for rote work? The truth is - ask students - pay the doctor a good living wage, and people wouldn't instead do only rote work even for a whole lot higher pay than doctoring, lawyering, engineering, or whatever.

But, of course, with the institutions we are proposing the situation doesn't arise. Everyone works at a balanced job, doing some coordinator type empowering tasks and some working class type more rote tasks, receiving a fair income for the combination. The arrangement gives everyone an incentive to work capably and well, doing useful activity, for as long as needed for their well-being, because duration and intensity of work is what earns income.

PARTICIPATORY PLANNING AND GENERALIZED SELF MANAGEMENT

The idea of the last institutional innovation underpinning a civilized social and economic setting is that the apportionment of energies, resources, and labour, and

of the benefits that derive from their utilization, should be decided, again, consistent with collective, cooperative self management as well as in a way that gets the tasks done insightfully and in tune with people's needs and desires.

In current economies the allocation function occurs by way of markets or central planning. These institutions are, however, horrendously flawed tools, and that remains true even if there is no private ownership of productive assets. Harsh and irrational competition, authoritarianism, ecological calamity, fiscal crises, anti social personal motivations, and class division are intrinsically promoted for enabling the benefits these tools convey to the most powerful and most wealthy.

For the values we have settled on, in contrast, new structures of allocation, like the new structures of local decision-making, remuneration, and division of labour, are needed. Indeed, markets and central planning would each by their operations subvert the above mentioned desired institutional choices and all the values we proposed.

A solution with the desired attributes is called participatory planning. The basic idea is simple, though a full discussion would take more room than we have here.

We have described having workers and consumers councils. Work happens. Consumption happens. The allocation task is that each workplace must arrive at an agenda regarding inputs from other workplaces and labour and outputs it generates for whoever wishes to receive them. Likewise, each individual consumer, neighbourhood, city, etc. must arrive at an agenda for what it will receive to consume, that others will produce and provide.

Of course there are some requirements.

The decisions of each participating workplace, individual consumer, and collective consumer, must sensibly match up to minimize or eliminate shortages or left over waste. Also, however, we certainly want choices to account for the personal, social, and ecological costs and benefits that accrue so as to pursue options which are overall positive while avoiding options which are overall negative. Finally, we also want the processes in allocation to foster values we favour and facilitate relations we desire, rather than to subvert what we hope for or even demolish it.

Thinking through the above, and realizing that we are talking about millions of participants negotiating the amounts and distribution of vast quantities of goods and services reveals that this is a major set of constraints on a massively complex problem. So, now what?

Well, the usual answer is, let's have markets or central planning or a combination of the two. The problem is that markets and central planning in any combination fail miserably on every attribute of the above list of sought characteristics.

So we propose, instead, participatory planning. Each workplace council and by aggregation higher councils, and each individual and collective consumer, take into account last year's actions and predicted changes for this year to propose their preferred activities. We can't expect that they will all immediately match up desirably. Thus, each participant, in light of the proposals of other participants and the implications of those for predicted costs and benefits, will have to modify their preferences and resubmit. Still no match, but closer. So perhaps it happens five times, with some mechanisms for facilitating coming more closely into accord each time.

It is a cooperative process, in which actors massage their requests and offerings in light of their own desires and the revealed desires of others, as well as the revealed social and ecological costs and benefits to society.

Details aside, the claim of participatory economics is that this planning can be done, without competition, without an authoritarian centre, and arriving at a worthy plan that manifests collective self managed preferences all by a process consistent with, manifesting, and facilitating other features sought for society including balanced jobs, equitable remuneration, and self managing councils - and thus without class hierarchy and rule.

One should not read the above and say, okay, great, I like the values, I want classlessness, so I favour participatory planning and participatory economics. One should, instead think - if this claim is true, then I ought to favour this vision, and therefore I need to look into the logic and features of the claim further, to decide. Meanwhile, here we can at least consider some implications, as if, indeed, we already knew that the claim is true.

Ending crises

Why would attaining the above modest list of institutions - self managing councils, balanced job complexes, equitable remuneration, and participatory planning – eliminate the types of crises we are currently enduring, and many other types, as well?

The short answer is because these new institutions won't intrinsically produce, as part of their very logic, the dreaded outcomes. Indeed, these new structures would propel their participants in virtually opposite directions.

What about plagues, drug epidemics, rampant immigration problems, wars, and situations in which the value of one's holdings collapse, workplaces under produce or, for that matter, over produce, or global warming and ecological disasters proliferate?

Having a participatory society does not preclude a disease developing and spreading. But it does ensure that assessments of how to address such problems dramatically change. Rather than the allocation of intellectual energies to medical tasks being ruled by profit potentials, they - like all decisions - will be ruled by best estimates of impacts on human well-being and development. Errors will remain possible, of course, but systematic violations of health - as we now have all over the world - will not.

Take Ebola. Because of its enormous risk, in a civilized world a vaccine would have been developed long before now. If some new disease came out of the blue, medical care and containment would be rapid and effective. Media reporting of associated risks would be accurate rather than fear mongering to attract audiences for commercial gain. Currently, the medical dangers of escalating Ebola fear in the US outpaces dangers of the disease itself. Perhaps worse, to the extent the dangers are real and serious – and they may very well be – uninformed media-hyped hysteria actually impedes careful approaches.

Regarding health more broadly, in a civilized economy there would be no incentive to accumulate profit for the few while ignoring, blocking, and even exacerbating conditions of danger on the job, toxic environments, or the need for worthy insurance.

Even more critically, there would not be debilitating poverty, horrible malnutrition, widespread starvation, etc.

Similarly, a good society removes the incentive to produce and distribute addictive drugs (or foods), by making it impossible to earn and enjoy great wealth based on such endeavours. This latter point is obvious, albeit remarkable, once raised.

That is, in a participatory economy income is a function of duration, intensity, and onerousness of labour undertaken in context of a workers council in an industry which the plan labels worthy due to popular desires for its product. Now suppose that some cartel, or corporation decides to try to amass wealth via providing an addictive drug – crack, cigarettes, sniffing glue, diet pills, or whatever – by creating a gigantic market for it. How would people doing that earn anything from their actions?

Such activity won't garner resources via the participatory planning system. And even if resourceful dealers find a way to escape that barrier and they temporarily manage to amass huge revenues (actually also impossible unless each dealer was not only able to produce and distribute, but to also get income for lots of false names, how would they then enjoy their massive income, since any huge amount of consumer benefits in the hands of any individual must be a result of cheating, stealing, etc. That is, no one can work long or hard enough to legitimately amass such excessive wealth, so having really excessive wealth reveals that one is a thief.

Since penalties for illegal activities presumably exist, and since options to enjoy the fruits of illegal activities are nearly nil, and since even generating exorbitant sums in the first place is virtually impossible, other than by direct theft, and since everyone gets fair income in any event, there is zero reason to cheat, steal, push drugs, or even just try to sell as much as possible of some product for any reason other than to meet the needs of its users. A dealer risks debits, as severe as society chooses to impose, and can't enjoy massively more benefits due to dealing drugs than normal benefits doing any legal and socially admired pursuit - other than by hiding it away in his or her basement since a civilized society lacks massive differences in income, so that visible grossly excessive consumption is a billboard saying, I cheated.

Potential immigration problems could persist until equitable relations were international - at which time there would be no reason for mass migrations. This gives each participatory society very good reason to help spread participatory structures broadly. Consider trade. It ought to occur in a manner that actually benefits weaker and poorer parties more than richer ones, so as to reduce gaps in wealth, rather than benefiting powerful and richer parties more, thereby increasing gaps in wealth. This positive result is not intrinsic to the new institutions existing in one country but depends instead on future policy choices among countries. On the other hand, populations would function in environments without antisocial pressures, emphasizing solidarity, and enjoying security, so it is reasonable to predict they would favour positive policies.

Wars over oil or tungsten, or for imperial sway over trade routes, or to ratify or protect corporations, or to bolster political elites, or to punish populations, would disappear because these dynamics would disappear, at least, as with immigration, once new institutions are international.

Typically, war, and even colonialism, is not about benefitting whole populations at the expense of other whole populations. Instead it is elites in one country who promote war at the expense of the population of their own country, and, as a kind of gigantic collateral damage, the population of other countries as well.

The idea is simple. Suppose Britain colonizes India. It steals wealth, oppresses the population, etc. So, the population of India certainly suffers. But who gains? Britain? Not so fast. Britain is an abstraction.

What is taken from India goes overwhelmingly to corporate elites in London. The bill for this extraction is, however, paid by the British population, in their taxes, and of course the Indian population. This can even mean that for every \$2 depleted from Britain in costs of maintaining empire, only \$1 comes back in ripped off profits. And yet empire persists. Why? Because the population pays the \$2 and the corporate elites collect the \$1. It turns out war is often wealth redistribution at home.

Now consider wars like in Indochina, undertaken to preserve empire from a 'bad example' (a country choosing to extricate), or wars in the Middle East, undertaken to control oil largely as a bargaining chip in international relations, and so on. Who pays – everyone in the targeted country, and, as well, everyone in the host country who is paying taxes to support the costs. Who benefits, elites in the host country – materially and politically – and also some quislings, often, in the targeted country.

Now why does all this disappear as we attain civilized relations? Because in a civilized society there are no elites to benefit, and because the populations of each country, well informed and capable, would never sanction such sadistic aggrandizement by and for a few. There is neither an institutional push toward war, nor is there a compliant population that would accept it.

What about what people usually mean by crises, that is, economic dislocations? If productive units over produce so that there is great waste that is simply thrown out – which is an endemic condition of contemporary economies without even counting useless war production, duplication, etc. – that is a crisis for resources and labour allocation. It becomes a crisis for elites only if it hurts profit possibilities.

If productive units underproduce, so there are shortages, and do so in a runaway pattern - too little consumption causes cuts in production, causes further cuts in consumer income, yields still less consumption, etc. – then it is crisis as well, certainly for the population and also for elites, when, again, it grows enough to hurt profit possibilities.

A civilized economy would avoid all this by correlating output and consumption closely, and doing so not to aggrandize a few, or to abide orders given by a few, but to equitably address everyone's needs in light of the self managing preferences of everyone. But this is participatory planning plus equitable remuneration and balanced job complexes, and with these institutions there is simply no motivation to do other than fulfil the agreed scenarios of society's plans as best units can. There is no way for individuals or groups to make higher income by producing less than desirable, or more. There is also no way to make higher income by inducing consumption through adverts or deception, since that doesn't actually meet needs.

Similarly, in a civilized economy, any project that destabilizes ecology makes no sense. There may be benefits for some, but there will also be offsetting harm for many, perhaps immediately, or certainly in time. If the economy's allocation system (as with markets or central planning) seeks to benefit only some, or has a short time horizon, or just doesn't even account for the ecology in its weighing of factors, then horrible violations will occur, as we witness in current societies. But if an allocation system properly assesses the ecological as well as social and personal implications of choices, and then it weighs the impact on everyone, and chooses actions consistent with people's wills in light of carefully conveyed information, and proportionate decision inputs for everyone, then these violations will disappear. Informed and confident populations will never agree to policies enriching a few while hurting the many.

When all is said, however, the real virtue of a participatory economy and participatory society isn't in eliminating current dispositions toward crisis, as important as that is, it is in eliminating the business as usual condition of permanent crisis regarding inequality, authoritarianism, alienation, ecological collapse, etc. The virtue is attaining self management, equity, solidarity, diversity, ecological sustainability, classlessness and freedom, feminism and intercommunalism, for all.

Again, I don't claim that the above - either the brief synopsis of defining institutions of real civilization or the brief account of their implications for what are called crises - should convince you. Indeed, it shouldn't. Questions should arise in your mind. More assessment is needed to make a full case. I claim only that the above presentation, albeit brief, ought to motivate further investigation and thought. After all, if things are as indicated above, the implications for current activity are profound, and that is important to determine.

Current choices

What would having a vision like the one described above, called participatory economics and, more broadly, called participatory society, imply for today's practical choices?

The answer in the large is as self evident as the rest of this discussion. If you want to get someplace new from where you are, it behoves you to take steps that take you where you want to go, rather than steps that take you somewhere else.

Taking it one degree further, you shouldn't reinforce unwanted old structures nor should you create new ones that are contrary to reaching your destination. Conversely, you should want to undermine unwanted old structures and to develop new structures in tune with your aims. The familiar slogan is, 'Plant the seeds of the future in the present'.

This agenda should affect changes you seek to win, how you go about winning changes, and what new structures you construct.

Thus, with this view you should want to win changes that better the lot of people who are suffering. You should want to seek those changes in ways that develop consciousness, commitment, and desires suitable to winning still more gains all on the path toward your destination. And you should want to build new institutions - both for struggle and when possible also for daily life - whose attributes also increase

consciousness, commitment, and desires suitable to winning still more gains, and whose features are such as to be compatible with and able to melt into the features of the new society you seek.

Suppose we take a couple of examples: say you desire improvements in income for some poor constituency such as low wage workers. Of course you will demand and seek to win higher pay. But with the approach suggested here you would do it talking not only about the immediate demand, but about what is really ultimately warranted, equitable remuneration, including developing awareness of what it would look like and imply, and of what it would take to win, and of how the current effort to win more pay for some workers could be a part of a longer project to win equitable remuneration for all. You would organize, as well, in ways that would leave your constituency not only more aware and desiring still more gains, but also stronger and ready to embark on winning more. Thus you would develop campaigns and even organization designed to move on to new goals after winning the current one.

The same logic applies far more generally. Say you are addressing some more macro issue such as defence spending - again, you would make demands for immediate gains in defence spending cuts, but you would use rhetoric and discussion elaborating ultimate aims - say a new mode of allocation - and you would try to create structures of struggle that would persist and keep battling to eventually melt into new structures of a new society.

If you compare the above - which is taking a non reformist approach to winning reforms that would benefit worst off constituencies while developing on going campaigns and movements with ever increasing commitment and clarity about ultimate vision - to current approaches to dealing with various crises, the difference should be evident. It is, as mentioned at the outset of this essay, the difference between being status quo oriented (now called reformist) and being change oriented (now called revolutionary) and it is precisely the difference that people of good will and serious intent must embrace on the road to a better society. ■

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The growing power of international social business

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In 2014, a number of reports and events have highlighted the enthusiasm shared by the public authorities, NGOs and the private sector for social business and, more broadly, for the social and solidarity economy, these include: the presentation of the Faber-Naidoo report on a new approach to development assistance; the reports of the social impact investment taskforce established by the UK Presidency of the G8¹; the Global Social Business Summit held in Mexico City; and a new law on social and solidarity economy that was enacted in France.

This general momentum is due to the fact that the actors involved in social business are seeing a range of new frontiers, such as the ability of social business to sustain projects that have so far been funded by NGOs and development agencies; that it has the ability to solve social problems while limiting the use of public funds; and that it can facilitate the testing of technological and organizational innovations in new models of production or distribution (private companies). But what about the reality? Can social business contribute to the renewal of development aid policies? Which specific challenges need to be addressed? This article provides an analysis of an approach that is often presented as a solution to the reconciliation of profitability and social concerns.

Defining social business

'Social business', 'social and solidarity economy' and 'social entrepreneurship' are similar concepts that overlap, for which there are as many definitions as there are actors

claiming to be part of the movement. The underlying idea is to harness the power of businesses and the economy for social (and/or environmental) benefit. The specific term 'social business' was popularized by Muhammad Yunus and it was based on the 'no loss, no dividend' principle that prohibits the distribution of dividends. Since then the term has escaped the control of its author and today there is no harmonized definition of social business. However, the different approaches seem to converge towards two common principles (a primary social objective and the search for financial independence), while they generally differ on four more secondary criteria: (1) governance with varying degrees of openness to stakeholders (beneficiaries, employees, suppliers, neighbours, etc.); (2) the management and allocation of profits (which should be fully reinvested in the opinion of Yunus, or partially distributed according to others); (3) the level of innovation in the solution provided by social business, and (4) the status of the organization (commercial enterprise, development project, foundation, cooperative, association, NGO, etc.). To remain sufficiently broad, this article uses the term 'social business project' rather than 'social enterprises'. Indeed, many projects claiming to be social businesses do not (yet) have any legal status.

Social business can be considered to be at the crossroads between market forces, businesses and social missions. The idea is for the intended benefits of an entrepreneurial operation (optimized) to be utilized for a higher purpose than merely profit. Given that social business can be applied to all areas of development (financial inclusion, nutrition and food security, health, education,

1. <http://www.socialimpactinvestment.org/>

housing, water, sanitation, energy, etc.), it can therefore be present in all economic sectors, albeit with a predominance in microfinance.

The objective of social business models is to provide new answers to social problems where public policies are failing, especially in developing countries. Such models are therefore designed to become financially independent (or at least that is the ultimate goal) so as to be sustainable and durable. To policy makers and development assistance actors, the support of social business enables the promotion of decentralized and innovative solutions that reduce the demand (eventually) on public funding. Social business can then serve as a lever to increase the social impact of public expenditure.

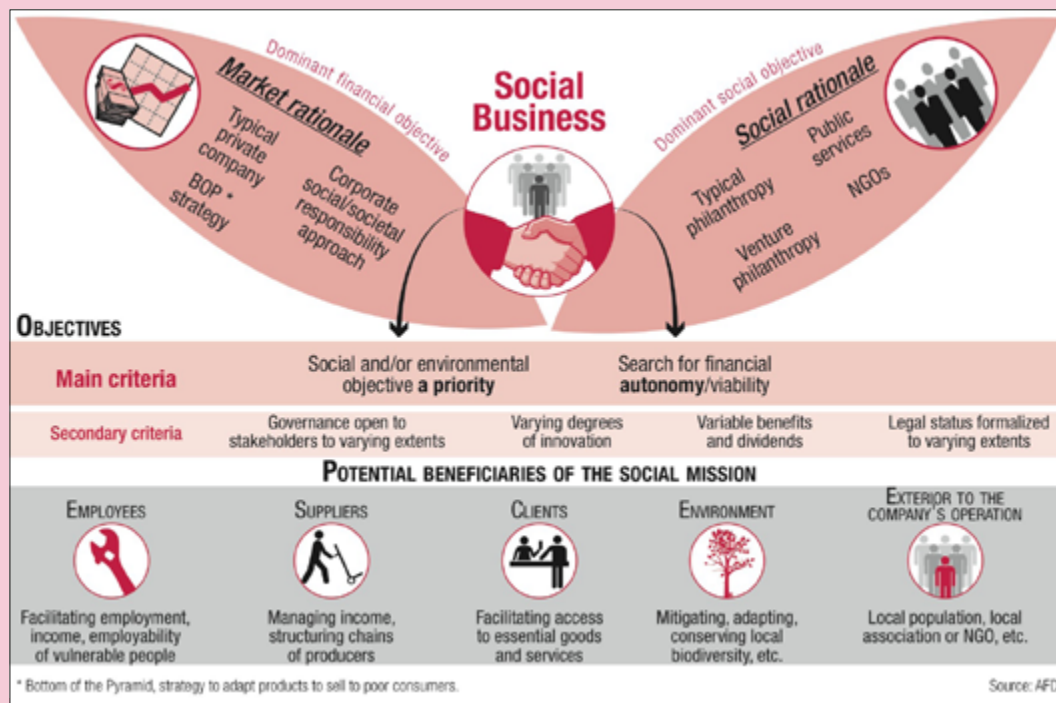
Today, most multinational companies have foundations or funds dedicated to the development of social business.

These funds are often operated in parallel with Bottom of the Pyramid (BOP) strategies that involve the adaptation of products so that they can be sold to the poorest people. For such multinationals, social business not only provides benefits in terms of image, but it also serves as a means to stimulate reverse innovation by carrying out trials in developing countries of new production and marketing ideas.

Specific development challenges

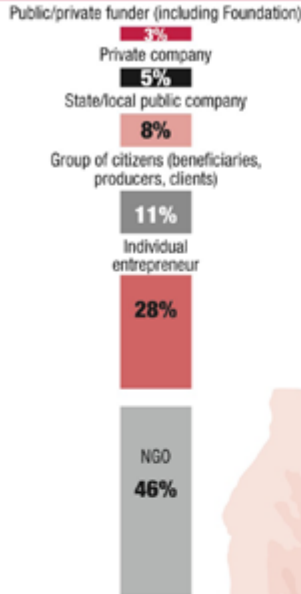
In addition to the usual difficulties for small and medium-sized enterprises in developing countries (such as financing, business environment, knowledge of the market, etc.), social business projects face additional difficulties inherent to their model. Indeed, trying to address a social problem by creating market value to ensure project

FIGURE 1 Defining social business

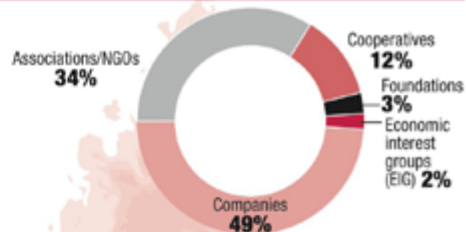


Social business, which combines the market, business and a social mission, aims to take advantage of the intended benefits of an entrepreneurial operation to serve social or environmental objectives.

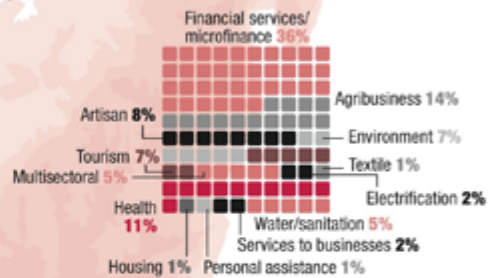
Project initiators



Status diversity



Sector diversity



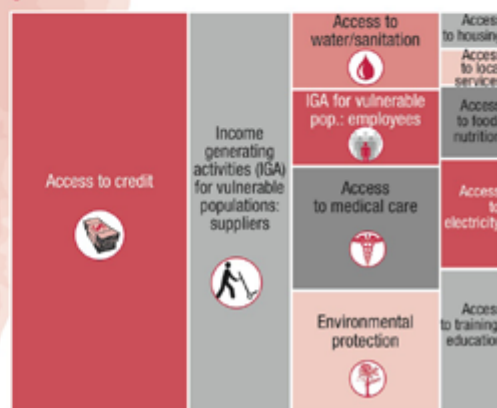
Social business in Madagascar

A recent study by AFD in Madagascar has identified nearly 90 projects that could be described as social businesses. These are relatively old projects (10 years old on average), of which almost half were initiated by NGOs, characterized by a wide variety of recipients, social missions, status types (50% companies) and sectors of intervention

Beneficiaries of the social mission



Social objective



¹ Conducted in January 2014 by the consortium of consultants FTHM and Croisere.

Source: AFD study 'Développement de l'entrepreneuriat social à Madagascar' conducted by FTHM-Croisere, 2014

NUTRI'ZAZA: AN EXAMPLE OF SOCIAL BUSINESS IN SEARCH OF FINANCIAL BALANCE

Nutri'zaza is a social enterprise in Madagascar (with a limited company status) that has a social mission to fight against chronic malnutrition, which affects nearly one in two children. The company is the culmination of a development project led by an NGO that created the *Koba Aina* dietary supplement. Since 1998, the French development NGO, GRET, has been raising awareness amongst mothers on the subject of child malnutrition and has distributed a type of baby food of high nutritional quality via a number of 'restaurants for babies'. The infant food is made mainly from local ingredients and is part of the Nutrimad project (created by GRET, IRD and the University of Antananarivo). The project took

on the status of a company in September 2012 following years of learning and testing to develop a distribution network for a liquid baby food (for 6 to 24 month old infants) that is affordable to the poorest households. The GRET NGO and four other shareholders (including two French investment funds, SIDI and I&P) were behind the creation of Nutri'zaza, with the support of a grant from AFD that was intended to cover the losses in the first years of its operation. It now manages a network of 39 restaurants for babies in seven towns in Madagascar, while 64 counsellors are engaged in daily home sales. Sachets of ready to prepare baby food are also available in grocery stores. Each month,

more than 60,000 portions are sold.

To maintain the social mission of this limited company, founding shareholders have strengthened the normal modes of governance (management and directors' boards, shareholders' general meetings) with an ethics and social monitoring committee (including all stakeholders) and a shareholder agreement that makes the social objective the priority of the business. The committee meets twice a year to monitor social indicators of the business: the number of children reached, number of meals provided, accessibility for the poorest (product selling price), number of counsellor jobs created, nutrition education activities carried out, etc.

sustainability very often involves the 'creation' of a market that did not exist. Therefore, solving a social problem in a financially viable way often requires an original idea, an innovation, and typically involves a long learning process.

There is a significant tension between the social objective and the imperative of financial stability. How can this stability be achieved when producing a good or service for the poor? How can a price be determined that is low enough to be accessible to the targeted beneficiaries but also high enough to allow the company to break even? There is also a natural temptation to assign multiple social objectives to a social business project: should a company that claims to be 'social' be exemplary and therefore have a social mission for all of its stakeholders (clients, employees, suppliers, neighbours, etc.)? This approach, however legitimate it may be, often leads to insurmountable difficulties and to contradictions between social

objectives (for example supporting a smallholder sector while practicing low prices for customers).

Moreover, a social business project must find its place in the field among NGO activities and the market for commercialized products, which is a potential source of conflict. NGO activity can indeed affect the social business project (for example, there is incompatibility in cases where an NGO is subsidizing the free distribution of a product, while a social business is offering a similar product at a low price); and a social business project that is too close to an existing market may experience hostile private sector competition.

There are also operational challenges. Firstly, how can funds be attracted towards projects that are risky and unprofitable by nature? For instance, most social business projects are innovative (in terms of techniques, organization or distribution). Also, the initial business model is

fragile and should be reviewed as and when the project is tested and there is therefore a high degree of risk, which is a major obstacle to mobilizing financing during the testing and project initiation phase. Once the project has broken even (or is close to doing so), the low profitability inherent in the project does not attract the 'classic' shareholder. However, many investment funds dedicated to social business and development agencies have already been mobilized with sufficient volumes to fund the most mature projects today (AFD, 2014).

How can continuity of funding be ensured when most social businesses experience statutory changes during growth, for example changing from an associative to a commercial status? Finally, how can project objectives, the adopted governance principles, human resources management and the prioritization of objectives be translated into daily organization and functioning? How can social objectives be secured in relation to the financial constraints? The development of the business and organizational model and its governance are the main issues to ensure the sustainability of social businesses. Again, experimentation and adjustments are necessary.

If public policy makers wish to encourage the emergence of social businesses, they may seek: to create an enabling legal and regulatory environment (for example, this was the intention of the law on social economy, adopted in France in 2014²); to accompany the projects upstream at the stage of experimentation of innovative solutions (business incubators and nurseries); to raise patient capital that is intended to have a social impact and a limited financial return (dedicated investment funds, philanthropic ventures, etc.); to facilitate the networking of social business actors for the exchanging of experiences; and to finance capacity building or invent simplified impact measurement devices that will be called for

by investors claiming to be engaged in impact investment.

Alongside investment funds dedicated to social business, most funders have recently adopted financing and accompanying strategies and instruments. However, the resources that are being mobilized on this issue seem to be drawn towards the more mature projects (which are still few in number), while smaller experimental and uncertain projects are struggling to find support. Who is willing to take the risk? ■

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2. The new law recognizes the place and role in the economy of activities that are characterized by three principles: being at the service of social and sustainable development; allocating profits for this purpose and not for the enrichment of shareholders; making collective and democratic decisions. It sets a framework for these activities and reinforces devices that help to promote them. This definition, which is broader than the historical scope of the social and solidarity economy, still includes companies with a cooperative mutual and associative status, as well as foundations, but now also includes commercial companies claiming the same principles. The statutory approach that prevailed until then is now out-dated on the basis of principles defining their social mission.

Climate negotiations: the proliferation of voluntary initiatives

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‘Second track’, parallel agenda, positive agenda, solutions agenda and collaborative initiatives are all terms that describe the broad range of initiatives taken by development actors (public authorities and agencies, companies, financial sector, NGOs, local authorities, universities, etc.). A new international architecture seems to be emerging from these various networks of actors, alongside and in conjunction with the international negotiations between states that are driven by professional negotiators.

These initiatives are taking up an increasing amount of space and gaining recognition at international conferences. In recent years, for example, the actors involved in these initiatives have asserted themselves strongly, especially at the Rio+20 Conference, during which more than 700 ‘voluntary commitments’ were presented.

Given the increasing importance of these initiatives and the commitment of significant actors that are increasingly numerous and diverse, some discussions and proposals are emerging to better take into account these non-state initiatives in multilateral frameworks, including within the United Nations Framework Convention on Climate Change (UNFCCC). The future French Presidency of the twenty-first Conference of the Parties (COP 21) to be held in Paris in late 2015 has pledged to reserve a large space for civil society and solution providers within climate alliances that bring together all of these actors. Similarly, in December 2014, the Peruvian presidency of the COP 20 in Lima organized the ‘Action Day’, which aimed to present initiatives and encourage stakeholders alongside the ongoing negotiations to take climate action. Finally, the many initiatives

presented by the diverse array of stakeholders have made a large contribution to the success of the Climate Summit 2014 ‘Catalyzing Action’ that was organized by Ban Ki-moon on 23 September 2014 in New York.

We can only celebrate and applaud the energy and ambition manifested through these many initiatives. However, this raises many questions and gives rise to debates and often harsh criticism regarding the value of any one particular initiative. For example, the Global Alliance for Climate-Smart Agriculture, which includes large agribusiness multinational companies whose models are highly controversial in terms of the main criteria of environmental sustainability or social inclusion, is attacked by NGOs and defenders of family farming.

Another question arises repeatedly: in what way do these projects have a real impact on emissions and do they represent the latest embodiment of green washing, in the absence of control mechanisms and international reporting? What additionality do these commitments offer: have these projects or funds been repeatedly proposed in the past, like a kind of declaration ‘recycling’ machine that serves only communication objectives? Do these programmes contribute effectively to sustainable development? Finally, some developing countries are questioning whether these voluntary initiatives are a way to escape national commitments.

Contributing to the efforts to limit climate change impacts

Given the climate emergency (remembering that the future 2015 Paris Agreement will only be implemented from

2020), it is necessary to drastically and rapidly reduce our emissions. Estimates of the *Emissions Gap Report*, published annually by the United Nations Environment Programme, show that, even if states adhere to their commitments up to 2020, a significant gap will still remain between actual emissions and the level of emissions that is compatible with a global warming of 2°C by 2100. Therefore, these initiatives are sometimes presented as opportunities to act quickly and to significantly reduce greenhouse gas emissions. However, so far it has been extremely difficult to actually measure the impact of these initiatives, given their extreme diversity and absence of frameworks and methodologies to ensure effective monitoring. Also, there is sometimes a lack of transparency and publically available data regarding their progress. Moreover, an international of the reductions achieved by all of these projects would not be very meaningful as they relate to different sectors, and there would also be a high risk of double counting the emissions reported by states.

In the longer term, scientific data show that it will be necessary to reach carbon neutrality by the end of this century. Such an effort will certainly not be possible only through voluntary initiatives but will require significant state commitment, particularly to implement the incentives and infrastructure necessary to enable a change in our production and consumption modes. However, the role of non-state actors to support this transition is crucial. While states can lead the way and give strong and clear signals to show that such a transition is underway, it will not happen without the dynamism of these actors, particularly local communities and businesses, that implement this transition and propose solutions to move towards low-carbon development. It is therefore necessary to design a new form of alliance in which these joint efforts are complementary and mutually reinforcing as part of a virtuous circle. National contributions, to be determined and presented by states in 2015, will demonstrate the efforts that each country will commit to after 2020. At this juncture there may be an interesting opportunity to implement this new 'alliance', in which non-state actors could work with governments to increase their levels of ambition, accompanying the transition through their commitments and the solutions they offer.

Improving the understanding and measurement of the progress of initiatives

To enhance the effectiveness of these initiatives, the lack of coordination and fragmentation of which are often criticized, many actors have tried to better orchestrate this complex web, with two main objectives: to have a more detailed overall vision of the myriad initiatives to better analyse them, and to encourage more action.

An initial effort has already been launched to gather the available information on major international initiatives. Databases have been established by the University of Oxford that gather hundreds of commitments, and Ecofys, the University of Cambridge and the World Resources Institute are developing an online database project to gather information on these initiatives (Climate Database Initiative). Other think tanks, NGOs and some international agencies are undertaking similar efforts. Similarly, coalitions of multiple actors within sectors (chemical industry, aeronautics industry, etc.) or as part of territorial approaches (cities or regions, local authorities, etc.) have also developed their own tools. There is therefore an abundance of data without the necessary harmonization, consistency or common indicators. Enhanced exchange and coordination mechanisms between these initiatives are needed.

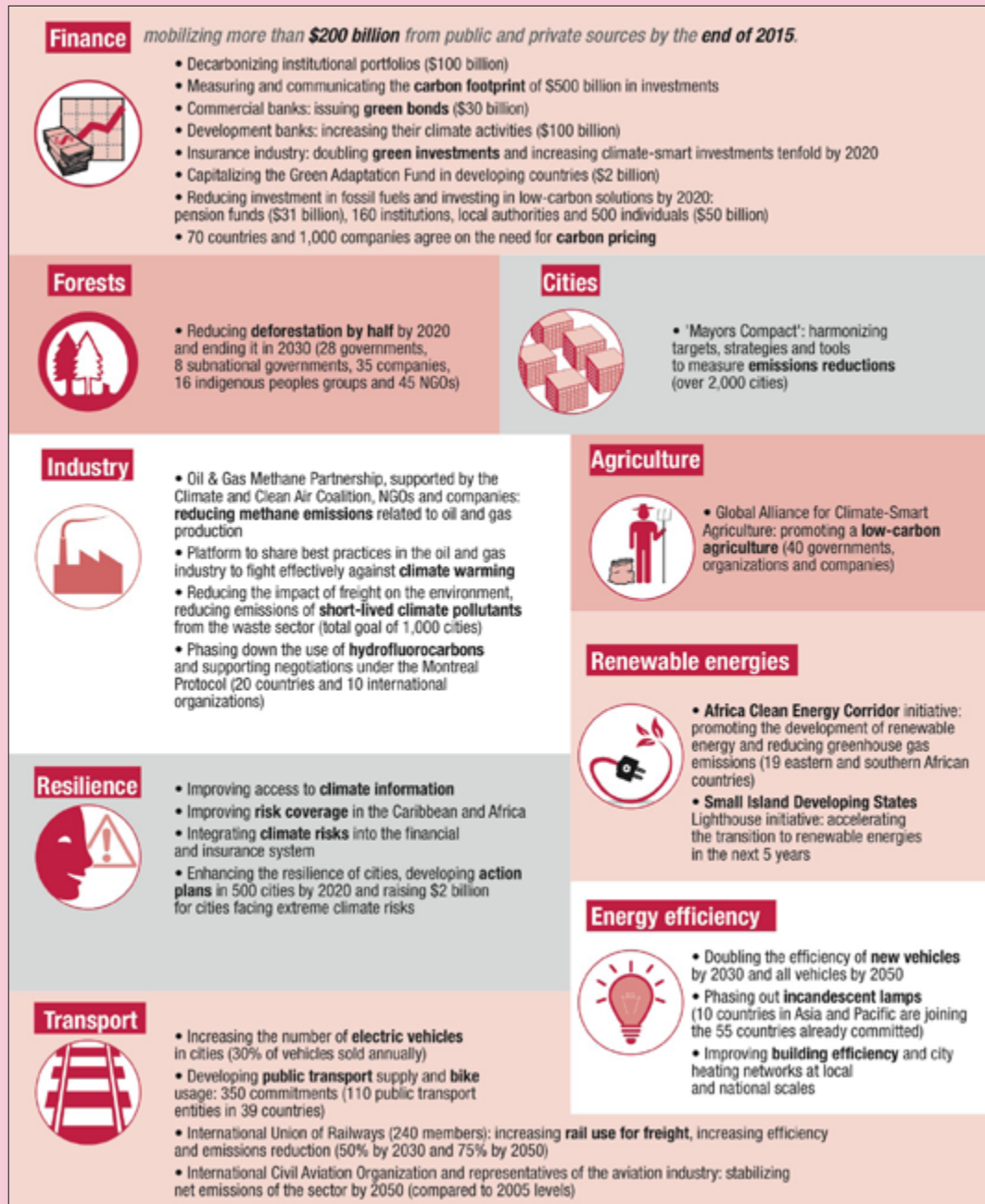
In addition, this information could help better identify areas where there is duplication and could encourage exchanges and collaborations, as well as areas that are not covered and to understand the underlying reasons. As for the evaluation of the fulfilment of commitments, this is only possible if there is a minimum number of common indicators and regular and transparent reporting. Ultimately, if a type of observatory or governance mechanism was implemented, it would be possible to analyse the gaps and encourage actors to join forces.

That said, the issue of governance or the coordination of voluntary initiatives is far from simple. At the Rio+20 Conference the idea of a movement like 'Transparency International' for sustainable development or a 'Sustainable Development Watch' was promoted, to drive diverse actions. The independence and impartiality of such an institution would be key to ensure its legitimacy and recognition by international institutions. This project is the

subject of discussions within international civil society, but also in the framework of the multilateral system. The Secretary-General of the United Nations – whose team in charge of preparing the September 2014 Climate Summit has played a major role in trying to bring together and develop initiatives – had suggested as early as 2013 the creation of a UN Partnership Facility, without much success to date. The Climate Convention Secretariat has also shown great interest in these issues, but lacks resources to ensure effective monitoring and coordination of these initiatives. The Global Compact, the main international initiative of socially responsible businesses, also plays an important role in identifying and encouraging private sector initiatives.

As mentioned above, many political questions arise regarding the real motivation of actors, particularly economic ones, who implement these initiatives, and it is not easy to imagine a system of monitoring, evaluation and coordination within or linked with the United Nations, which is a system primarily developed by and for states. The rapid changes observed in recent years show that there is a strong focus on these issues, and that non-state actors are determined to play a role in the transition to a low-carbon world. The Paris 2015 Climate Conference could be the opportunity to seal and implement this alliance, which may also apply to the post-2015 development agenda on the targets of the Sustainable Development Goals. ■

FIGURE Major announcements at the Climate Summit (New York, September 2014)



Voluntary initiatives from stakeholder groups today contribute to the outcome of global political summits.

