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Abstract

This article aims to examine the Human/Nature relationships in coastal and island contexts, based on ethnographic field surveys conducted over the past four years on the islands of Kihnu, Manilaid and Ruhnu (Estonian part of the Gulf of Riga). It seeks to decipher the particular social-ecological system that has settled on these three islands, whose communities live with the sea on a daily basis. It will address both the food uses of the marine environment, their translation into the organization of communities (inclusion in the landscape, establishment of specific marine cosmogonies), but also the symbolism and representations related to the sea (intangible heritage).

Key words

Man-Nature relationships, anthropology of environment, maritime anthropology, coastal communities, intangible cultural heritage, ecological knowledges, Kihnu, Ruhnu, Manilaid, islands, Riga Gulf.



Introduction

The coastal communities of the Baltic Sea have a historical tradition of drawing a large part of their daily food resources from the marine and coastal ecosystem they have occupied for centuries. The three islands of Kihnu, Munalaid and Ruhnu, located in the upper Gulf of Riga (figure 1), are no exception. Today Estonian, these islands have experienced the vicissitudes of regional history, joining the European Union in 2004. A particular relationship between Man and Nature around the Baltic Sea has developed over the centuries, which is interesting to analyse (Mahieddin 2018). This text focuses on these relationships between fishing communities (Geistdoerfer 2007) and their marine environment, relationships that are accentuated in an island context, as on these three islands. The conceptual framework of the article is drawn from maritime and anthropology of nature, as well as from the literature on socio-ecosystems and on intangible cultural heritage related to the environment. The article is based on materials from ethnographic fieldworks conducted in Estonia since 2015 in medium-term immersion at different seasons. These surveys were conducted by ethnographic interviews (semi-directive interviews and life stories), as well as participant and floating observation, in a multi-sited ethnography (Marcus 1995) consisting of the three islands. The text also uses a territorialized literature dealing with these islands, or more broadly with the Gulf of Riga, or even the Baltic Sea or boreal area. After a brief description of the various sites constituting the fieldworks, the environmental uses of the coast and the Gulf by the communities are presented, before focusing on the cosmogony of these three islands, and its mobilization in the different categories of heritage by island stakeholders, allowing a global understanding of what underlies this unique marine and coastal social-ecological system, facing different threats. An *index locorum* is placed at the end of the article.

Figure 1. Localization of the islands in Baltic sea. Anatole Danto (p. 96).

Kihnu, Manilaid et Ruhnu: the triplets of the Gulf of Riga

These three islands are part of Estonia's 19 inhabited islands (Tõnurist 2013). They are characterised by more or less similar administrative, socio-economic, demographic and environmental elements (table 1), differentiating them from the rest of the Estonian islands.

Table 1: comparative data and key figures of the three islands (*: insignificant value, as the island is administratively attached to the mainland municipality of Tõstamaa (until 2017), then to the city of Pärnu. Sources: pub.stat.ee / geoportaal.maaamet.ee) (p. 97).

The three islands are dune islands, made up of accumulations of fine arenic sediments, themselves resulting from glacial deposits, moraines, then classical coastal geomorphological evolutions (currentology, drift, terrigenous contributions) following the reduction of the ice cap of the Fennoscandian shield to the north, and, correlatively, the rise of the sea level. These three islands therefore constitute sandy, emerged points, also containing significant morainal deposits (boulders and pebbles). They also have brackish to fresh water sources within them, which have led to the emergence of a small hydrographic network (streams and ferruginous

ponds) and coastal wetlands, mainly peaty. The altitudes of the islands are quite low, except for Ruhnu, which culminates, thanks to a high dune, at 28 m. All these elements create a very high vulnerability of these islands to the risk of marine flooding. The absence of tides in the Baltic is compensated by storms that are often violent, associated with strong winds, leading to an extreme fast marine overcoast (sometimes of the order of 2.75 m, Suursaar et al. 2006 or Tõnisson et al. 2008). The island of Manilaid for example, can be divided into three parts during extreme events. The island of Ruhnu has sometimes been submerged almost entirely, as during the storms of XVth April 1961 or 2nd November 1969 killing many inhabitants. At the same time these post-glacial geomorphological formations, which have since been reworked by the coastal context, have enabled the development of a specific island biotope, based on the triptych of sand + peat bog + forest. The forests are mainly composed of birch trees in peaty depressions, conifers on sandy heights.

Kihnu island (figure 2) is the largest and most populated. It is the only one to be composed of four villages (Lemsi, Rootsiküla, Linaküla and Sääre, küla meaning "village"). It is also the only one with a real airport runway, despite the stop in commercial flights a few years ago due to the arrival of a new and more powerful ferry. It is connected to the continent three times a day, in one hour by boat. The island is long from north to south, and at its northern end, it ends in a very long five-kilometre strip of pebbles, called Kakra siär, a real obstacle to navigation. It is low in altitude, has vast forest areas, but also three large clearings, one for airport and the other two for agriculture. It is also surrounded by sandy beaches and pebbles and by numerous moraine blocks, more or less submerged, which were long exploited for the benefit of the region's port buildings, particularly for the masonry of the quays of Pärnu, Ventspils and Riga harbours. Outside beaches, island's coasts are made up of reed beds and salt meadows, grazed in the summer by sheep, goats and cows. A drainage of the hydrographic network was carried out several decades ago, during the latifundiary period, making it possible to obtain parcels that could be cultivated out of water. This drainage system will be reinforced during the collectivization of the land. The forest is concerned by harvesting and cutting. The urban structure in four villages is not really visible in the landscape, except around the central pole of the island, which includes most of the administrations and services (church, school, museum, community hall). The habitat is indeed diffuse, established by farms (talu). People are called by the name of their farm, followed by their first name.

Figure 2. Kihnu Island. Anatole Danto (p. 98).

The village of Manija is a group of islets, consisting of a main inhabited island, Manilaid (figure 3) and two other uninhabited islets: Sorgu saar (which has a lighthouse, inhabited until the late 1970s) and Annilaid. The term *laid* refers to an "islet", saar to an "island". Manilaid, much smaller than Kihnu and Ruhnu and generally very low is also the least populated island, but the closest to the mainland. It was settled late, since it was not until 1933 that the first inhabitants arrived. About a hundred people left Kihnu for Manilaid on that date faced with demographic pressure. It has been inhabited continuously since then. The island has an oblong shape from southwest to northeast over 3.5 km. It is almost unwooded, has vast reed beds and in its centre a road connects the two ends of the island. Housing and agriculture are distributed on both sides of this unique axis from the port to the lighthouse.

Figure 3. Munalaid Island. Anatole Danto (p. 99).

Ruhnu Island (figure 4) is an island different from the two previous ones because it is very far from the mainland. It is one of the most isolated points in the European Union. The nearest coast is Latvian, and the Esto-

nian coast is 52 km away, at the level of the island of Saaremaa. Access is not easy, except by plane, once or twice a week. The rest of the time the trip is made by boat in a minimum of three hours. Its geomorphology is also different, since it comes essentially from a sandy veneer on the crest of a marine ridge (Kriiska & Lõugas 2005). A few morainal blocks, much less numerous and visible than on the two previous islands, are present. On the other hand, the sandy accumulation is more important and the island culminates at 28 m thanks to its high dunes. A northnorth-west/south-south-east line delineates the two main parts of the island. To the east the island is essentially dune and forested. This is also where the high points are located. To the west the island is low, made up of land that is now cultivated, developed during the kolkhoz period (Västrik 2015) and then reed beds. In the centre along this axis a main road distributes the secondary road network. With the exception of a few farms, habitat is concentrated along this road in the centre of the island, where the high points (maritime radar, lighthouse and churches) and freshwater sources are located. At the southern tip are established the port and the airfield (on a grassy runway). This remoteness from the mainland has led to the emergence of population isolates, allowing the subsistence or birth of endemic or rarely observed species from outside the island (Parmasto & Parmasto 2005).

Figure 4. Ruhnu Island. Anatole Danto (p. 100).

These three islands are populated by specific island communities. Very early on, they were occupied by Baltic coastal societies for nomadic marine mammal hunting (Storå 2001) and fishing settlements, before sedentary settlements were established. Over the last few centuries, the Swedes have lived in Kihnu and especially Ruhnu, an island whose ownership has long been claimed by the Germans, Russians, Swedes, Estonians and Latvians. These facts led to the birth of a Swedish culture from the Gulf of Riga islands.

In addition to a dialect specific to these territories (the dialect of Aiboland, or Egeland, Swedish-speaking territories of northern and western Estonia, accentuated in Ruhnu, where it forms Runska), Swedish customary law, particularly agrarian law, has applied at length to Ruhnu, further afield in Kihnu¹. Fleeing the arrival of the Soviets in 1944, the last Swedish-speaking people left Ruhnu and the Estonian coast for Sweden. When the USSR fell, the land was returned to Swedish descendants, most of whom did not wish to return, except during the holidays, leaving the Estonians residing on the island. Only a few Swedes have returned, visible by their Scandinavian names. The current community of Ruhnu is therefore mainly a contemporary Estonian community, which has nevertheless retained part of Swedish culture (old boundaries still in force, services celebrated in the two Lutheran churches, hunting and fishing practices, etc.). Kihnu, and in 1933, Manilaid, closer to the mainland, were populated by Estonians for a longer time. But the island context has also allowed the emergence of a Kihnu language: Kihnu keel in Estonian, Kihnu kiel in island dialect, and above all, its perpetuation to the contemporary era, as well as the whole island culture.

On the three islands, the socio-economic and cultural markers are more or less linked. Although they may have experienced different population trajectories (Swedish fleeing in Ruhnu, Kihnu inhabitants living late in Manilaid, etc.), they have similarities. The three communities, through their establishment in the heart of a northern marine environment (Nakhshina & Krause 2014) have always practiced hunting and fishing activities on the foreshore or at sea. As in other island societies (such as Frisians, Bretons or Polynesians, etc.) the communities in place have quickly developed a strong sense of maritime navigation necessary to ensure the livelihood of families left on the islands. During the 20th century, these skills enabled the inhabitants to cushion the transition between agriculture and services, allowing them to embark, first on fishing, particularly on the USSR's high-sea fleets then within the Soviet navy or in trade. At the same time these islands, strategic points for which they are owned, have long housed engineering, technical or military corps dedicated to the local marine context: lighthouses and beacons, maritime control, sea rescue, radar, etc. All this has led to the emergence of island communities structured around a social group of seafarers both on land and at sea. At the same time the men, most of whom were mobilized by the embarkations, left for several days or even several months for more or less long campaigns. The men who live on the islands are generally "exogenous", coming from the mainland and placed there by the administrations, military or maritime (lighthouse keepers, coastquards, customs officers, military from the Soviet Ruhnu radar base, etc.). This condition allows island women to manage the islands particularly in Kihnu and Manilaid, allowing some newspapers to go so far as to describe Kihnu as "the last matriarchal society in Europe". Even if this term may seem exaggerated with regard to certain elements of local kinship anthropology and denounced by the inhabitants ("the term is not appropriate", says one woman) we nevertheless notice an important role for women within the community. Overall, women effectively govern island affairs (Salmi & Sonck-Rautio 2018) and are at the forefront of innovation and economic development issues. If the mayor is currently a man, a woman was on the previous term. The role of mayor is however a purely administrative role on the island and does not replace the collective constituted by the community, which has its own decision-making arenas inherited. At the same time women perpetuate certain traditions, particularly marital traditions (Rüütel 2002), textiles, crafts, gastronomy or art by ensuring their transmission to subsequent generations. This original culture has also made it possible for Kihnu's cultural space to be classified as an intangible cultural heritage

Ruhnu, or the persistence of *holm* toponym in Ruhnu, or the persistence on Kihnu of the toponym *Rootsiküla*, literally, "the Swedish village". Similarly, during participating observations, an elderly woman spoke in Swedish dialect at Kihnu Cemetery.

by UNESCO. This makes it possible to describe these islands and their communities as a particular marine and coastal social-ecological system: a mixture of island communities with a strong identity with many traditional food uses and a specific local ecosystem of low sandy-muddy islands.

Figure 5: Kihnu Island (p. 103).

Uses of the coastal and marine environment: «knowledge and practices concerning nature and the universe» specific to the three islands

This section proposes to analyze a specific category of intangible cultural heritage: that of "knowledge and practices concerning nature and the universe". This category serves as a demonstrator for local intangible cultural heritage, one of the pillars of which is based on specific environmental uses (Godelier 1978). Indeed, the coastal communities of these three islands have always practiced a food poly-activity based on proximity to the coastal and marine environment. This poly-activity has only recently experienced the socio-economic dichotomy between professional and amateur practices. Before the Soviet era the distinction was weak. During the USSR, due to collectivization, the kolkhozes² and their objectives led to a scarcity of amateur practices in favour of achieving the objectives of the plans. Today the socio-economic distinction is really instituted and we distinguish between amateur practitioners, professional practitioners and mixed practitioners. Fishing in particular remains the main source of employment for men on the islands, followed by merchant shipping, generally abroad and particularly in Finland.

Thus, there are still about sixty professional fishermen in Kihnu (58 in 2018), 3 in Ruhnu, which in each case represents about 5 to 10% of the total island population, twice as many in the active population.

The inhabitants of the three islands have first developed a strong fishing activity, which can be divided into two sub-activities: fishing (shoreline or on-board) and hunting marine mammals. Fishing is the traditional livelihood activity on these islands. There are as many fishing practices as there are fishermen, but a few categories can still be distinguished. Fishing is a very seasonal activity (Krause 2013) throughout the peri-boreal zone and meteorology and climate will severely constrain day-to-day practices. Riparian fishing for example, can only take place in winter, when the ice is thick enough on the island's marine shores. Then, fishermen can reach their fishing grounds on the ice, sometimes several hundred metres offshore (figure 6). They can access it on foot, by sled or by snowmobile. In groups of two or three fishermen, they will then set gillnets a few dozen metres under the ice. They proceed by digging about ten to a dozen holes at regular intervals, which they mark with small coniferous branches or with small pavilions. Between the holes they stretch or raise the nets using long hooked poles. They shelter each of the holes of a draft shield during the manoeuvre, to prevent the water from freezing directly and to prevent pieces of ice from getting caught in the nets, which would then be less fishing because they would be visible to fish. The groundwater nets are about 20 to 25 m long and 1 to 1.5 m high. The elders used to pass the slicks of the nets over wood fires on the beach in the smoke to fish better. Each group fishes at a specific location, marked specifically for each group, about 50 m from the ice/sea boundary that is not icebound. The nets are retrieved every morning, during two to three hours. Fishermen can also fish in the hole, by diving a hook into a hole in the ice and waiting for the fish to bite. This is more common on continental lakes or rivers (Mustonen 2014) than on these is-

^{2.} And in particular the Kihnu fishing kolkhoz, initially the *nõukogude partisan*, literally the "Soviet partisan", who was a very important kolkhoz. It was then merged with that of the "Pärnu fisherman", the *Pärnu kalur*, by forming the "Kihnu department" of this kolkhoz: *Kihnu osakond*, in 1973. On Ruhnu, the first kolkhoz established was an agrarian kolkhoz, before a fishing kolkhoz was born. They were repatriated to Pärnu after the 1969 flood. Some kolkhozes have remained, except Estonia, and still exist (Nakhshina & Wahnsiedler 2015).

lands. The fish caught then are quite varied (pike, perch, flounder, vimbe, rattan, etc.).

Figure 6: Lifts nets on the ice off Kihnu. Anatole Danto, Kihnu, 2016 (p. 104).

When the ice disappears, other fishing techniques are in place. Fishermen will set fyke nets (introduced from Latvia in the 1860-1870s) or gillnets between islets, individually or in pairs, and catch a wide variety of fish (Ojaveer 1997) such as perch, pike, trout, etc. They use small units of the fleet, only registered and unnamed, such as boats or flat boats with low motorization. Again, the shift lasts two to three hours, once a day. Sometimes they catch salmon, but like eels, this is becoming increasingly rare. These species have moved from targeted to accessory species. The eel, for example, were targeted at night with fires lit at the bows of boats and spear. There are larger fishing units inherited from the kolkhoz (Saare 2018) built in the region, which have a name in addition to the registration. Previously, for each large ship built, three days of ceremonies were decreed. Today, 3 or 4 fishermen embark on board and directly target herring in spring (matjes) and autumn (figure 7). They fish with a special net, the kakuam, a kind of little seine-haul. They leave very early in the morning (4 am) and return at the end of the day (6 pm) to land their fishing at the refrigeration plant. Previously, fishermen from the islands left Ruhnu, Kihnu and Manilaid from April to October in search of Baltic herring on a very large fishing territory (Walsh 2018) from Denmark to Russia (Sonck-Rautio 2017). From now on, sea outings are shorter and above all closer, confining themselves to the Gulf of Riga or to the outskirts of Saaremaa and Hiiumaa. However, the fishing territory has tended to expand in recent years, a form of adaptation (Da Cunha & Vanderlinden 2014) of the communities: in Kihnu the pressure mentioned by the inhabitants of seals and cormorants is causing a decrease in fish around the islets, fishermen must then go further offshore. Beach seining has disappeared due to a lack of people to fish. It

was once used on the beaches of the islands, where, during herring spawning in particular, the men on board would pull the fish towards the coast, then caught by women and children. The ecological knowledge (Ingold 2003) related to herring fishing comes from the Swedish populations of the islands, in particular concerning adapted nets. Winter fishing is generally for the benefit of the family only, while off-ice fishing is generally a commercial fishery.

Figure 7: Large armed unit with kakuam, for Baltic herring. Anatole Danto, Kihnu, 2018 (p. 105).

The other major predation activity on local fisheries resources is the hunting of marine mammals and more specifically sealing (Lepóla 2018). This is a real identity marker (figure 8) for communities (Doyon 2018) even if there has been a contemporary change in representations related to seals (Plaan 2018). However, it is still practiced on the three islands. While it was once a targeted hunt (Steffensson 2007) it is now more of a by-catch hunt: fishermen now kill a seal without really looking for it, but rather by spotting one at random, by going fishing (for example, five seals were killed in Kihnu in spring 2018). Sealing was a very important economic activity for the islands (Leinbock 1924) and in particular Kihnu because it provided a rich foodstuff (meat + fat often preserved in cans) and an exportable commercial resource (Sellheim 2016) with high added value (fur, which was used locally to make boots and hats and which is still used today especially for carpets). Long practiced at two times of the year with the break-up of sea ice at the beginning of spring and in autumn, hunting was prohibited under international pressure (Geistdoerfer 1984) between 1972 and 1980 depending on the species, in response to the decline in phocid populations (Harding & Härkönen 1999). It continued to be illegally perpetuated (Nakhshina 2012) by island populations on a very small scale. Since 2015, it has been reauthorized again: communities have put pressure on the government to reopen (Martinet 2017) in response to the increase in seal populations. The current system prohibits on-board net hunting and only allows riverside gun hunting. It is based on very expensive hunting licences granted to inhabitants (some of whom are discouraged by the price and abandon their practice) who must submit catch reports. They are territorialized, i.e. assigned to a predefined hunting territory (e.g. Kihnu Island and its surroundings). This licensing system is coupled with a quota system (Mariat-Roy 2011): is allowed to be killed 1% of the scientifically measured Estonian seal population. This represented a quota of 45 seals for 2017, of which only 9 were killed across the country. Today only the hunt in the immediate vicinity of the islands remains, while the on-board hunt, specifically targeting seals in the straits from Pärnu to Hiiumaa, including the Muhu Strait, has disappeared. The latter was the most common practice at the end of the calendar year: autumn hunting has therefore ended in Kihnu while some hunters still practice it in Ruhnu. In the past, autumn hunting used to take place between Saint Martin and Saint Catherine or until the first ice. Seals must now be shot with a gun in one shot. They were previously caught on the hook before the Finns brought this new technique. They are fatter in autumn but easier to catch in winter. The hunting season has also been postponed to the end of winter. While it used to focus on a period from 2nd February 2 (Candlemaster) to 25th March (Annunciation) it is now only open on 15th April. The Annunciation corresponds to the date when "it is the first time that the seal wants to stay on the ice all night". Correlated to climate change affecting ice conditions in the Gulf of Riga (Lépy 2009) this leaves hunters with no date to go out in some years. At the same time regulatory measures to preserve the environment have led the administration to prohibit access to the islets of the region (Sorgu saar, Annilaid, Sangelaid, Umalaid, ...) which were previously frequented by hunters and fishermen who had sometimes built summary docks there, modifying the territories of practice. Finally sealing is now a solitary practice, whereas previous-

ly, sealers used to go 4 or 6 times, with a special boat, sometimes in pairs. The group formed a "fraternity" (hülgeseltsiks) formed on New Year's Eve or New Year's Day. Once the fraternity was formed the hunters would go to the house of one of the members with their guns and the approval was confirmed by shooting a candle into the doorway. Thanks to their ship they sometimes covered 25 km a day on the ice with the help of dogs. The sealers then divided the killed seals among themselves. Females are consumed boiled with potatoes or in smoking but not males because their smell is too close to turpentine.

Figure 8: Seals and their hunting, an identity marker on the islands. Anatole Danto, Kihnu, 2016 (p. 108).

These practices dedicated to fisheries resources constitute the structuring activity of the three communities. They complement these contributions with a dual agrarian system (Ia 1962) a mixture of polyculture-livestock on small plots with little rich land and uses of the forest (Meikar 2009) peat bogs and reed beds (cutting, harvesting, hunting practices for sea birds). The lands of the three islands are naturally not very rich. An amendment is necessary to ensure minimum yields particularly in vegetable gardens. Women on the three islands usually pick up the sea leash and seaweed (Delaney, Frangoudes & Ii 2016) to deposit in the gardens. Driftwood was also recovered. Each farm has its own vegetable garden and orchard. Some hives are visible (at least three apiaries are present in Kihnu, one of which belongs to a professional beekeeper, two in Ruhnu). The parcel structures the agrarian geography of the islands. The same system applies in Kihnu and Manilaid: the plots are lon, with the house near the road, the vegetable garden and the orchard while the plot bottoms are devoted to grass and salt meadows, meadows and even reed beds. Each farm has direct access to the road and the sea. Some farms on Kihnu do not have access to the sea, given the shape of the island. This is compensated by the existence of coastal

commons (McCav 1947) allowing access to it, at the end of a road for example. In Ruhnu the urban plot is concentrated in the centre of the island near the high points and water points. The rest of the parcel for agricultural use is divided between farm families. Each family had a plot in the forest, one in the reed bed and one in the meadows. Reed was used for thatched roofs as in Kihnu. The Ruhnu boundary is a traditional Swedish boundary, with large flat stones marked with a cross, corner of four plots in the forest and more or less round stone wall enclosures in the meadows surmounted by wood at the time to protect animal crops (figure 9). Today "livestock is locked up, crops are not, in the past, it was the other way around". The stones of the enclosures were used by the Soviets to build the new port of Ringsu in the south of the island to replace that of Limo. Now the livestock consists of cows, endemic sheep and goats. In summer the inhabitants put them on the pastures (salt meadows) and bring them back to the highlands in winter, in the stables or sheepfolds. Wool is widely used by women who spin it especially in Kihnu, famous for its looms and skirts in red tones (local vegetable dyes). The forest is a place of resources. Of course, the wood is cut, which can be supplemented by driftwood, but above all berries and mushrooms are harvested, which are the staple foods of Finno-Ugric cultures. Medicinal plants are also harvested such as pärn (raudrohi in Kihnu) which is infused in winter during low temperatures. Some women, like in Kihnu, have made phytotherapy their profession. Maple and birch saps are also collected at the end of winter.

Figure 9: Former stone walls and endemic sheep herd. Anatole Danto, Ruhnu, 2018 (p. 108).

Finally, hunting resources are also exploited. While there is a hunt for marine mammals, there is no hunt for land mammals due to the lack of large game species on the islands. On the other hand, seabird hunting is developed (Skov 2011). Thus, "every Kihnu man must hunt. Hunting is learned with the elders". Is-

landers are looking for different birds, especially migratory birds, which take advantage of the surroundings of the islands to rest on their migratory routes (ducks, geese) or edible Baltic seabirds, which are frequent. Only five hunters officially have a license in Kihnu, but there are more hunters unofficially. One bird in particular is emblematic, especially in Kihnu and Manilaid, it is the merganser. Two species coexist: the goosander mergus (Mergus merganser, locally called jääkoskel), and the common mergus (Mergus serrator, rohukoskel). Men make them small barrels, which they hang in the trees at a height sufficient for them to make their nests (figure 10). The mergansers, which arrived on the islands at the end of winter, lay eggs in pairs in these nesting boxes around May. The female can only incubate a maximum of 10 or 11 eggs and the women have developed the habit of collecting the excess for cooking. At hatching, the women help the small mergansers to reach the sea, guiding them to avoid foxes, crows, dogs, cats, etc.

Figure 10: Nesting boxes for mergansers. Anatole Danto, Kihnu, 2018 (p. 110).

This particular category of intangible cultural heritage, that of "knowledge and practices concerning nature and the universe" is therefore well established and mobilized (Lipin & Leete 2000) by islanders. Today it serves as a demonstrator for the local intangible cultural heritage of Kihnu, Ruhnu and Manilaid.

A coastal cosmogony spearheading the process of heritage development

All these practices have contributed to the shaping of an island landscape (Krauss 2016) specific to the three islands, evolving with changes (Plaan 2018 op. cit.). But while these "knowledge and practices concerning nature and the universe" constitute one of the pillars of the classification of the Kihnu cultural space as intangible cultural heritage by UNESCO, for example, this category is

also associated with those of "traditional craftsmanship skills", "performing arts", "social practices, rituals and festive events" and "oral traditions and expressions". Thus, five categories of intangible cultural heritage are identified. Beyond that, we observe the existence of a true cosmogony specific to these islands, resulting from the relationship of the communities to the coastal and marine environment in question and from the historical multi-ethnic depths. This cosmogony still underlies this relationship between man and nature (Descola 2015). As we have seen, the local cosmogony gives pride of place to non-humans, animals, especially fish (Todd 2014), seals and birds, as plants. Relations between humans and nonhumans (Stépanoff & Vigne 2018) are thus specific on the islands, closely intertwined, without necessarily distinguishing these two categories, or at least a watertight border between the two, like the mergansers. This cosmogony is also reflected in particular representations. Thus, the field of beliefs (Sudak 2015), particularly dreamlike of the islands, is marked by elements referring to the sea and its elements (Krause & Strang 2016). For example, several types of dreams reflect events: "if one man dreams that it's snowing a lot, he will catch a lot of fish". Similarly, dreaming of making love to his wife will ensure them fish (Danto, Mazé & Ragueneau 2018), but no seals. There are also superstitions: "when a man goes fishing, if he meets a woman who is several months pregnant, it will bring him much luck". On the other hand, «if he meets an elderly woman, who has never had a child, or a young woman who is not yet married, he will not fish anything».

The symbolism linked to the sea is also widely present in many forms, to the point of penetrating deeply into the religious field (Protestant as well as Orthodox, but also referring to paganism, ancient Nordic gods or Finno-Ugric epics) with the existence of ex-voto, mural paintings, frescos, paintings, decorations, etc. Naive art is also very developed on the islands and very popular

(Van der Vaart et al. 2018). Many scenes of daily life have been painted by local artists and residents for decades or even centuries. The elements of nature are also sometimes revered, such as the "sacred stone", Liivaaaa kivi, where islanders hang fabrics on the branches of the trees surrounding the stone. This symbolism is also immaterial. In December 2018 for example, the renovation of the lighthouse was to be blessed by the Estonian metropolitan Stephanos. cosmogony pervades the language, of course, in the dialects of the islands. Thus, in Kihnu, the noun "nature" is non-existent. Islanders use the terms "courtyard", "garden", "exterior" (hoov, ou, etc.) to refer to what is outside the house, up to the limits of the last islets on the island's periphery (figure 11).

Figure 11: Seaside south of Kihnu Island. Anatole Danto, Kihnu, 2018 (p. 110).

Heritage processes are underway on the three islands and the inhabitants are enhancing this cosmogony in order to safeguard and enhance the heritage, both natural and cultural, tangible and intangible. If the category of immateriality is generally associated only with cultural heritage (as a constituent subcategory of this cultural heritage), one may question the relevance of this categorization to local cosmogony. Indeed, it is surely more appropriate to analyse this intangible heritage as a subcategory of both natural and cultural heritage, given the strong human-nature interaction on these islands and the fact that it is the basis of community organization. The intangible maritime and coastal heritage of the islands is therefore subject to a process of heritage development, which began several decades ago, but has really been gaining momentum over the past twenty years. Only Ruhnu Island has a branch of a national museum, the Rannarootsi Muuseum (in Estonian), the Aibolands Museum (in Swedish), whose headquarters is based in Haapsalu, and which is dedicated to the culture of the Swedish Estonian coast (figure 12). In Kihnu, there is a local museum (Aav 2008), managed by the community. Finally, in Manilaid, there has recently been a small cultural space with some museum collections. Museum collections are nationally recognized and museography exposes both tangible and intangible heritage. Numerous grants have supported the development of these areas in Kihnu and Manilaid, notably through the European LEADER and INTERREG programmes. In Ruhnu the museum is awaiting redesign and only private patrons have so far contributed, pending the award of a government grant. These museums are also and above all linked to a network of local actors who wish to protect their heritage (Hillerdal 2009). They have strong ties. This network also contributes to associative or private initiatives, through festive events (with for example the re-establishment of the summer games between Ruhnu and Kihnu in the summer of 2018, which have been stopped for several years or the organisation of maritime festivals). It also created a foundation, the Sihtasutuse Kihnu Kultuuriruum ("Kihnu Cultural Space3"), in the 1990s, subtitled in English: UNESCO Masterpiece of Oral and Intangible Heritage. This foundation, which is still very active today, was at the origin of the classification of the Kihnu Kultuuriruum at UNESCO with a proclamation in 2003 and an inscription in 2008. Later, this foundation took care of the new place in Manilaid (2016), thanks to the LEADER programme (figure 13), then of an INTERREG, still in progress, which enabled it to build and rehabilitate several buildings in Kihnu, one near the museum, for the promotion of the island's traditional activities, the other in the south of the island at the Metsamaa farm, intended to promote naive island art, the sauna and festive events. The foundation manages the Kihnu lighthouse and Metsamaa farm on a daily basis, and organizes the Kihnu Folklore and Sea Festival (Kihnu Mere Pidu), the island's traditional school (Kihnu pärimuskool, traditional music and dance classes for school children, summer camp),

3. Term to be interpreted with the word "space" as a spatial noun with territorial value, and with the adjective "cultural" in the ontological sense.

and the knitting festival (Kudumifestival). Finally, the foundation promotes local crafts and production through a market on the port, built thanks to the LEADER programme (Sadamaturg). Parallel initiatives are also emerging, for example to promote the island's gastronomic culture (with Kihnu Küek). The European programmes mentioned have also strengthened links between the islands but also with other communities and minorities in the Baltic region, on heritage and economic development issues. A large part of the actions is carried out along an axis of valorization of local and traditional knowledge (Geertz 2008), in particular eco-anthropological (Hunn 2007, Danto 2018). This local ecological knowledge and traditional ecological knowledge (Plaan 2013) coexist in the cosmogony of the three islands helped by recurrent exogenous contributions over the centuries (Scandinavian, German-Baltic, Finno-Ugric, Russian, etc.). The previous chapter explained it: they are very numerous on these coastal territories, and are still mobilized, both directly, during the perpetuation of practices and indirectly, as part of their heritage.

Figure 12: Korsi talu, the farm of the Haapsalu Museum in Ruhnu. Anatole Danto, Ruhnu, 2018 (p. 112).

Figure 13: The new Manilaid museum area, co-financed by the LEADER programme. Anatole Danto, Manilaid, 2016 (p. 112).

This cosmogony therefore still really builds the three island communities, which can be decoded as coastal communities (Reyes et al. 2018) not as coastal peasants, but really as maritime fishing communities. They practice deep-sea fishing and commercial navigation in the long-distance and these trips on the waves serve as the initial architecture for most of the symbols and representations invoked and evoked. While differences obviously exist between islands⁴ or even within islands,

4. Let's take the example of eel fishing. This was practiced on all the islands for different purposes. In Ruhnu, eel is associated with the snake, and

similar features, a kind of cosmopolitics (Chartier & Rodary 2007, Descola 2016) common to the three territories, do exist.

Threats to this intangible heritage related to the sea

This rich intangible heritage, linked to nature and more particularly to the presence of the sea, nevertheless faces significant threats, both anthropogenic and natural, often mixed.

First, and in a rather classic way, the intangible heritage of the islands has faced globalization. Until the Second World War, the islands lived in a form of communitarianism. with many maritime exchanges across the Baltic Sea. On this date the islands will experience a major disruption, with in particular the passage of the Germans but also and above all, the Russians, who will leave an important mark, that of collectivisation and of what results from it (fishing kolkhoz, agrarian kolkhoz, etc.) but also that of surveillance and control (military bases, radars, watchtowers to avoid fleeing by boat to Scandinavia, etc.). This will have a profound and lasting impact on the inhabitants. Moreover, some thirty years after the fall, the traces left are still numerous, in the landscape of course but also in memories and in some practices. This increase in flows of all kinds between islands, the mainland and other extranational powers inevitably leads to cultural changes, even though the island's existence ensured a certain conservation (Ruhnu, because of its remoteness (Nakhshina 2011), was "a state within a state", "a territory of freedom", with "hippies", "dissidents" according to some). With the fall of the USSR, this will be accentuated by the sudden entry into the market economy, then by European union integration, leading to a certain cultural dilution. The foundation that was created in the 1990s seeks, among other things, to limit this process. But it also aims, in addition to preserving identity, to perpetuate traditions, in particular through their transmission. And the islands are facing a major challenge, that of demographic collapse: a drastic drop in the birth rate, an ageing population and an island exodus are contributing to the reduction or even cessation of intergenerational transmission, thus endangering "the island is depopulating" confides a Kihnu resident. While other rural and island territories are experiencing the same phenomenon, it is particularly acute on these three islands, which have also experienced decollectivization and the departure of Soviet soldiers, engineers and technicians (Ruhnu, for example, is losing a base of fifty men). This is also reinforced on island territories by changes in public policies involving a significant reduction in the employment of seafarers in these specific areas, particularly in lighthouses and beacons, maritime affairs, or maritime control, which are increasingly automated or managed from centres on the mainland (Ruhnu Island lost its coast guard only in 2013). This evolution of Action of State at Sea is also visible on other European islands, like in the French island of Ushant (closure of the maritime school, maritime affairs, a semaphore and removal of local lighthouses and beacons). In addition to these threats, there are also correlated socio-economic changes. The primary sector and in particular fishing, no longer attracts young islanders, who prefer to study on the mainland, then live in Tallinn or work in Finland. Small-scale fishing has become a repulsive profession, in crisis, as in other European territories. Here again, fishing activity in the primary sector is specific and has its own problems, which especially affect coastal communities and in particular the one where fishing was a single activity (like on the French boreal archipelago of Saint-Pierre and Miguelon). The reduction of fishing rights, particularly by quotas and/ or licences, can discourage, as can the hardness of the profession, one of the most dangerous around the world. However, some young people express the wish to return to the

was therefore only sold on the mainland, because it brought back. On the other hand, in Kihnu, eel was in demand and was even the basis of a traditional dish, so the best cook of the year became the chef to prepare wedding meals on the island.

island and establish themselves as fishermen. Finally, seafarers are a population at risk for possible alcohol addiction. During the field surveys, this was mentioned several times on the three islands as an aggravating factor in the decline of the sector and the depopulation of the islands: "women are tired of seeing their husbands come home like this every day, so some end up moving to the mainland". The islands are therefore affected by many violent changes in functionality, with a collapse of the primary sector. This is partly offset by growth in the tertiary sector, particularly in Kihnu. Initially favoured by a part of the communities, this evolution towards the tertiary sector sometimes poses problems, reaching the limits of certain models. For tourism in particular, although it represents an interesting financial windfall for the inhabitants thanks to summer property rental, it now poses some management problems (Parts & Sepp 2007) some weeks of high traffic (full ferry, all rented accommodation, lack of sufficient catering points, etc.). Ruhnu and Manilaid, more distant or less known, do not know yet.

Another risk to the heritage of these coastal communities is a decision-making process that de facto excludes the views of local populations for many subjects. If this problem is a recurrent recrimination within Western societies, it takes on an additional twofold dimension here. First, it undermines the self-governance capacity of these island communities with strong identity markers. These communities with their own cosmogony and dialect nevertheless constitute social groups independent of neighbouring societies. Without lapsing into pro-independence or even autonomist tendencies, however, the three communities claim a particular culture, tinged with indigenousness (Nuttall et al. 2005). Finally, this problem no longer allows communities to manage their resources and uses as they see fit, leading to controversies (Chateauraynaud 2010). Past management (German-Baltic land areas, collectivisation, etc.) has not proved its worth, either in socioeconomic terms, or in environmental terms,

or in both, even if "socialist cooperatives have improved life". The communities claim responsibility for the management of the ecosystem and its products. Indeed, for islanders, what extends around their farm is considered as a common good of their community (Ostrom 2010). The cosmogony is then invoked as an identity marker, in the face of the "conservationist" policies of nature (Granjou 2013) conducted around the islands: "island fishermen respect the sizes [minimum] size catch]", "people have practical knowledge, but there are the pro-environment, with the problem of overprotection". Others confide: "the protection of the environment is done by the community, it is a matter of our survival", "foreign hunters who come in the summer kill all the birds, it should be forbidden, we don't hunt here for leisure, just what we need to eat". Local and traditional ecological knowledge and in the first place those concerning species - fauna and flora - and coastal and marine habitats (Thornton & Scheer 2012) are not or only slightly taken into account (Huntington 2000) in the decision-making processes leading to generally more restrictive regulatory developments in environmental matters (Mazé et al. 2017). Yet, according to one islander: "fishermen are in daily contact with nature, they see what is happening and have knowledge, they know better than others". Another: «They know plants. Better than in the city".

Finally, a third major category of threat is environmental change. Such changes affecting islands are very numerous and can have additional impacts compared to continental territories (Köpsel, Walsh & Leyshon 2017). Thus, a long period of storm prevents ferries from passing through, cutting off the mainland's islands. Similarly, a mild and rainy winter prevents the aircraft from landing at Ruhnu by soaking the runway field. Fishermen and hunters must adapt to the arrival of invasive species (Ksenofontov et al. 2018) or to the disappearance of endemic species, as well as to the modification of the migration corridors of certain populations. This particularly concerns three groups of species: migratory species of fish, migratory birds and marine mammals, specific targets of communities. The absence of ice is also a very important factor for all winter activities: car traffic to the mainland on the ice, but above all, ice fishing and seal hunting. Ice conditions which now fluctuate greatly from one year to the next (Lépy 2012), thus disturb the territories of subsistence practices and ultimately the daily lives of families who must partially change their eating habits (Kozlov et al. 2007). Droughts, as in the summer of 2018, also have an impact on plant growth on poor island lands. Finally, the rise in sea level (leading to the disappearance of the islets that make up the Kihnu area, or permanently cutting Manilaid into three separate islands) and the associated risk of marine flooding during storm phases (loss of one hectopascal = one centimetre of sea level rise) is also a serious problem, which affects the tangible and natural cultural heritage, both underwater and coastal, and disrupts ecological knowledge (McEwen 2012).

Island communities therefore face three main types of threats: socio-economic, political and environmental. While populations are largely resilient to risks (of any kind, as evidenced by life in the Soviet era, or the continuation of life after deadly marine floods) they must constantly adapt to change (Ounanian 2016) and become more sustainable, in a continuous process. Being communities that are primarily rural, but also coastal, especially island, and more precisely fishing communities, classify them among the communities most exposed to risks and threats. In addition, they face specific threats to their socio-ecosystem, sometimes little known to policy makers or little studied by scientists (Latour 2004, Delaney and Hastie 2007) adding a degree of vulnerability. Moreover, the opposition between certain environmental and cultural policies sometimes contributes to a certain confusion within communities (Mätas 2017), through the segmentation and nonintegration of decisions (Lyons et al. 2016) which sometimes contradict each other.

Conclusion

The coastal communities of the three islands of Kihnu, Ruhnu and Manilaid are therefore specific fishing communities with a particular cosmogony, focused on a special relationship with the sea. This has allowed the development of a dedicated intangible heritage, both natural and cultural, rich but threatened. The socio-ecosystem thus constituted, intertwined, has its own modes of heritage governance, which sometimes come up against national or supranational injunctions but which can also sometimes allow regulatory amendments, as in the case of the seal hunt (Sellheim 2014). These modes of governance are sustainable (Parts 2015) and allow the participation of the entire collective constituting each of the communities. Thanks to them, adaptation to the changes (Sonck-Rautio 2018) affecting these islands can be more peaceful than elsewhere (Ksenofontov et al. 2017), even if the challenges are great. The resilience and unity of communities over time (Diamond 2006) have helped to forge part of the identity of islanders, enabling them to support changes in the functionalities of territories.

Acknowledgements (p. 116).

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