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Projet ERC AGROCHRONO Un projet de pointe en archéométrie pour l'étude du développement de l'agropastoralisme dans les zones frontalières Indo-Iranienne

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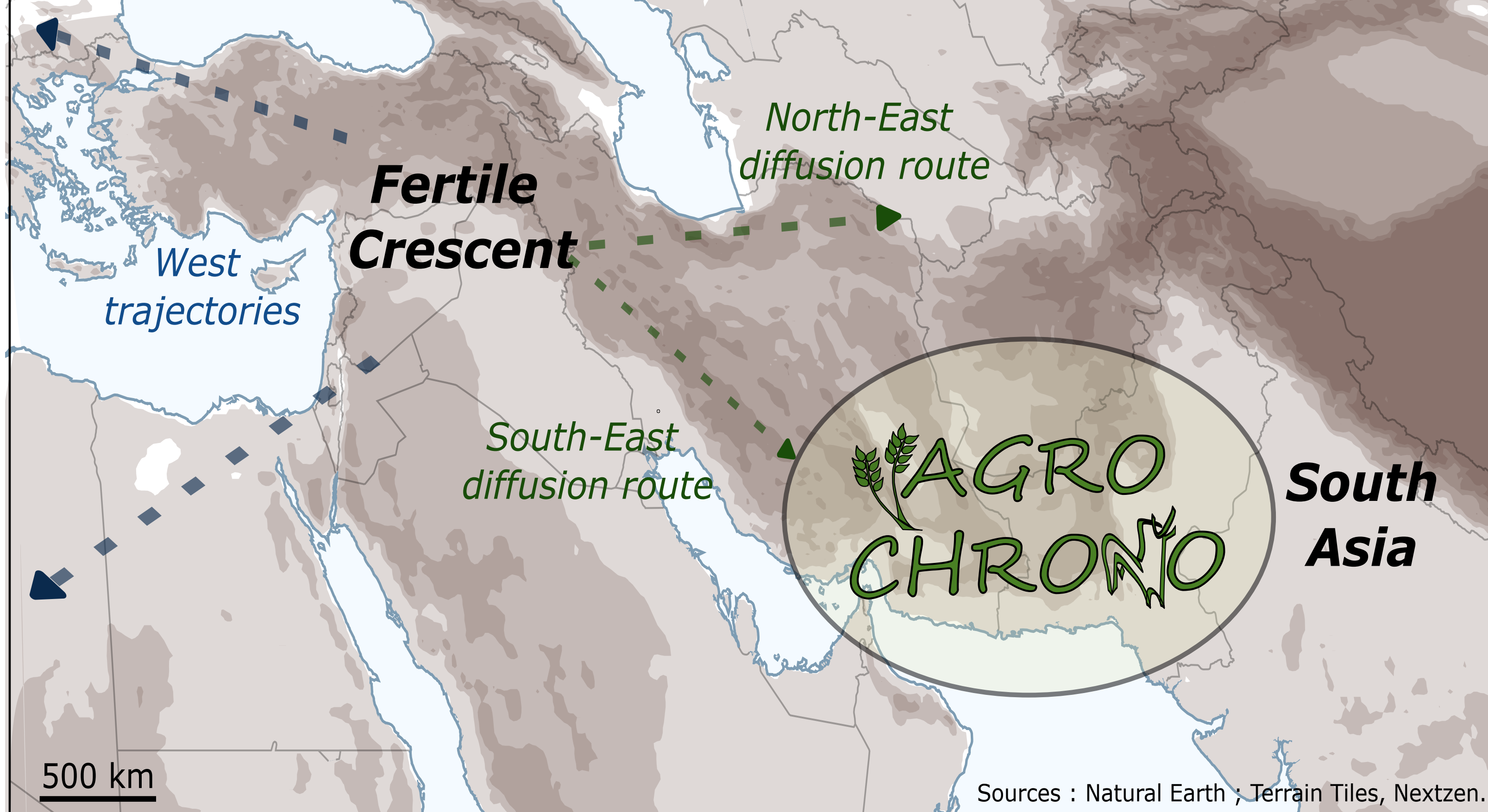
Timing the Economic, Cultural and Environmental patterns of Agropastoralism development in the Indo-Iranian Borderlands

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A region on the diffusion route of agropastoralism to South-Asia

The emergence of an agropastoral way of life in South West Asia from the late 10th millennium BCE revolutionised the social organisation of prehistoric communities. The spread of this new economic and cultural model followed several trajectories. A key region comprised between the Zagros mountains of the Iranian Plateau to the Indus Valley, known as Indo-Iranian borderlands (IIBL), is yet poorly explored. Current knowledge of agropastoralism dynamics and dispersal in this area remains fragmentary due to the lack of a robust chronological frame drawing temporal links between the settlements.

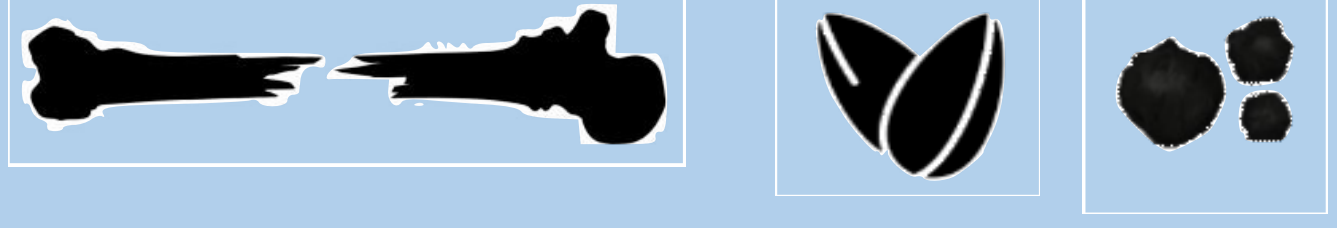


AGROCHRONO project uses a combination of classical archaeological, bioarchaeological and palaeoenvironmental methods, together with the latest developments in biomolecular, isotopic and chronometric techniques.

THEME 1: ABSOLUTE CHRONOLOGY

What is the timeframe of early agropastoral occupations?

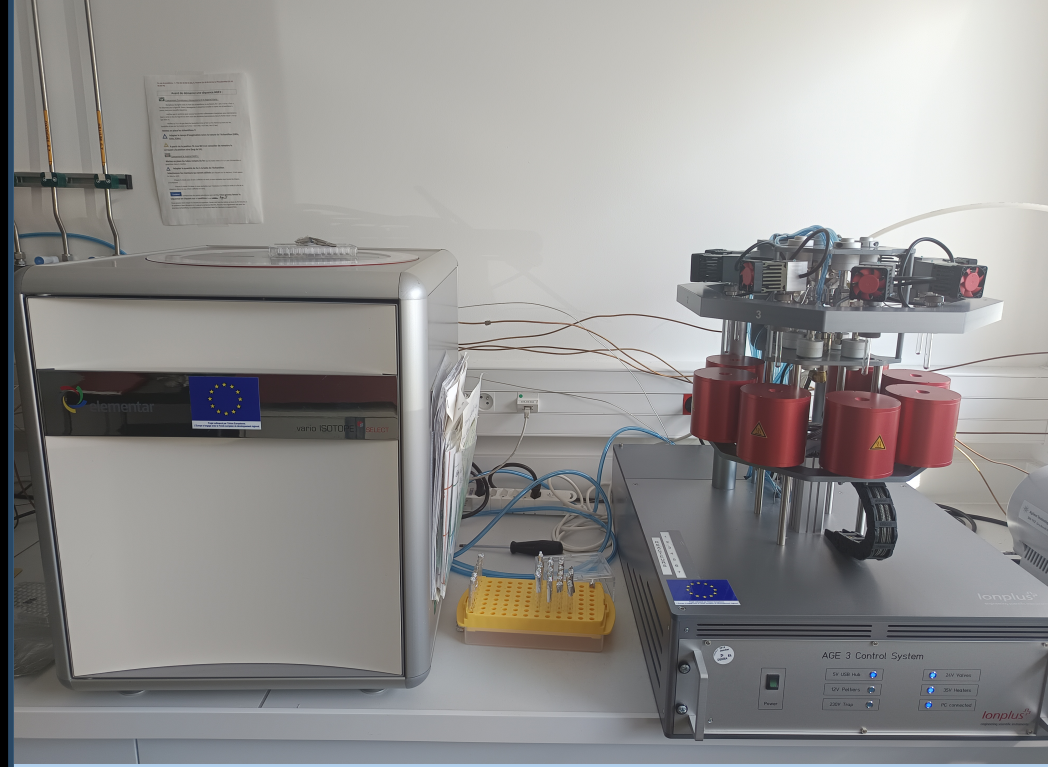
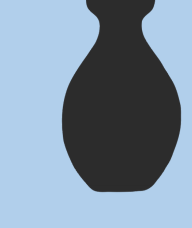
¹⁴C dating



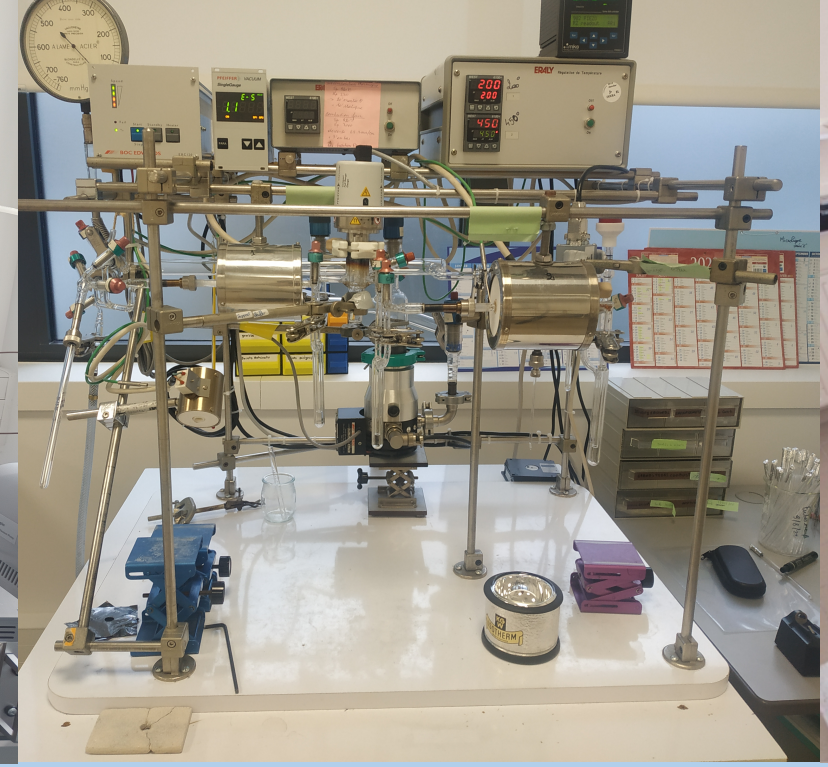
Compound-Specific ¹⁴C Analyses



Archaeomagnetic dating



Automatic combustion-graphitisation line for samples >200µgC



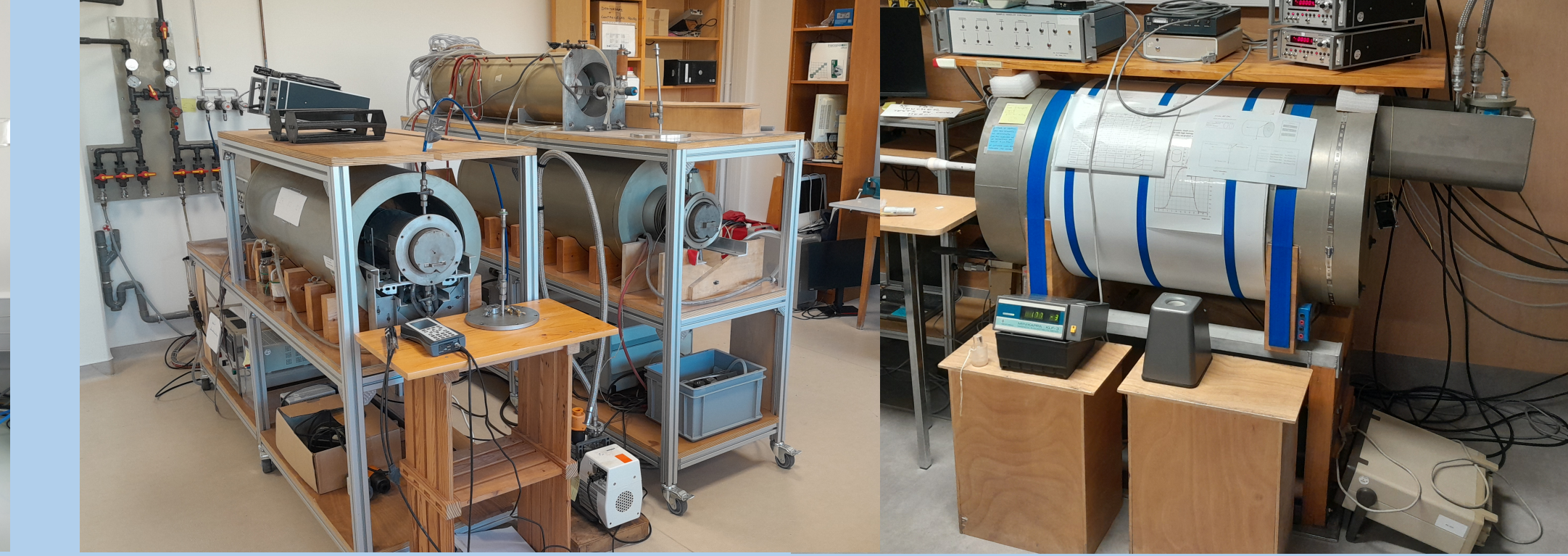
µ-combustion line for samples <100µgC



ECHO-Mini Carbon Dating System for ¹⁴C measurement



Preparative capillary gas chromatography for isolation of single lipids



Palaeointensity furnaces and Cryogenic magnetometer for remanent magnetisation measurement

THEME 2: ECONOMY

What are the changes in food procurements?

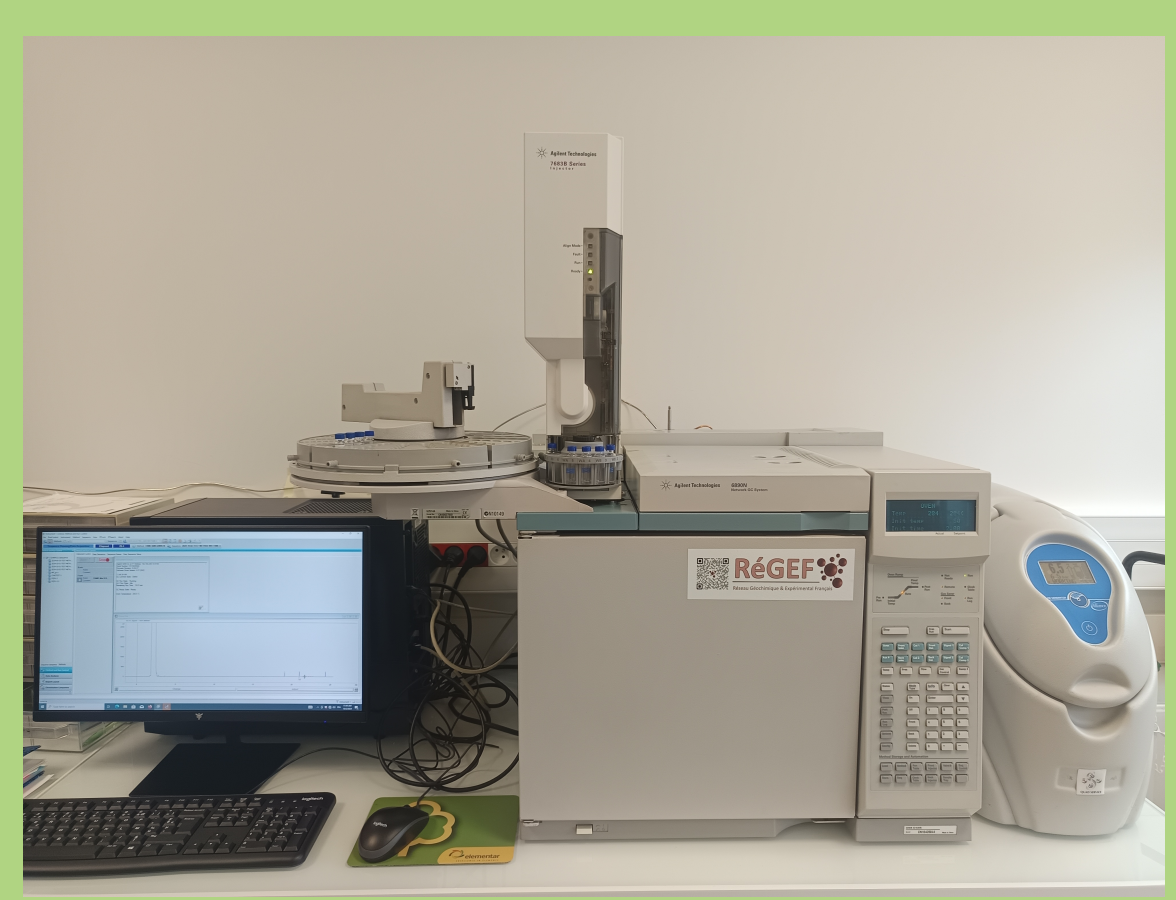
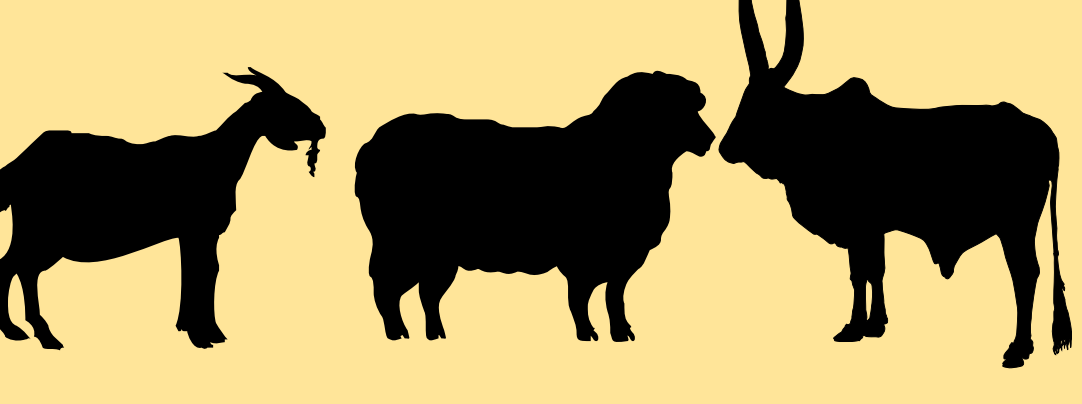
Palaeodiet reconstructions

Lipid residue analyses

Archaeobotany



Archaeozoology



Gas Chromatography (GC) for separation and quantification of lipids



GC-Mass Spectrometry (MS) for lipid identification



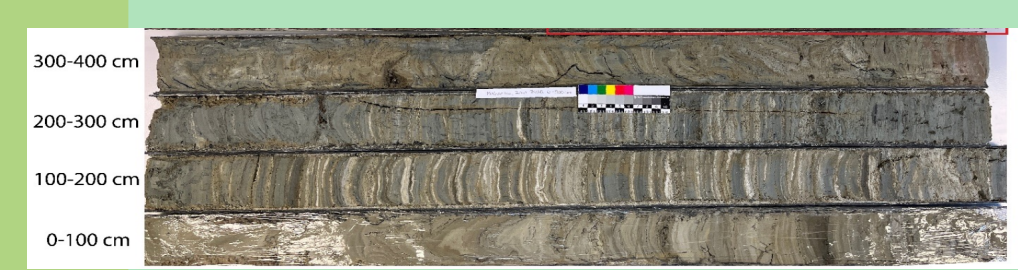
GC-Isotope Ratio MS for compound-specific ¹³C and ²H measurements

THEME 3: ENVIRONNEMENT

What was the environmental frame?

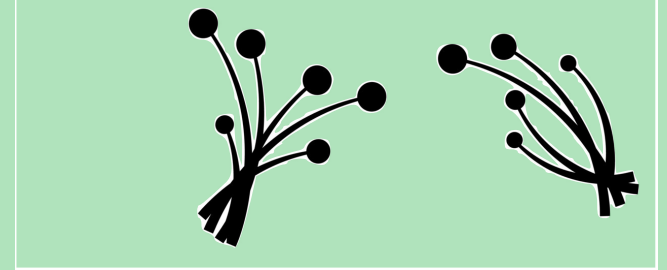
Vegetation and hydrology reconstructions

Lake core sediments



Maharlou, Iran

Palynology



Palaeoclimate modelling

THEME 4: SOCIO-CULTURAL PATTERNS

What are the links between settlements in space and time?

Fieldwork in Pakistan



Fieldwork 2024 at Chanhu-daro



A. Didier directing excavations

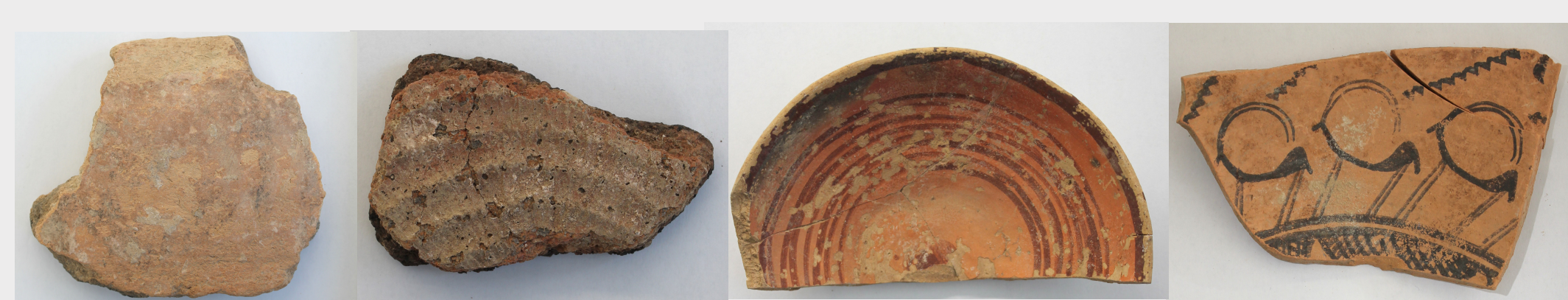


Coring of sediments



B. Mutin conducting surveys

Cultural links between settlements



Neolithic & Chalcolithic ceramics from Mehrghar

Difusion routes modelling

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