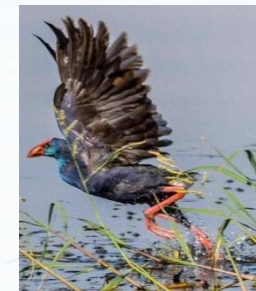


Decarbonization of Nile Delta and Valley and Danube Delta





Decarbonising Deltas and Wetlands- Nile Delta & Valley and Danube Delta

Sohag University



Beni Suef University



The Renewable Energy Materials Lab



Nile University



Sohay Inn Co.



A One Group



Al korra Foundation



DDNI Tulcea



Geostud



Facultatea Transporturi Politehnica Bucuresti



WWF



Manchester Metropolitan University



FLAG Delta



BEIA CONSULT INTERNATIONAL



COMOTI



Asociatia Ivan Patzaichin Mila 23



Smarter Mobility Solutions Ltd.



Institutul National de Meteorologie si hidrologie



Academia de Studii Economice Bucuresti



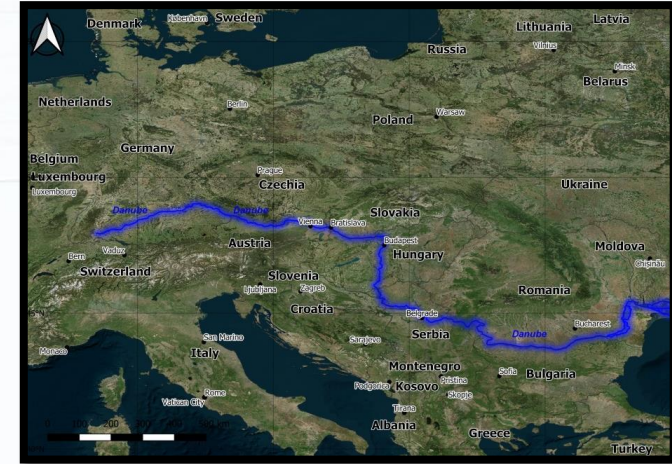
Steinbeis Europa Zentrum



Setting the scene



- Nile River Delta & Valley



- Danube River Basin / Danube Delta



Challenges

Nile River Delta & Valley

Sea level rise Mediterranean



urbanization



Endangered species



Overfishing



Pollution



Mobility



Danube River Basin / Danube Delta

Danube Delta site_April 2002



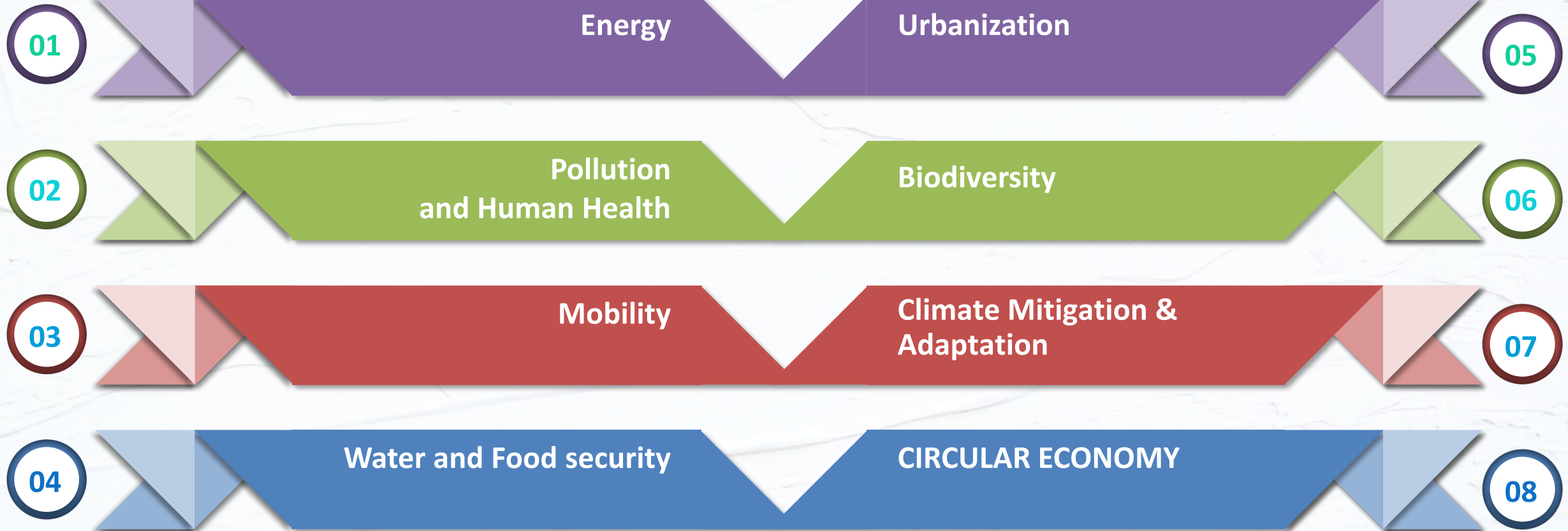
Danube Delta Site_ July 2022



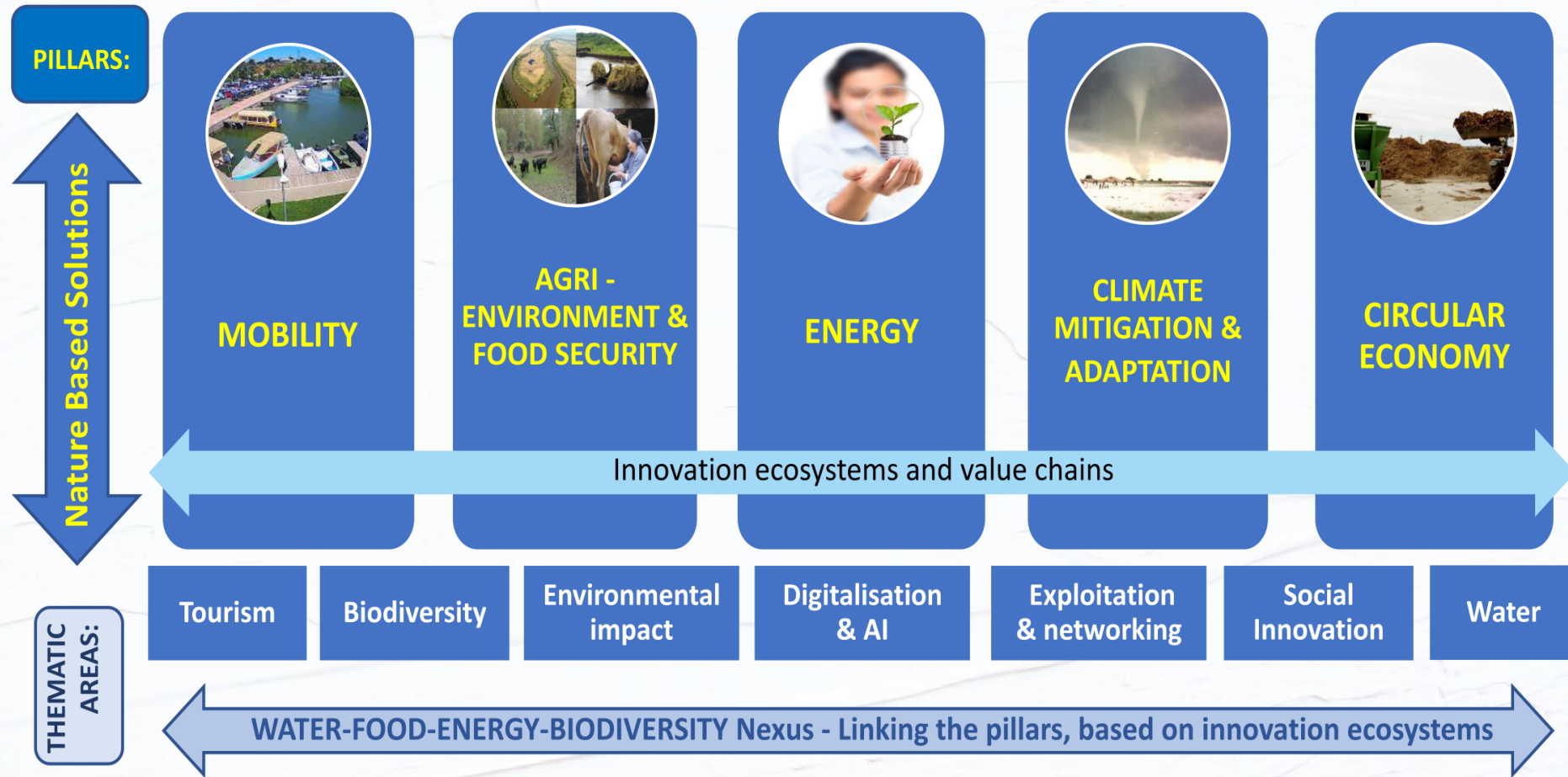
Flooding_2019



Decarbonization of Nile Delta and Valley (NDV) Pillars

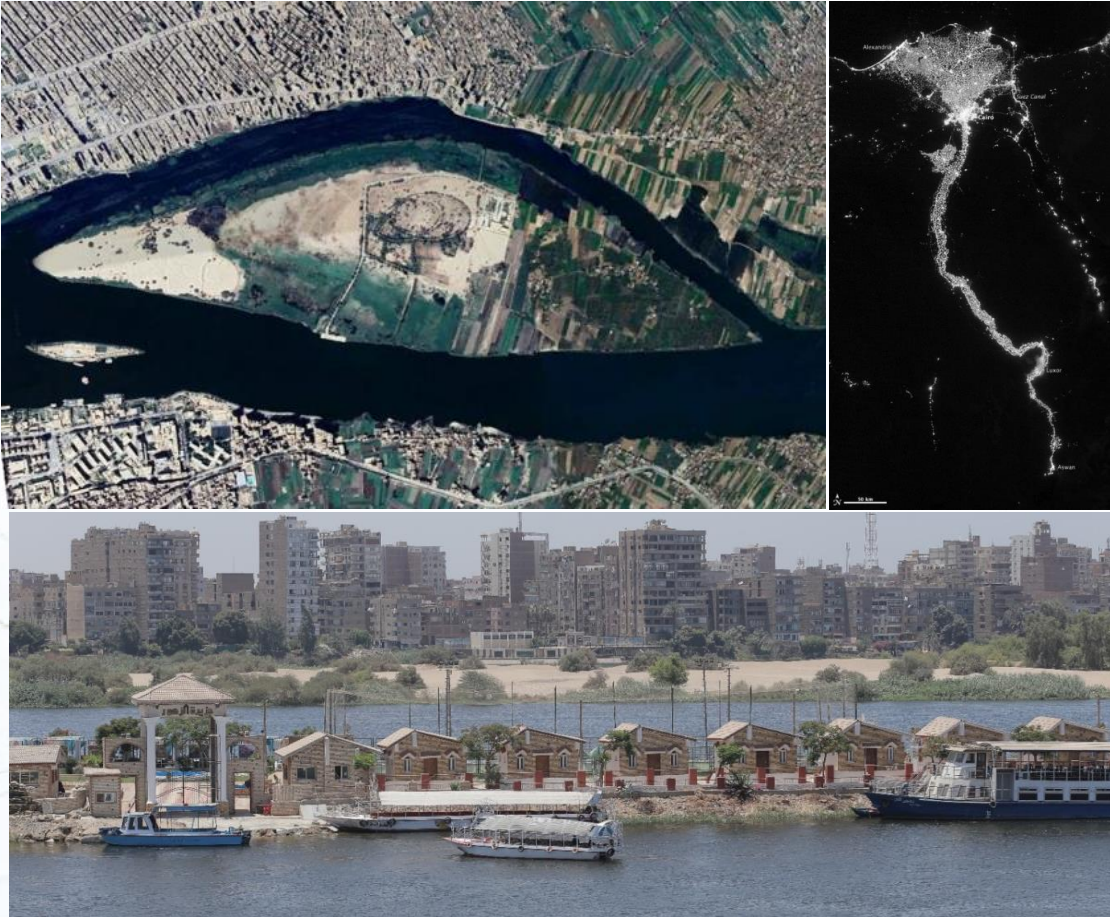


3D (Decarbonising Danube Delta)



Mitigating Impact

Highly Urbanized Environments on Wetlands



Biodiversity Conservation



Impacts (Nile delta and valley)

Azolla filiculoides



Lemna minor,



Algal blooms



Tilapia Zilli



Bio-ecosystems, agriculture, biodiversity, water preservation and quality, and coastal communities in particular imminent danger and risk.



Myriophyllum potamogeton

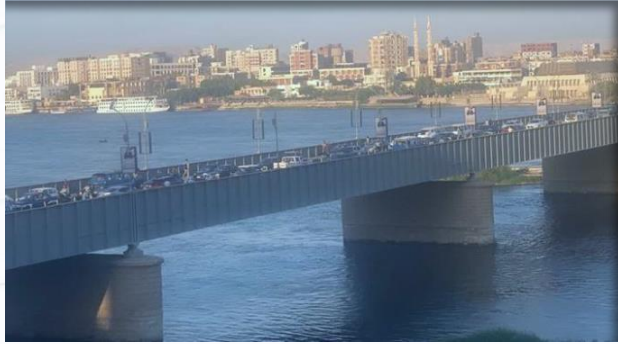


Anguilla anguilla

3 of 9 plant and 2 of 12 fish species disappear completely. Others are endangered

Mobility

Nile Delta & Valley



Danube Delta



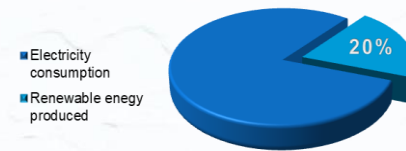
Renewable Energy

ElHelal Medical Tower

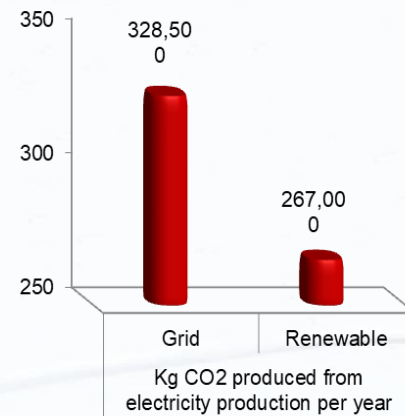
(Case Study) Nile valley

Operating energy consumption:

20 % Renewable energy



Carbon emission reduction



Smart management:

The low-voltage side part, such as distribution facilities, electrical equipment, cable circuits, etc.

Waste water management:

Grey water and black water management

Renewable Energy Sources

wind, solar, waste



Biodiversity

Nile Delta and Valley

The number of bird species at risk of extinction is 10, representing 71.4% of the total bird species globally and 2.6% of the total birds in Egypt.

3 aquatic plant species and 2 fish species disappear completely. Others are endangered.



Sustainability-based Solutions (SBS)



Biochar as sustainable solution for decarbonization and agro-waste recycling

Aquaponic as an innovative economic model for securing sustainable food production



Danube Delta Europe's largest remaining natural wetland

Approx. 330 bird species, including 70% of the global white pelican population and 60% of the world's pygmy cormorants.

Home to more than 60 species of fish, including four species of sturgeon.



Nature-based Solutions (NBS)

Improving the flow of water, matter and energy in aquatic complexes

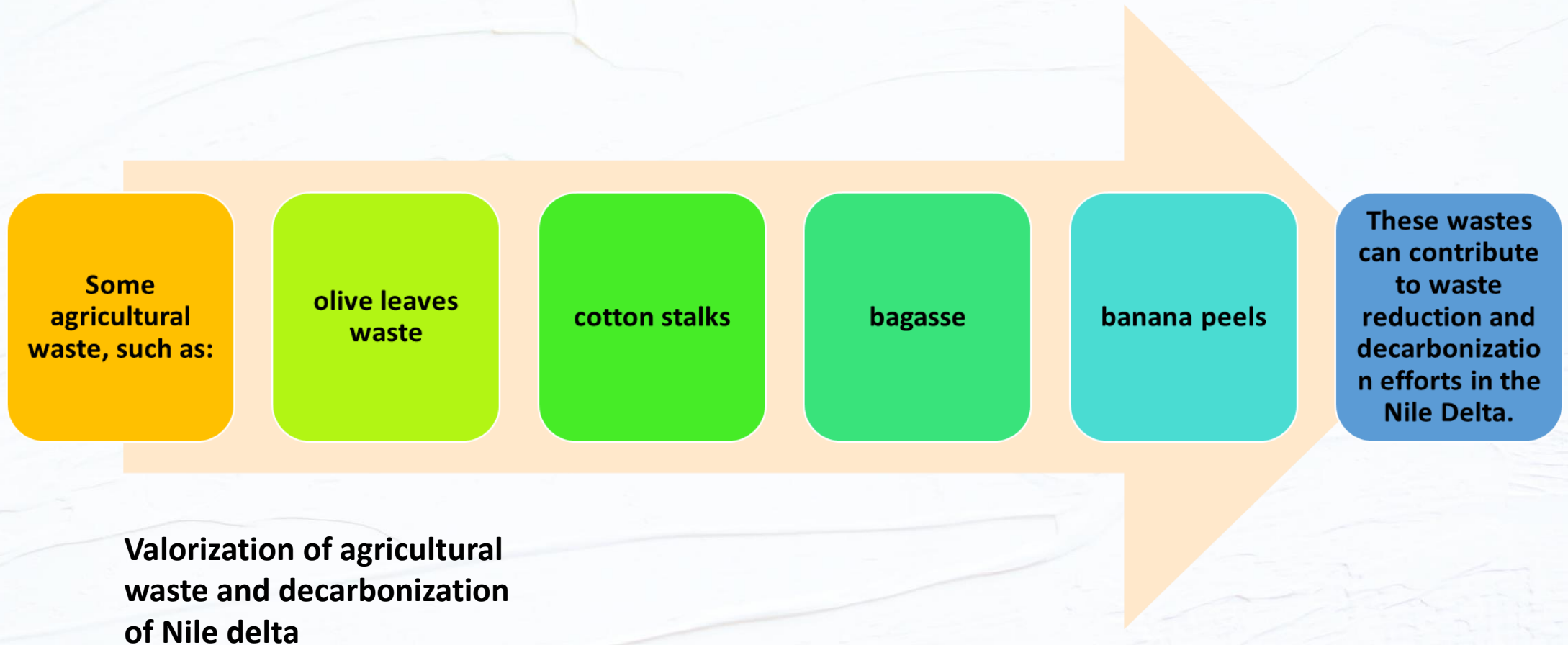


Restoration of wetlands

Smart technologies for biodiversity conservation

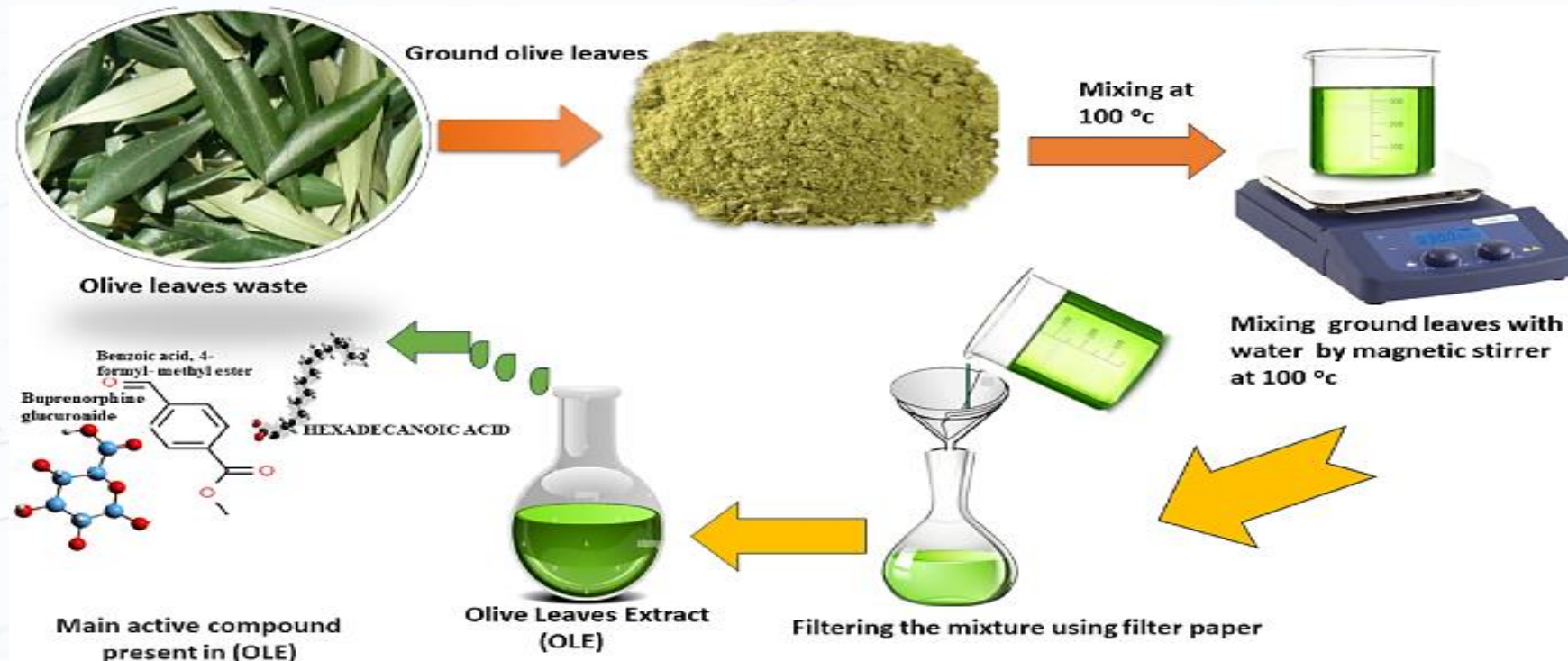


Circular Economy



Valorization of agricultural waste and decarbonization of Nile delta and Valley

Olive leaves waste as corrosion inhibitor



Aquaponics system as an innovative economic model

For securing sustainable food production



Circular Economy in Danube Delta



Reed exploitation
explore solutions



Waste from Tourism
waste value chain and
capacity building - engage
hotels and guest houses



Port city & industry
recycling and recovery of
materials



Fisheries & Aquaculture
by-products & food waste

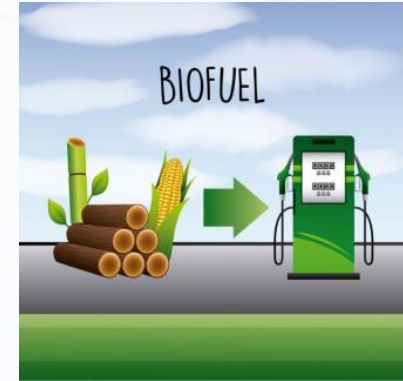
Circular Economy

Waste to Energy

Reed resource



Thatching;
Paper production;
Insulation materials;
Garden fences;
Particle boards;
Indoor furnishings: blinds,
floor and wall coverings,
panels and screens;
Fodder plant;
Baskets;
Souvenirs.

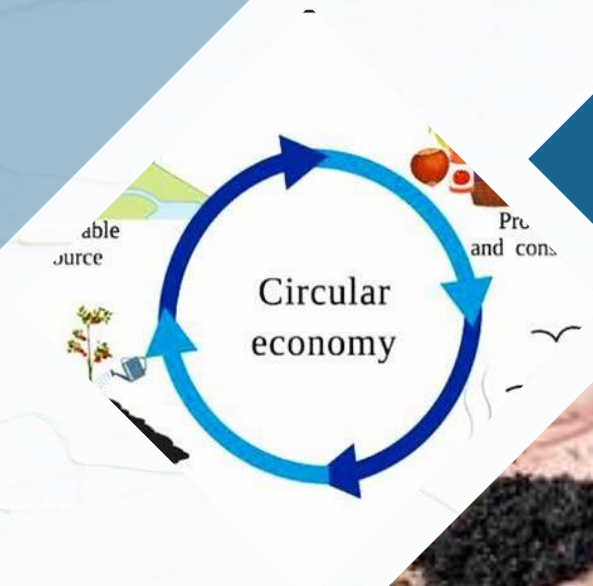


Reed biomass can be used as an **energy source** in three ways: combustion, biogas and biofuel production.



Innovation SOLUTIONS

Represented in Nile Delta and
Valley



Biochar for circular
bio-economy



Agricultural
waste recycling



Aquaponic as an
innovative model
for securing sustainable
food production



Future Work



- Explore joint opportunities & organise a workshop in March/April 2024 *on Nature-based & Man-made solutions to decarbonise Deltas*
- Develop business models within Circular Economy
- Investigate pollution to reduce impact on Local Air Quality & Health
- Engage with EU Calls as part of Horizon Europe Programme
- Design a Roadmap up to 2030 on decarbonising Deltas & Wetlands

Contact details

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