# Developing Foundation of the Natural Capital Accounting for Sustainable Nature-Based / Eco-Tourism Development in Tunisia

CONTEXT

- **Substantial potential for ecotourism** and nature-based tourism offering diversification aligned with Tunisia 2035 Sustainable Tourism Strategy.

- **Overarching goal:** mitigate climate change impacts on beach tourism, gradually transforming the Tunisian tourism model with a new, sustainable, and inclusive approach.

OBJECTIVE

Guide the development of Tunisia's tourism sector in a way that is more sustainable and resilient to threats such as climate change by developing and using a select set of ecosystem natural capital accounts (ENCA) at national and sub-national/ local levels, along with key information related to tourism activity, to provide the Government of Tunisia with a decision support tool.
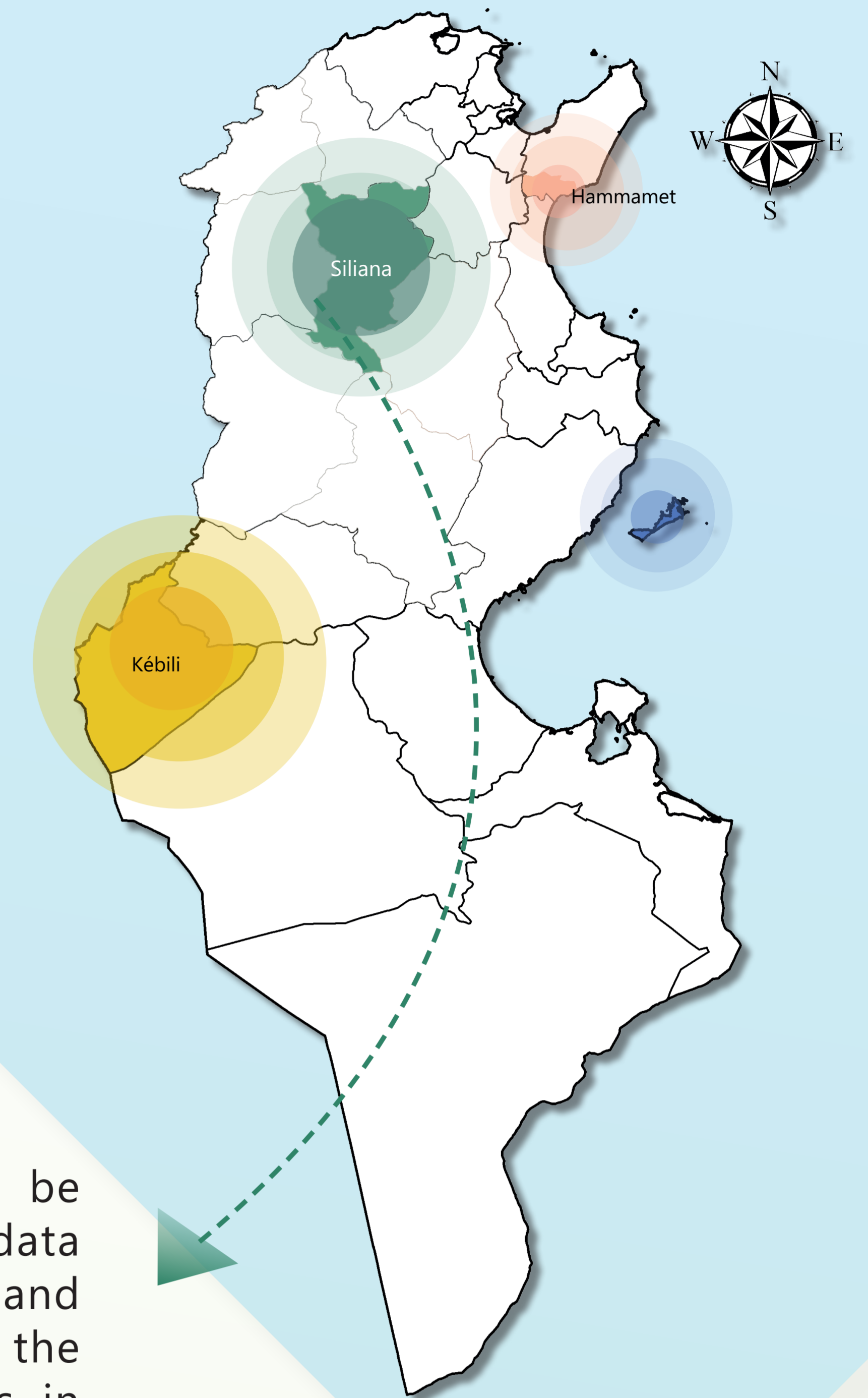
ACTIVITIES AND RESULTS

1. **Data and information collected:** A comprehensive database of relevant data on the Ecosystem Natural Capital and sustainable tourism (ecotourism and nature conservation) is compiled from existing regional, national, and local sources.

2. **ENCA and sustainable tourism accounts developed:** Accounts for Ecosystem Natural Capital and sustainable tourism are established for selected ecosystems (*coastal ecosystem, oasis ecosystem, rangelands/forests ecosystem*).

3. **Compendium on ENCA and sustainable tourism developed:** A user-friendly compendium summarizing the concepts, data, and applications of ENCA and sustainable tourism is created.

4. **Accessible data repository established:** A geo-active platform is fueled by data on ENCA and sustainable tourism, ensuring open access and easy utilization.

5. **Policy briefs on the contribution of Tunisia's ENCA to the tourism sector** and pathways for sustainable and resilient tourism, supporting decision making process, are developed.

6. **Stakeholder capacities strengthened:** Training workshops based on national priorities are organized.

ECOSYSTEM SERVICES IN THE SILIANA WATERSHED

The ENCA accounts will also be complemented by additional data related to coastal erosion and marine submersion, as well as the modeling of ecosystem services in Siliana watershed, developed in the context of the Tunisia - Country Climate and Development Report preparation (CCDR, 2023).
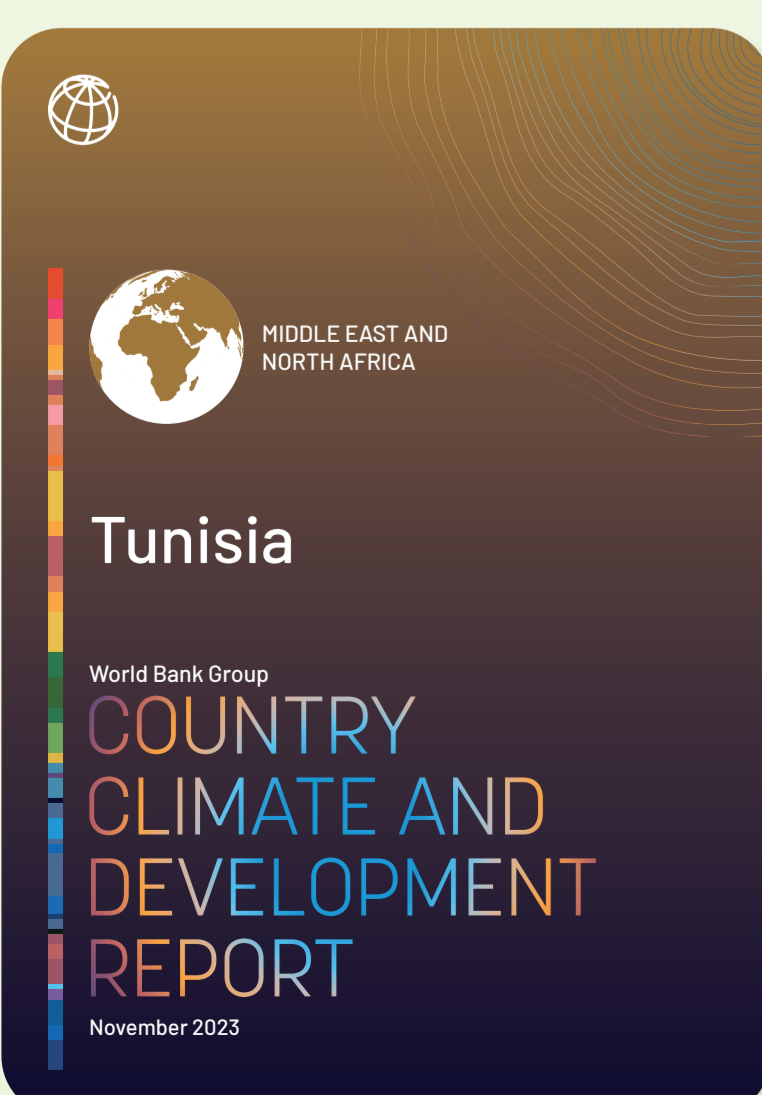
1. The modeling and assessment of ecosystem services over time aggravated by climate change if no bold actions/measures are proactively taken.
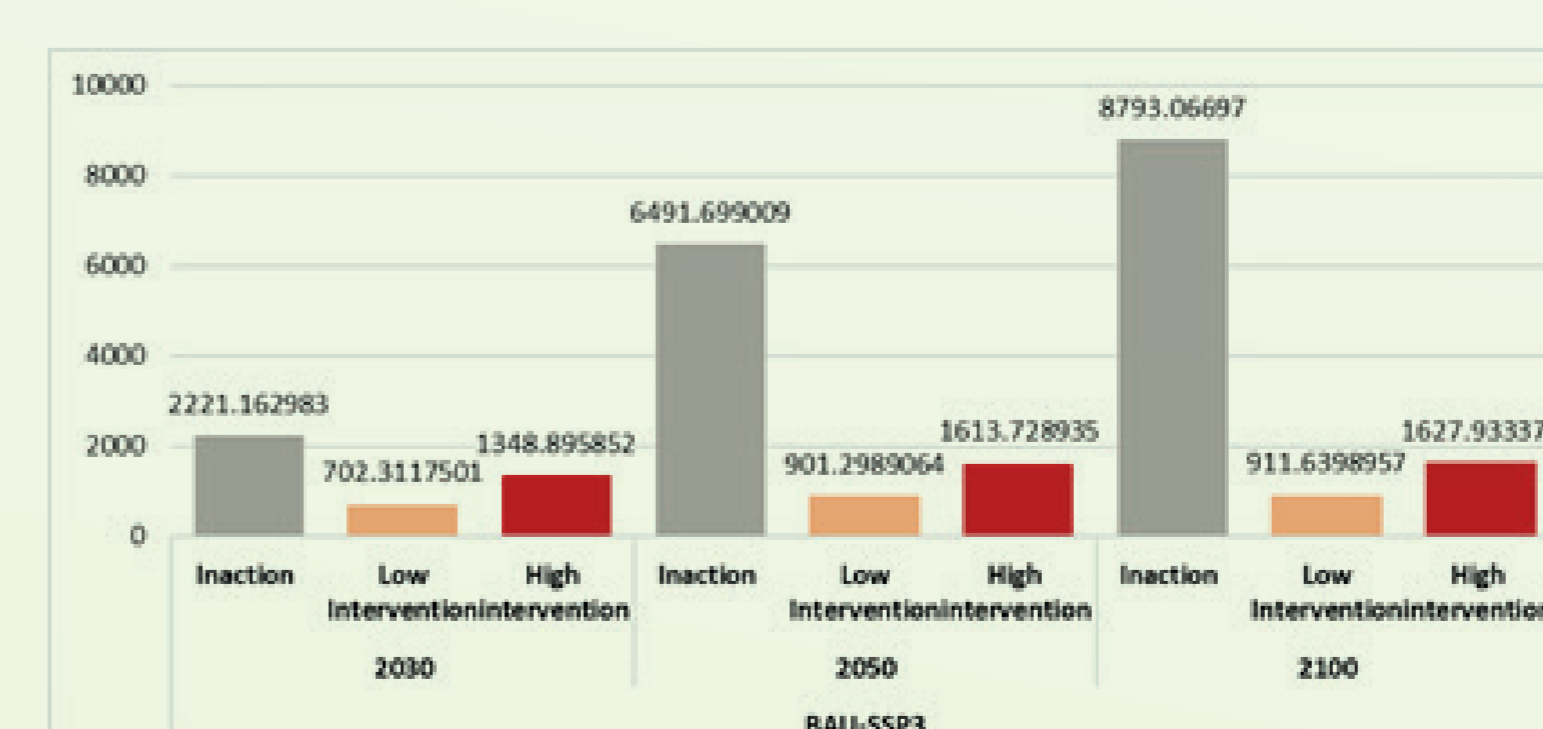
→ The modeling and assessment of ecosystem services associated with landscape management in Tunisia highlights the importance of promoting afforestation, implementing soil and water conservation techniques, promoting agroforestry practices, and strengthening institutional and policy frameworks to enhance ecosystem resilience and sustainable development in the face of climate change.

2. The comparison in terms of costs of intervention vs. cost of inaction, shows that the cost of inaction remains the highest for the time horizons **2030**, **2050** and **2100** at a **6%** discount rate.

PROGRESS AND RESULTS:

1. **Progress in natural capital data and analysis (NCA, other data, reports):**
Ecosystem services modeling in the Siliana Watershed: a summary report will be published through the Maghreb Technical Notes Series.
Ecosystem Natural Capital and sustainable tourism accounts: relevant data are being collected and process to create the expected accounts and develop a comprehensive database and related geo-enabled platform.

2. **Progress in using data and evidence to inform policies and Bank core documents (e.g. CCDR, CEA, CPF):**
Data and evidence related to the Ecosystem Services modeling in the Siliana Watershed were used to inform the Tunisia CCDR, moving towards climate-resilient policies including integrated landscape management. ENCA and sustainable tourism accounts will be used to inform the implementation of the Tunisia 2035 Sustainable Tourism Strategy.

3. **Capacity building (# of people trained, % female, benefiting agencies):**
Several trainings on Ecosystem Natural Capital and sustainable tourism accounts and related tools are planned from March 2024 to September 2024 to strengthen the capacities of all the stakeholders involved.

The ES modelling and related economic analysis informed the CCDR as part of the recommendations of high impact action for a green, resilient, and inclusive transition to increase the resilience and efficiency of the agricultural sector and leverage nature-based solutions as follows:

Incentivize (for example through subsidies and tax incentives) and invest in protection and rehabilitation of ecosystems, especially watersheds, oasis ecosystems, forests, and wetlands. Implement widespread sustainable land-use planning, water management practices, and agroforestry.

Tunisia COUNTRY CLIMATE AND DEVELOPMENT REPORT — MIDDLE EAST AND NORTH AFRICA — World Bank Group — November 2023

Cost of inaction vs. cost of intervention (M$, 6%)

	BAU-SSP3		
	2030	2050	2100
Inaction	2221.162983	6491.699009	8793.06697
Low intervention	702.3117501	901.2980064	911.6398957
High intervention	1348.895852	1613.728935	1627.933371

	Actual provision (t/ha/yr)	
	Siliana watershed	Tunisia
Sédiment retention	18.2	5.0
Surface water yield	38.9	209.0
Underground water yield	4.3	97.4
Carbon sequestration	0.2	0.1
Olive yield	1.0	0.7
Barley yield	1.4	0.9
Durum wheat	1.6	1.8
Soft wheat	1.4	1.7

Assessing landscape management approaches via ecosystem services (ES) to address water scarcity