

Climate Change Impacts & Sustainable Tourism Strategies



THE TUNISIAN EXPERIENCE

11M+

Annual Tourists

9%

GDP

1300 km

Med. Coast



01

Tunisia's Climate Vulnerability Profile

Understanding the stakes for Tunisia's tourism sector

Climate Vulnerability: Tunisia's Tourism Sector at Risk

Rising Temperatures

Average temperatures up +1.4°C since 1960. Saharan heat expansion threatens southern tourism. Beach season shortening in northern coastal zones.

Coastal Erosion

30% of Tunisia's 1,300km coastline faces erosion risk. Sea-level rise threatens Hammamet, Sousse & Djerba hotel infrastructure (50,000+ rooms).

Water Scarcity

Tourism sector consumes 15% of national water. Decreasing rainfall (–20% forecast by 2050) threatens resorts, golf courses & agricultural tourism.

Extreme Events

Increased flash floods in the Medjerda Valley and Saharan dust storms reduce tourist comfort and damage heritage sites.

🚩 Tunisia ranks among the top 10 most climate-vulnerable Mediterranean countries (World Bank, 2023)

02

Tunisia's Three-Pillar National Strategy

A coordinated cross-ministerial response to climate change

Tunisia's Three-Pillar Response Framework

Ministry of Environment

Ecological Transition

- National Ecological Transition Fund (FTE)
- Integrated Coastal Zone Management
- Shoreline Protection & Resilience Plan
- Biodiversity Corridor Preservation
- National Climate Change Adaptation Plan (PNACC)

Ministry of Industry & Energy

Energy Transition

- National Energy Efficiency Strategy 2035
- Renewable Energy: 35% target by 2030
- Hotel sector green certification program
- Solar thermal & PV in tourism facilities
- STEG Green Tariff for eco-certified operators

Ministry of Tourism

Sustainable Tourism

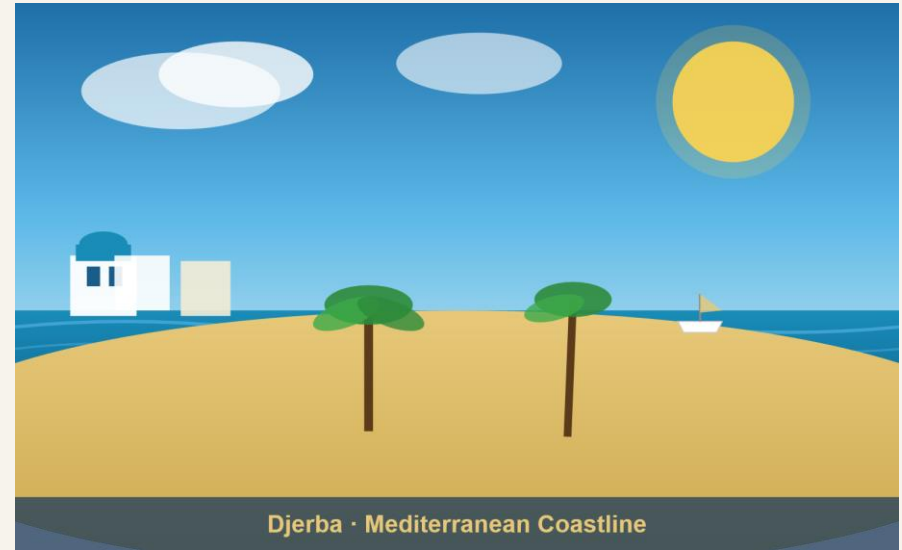
- National Sustainable Tourism Strategy 2035
- Alternative & Rural Tourism Development
- Green Label Certification (Tunisia Eco-Label)
- Cultural Heritage Tourism Diversification
- Community-Based Tourism Promotion

Ecological Transition Fund & Coastal Protection



Fonds de Transition Écologique (FTE)

- Budget: TND 120M allocated 2022–2026 for green infrastructure
- Finances eco-restoration of degraded coastal and arid ecosystems
- Supports SME transition to circular economy models in tourism zones
- Co-finances UNESCO Natural Heritage protection projects
- Partners with GEF, EU Green Deal, AFD for co-investment



120M TND

FTE Budget 2022–26

32

Blue Flag Beaches

2035

Net-Zero Target

1,300 km

Coastline Protected

Energy Efficiency & Renewable Energy Strategy

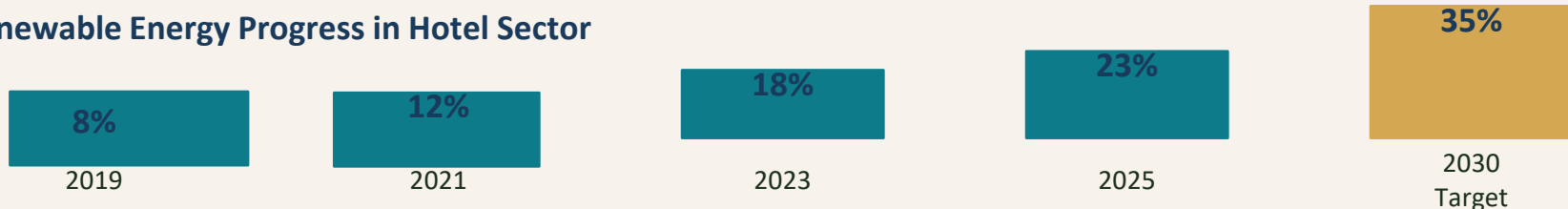
⚡ National Energy Efficiency Strategy

- ANME mandatory energy audit for hotels >100 rooms
- ISO 50001 energy management certification incentivized
- Green building code (RT2021) mandatory for new hotels
- LED retrofit program: 30% energy reduction target
- Smart metering deployment in major tourist zones

☀️ Renewable Energy in Tourism

- Target: 35% renewables in national energy mix by 2030
- PROSOL ELEC: subsidized solar PV for hotels & riads
- Djerba Solar Village pilot: 100% solar-powered tourism zone
- Saharan eco-lodges: off-grid solar + wind hybrid systems
- Green Hydrogen: Kairouan wind corridor for hotel heating

Renewable Energy Progress in Hotel Sector



Sectoral Sustainable Tourism Strategy 2035

Diversification beyond sun & sand: building climate-resilient tourism products

Alternative Tourism

- Ecotourism in national parks (Feija, Bou Hedma, Ichkeul)
- Desert tourism with low-footprint camps (Douz, Tozeur)
- Medical & wellness tourism (Gafsa thermal springs)
- Sports & adventure tourism (Atlas trails, diving)

Rural & Community Tourism

- Village homestay network: 200+ registered riads & maisons
- Berber cultural immersion programs (Matmata, Tataouine)
- Mountain agritourism in Ain Draham forest zone
- Women cooperative tourism: Sejnane ceramics, Chebika

Heritage & Cultural Tourism

- UNESCO World Heritage circuit: 8 inscribed sites
- Medina revitalization: Tunis, Kairouan, Sfax
- Archaeological tourism: Carthage, El Jem Amphitheater
- Intangible heritage: music, festivals, gastronomy routes



Goal: Alternative tourism to represent 30% of total tourist nights by 2030 (vs. 12% in 2022)

03

Flagship Initiatives & Best Practices

Concrete examples driving Tunisia's sustainable tourism transformation

Flagship Initiative: Djerba — A Model for Sustainable Island Tourism



Djerba Sans Plastique



UNESCO World Heritage (2023)

45T/mo

Plastic Diverted

3,200

Certified Businesses

+22%

Heritage Revenue

2023

UNESCO Inscribed

Djerba - Mediterranean Coastline

- Island-wide single-use plastic ban since January 2022
- Partnership: UNEP Mediterranean Action Plan
- Beach cleanup network: 500+ volunteer stewards
- Compostable packaging supply chain developed locally
- Tourist campaign: 'Djerba, Notre Trésor Bleu'
- Inscribed July 2023: Cultural Landscape of Djerba
- Covers the unique Houma urban/agricultural mosaic
- Ghriba Synagogue (oldest in Africa) — pilgrimage tourism
- Traditional Djerbien architecture — strict preservation codes
- Sustainable visitor management plan (daily entry limits)
- Community benefit-sharing framework for local artisans

Artisan Economy: Climate Resilience Through Cultural Heritage



350,000 artisans — 9.7% of Tunisia's active workforce


Pottery & Ceramics


- Nabeul: blue-white tiles, UNESCO Crafts City
- Djerba-Guellala: terracotta tradition since antiquity
- Sejname: UNESCO Intangible Heritage pottery
- Moknine: garden terracotta export network


Textiles & Carpets


- Kairouan: 23,000+ weavers, mergoum & kilim
- Mahdia: silk weaving with gold-thread technique
- Ain Draham: Berber wool rugs & blankets
- Gafsa: traditional fouta textile revival

Handicrafts as Climate Adaptation Strategy

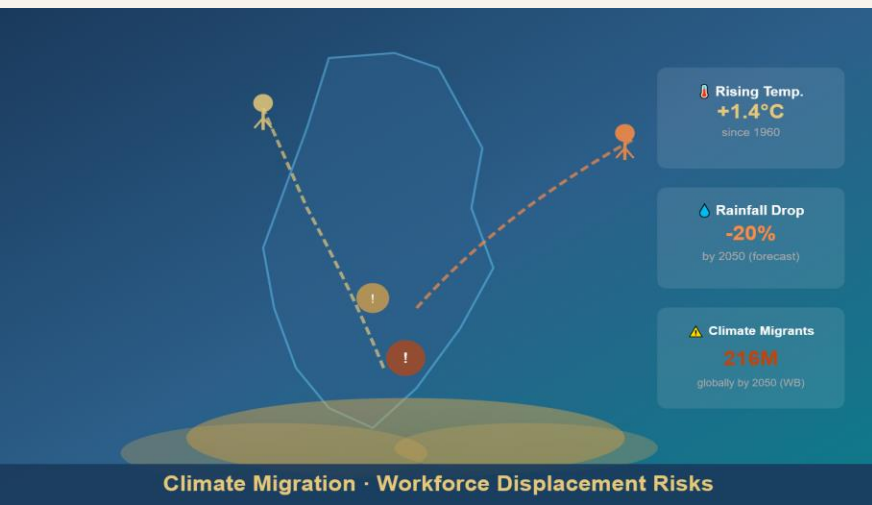
 Zero-waste workshops: upcycled ceramic shards, repurposed textile scraps

 Natural materials: local clay, organic dyes, olive wood — zero imported inputs

 3× higher economic value per tourist than mass-market souvenirs

 65% women artisans: climate-resilient income for vulnerable rural communities

Combating Climate-Induced Workforce Displacement in Tourism



Why it matters for Tourism:

- Southern Tunisia (Tozeur, Tataouine, Douz): desertification pushes farmers & artisans to coast
- Coastal erosion displaces fishing communities dependent on eco-tourism income
- Youth rural exodus: traditional crafts, guiding & farming skills lost to cities
- Hotel sector seasonal workers increasingly migrate permanently under climate stress
- Tunisia is a transit & destination country for climate migrants from Sub-Saharan Africa

Tunisia's Mitigation Strategies: Keeping Communities Rooted

01

Rural Tourism Jobs

200+ registered rural homestays & eco-lodges creating year-round alternative income to agriculture

02

Digital Artisan Platform

E-commerce & virtual workshops for artisans to reach global markets without physical migration

03

Climate Resilience Training

INAT vocational training for 5,000 rural workers in sustainable tourism, guiding & hospitality

04

Oasis Economy Revival

Eco-tourism around ksour, chott lakes & oasis agriculture generates dignity-preserving local income

Gastronomic & Cultural Tourism: The Culinary Heritage Route

★ La Charfiya — UNESCO Intangible Cultural Heritage (2023)

Traditional embroidery tradition from Nabeul, inscribed UNESCO 2023. Forms the anchor of a culinary-artisan immersive circuit linking Cap Bon's gastronomy, terracotta & silk crafts.



The Tunisian Culinary Route

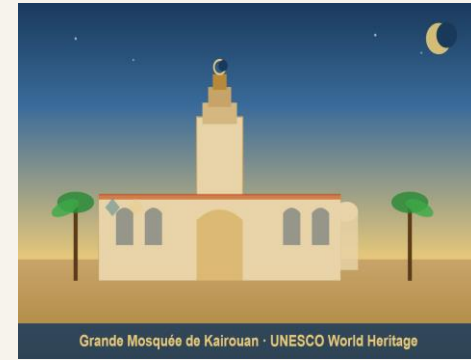
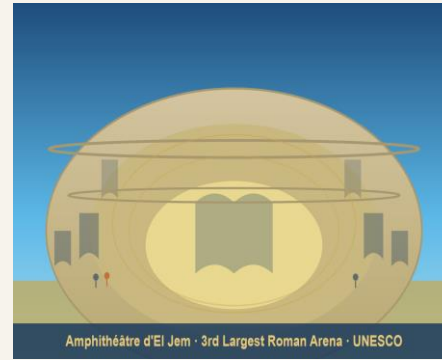
- 14 regional culinary circuits mapped and certified
- Farm-to-table: olive oil, date, harissa tasting trails
- Cooking classes in medinas: Tunis, Sfax, Houmt Souk
- Slow Food Tunisia network: 35 protected local products
- Export of culinary tourism models to OIC partners



Artisanat & Circular Economy

- ONA network: 350,000 registered certified craftspeople
- Zero-waste workshops: pottery, weaving, zellige, copper
- Upcycling centers in medinas: waste into premium souvenirs
- Circular economy label for tourism supply chains
- UNESCO Crafts Cities: Nabeul (ceramics), Gafsa (weaving)
- Women-led cooperatives: Sejnane figurines, Ain Draham rugs

Active & Heritage Tourism: Trekking Routes & UNESCO World Heritage Circuit



Tunisia UNESCO Heritage Circuit — 8 Sites

- Tunisia Trail Network: 3,500km marked trails in 8 zones
- GR Tunisie: 1,200km Ain Drahem → Tozeur transect
- Atlas Dorsale: Bou Kornine, Zaghouan, Chambi peaks
- Desert trekking: Saharan circuits from Douz & Ksar Ghilane
- Birdwatching: Ichkeul (Ramsar) + Lake Bizerte circuits
- E-bike & cycling routes in Cap Bon peninsula

- Medina of Tunis — Arab-Andalusian masterpiece
- Amphitheater of El Jem — 3rd largest Roman arena globally
- Kairouan — First city of Islam in North Africa, 670 AD
- Dougga (Thugga) — Best-preserved Roman town in Africa
- Carthage — UNESCO Archaeological Site
- Djerba Cultural Landscape — inscribed 2023

Alternative routes generate 3× more local economic value per visitor · Carbon footprint 60% lower than resort tourism

Medina Heritage & Circular Economy in Hotels

Tunisia's Circular Tourism Economy Framework



Waste Mgmt

Zero landfill hotels: composting, biogas from organic waste, glass/metal recycling in tourist zones



Water Reuse

Wastewater treatment & reuse for irrigation in 78% of classified hotels; rainwater harvesting in riads



Local Sourcing

Short supply chains: km0 restaurants, local produce certification, direct contracts with farm cooperatives



Green Retrofit

250 hotels upgraded 2022–2024; avg. 28% energy savings; EU-funded renovation fund operational



Zero Packaging

Returnable container scheme in tourist zones; biodegradable amenities mandatory in eco-label hotels

78%

Hotels Reusing Water

**50% Hotels
Retrofitted**

28% Energy Saved

35 Protected Local
Products

Key Results & Roadmap to 2030

32

Blue Flag beaches certified

-18%

CO₂/tourist-night since 2019

250

hotels green-retrofitted

+35%

rural tourism arrivals 2022–24

78%

hotels reusing treated water

350K

artisans in eco-tourism chains

Strategic Roadmap 2025–2030



Recommendations for OIC Member States

Lessons from Tunisia's experience applicable across the OIC tourism family

01

Adopt a Cross-Ministerial Framework

Climate adaptation for tourism requires alignment between environment, energy, and tourism ministries with joint working groups and shared KPIs.

02

Diversify Beyond Mass Tourism

Heritage, cultural, rural, and culinary tourism routes are inherently more climate-resilient and generate higher local value per tourist.

03

Protect Artisan & Rural Livelihoods

Invest in artisan economy platforms, circular craft tourism, and women's cooperatives to anchor vulnerable communities against climate migration.

04

Counter Climate-Driven Migration

Rural tourism jobs, digital artisan platforms, and oasis economy revival keep skilled workers rooted and prevent irreversible cultural loss.

05

Leverage UNESCO & Intangible Heritage

Cultural inscription drives high-value, climate-resilient tourism. OIC states should nominate living heritage, culinary traditions, and crafts.

شكراً · Merci · Thank You



Tunisia: A Living Laboratory for Sustainable OIC Tourism

Ministry of Tourism, Republic of Tunisia

COMCEC Working Group on Tourism

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