



CLIMATE RESILIENCE FOR MARMARA REGION

Long-Term Adaptation and Implementation Strategy

Facing the Climate Crisis in Marmara

The Marmara Region, home to over 25 million people and the economic heart of Türkiye, is already feeling the impact of climate change:

- **Heatwaves intensified by the urban heat island effect**
- **Floods and flash floods from more intense rainfall**
- **Sea level rise threatening coastal cities like Istanbul**
- **Increased risks to public health, transport, and waste systems**

Priority Areas and
Actions

Methodology at a Glance

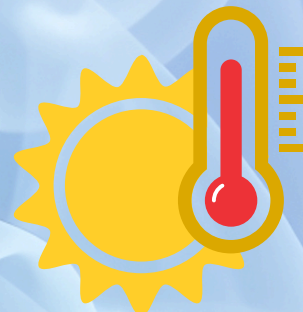
Call to Action



Priority Areas and Actions

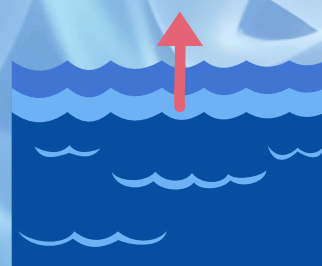
1. Combatting Urban Heat

- Expand green spaces and tree canopies
- Introduce cool roofs and permeable surfaces
- Establish neighborhood cooling centers
- Mandate heat-sensitive urban design
- Implementation tools: Urban heat maps, zoning codes



2. Flood and Sea-Level Resilience

- Upgrade stormwater systems and drainage
- Restore wetlands and build rain gardens
- Enforce no-build zones in floodplains
- Prepare for coastal sea-level rise impacts
- Implementation tools: Flood risk maps, emergency plans



3. Sustainable Energy for Climate and Health

- Retrofit public buildings for energy efficiency
- Promote rooftop solar on public facilities
- Low-emission heating and cooling
- Introduce smart grids and battery storage
- Implementation tools: Energy audits, building codes



Priority Areas and Actions

4. Climate-Smart Transport

- Expand metro, tram, and bicycle networks
- Electrify municipal buses and ferries
- Retrofit transport hubs for floods
- Shaded pedestrian and bike corridors
- Implementation tools: Infrastructure audits, TOD policies



5. Zero-Waste & Resilient Infrastructure

- Scale up recycling and composting
- Capture methane from landfills for energy
- Flood-proof waste sites and plants
- Promote community-led zero-waste zones
- Implementation tools: Waste targets, PPPs in waste tech



6. Protecting Public Health

- Heat-health early warning systems
- Climate-proof hospitals and clinics
- Expand disease surveillance
- Engage communities in preparedness
- Implementation tools: Risk maps, disaster systems





Methodology at a Glance

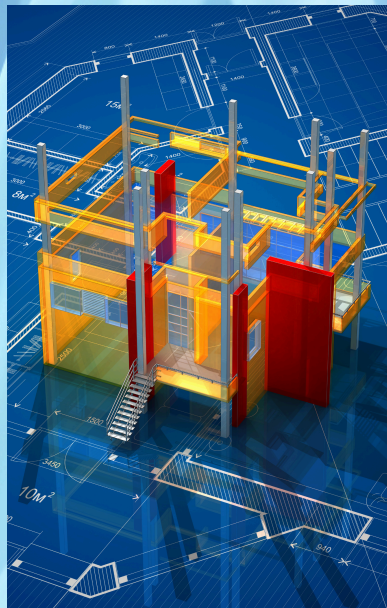
Risk & Vulnerability Assessments (RVA)

Stakeholder Engagement & Community Co-design

Climate Modeling and Scenario Planning

Urban Planning Mainstreaming

Monitoring, Reporting & Verification (MRV)





Institutional Coordination

- **National:** Ministries (Environment, Energy, Health, Transport), AFAD, MGM
- **Regional:** Marmara Municipalities Union (MMU), Development Agencies, TÜBİTAK
- **Local:** Municipalities, community leaders, NGOs
- **Private Sector:** Industry partners, SMEs, energy providers
- **Academia:** Istanbul Technical, Boğaziçi, Marmara Universities

Monitoring & Reporting

- Annual Climate Action Reports
- GIS-based dashboards and open data platforms
- Peer learning through annual Marmara Climate Forum

Call to Action


- Local governments are key players in building climate resilience.
- This brochure is your roadmap for preparing a Sustainable Energy and Climate Action Plan (SECAP).



Protect Marmara. Prepare your municipality. The time to act is now.
Marmara Municipalities Union (MMU) – www.marmara.gov.tr | climate@marmara.gov.tr



Funded by
the European Union



To build resilient, livable, and low-carbon cities across Marmara by 2050, in alignment with Türkiye's National Climate Strategy and the 2053 Net-Zero Goal.

*Without action, these threats will worsen. But with the right strategies,
Marmara can adapt and thrive.*

This brochure has been prepared within the framework of the project 'EU for the Energy Transition: A Compact of Mayors in the western Balkans and Türkiye', co-financed by the European Union and the German Federal Ministry for Economic Cooperation and Development (GIZ), implemented in Türkiye by the Lithuanian Central Project Management Agency (CPVA); Covenant of Mayors in the Western Balkans and Türkiye' project, co-financed by the European Union and the German Federal Ministry for Economic Cooperation and Development.