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CLIMATE CHANGE ADAPTATION ACTION PLAN AEGEAN REGION, TÜRKİYE

Building Resilience in Agriculture, Water, Coasts, and Communities

PRESENTATION 2025

START NOW

More Information
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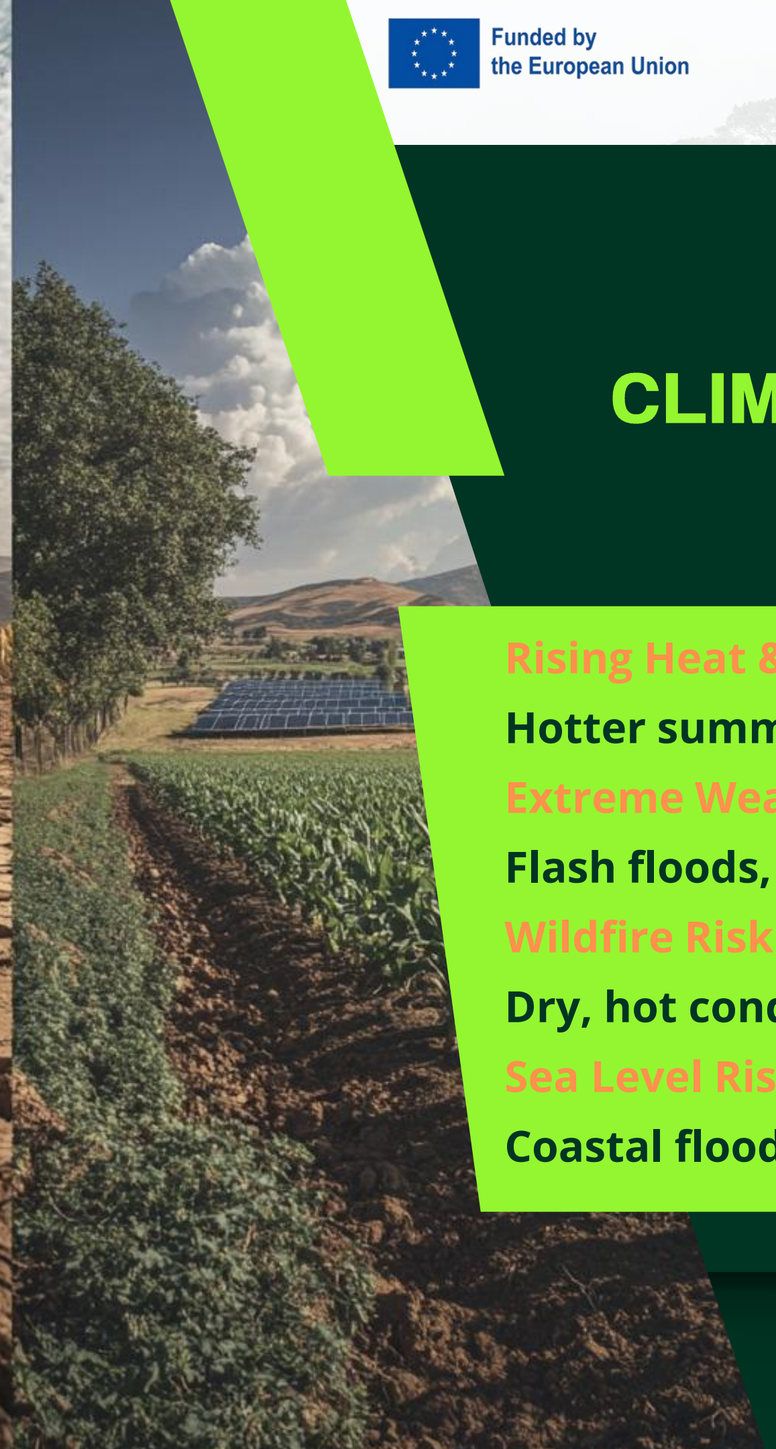

CLIMATE CHALLENGES IN THE AEGEAN

Rising Heat & Drought

Hotter summers, frequent heatwaves, prolonged droughts

Extreme Weather

Flash floods, intense downpours, stronger storms

Wildfire Risk

Dry, hot conditions increasing forest fire threats

Sea Level Rise:

Coastal flooding, erosion threatening low-lying areas

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MOST VULNERABLE SECTORS

- **Agriculture & Food:** Drought, heat stress, reduced yields
- **Water Resources:** Scarcity, reservoir depletion, user conflicts
- **Coastal Zones:** Erosion, storm surges, flood risks
- **Biodiversity:** Forest stress, habitat loss, species shifts
- **Public Health:** Heat-related illness, disease spread
- **Tourism:** Heat discomfort, cultural site degradation
- **Energy & Infrastructure:** Grid strain, flood/fire damage
- **Urban Areas:** Urban heat, Urban floods, infrastructure stress

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URBAN SETTLEMENTS & INFRASTRUCTURE -1-

Adaptation and Implementation Actions Urban Heat Island

- **Expanding Urban Green Spaces:**

Creating and maintaining urban parks, green belts, street trees, and green roofs reduces surface and air temperatures, improves air quality, and enhances water retention in cities.

- **Implementing Cool Roofs and Pavements:**

Switching to light-colored, reflective roofing materials and pavements can reduce surface heat absorption, lowering surrounding air temperatures and cooling indoor environments.

- **Establishing Urban Forests and Shaded Streets:**

Planting shade-providing, drought-tolerant trees along streets and in urban squares can significantly lower local temperatures and reduce heat stress for pedestrians.

- **Introducing Urban Water Features and Blue Infrastructure:**

Integrating water elements such as ponds, fountains, rain gardens, and constructed wetlands can help absorb heat, regulate humidity, and reduce surface temperatures.

- **Smart Urban Planning:**

Urban zoning must consider wind corridors, building orientation, density limits, and green infrastructure integration to prevent heat traps and allow natural cooling airflow.

- **Promoting Heat-Resilient Building Design:**

Passive cooling elements, proper insulation, natural ventilation, and sun-shading systems should be standard in both new constructions and retrofits.

- **Heatwave Early Warning Systems:**

Strengthening meteorological monitoring and establishing SMS and app-based alert systems can help residents prepare for extreme heat in advance.

- **Establishing Community Cooling Centers:**

Municipalities can designate and retrofit public spaces as cooling shelters during heatwaves, targeting vulnerable populations such as the elderly and children.

- **Supporting Urban Agriculture and Rooftop Gardens:**

Green roofs and community urban farms improve insulation, reduce surface temperatures, and create co-benefits like food security and biodiversity.

- **Integrating Climate Resilience into Urban Master Plans:**

All future urban planning and development strategies should incorporate projected climate data to ensure long-term resilience, prioritizing both mitigation and adaptation measures.

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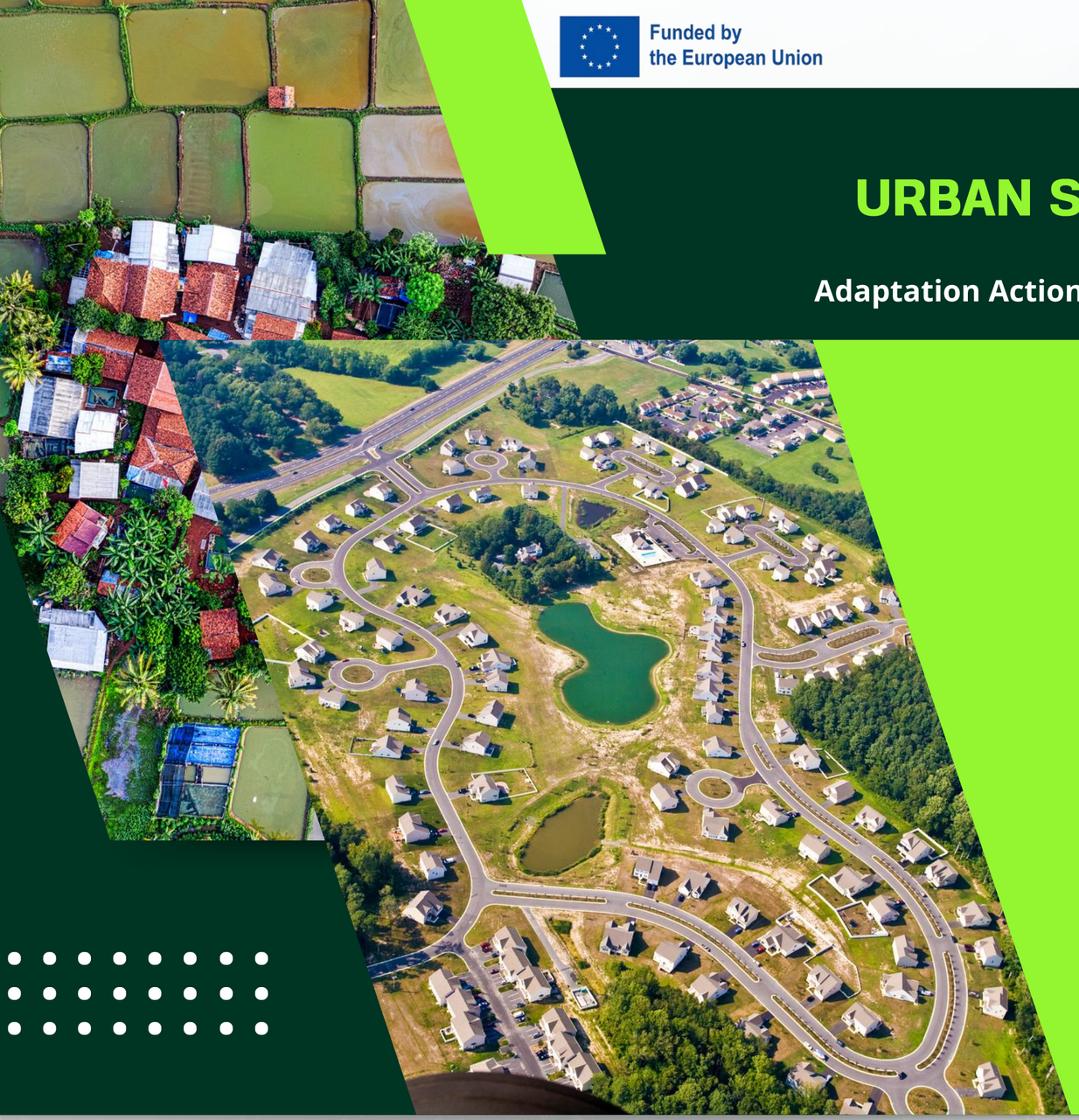

URBAN SETTLEMENTS AND INFRASTRUCTURE -2-

Adaptation Actions and Implementation Actions to Focus on Urban Flooding Risk Mitigation

- Mandate the use of permeable pavements and rain gardens in new developments.
- Upgrade urban drainage systems to accommodate intense rainfall events.
- Implement floodplain zoning and restrict construction in risk-prone areas.
- Deploy real-time rainfall monitoring and flood early warning systems.
- Restore and protect urban and peri-urban wetlands.
- Construct stormwater retention ponds and underground storage tanks.
- Maintain and re-naturalize river channels flowing through urban zones.
- Train and prepare communities for flood emergencies.
- Use climate projections to guide future urban planning decisions.
- Allocate municipal resources for flood-resilient infrastructure investment.

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ADAPTATION AND MITIGATIONACTIONS FOR URBAN FLOODING

Green and Permeable Infrastructure:
Promote permeable surfaces (porous pavements, green roofs, rain gardens) to allow water infiltration, reducing surface runoff.

Upgrading Stormwater Drainage Systems:
Expand the capacity of urban drainage, modernize pumping stations, and build separate rainwater and sewage channels to prevent overflows.

Floodplain Zoning and Restriction Policies:
Ban construction in flood-prone areas and update urban zoning to leave room for natural water retention and flood buffers.

Early Warning Systems for Flood Events:
Develop real-time rainfall and flood alert systems, especially for urban neighborhoods with known drainage limitations.

Urban Wetlands Restoration:
Restore or create wetlands in peri-urban areas to act as natural sponges during storm events.

Water Retention Basins and Underground Tanks:
Construct retention ponds, underground tanks, and dry basins in urban parks to temporarily store excess stormwater.

River Channel Maintenance and Green Restoration:
Regularly clear obstructions, re-naturalize riverbanks, and reduce concrete channelization to slow water flow and prevent urban flash floods.

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Community Emergency Preparedness Training:
Educate citizens on evacuation routes, flood safety practices, and neighborhood-based alert networks.

Integrating Climate Models into Urban Planning:
Use flood risk maps informed by climate change projections for future zoning and infrastructure development.

Municipal Climate-Resilient Investment Strategies:
Secure long-term financing to modernize urban water management and resilience infrastructure.

Key Institutions to Collaborate

Municipalities,
General Directorate of State Hydraulic Works (DSI) AFAD,
Ministry of Urbanisation,
Provincial Environmental Authorities.

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ADAPTATION FOCUS: SEA-LEVEL RISE PREPAREDNESS

Coastal cities in the Aegean are increasingly exposed to sea-level rise and coastal erosion, threatening infrastructure, fresh water resources, and livelihoods.

- **Adaptation and Implementation Actions**
- **Update development regulations to enforce coastal buffer zones.**
- **Restore natural coastal defenses such as dunes and wetlands.**
- **Combine hard engineering solutions (sea walls) with nature-based protection.**
- **Elevate critical infrastructure above projected sea-level thresholds.**
- **Monitor groundwater salinity to prevent saltwater intrusion.**
- **Run public awareness campaigns for coastal communities.**
- **Establish Integrated Coastal Zone Management (ICZM) plans.**
- **Retrofit coastal facilities to withstand storm surges.**
- **Develop socially equitable relocation plans for highly exposed areas.**
- **Strengthen international collaboration and knowledge exchange on coastal adaptation.**

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INSTITUTIONS TO COLLABORATE

- Municipalities & Metropolitan Municipalities
- Ministry of Environment, Urbanisation & Climate Change
- Ministry of Urbanisation
- Turkish State Meteorological Service (MGM)
- General Directorate of State Hydraulic Works (DSİ)
- Disaster and Emergency Management Authority (AFAD)
- Provincial Environmental Directorates

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ENERGY AND CRITICAL INFRASTRUCTURE CLIMATE ADAPTATION PLAN

Adaptation Actions and Implementation Steps

Reinforce electrical grid and manage peak demand

- Upgrade transformers and transmission lines, especially in areas where heatwaves increase energy demand.
- Implement demand-side management strategies, such as smart metering, consumer incentive programs, and awareness campaigns to reduce peak hour usage.
- Establish temporary backup energy systems for critical facilities like hospitals, water supply stations, and emergency services during extreme weather.

Adapt public infrastructure to heatwaves and extreme rainfall

- Design public buildings with passive cooling strategies and install high-efficiency cooling systems in health and social care buildings.
- Retrofit and expand urban stormwater drainage systems to handle intense and short-duration rainfall linked to climate change.
- Apply heat-reflective coatings to surfaces and prioritize shading solutions (trees, canopies, solar pergolas) for streets, public squares, and bus stops.

Promote decentralized renewable energy systems

- Encourage installation of rooftop solar panels, solar water heaters, and small-scale wind turbines in residential, commercial, and public buildings.
- Simplify permitting and net-metering regulations to accelerate local renewable energy adoption.

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Improve energy efficiency of infrastructure and services

- Conduct systematic energy audits in public and private buildings to identify inefficiencies.
- Incentivize energy-saving retrofits, including high-performance insulation, energy-efficient HVAC systems, and LED lighting.
- Support public campaigns on reducing energy consumption in households and businesses, particularly during extreme weather events.

Integrate climate resilience into energy infrastructure planning

- Require climate risk assessments for all new energy generation, transmission, and distribution projects.
- Locate energy-critical facilities away from known flood zones, wildfire-prone areas, and unstable slopes.
- Incorporate future temperature extremes into the design of transmission systems (e.g., choosing materials and components that tolerate higher operating temperatures).

Diversify the energy mix with climate-resilient sources

- Expand the share of geothermal, solar, and wind energy in the Aegean Region’s energy portfolio to reduce dependence on vulnerable hydropower sources.
- Promote hybrid energy systems that integrate storage solutions with renewable production.
- Accelerate adoption of geothermal-based heating and cooling for industrial and urban facilities, especially in geothermal resource-rich areas like Denizli and Aydın.

Invest in smart grids and large-scale energy storage

- Deploy smart grid solutions for real-time load balancing, predictive maintenance, and outage management.
- Develop grid-scale battery storage facilities to handle renewable energy fluctuations and ensure energy availability during extreme weather.

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KEY INSTITUTIONS INVOLVED

- **Ministry of Energy and Natural Resources — Coordination of national energy security policies, grid infrastructure upgrades, and renewable energy strategy.**
- **EPDK (Energy Market Regulatory Authority) — Regulation of grid and distribution company practices, pricing, incentives for renewable energy, and grid access.**
- **TEİAŞ (Turkish Electricity Transmission Corporation) — Operation and planning of the transmission network, system-wide balancing and adaptation investments.**
- **Distribution Companies (GEDİZ EDAŞ, AYDEM, etc.) — Regional grid maintenance, local power distribution network improvements, and customer-oriented adaptation measures.**
- **AFAD (Disaster and Emergency Management Authority) — Risk assessment, early warning, and rapid response planning in climate-induced emergencies.**
- **General Directorate of Meteorology — Weather and climate projections, early warning systems.**
- **Municipalities — Local adaptation planning, enforcement of construction standards, promotion of decentralized renewables, and urban drainage improvements.**
- **Private Sector — Investment and innovation in renewable energy, smart grids, and energy efficiency technologies.**
- **Universities and Research Institutions — Development of climate risk assessment tools, innovative technologies, and technical support for energy resilience projects.**
- **Regional Development Agencies — Project funding, technical support, and regional coordination of adaptation efforts.**

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AGRICULTURE & FOOD SECURITY

- Agriculture in the Aegean Region faces growing risks from climate change, including rising temperatures, irregular rainfall, and worsening water scarcity.
- Key crops such as olives, grapes, cotton, and cereals are increasingly impacted by drought, heat stress, and shifting seasonal patterns.
- Water shortages in basins like Gediz and Büyük Menderes are reducing irrigation, while warmer winters disrupt fruit production cycles.
- Without timely adaptation, these challenges threaten both farmer livelihoods and regional food security.

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COMBINED ADAPTATION AND IMPLEMENTATION ACTIONS

Efficient Irrigation and Water-Saving Farming

- **Expand use of drip and sprinkler irrigation systems.**
- **Train farmers in optimal irrigation scheduling.**
- **Encourage rainwater harvesting and on-farm water storage (ponds).**

Drought-Resistant Crops and Crop Diversification

- **Distribute and subsidize high-yielding, drought-tolerant seed varieties.**
- **Promote crop shifts from water-intensive plants to drought-hardy options such as barley, chickpeas, and lentils.**

Agro-Meteorological Early Warning Systems

- **Establish localized weather forecasting and drought alert systems.**
- **Deploy SMS/app-based advisories for extreme weather (heatwaves, frost, heavy rain).**

Climate-Smart Farming Extension Services

- **Scale up training in conservation agriculture, mulching, integrated pest management, and agroforestry techniques.**
- **Develop model demonstration farms to spread best practices.**

Crop Insurance and Financial Safety Nets

- **Expand participation in TARSİM (Türkiye’s national agricultural insurance scheme).**
- **Provide rapid post-disaster financial relief and access to subsidized recovery loans.**

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Integrated Water Resource Management

- Develop basin-level water allocation plans and invest in new reservoirs.
- Promote the use of recycled wastewater and prioritize drought-year water sharing strategies.

Climate-Resilient Crop Research and Development

- Establish breeding programs for heat-, drought-, and salt-tolerant crop varieties.
- Support long-term agricultural innovation through universities and international collaborations.

Agroforestry and Ecosystem-Based Farming

- Promote integration of trees into farming systems (windbreaks, intercropping, shelterbelts).
- Support biodiversity-friendly practices that enhance soil fertility, shade, and water retention.

Soil and Land Conservation Measures

- Expand terracing, soil erosion prevention structures, and soil restoration projects.
- Grow incentive-based conservation programs like CATAK for sustainable land stewardship.

Strengthening Farmer Institutions and Networks

- Build the capacity of cooperatives and water user associations for adaptive planning.
- Promote participatory approaches and farmer-led climate adaptation learning networks.

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KEY INSTITUTIONS INVOLVED IN IMPLEMENTATION

- Ministry of Agriculture and Forestry (Tarım ve Orman Bakanlığı)
- General Directorate of State Hydraulic Works (DSİ)
- Provincial Directorates of Agriculture and Forestry
- TARSİM (Agricultural Insurance Pool)
- Turkish State Meteorological Service (MGM)
- Universities and Agricultural Research Institutes
- Ministry of Environment, Urbanization and Climate Change
- Farmer Cooperatives and Unions (e.g., TARIM-KOOP, Ziraat Odaları)
- Water User Associations (Sulama Birlikleri)
- Non-Governmental Organizations (NGOs) and International Organizations

Support awareness campaigns, technical assistance, and ecosystem-based adaptation projects (e.g., WWF-Türkiye, FAO, UNDP).

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CLIMATE ADAPTATION PLAN FOR WATER RESOURCES

Introduction

- The Aegean Region’s water security is under growing threat due to climate change.
- The region’s hydrological system is heavily dependent on winter rainfall, but projections indicate a significant reduction in both rainfall and river flows — especially in critical basins like Gediz and Büyük Menderes.
- Rising temperatures will also accelerate evaporation, further limiting available surface and groundwater.
- Water scarcity will affect drinking water supply, agriculture, energy production, ecosystems, and industry.
- At the same time, extreme rainfall events will strain existing water infrastructure, increasing flood and pollution risks.

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ADAPTATION AND IMPLEMENTATION ACTIONS

- **Urban and Agricultural Water Efficiency**

Launch large-scale programs to reduce water loss in municipal networks, modernize irrigation systems (e.g., shift to drip irrigation), and encourage water-saving appliances in homes and businesses.

- **Wastewater Reuse and Alternative Sources**

Expand the treatment and reuse of wastewater, especially for irrigation, industrial cooling, and park maintenance; explore desalination for coastal urban areas and mobile systems for drought emergencies.

- **Groundwater Recharge and Rainwater Harvesting**

Build recharge basins and check dams to retain stormwater and enhance aquifer recharge; mandate rainwater collection systems in new developments and farms.

- **Reservoir and Storage Optimization**

Upgrade existing reservoirs to improve storage and distribution efficiency, and construct small-scale storage structures (e.g., farm ponds, village cisterns) to buffer against dry seasons.

- **Nature-Based Water Retention Measures**

Restore degraded wetlands and upper watershed forests to improve water retention, reduce surface runoff, and maintain river flows during drought.

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ADAPTATION AND IMPLEMENTATION ACTIONS

- **Early Warning Systems for Drought and Floods**

Expand monitoring networks and create an integrated early warning system that uses real-time data and seasonal forecasts to alert communities and farmers in advance.

- **Integrated River Basin Management (IRBM)**

Strengthen multi-stakeholder basin committees to develop annual drought plans, manage reservoirs cooperatively, and prioritize critical water uses during shortages.

- **Policy and Regulatory Reform**

Update water allocation laws to reflect climate-induced scarcity, introduce water quotas for drought years, and implement progressive tariffs that promote conservation across sectors.

- **Infrastructure Climate Proofing**

Retrofit dams, pipelines, and urban drainage to withstand extreme events such as flash floods and prolonged droughts; embed climate modeling in design and maintenance processes.

- **Public Awareness and Stakeholder Participation**

Launch educational campaigns, promote water-saving behaviors, and ensure farmers, industries, and local governments are fully engaged in regional water governance.

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KEY INSTITUTIONS FOR COOPERATION

- State Hydraulic Works (DSİ)
- Ministry of Agriculture and Forestry
- Ministry of Environment, Urbanization, and Climate Change
- Provincial Governorates and Metropolitan Municipalities
- State Meteorological Service (MGM)
- Disaster and Emergency Management Authority (AFAD)
- Universities and Research Institutions
- NGOs (e.g., TEMA, Doğa Derneği, WWF-Türkiye)
- River Basin Management Committees
- Private sector stakeholders (agriculture, industry)

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COASTAL ZONES AND MARINE AREAS CLIMATE ADAPTATION PLAN

Introduction

- The Aegean coastline — home to thriving tourism, historic settlements, rich biodiversity, and vital marine industries — faces growing risks from climate change.
- Rising sea levels, stronger coastal storms, saltwater intrusion, habitat loss, and ecosystem shifts are already reshaping the natural and economic landscape of the region.
- Without timely action, these pressures will erode coastal resilience, threaten infrastructure, disrupt tourism and fisheries, and reduce the safety and quality of life in coastal communities.
- This adaptation plan proposes an integrated set of engineering, ecological, regulatory, and community-based actions designed to secure the Aegean’s coastal zones against the long-term impacts of climate change while promoting sustainable development.

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ADAPTATION AND IMPLEMENTATION ACTIONS
COASTAL ZONES AND MARINE AREAS

Integrated Coastal Zone Management and Setback Zones

Establish legally enforced coastal management plans across Aegean provinces, including dynamic "setback" buffer zones to prevent new construction in erosion and flood-prone areas.

Nature-Based Erosion Control & Habitat Restoration

Deploy beach nourishment, dune stabilization, wetland conservation, and living shoreline techniques to protect and restore coastal ecosystems while reducing wave and flood impact.

Coastal Flood Early Warning Systems

Develop and implement advanced real-time monitoring and alert systems for storm surges, high waves, and flooding, paired with community evacuation protocols.

Marine Ecosystem Resilience Programs

Establish and expand Marine Protected Areas (MPAs), implement fisheries management measures, and restore seagrass beds and other natural habitats to buffer against warming and acidification.

Hard Coastal Defenses at Critical Locations

Design and build engineered structures (seawalls, storm surge barriers, breakwaters) selectively for irreplaceable urban areas, ports, and heritage sites exposed to rising seas and extreme weather.

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ADAPTATION AND IMPLEMENTATION ACTIONS
COASTAL ZONES AND MARINE AREAS

Managed Retreat and Strategic Land Use Adjustment

Identify unsustainable coastal settlements and plan proactive relocation, transforming vacated areas into ecological buffer zones or open space over time.

Infrastructure Climate-Proofing

Redesign and retrofit transport, utility, port, and tourism-related infrastructure in coastal areas to withstand sea-level rise and intensified storm events.

Adaptive Fisheries & Marine Livelihoods Support

Support fishing communities in adjusting to shifting fish distributions and invasive species, while encouraging sustainable alternatives and early-warning for harmful marine phenomena.

Sustainable Coastal Tourism Transition

Diversify the tourism economy by promoting inland and climate-resilient alternatives (ecotourism, heritage tourism) and guiding future developments away from high-risk shorelines.

Multi-Stakeholder Coastal Resilience Coordination

Establish a permanent regional coordination mechanism to align municipalities, ministries, NGOs, and researchers around integrated coastal adaptation, ecosystem management, and monitoring.

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INSTITUTIONS TO COLLABORATE

- Ministry of Environment, Urbanization and Climate Change
- (Spatial planning, coastal policy, managed retreat regulation, ecosystem conservation)
- Ministry of Transport and Infrastructure
- (Coastal structures, port resilience, engineering solutions)
- Ministry of Agriculture and Forestry
- (Fisheries management, ecosystem resilience, aquaculture, invasive species control)
- AFAD — Disaster and Emergency Management Authority
- (Emergency planning, evacuation systems, coastal flood response)
- Turkish State Meteorological Service
- (Storm surge and extreme weather monitoring, forecasting)
- Local Municipalities & Metropolitan Municipalities
- (Urban planning, enforcement of setback zones, coastal restoration, public awareness)
- Development Agencies (İZKA, GEKA)
- (Financial support for sustainable coastal projects and tourism diversification)
- NGOs and Environmental Foundations
- (WWF-Türkiye, Doğa Koruma Merkezi, TEMA) — (Nature-based solutions, restoration projects)
- Universities & Research Institutions
- (Monitoring, climate projections, coastal ecosystem studies)
- Fisheries Cooperatives & Local Communities
- (Local adaptation actions, marine stewardship, sustainable livelihoods)

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KEY INSTITUTIONS TO COLLABORATE

- **Ministry of Agriculture and Forestry**

(General Directorate of Nature Conservation and National Parks, General Directorate of Forestry, Fisheries and Wildlife Units)

- **Ministry of Environment, Urbanization and Climate Change**

(Environmental Impact and Adaptation Units)

- **State Hydraulic Works (DSİ)**
- **Universities**

(Ege, Dokuz Eylül, Muğla Sıtkı Koçman — Ecology, Biology, Forest Engineering departments)

- **NGOs (WWF-Türkiye, Doğa Derneği, Nature Conservation Centre)**
- **Local Governments**

(Municipalities and Provincial Directorates of Environment and Forestry)

- **Community-based Organizations and Volunteer Networks**
- **International Organizations**

(IUCN, MedECC, GEF Small Grants Programme)

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BIODIVERSITY & ECOSYSTEM SERVICES

Adaptation and Implementation

Expansion and Dynamic Management of Protected Areas

Strengthen and expand protected area networks, especially in locations expected to serve as climate refugia. Protected area management plans should integrate updated climate vulnerability assessments, fire prevention strategies, and invasive species monitoring protocols.

Proactive Wildfire Risk Reduction

Implement integrated fire risk management including preventive fuel load reduction, establishing buffer zones, improving early detection systems, and reinforcing the capacity of both professional and community-based firefighting units.

Restoration of Degraded Ecosystems

Rehabilitate degraded forests, rangelands, and wetlands to strengthen ecological resilience and ecosystem service delivery. Restoration efforts should prioritize native species suited to future climate conditions and be closely aligned with local hydrological and soil patterns.

Facilitating Species Migration and Conservation Breeding

Support species under severe climate stress through targeted translocation, seed banking, and conservation breeding. This includes relocating vulnerable fauna and flora to more stable microhabitats or controlled environments for future reintroduction.

Strengthening Control of Invasive Species and Pests

Develop a coordinated monitoring and rapid response framework to manage climate-driven invasive species expansion and pest outbreaks, minimizing ecological damage through environmentally responsible interventions.

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Ecological Connectivity Planning

Establish ecological corridors to enable species migration across fragmented landscapes in response to shifting climate zones. Connectivity planning should be embedded in land-use policy and regional development strategies.

Climate-Smart Forest Management

Revise forestry practices to promote structural diversity, resilience, and species mix suitable for emerging climate scenarios. Assisted migration of tree species and ongoing updates to forest management models should be institutionalized.

Protection of Freshwater Ecosystems

Implement environmental flow regulations, improve aquatic habitat restoration, and modernize dam operation models to sustain biodiversity and ecosystem functions in the face of changing hydrological regimes.

Strengthening Long-Term Monitoring and Research

Establish an integrated biodiversity monitoring network to continuously assess ecosystem health, detect climate-driven changes, and feed evidence-based data into adaptive conservation strategies.

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PUBLIC HEALTH & SOCIAL WELFARE

Adaptation and Implementation Actions

Heatwave Preparedness and Early Warning Systems

Establish a region-wide heat health early warning system. Integrate forecast data with public alerts and structured community responses including opening cooling centers, prioritizing care for vulnerable groups, and training emergency services for heat-related health surges.

Strengthened Vector-Borne Disease Surveillance and Control

Expand monitoring for climate-sensitive diseases such as West Nile virus, leishmaniasis, and malaria. Deploy targeted vector control programs and launch public education campaigns on personal protection and habitat management.

Safe Water and Sanitation Assurance During Climate Extremes

Enhance flood and drought contingency planning for water systems. Stockpile water treatment resources, strengthen water quality surveillance, and ensure infrastructure resilience to prevent contamination during extreme events.

Healthcare System Climate Preparedness

Equip hospitals and health facilities to maintain service continuity during heatwaves, wildfires, and floods. Update emergency protocols, secure backup energy and water systems, and train medical personnel in climate-related health risks.

Community Outreach and Health Risk Education

Implement sustained education campaigns on climate-related health risks. Engage schools, media, NGOs, and local leaders to deliver messages on heat safety, disease prevention, and hygiene during climate extremes.

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Climate-Resilient Urban Planning for Health Protection

Integrate public health into urban design. Promote green infrastructure, heat-mitigating building materials, and zoning reforms to reduce heat islands and improve air quality, especially in vulnerable neighborhoods.

Strengthening Social Safety Nets and Mental Health Services

Expand climate-adaptive social assistance programs for disaster-affected populations. Integrate mental health care into disaster recovery and establish community peer-support systems to strengthen social resilience.

Research and Development on Climate-Sensitive Diseases

Invest in scientific research on shifting disease patterns and vector ecology. Support early vaccine planning and partnerships with international health bodies for emerging infectious disease preparedness.

Institutional Capacity Building and Intersectoral Coordination

Establish dedicated climate-health units at national and provincial levels. Ensure cross-sectoral collaboration with urban planning, water management, agriculture, and disaster response for integrated adaptation actions.

Policy Integration and Long-Term Strategic Planning

Embed climate considerations into all public health planning processes. Strengthen Türkiye’s participation in international climate-health networks and ensure that national health policy reflects evolving climate risk scenarios.

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INSTITUTIONS TO COLLABORATE

- Ministry of Health & Provincial Health Directorates
- Disaster and Emergency Management Authority (AFAD)
- Turkish State Meteorological Service (MGM)
- Municipal Governments
- Ministry of Family and Social Services
- Ministry of Agriculture and Forestry (for vector control)
- Turkish Red Crescent & NGOs
- Universities & Research Institutes (Ege, Dokuz Eylül)
- WHO, ECDC

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TOURISM & CULTURAL HERITAGE

Adaptation Actions & Implementation

Seasonal Diversification & Alternative Offerings

Develop and market spring/autumn festivals, cultural tours, wellness retreats, agro- and eco-tourism packages to spread arrivals beyond peak summer.

Resource-Efficient Facilities

Roll out grants and certification for hotels to install low-flow fixtures, solar water heaters, high-efficiency HVAC, and smart energy controls; conduct on-site efficiency audits.

Climate Vulnerability Audits

Deploy expert teams to assess heat, flood, fire, and erosion exposure at beaches, marinas, and archaeological sites; prioritize protective upgrades.

Visitor Safety & Communication

Integrate multi-lingual weather alerts and safety protocols into booking and guide systems; install shade structures, hydration stations, and train staff in first aid for heat or flood incidents.

Climate Risk Insurance

Design subsidized insurance products covering storm, flood, and fire damage for tourism SMEs; establish a rapid-response relief fund for post-disaster recovery.

Resilient Infrastructure Design

Update building codes and permitting to require elevated, flood-resistant, and passively cooled designs in new developments; retrofit critical facilities accordingly.

Heritage Asset Protection

Install protective canopies and improved drainage around vulnerable monuments; apply UV-resistant conservation treatments and digitally document sites for archival.

Inland & Mountain Tourism Development

Invest in visitor centers, access roads, and shuttle services to cooler upland and rural destinations; promote eco-lodges and guided nature experiences.

Data Monitoring & Adaptive Management

Establish a tourism observatory to collect visitor feedback, climate-impact data, and market trends; adjust offerings and capacity planning in real time.

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INSTITUTIONS TO COLLABORATE

- Ministry of Culture & Tourism (MoCT)
- Regional Tourism Boards & Development Agencies
- Metropolitan & District Municipalities
- Ministry of Environment, Urbanization & Climate Change (MoEUCC)
- Disaster & Emergency Management Authority (AFAD)
- Turkish State Meteorological Service (TSMS)
- Insurance Regulatory & Development Authority
- Heritage Protection Directorate (MoCT)
- Hotel & Restaurant Associations
- Turkish Travel Agencies Association (TURSAB)
- Vocational & Higher Education Institutions

THANK YOU
FOR YOUR ATTENTION

“Together, we can contribute to a sustainable future”

Questions & Discussion

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