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# CLIMATE CHANGE ADAPTATION ACTIONS FOR MEDITERRANEAN REGION OF TÜRKİYE

**PRESENTATION 2025**

**START NOW**



More Information  
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## INTRODUCTION

- The Mediterranean Region is warming faster than the global average.
- Climate change already affects agriculture, water, biodiversity, cities, and public health.
- This presentation provides a roadmap to adapt and mitigate impacts, securing the region's future.

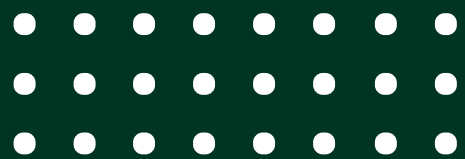






## KEY CLIMATE RISKS

- **Extreme Heat & Heatwaves**
- **Droughts**
- **Severe Rainfall & Flash Floods**
- **Storms & High Winds**
- **Wildfires**
- **Sea Level Rise & Erosion**
- **Vector-Borne Diseases**

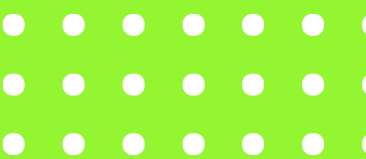






# MOST VULNERABLE SECTORS

- **Agriculture & Food Systems**
- **Water Resources**
- **Forests & Biodiversity**
- **Fisheries & Marine Life**
- **Public Health**
- **Urban Areas & Infrastructure**
- **Tourism**
- **Energy Systems**







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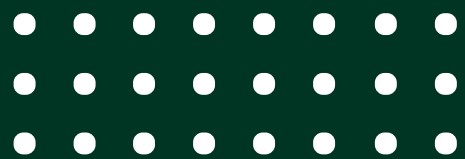


# SECTORAL ADAPTATION AND MITIGATION ACTIONS



**PRIVATE  
SECTOR**

**PUBLIC  
SECTOR**







# ADAPTATION AND IMPLEMENTATION ACTIONS FOR URBAN SETTLEMENTS AND INFRASTRUCTURE

## Urban Flood Control and Drainage Upgrades:

Assess flood risks, clear blockages, and install or improve pumping stations to enhance drainage capacity.

Improved infrastructure reduces flood damage and protects critical urban areas.

## Heat Mitigation in Cities:

Expand urban greenery, implement cool roofs and reflective coatings, and deploy passive cooling technologies. These measures lower urban temperatures, decrease energy use, and improve livability.

## Resilient Infrastructure Audits:

Regularly inspect and reinforce roads, bridges, and utilities to withstand extreme weather. Immediate fixes prevent catastrophic failures and enhance overall urban resilience.







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### **Sustainable Urban Mobility Initiatives:**

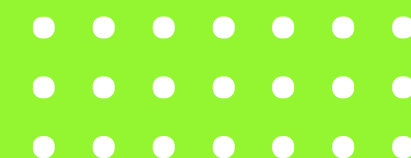
Expand public transit, build safe bicycle lanes, and transition municipal fleets to low-emission vehicles. Promoting sustainable mobility reduces congestion, emissions, and urban heat.

### **Community-Based Resilience Programs:**

Engage residents in local adaptation projects, such as neighborhood gardens, volunteer-based emergency check-ins, and local resilience planning. Grassroots involvement ensures that solutions meet local needs and gain broad support.

### **Long-Term Integration into Urban Planning:**

Update zoning, master plans, and building codes to integrate climate resilience into new development. Planning for the future safeguards urban growth against recurring climate risks.







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# ADAPTATION AND IMPLEMENTATION ACTIONS FOR SUSTAINABLE ENERGY SYSTEMS

## Boosting Energy Efficiency and Demand Management:

Implement incentive programs for energy-efficient appliances and building retrofits, and introduce smart meter systems to reduce peak loads.

## Maintenance and Climate-Proofing of Power Infrastructure:

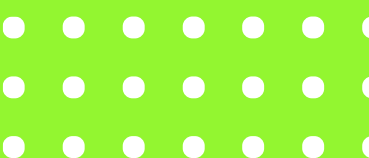
Upgrade transmission lines, substations, and generation facilities to withstand high winds, heat, and flood conditions.

## Decentralization through Distributed Generation:

Accelerate rooftop solar, community micro-grids, and solar water heaters to reduce dependency on central grids and enhance local resilience.

## Promotion of Alternative Cooling Techniques:

Invest in passive and low-energy cooling methods such as district cooling systems, cool roofs, and evaporative coolers to reduce energy demand.







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### Emergency Energy Planning:

Develop contingency plans for backup generators, load shedding, and emergency power supplies for critical infrastructure during extreme events.

### Long-Term Diversification and Modernization of the Energy Mix:

Transition to a renewable-heavy energy portfolio with large-scale solar, wind, and energy storage investments, and modernize the grid with smart systems.

### Energy Storage Solutions:

Invest in energy storage technologies (e.g., batteries) to store excess renewable energy and balance supply and demand during peak hours and emergencies.

### Smart Grid Development:

Implement advanced grid technologies (e.g., sensors, real-time monitoring) to optimize energy distribution, enhance fault detection, and improve resilience.

### Micro-Grid Systems in Vulnerable Areas:

Deploy micro-grids in remote or vulnerable areas to provide localized energy resilience and ensure power availability during disruptions.

### Public Awareness and Education Campaigns:

Conduct public education programs on energy conservation, renewable energy adoption, and climate-resilient energy practices.







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# ADAPTATION AND IMPEMENTATION ACTIONS FOR AGRICULTURE AND FOOD SYSTEMS

## Climate-Smart Farming Practices:

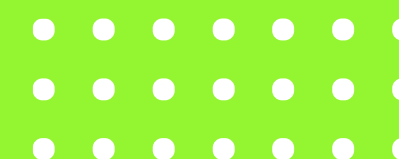
Promote efficient irrigation, rainwater harvesting, mulching, and no-till practices to conserve water and reduce erosion. These measures help protect crop yields from heat and drought.

## Drought-Resilient Crop Varieties:

Develop and distribute crops that tolerate heat, drought, or salinity, ensuring continuity in production despite climatic shifts. This preserves food security while adapting to changing environmental conditions.

## Enhanced Insurance and Early Warning Systems:

Expand crop and livestock insurance schemes and deploy weather alert systems to help farmers prepare for extreme events. These tools provide a safety net and allow timely preventive actions.







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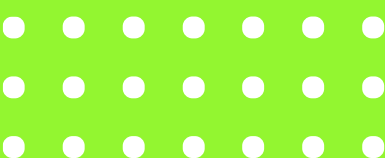


### **Integrated Long-Term Water Management and Crop Diversification:**

**Invest in large-scale water storage, inter-basin transfers, and promote shifts toward crops that require less water. Over time, this stabilizes irrigation supply and diversifies income, reducing vulnerability.**

### **Rural Livelihood Diversification and Mitigation:**

**Support alternative income sources (e.g., farm-based tourism, renewable energy on farms) and promote practices that lower emissions, such as precision agriculture or agroforestry. Diversifying livelihoods builds community resilience while contributing to national mitigation goals.**







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## WATER RESOURCES

### Improved Water Efficiency and Conservation:

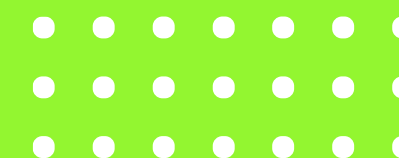
Launch campaigns and infrastructure upgrades (e.g., leak repairs, efficient fixtures) to reduce water loss in agriculture, industry, and municipal systems. These steps help preserve dwindling water supplies in a changing climate.

### Smart Water Management Technologies:

Employ real-time monitoring (sensors, remote sensing, GIS) to optimize water distribution and quickly identify leaks. Data-driven management supports better allocation during droughts and excess rainfall events.

### Watershed Protection and Restoration:

Restore critical catchments through reforestation, erosion control, and wetland rehabilitation to improve groundwater recharge. Healthy watersheds enhance water quality and supply for all sectors







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### **Drought Preparedness and Emergency Plans:**

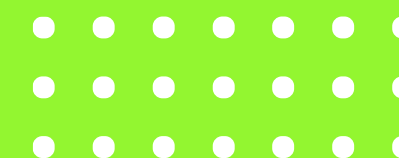
**Develop clear management plans with defined triggers for water restrictions and coordinated responses across sectors.**

**Early planning minimizes the impacts of water scarcity and builds community awareness.**

### **Long-Term Integrated Water Management**

**Form basin-wide committees to design new reservoirs, enhance aquifer recharge, and develop inter-basin transfers where necessary.**

**These infrastructure investments support a resilient and sustainable water supply over decades.**







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# FORESTS AND BIODIVERSITY

## ADAPTATION AND IMPLEMENTATION ACTIONS

### Enhanced Wildfire Prevention and Response:

Increase firefighting capacity, clear dry brush, create fire breaks, and establish community fire watch programs. Quick detection and response help protect forests and adjacent communities.

### Reforestation with Climate-Resilient Species:

Plant and nurture native, drought-tolerant trees in degraded areas and after fires to restore forest cover. This supports habitat recovery, binds soil, and enhances ecosystem services.

### Biodiversity Conservation and Protected Areas:

Expand and better manage protected regions, enforce anti-poaching and logging regulations, and monitor vulnerable species. Preserving critical habitats ensures ecological stability and long-term resilience.







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### **Invasive Species Monitoring and Control:**

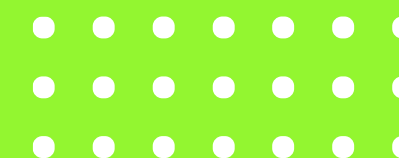
Establish rapid response teams to detect and manage invasive pests and species that threaten native ecosystems. This prevents ecological imbalances and preserves biodiversity.

### **Community-Based Ecosystem Management:**

Involve local communities in sustainable forestry and biodiversity projects such as community forestry, ecotourism, and non-timber product harvesting. Local ownership supports long-term conservation and socioeconomic benefits.

### **Long-Term Landscape-Level Planning:**

Develop ecological corridors and integrate climate projections into land-use planning to allow species migration and forest adaptation. This holistic approach improves ecosystem connectivity and resilience.





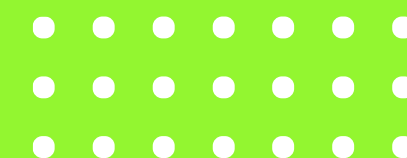


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# **FISHERIES AND MARINE ECOSYSTEMS ADAPTATION AND IMPLEMENTATION ACTIONS**

- Sustainable Fisheries Management
- Invasive Species Control in Coastal Waters
- Protection and Restoration of Marine Habitats
- Support for Sustainable Aquaculture
- Community Involvement and Awareness
- Long-Term Ecosystem-Based Coastal Management







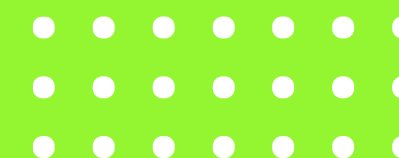
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## **PUBLIC HEALTH**

### **ADAPTATION AND IMPLEMENTATION ACTIONS**

- **Development of Heat-Health Action Plans**
- **Strengthening Healthcare Systems**
- **Vector Control and Disease Surveillance**
- **Ensuring Water and Food Safety**
- **Community Health Education**
- **Long-Term Urban Health Planning**





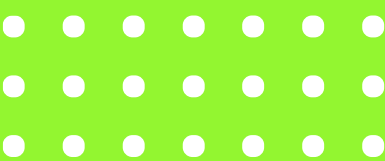


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## TOURISM (COASTAL AND INLAND)

- **Diversification of Tourism Seasons and Offerings**
- **Climate-Proof Tourist Facilities**
- **Protection of Coastal Attractions**
- **Training and Awareness Programs for the Tourism Sector**
- **Emergency Preparedness for Tourist Areas**
- **Long-Term Sustainable Tourism Planning**
- **Promotion of Low-Carbon Tourism**





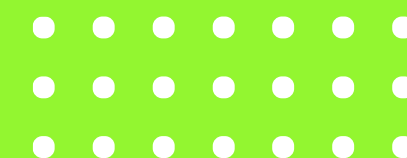


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## SHORT-TERM ACTIONS

- **Promote drought-tolerant crops**
- **Expand urban greenery**
- **Improve city drainage**
- **Launch early warning systems**
- **Upgrade firefighting capacity**
- **Restore degraded ecosystems**





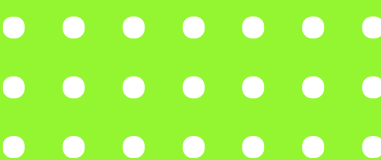


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## LONG-TERM STRATEGIES

- **Climate-resilient urban planning**
- **Diversify tourism and energy sources**
- **Recycle water, desalination**
- **Ecological corridors**
- **Renewable energy infrastructure**
- **Strengthen health systems**





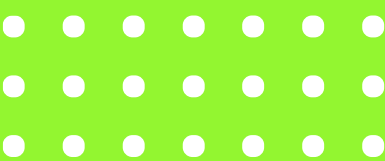


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## IMPLEMENTATION METHODS

- **Basin-level water management**
- **Climate-informed urban design**
- **Public-private green investment**
- **Real-time monitoring and early warnings**
- **Policy reforms for land and water**





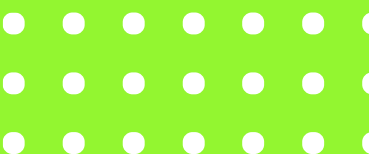


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## KEY INSTITUTIONS

- **Ministries: Environment, Agriculture, Health, Energy, Tourism**
- **Local governments**
- **DSi & Meteorology**
- **Universities & NGOs**
- **Private sector & community groups**





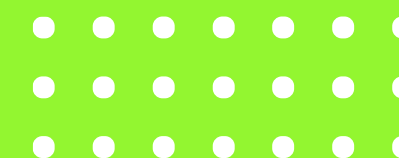


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## HOW YOU CAN CONTRIBUTE

- **Save water and energy**
- **Plant trees**
- **Stay informed on local risks**
- **Support eco-tourism and sustainable businesses**
- **Advocate for climate-smart policies**





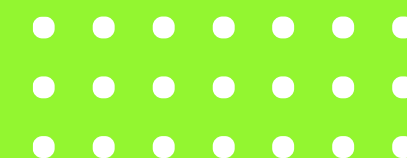


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## CONCLUSION

**Climate adaptation is essential. Acting today protects lives, nature, and the economy. This plan is a roadmap to resilience for Turkey's Mediterranean Region.**





# THANK YOU FOR YOUR ATTENTION

*"Together, we can contribute to a sustainable future"*

Questions & Discussion

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