



The Accounting Chamber
Supreme Audit Institution of Ukraine

DISASTER RISK REDUCTION — — CLIMATE CHANGE ADAPTATION ACTIONS

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EUROSAI Working Group on the Audit
of Funds Allocated to Disasters and Catastrophes



FOREWORD

**Global Cooperative
Audit of Climate
Change
Adaptation
Actions**



**In 2023 the Accounting Chamber
joined the Global Cooperative
Audit on Climate Change
Adaptation Measures**

**The audit was conducted in accordance
with the methodology and requirements
defined in the IDI Performance Audit ISSAI
Implementation Handbook**



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INTRODUCTION

During the audit, particular attention was paid to:

- The alignment of national measures with international programs, recommendations, and guidelines on disaster risk reduction, particularly the Sendai Framework for Disaster Risk Reduction 2015–2030
- The achievement of the Sendai Framework's targets in Ukraine
- Ensuring effective coordination of disaster risk reduction activities among governmental institutions



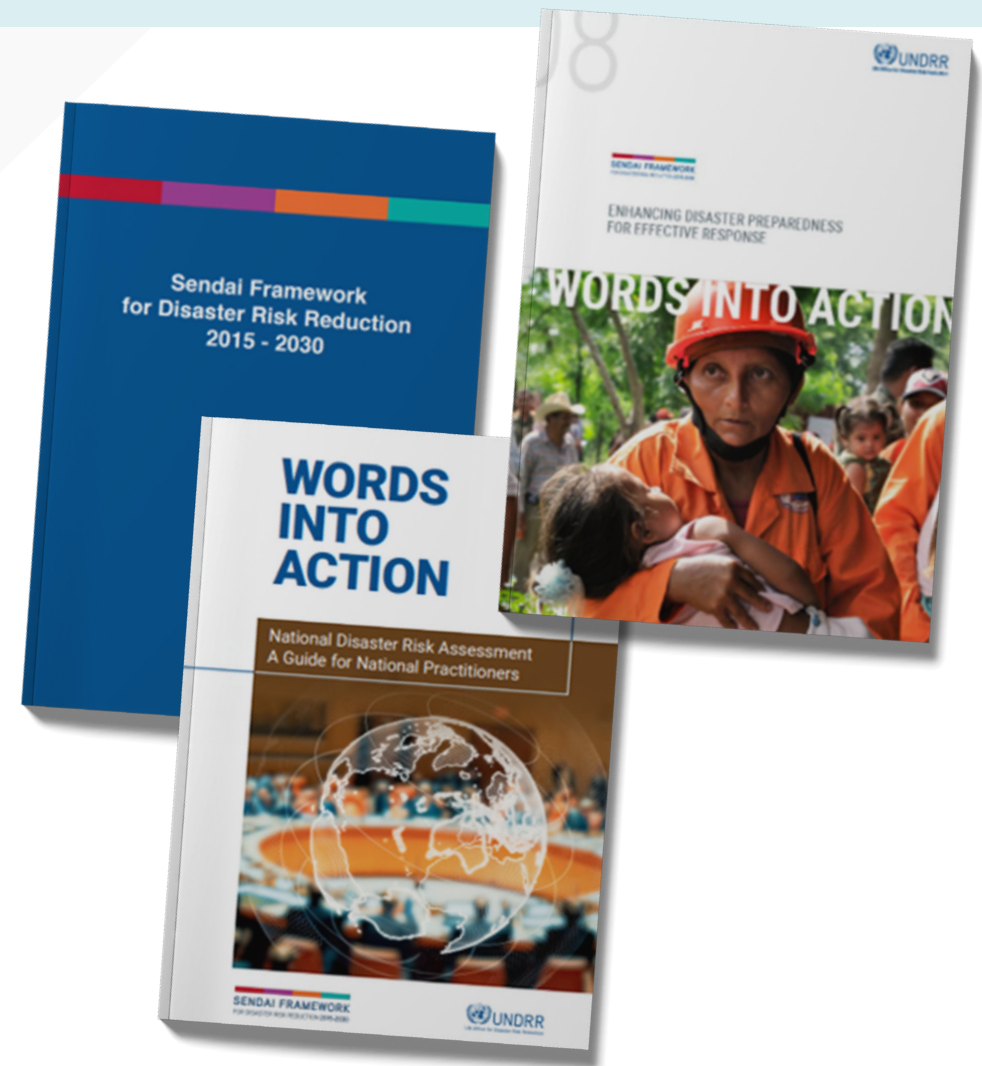
The Sendai Framework Priorities for Action

AUDIT CRITERIA

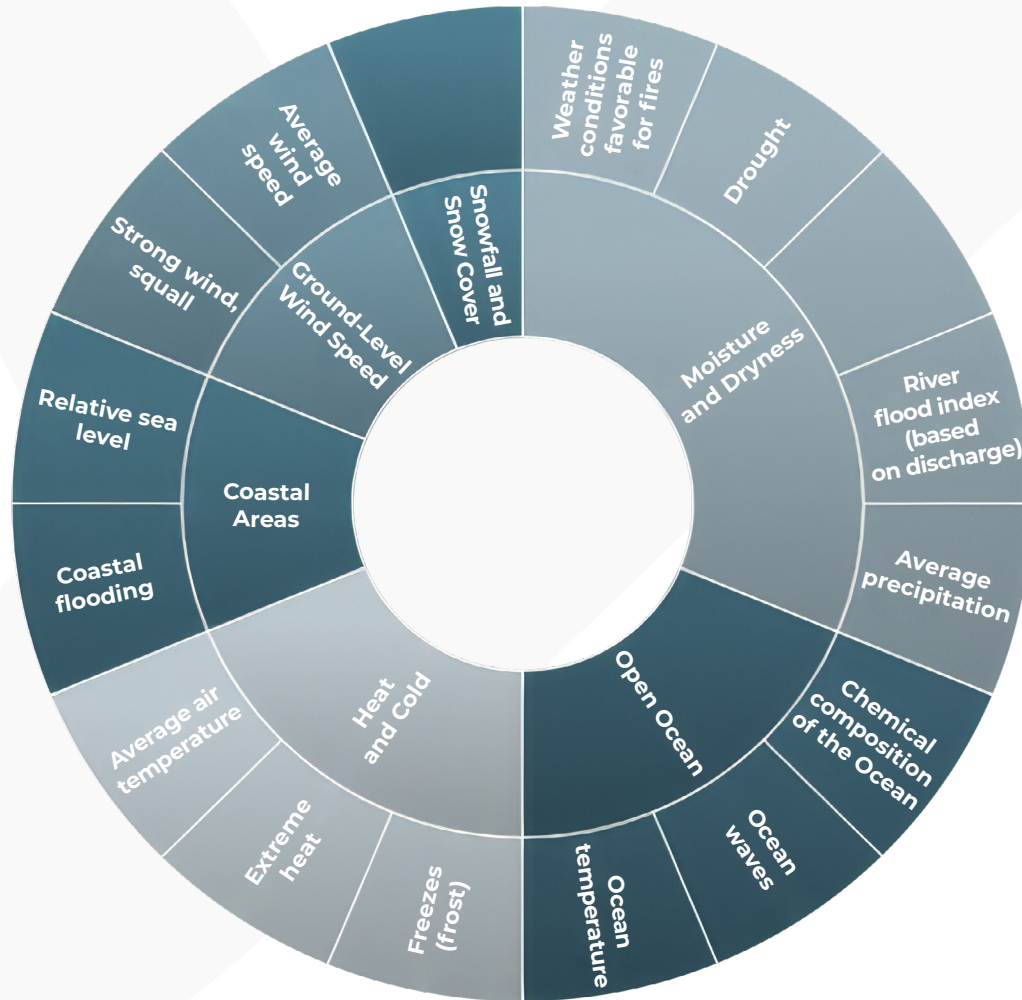
Compliance of disaster risk reduction measures related to climate change with the requirements of:

- The Sendai Framework
- The UNDRR (United Nations Office for Disaster Risk Reduction) “Words into Action” Guidelines on “Enhancing Disaster Preparedness for Effective Response”
- The UNDRR “Words into Action” Recommendations on “National Disaster Risk Assessment”

Effectiveness of implementing disaster risk reduction measures, including those related to climate change



CLIMATE THREATS/HAZARDS FOR EUROPE



According to studies by the European Environment Agency (EEA) and the Intergovernmental Panel on Climate Change (IPCC), **16 major climate threats/ hazards for Europe have been identified and classified into 6 types**



CLIMATE THREATS/HAZARDS FOR UKRAINE

Of the 16 major climate threats / hazards identified for Europe, Ukraine in particular faces:

Climate Risks in Ukraine



Extreme Temperatures

Over the past decade, the average annual temperature in Ukraine has increased by 1.2°C, significantly exceeding the global average.



Fire Hazardous Weather

Between 2019 and 2023, over 6,800 forest fires occurred, affecting an area of 143,300 hectares and causing damages amounting to 21.5 billion UAH.



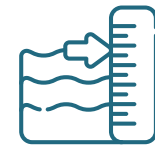
Changes in Precipitation Patterns

Droughts occur annually, with crop yield losses in agriculture ranging from 10% to 70%.



Floods and Flash Floods

Floods and flash floods are among the most common natural disasters in Ukraine. In 2020, floods in western Ukraine damaged over 14,000 homes and destroyed 500 km of roads.



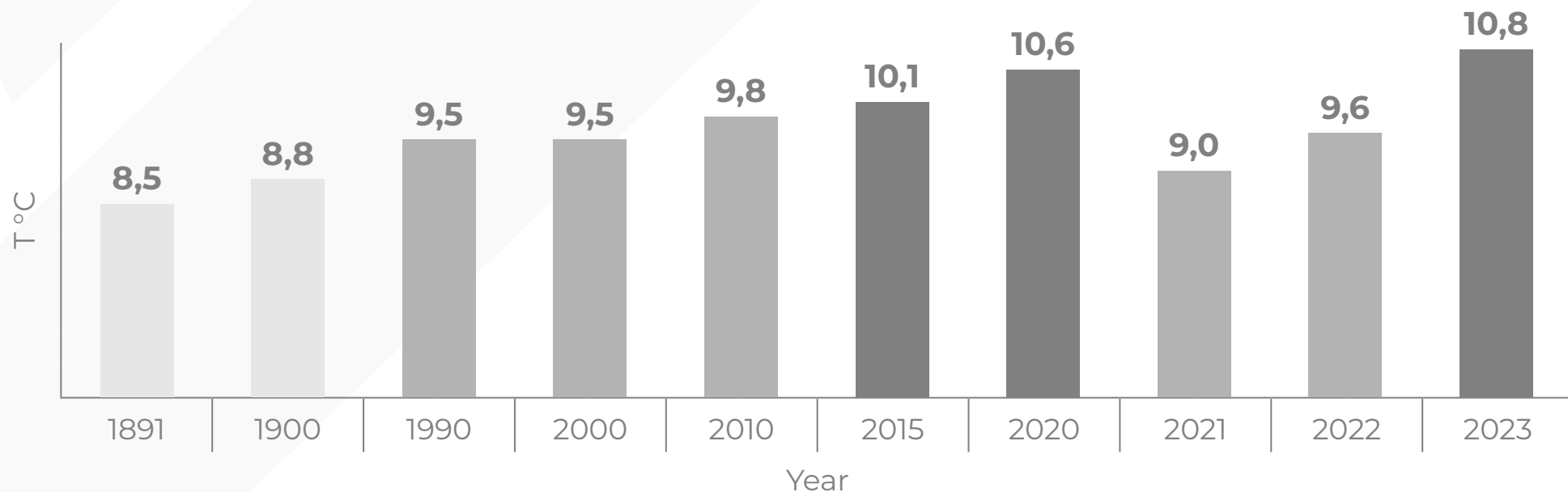
Sea Level Rise

The current rate of Black Sea level rise is 0.25 cm per year. By 2100, the water level in the Black and Azov Seas is projected to rise by 22 to 115 cm.

TEMPERATURE TRENDS

☉ Ukraine has been warming since 1891

☉ In 2023, the average temperature in Kyiv was $+1.8^{\circ}\text{C}$ above the norm, with extreme maximums reaching $+38\text{--}42^{\circ}\text{C}$



Average Annual Air Temperature in Ukraine from 1891 to 2022

PRECIPITATION TRENDS

- ◉ Seasonal redistribution of rainfall
- ◉ Heavy downpours more frequent
- ◉ Floods impact 27% of Ukraine's territory



Photo. Flood on the West of Ukraine, 2008
Source: Open-access internet resources



Photo. Flood on the West of Ukraine, 2020
Source: Open-access internet resources

DROUGHTS

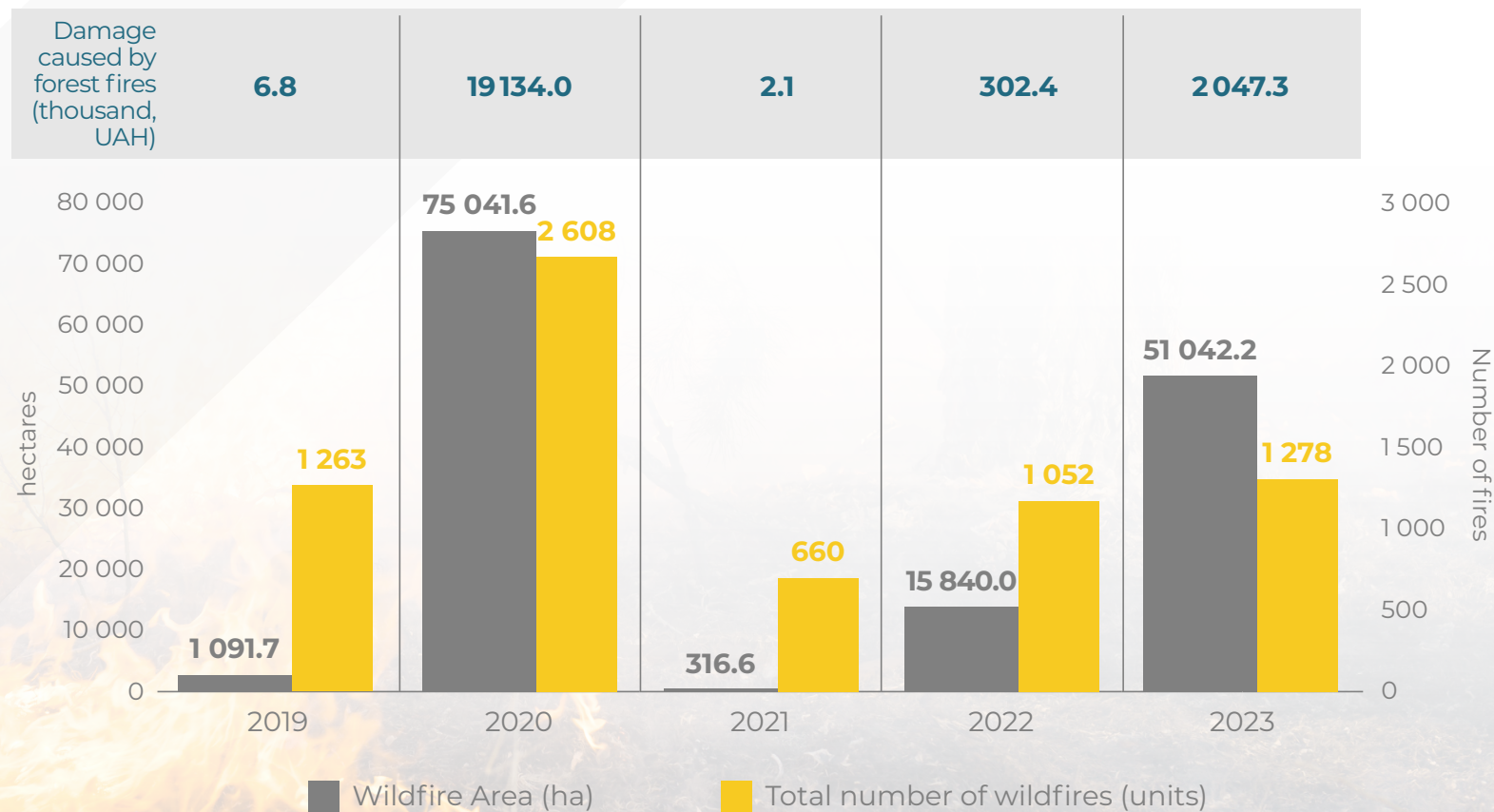
Annual droughts in Southern Ukraine:

- ◉ Crop losses up to 70%
- ◉ 2020: Odesa region lost 80–90% of crops
- ◉ Fresh water shortages expected



WILDFIRES

- ◉ **6.861** fires (2019–2023)
- ◉ **143.300** hectares burned
- ◉ Damages:
UAH 21.5 billion
- ◉ Record 2020 fire season



Dynamics of Forest Fires and Their Burned Areas from 2020 to 2022 and in the First Half of 2023

CONCLUSIONS

- ◉ **Need for systemic changes in approaches to managing climate change — induced disaster risks in Ukraine**
- ◉ **To create an integrated disaster risk management system**
- ◉ **Strategic climate change adaptation must become an integral part of both national and regional policies**

RECOMMENDATIONS

- ◉ Establish a centralized interagency platform to coordinate actions, collect, analyze, and exchange disaster risk data
- ◉ Modernize existing early warning systems to incorporate current climate data and forecasts
- ◉ Develop and implement a unified methodology for assessing disaster risks caused by climate change
- ◉ Organize national educational campaigns aimed at informing the public about disaster risks and the need for adaptation measures
- ◉ Increase international cooperation by actively involving external assistance, expertise, and resources to implement climate change adaptation measures
- ◉ Allocate budgetary resources in the state budget for measures to prevent natural emergencies

IMPLEMENTATION OF RECOMMENDATIONS

- ◉ Procedure for the functioning of the System for Monitoring and Forecasting Emergencies
- ◉ Informing the public about natural hazards
- ◉ The National Automated Centralized Alert System
- ◉ A methodology for assessing forest fire risks considering climate change and a methodology for assessing changes in the carbon balance in forest plantations damaged by fires
- ◉ Digital radio communication systems
- ◉ Evacuation plans and training exercises





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Allocated to Disasters and Catastrophes



Disasters — a test of Global humanity

They define who we are, and how we respond
to them demonstrates our strength and cohesion

Together against disasters:
auditing that saves lives and restores the future



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THANK YOU FOR YOUR ATTENTION!



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