



EUROSAI

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



SESSION 3. LESSONS FROM RECENT AUDITS

TOPIC OF DISCUSSION: FROM FORECAST TO SIGNAL — AN AUDIT OF FLOOD MANAGEMENT IN UKRAINE

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Supreme Audit Institution of Ukraine

EUROSAI WGAFADC SEMINAR: “FROM EARLY WARNING TO RESILIENCE:
ARE GOVERNMENTS PREPARED FOR DISASTERS AND CRISES?”

Kyiv, October 2026

SCALE OF THE PROBLEM



13
flood-related
emergencies



UAH **140** million
estimated damage
(2022–2025)



10 people
died in floods,
9 of them in Odesa in 2025



239
areas with potentially
significant flood risk



Climate change is intensifying rainfall

Floods increasingly mean not only riverine flooding in mountain areas but also sudden flash flooding of cities. Under these conditions, response time is measured in hours rather than days — which is exactly why warning the population becomes critical for minimizing consequences

AUDIT CONTEXT



AUDIT QUESTION 3.1

Does the existing centralized warning system ensure timely delivery of signals and messages to the population in the event of a flood threat?

PARTIALLY COMPLIANT

Accounting Chamber's assessment
against the audit criterion

*The system has been established overall,
but signals to people at risk are not
guaranteed to arrive on time, to the right
address, and verified*

NOTIFICATION CHAIN

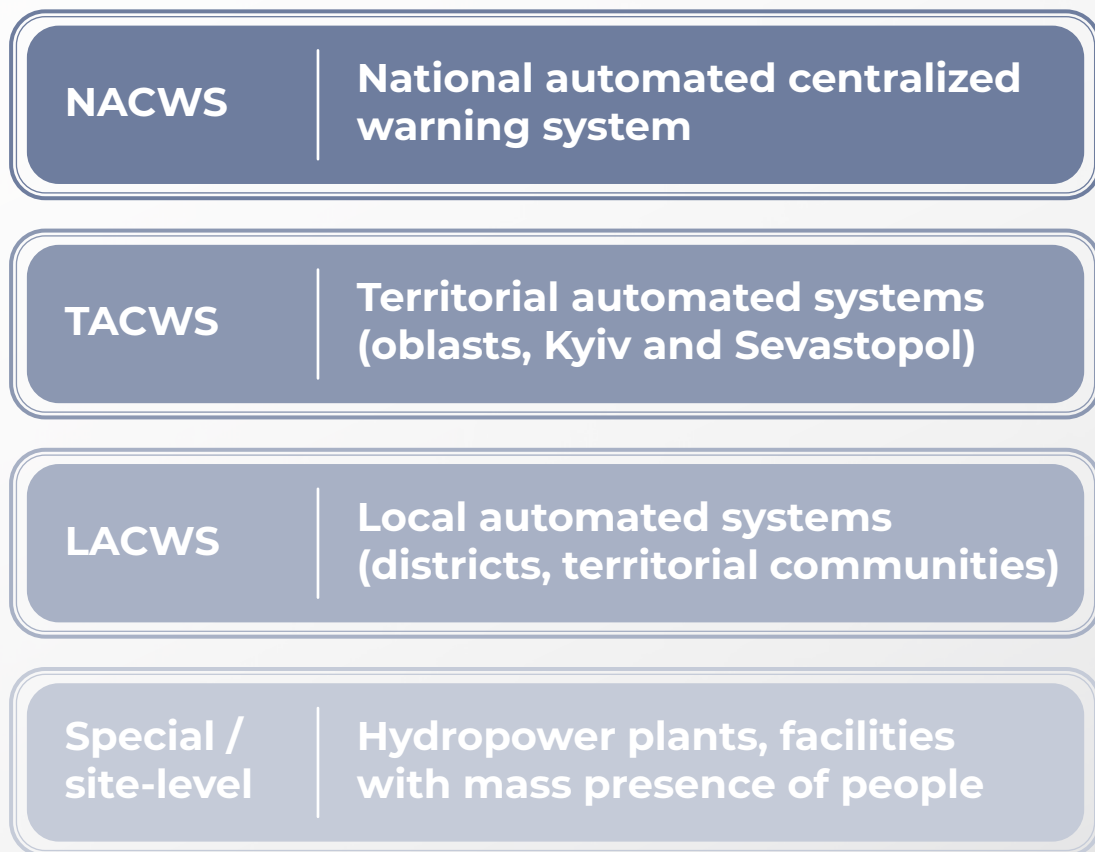
**Warning is not a stand-alone technology but a link in a chain.
A break anywhere devalues the rest**



If one link breaks, the rest lose their meaning

A forecast that never became a decision, and a siren that was never switched on, produce the same result: the person does not know they need to act

ARCHITECTURE OF THE WARNING SYSTEM



SIGNAL DELIVERY CHANNELS



- TV and radio broadcasting (with sign language / subtitles)
- Electronic communication networks: telephony, SMS
- Cell broadcast service of mobile network operators
- Internet
- Sirens, loudspeakers, mobile warning equipment

TERRITORIAL LEVEL: TACWS

As of 01.01.2026

8 / 24

**regions have modern
(upgraded) TACWS**



Upgraded and commissioned

8 regions

Pilot operation / equipment installation

6 regions

Only technical specifications agreed

7 regions

No upgrade work carried out

2 regions (temporarily occupied)



The upgraded national NACWS was put into permanent operation in January 2025



TACWS was not upgraded at all on temporarily occupied territories

LOCAL LEVEL: LACWS

The weakest link

~ 12%

of total need
for LACWS
built



8 regions — not a single LACWS

Zakarpattia, Ivano-Frankivsk, Zaporizhzhia, Zhytomyr,
Kirovohrad, Luhansk, Cherkasy, Chernivtsi —
including territories with significant flood risk



Lviv region



LACWS deployed in all territorial
communities — the only such region
in Ukraine

**Communities are the first to face local flooding —
which is why this gap is most critical for people's life and health**

REGIONAL CASES

ZAKARPATTIA REGION

TACWS has been upgraded, but 70 more LACWS and over 1,600 end devices are still needed.
Several parallel channels are in use

LVIV REGION

LACWS — in all communities.
Loudspeakers cover 71.6 % of the population; including media and apps — 96 %.
Full coverage by stationary devices is still lacking

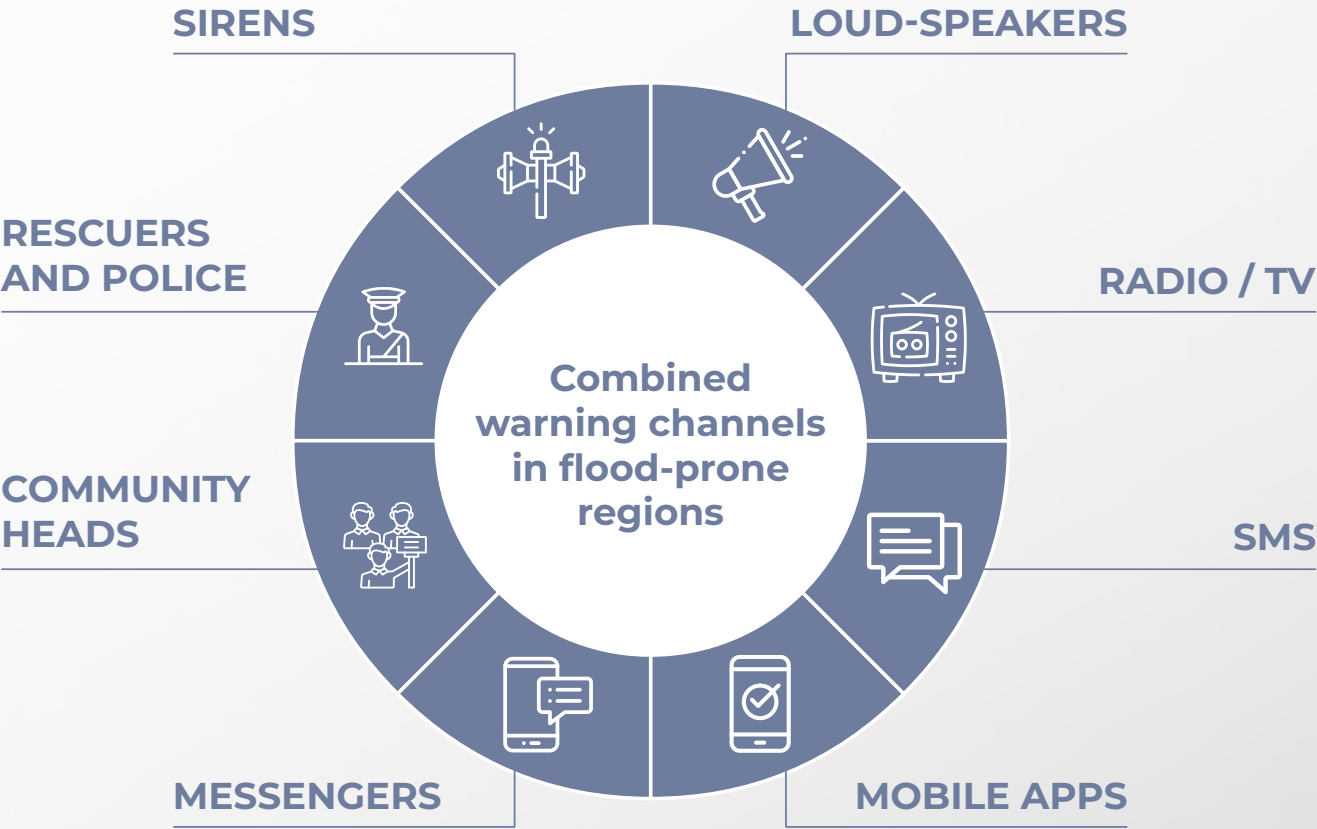
IVANO-FRANKIVSK REGION

TACWS could cover ~ 92 % of the territory (flood of 07.2023), but only 2 communities have fully compliant systems; over 60 % have only sirens and loudspeakers

CHERNIHIV REGION

In settlements affected in 2023, there was no warning system at all.
Information was passed manually by community heads through village elders

“WORKING” ≠ “PROVEN”



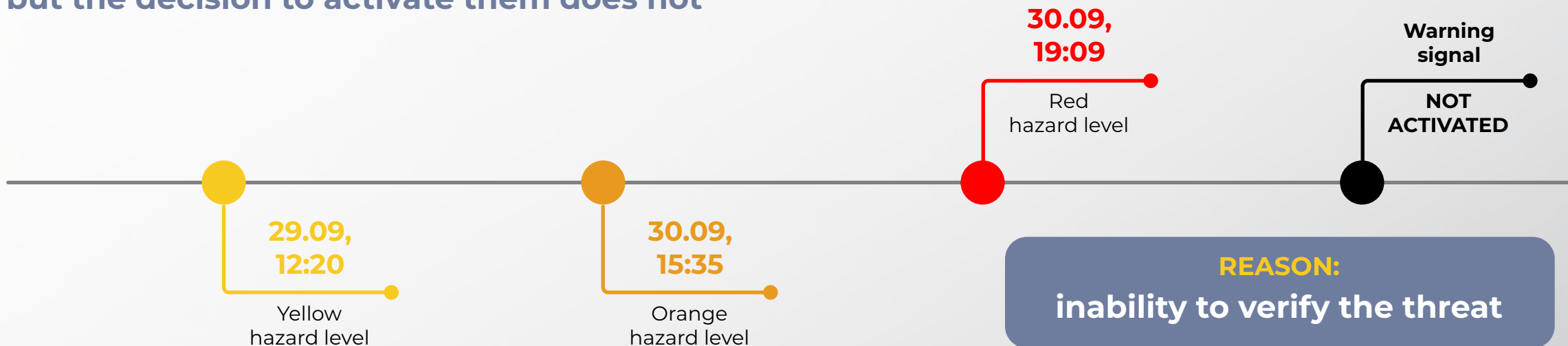
This approach partially compensates for the lack of upgraded systems



Effectiveness depends on connectivity, the human factor, and the speed of transmission between levels of government

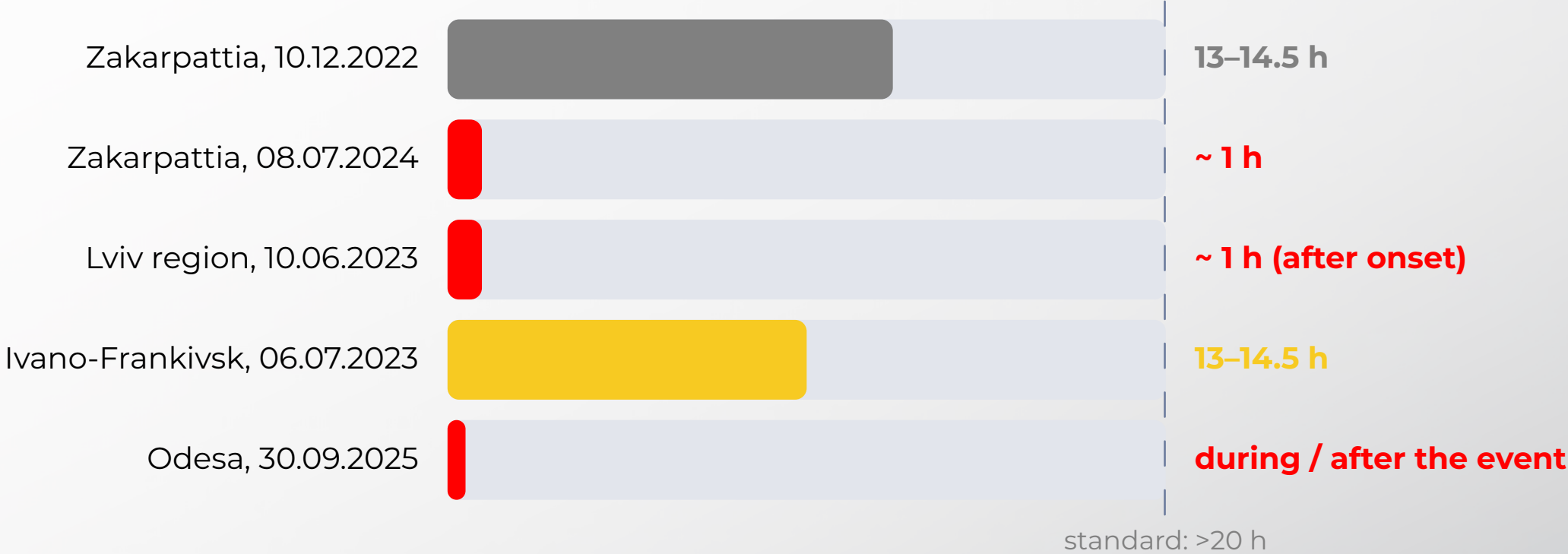
CASE: ODESA, SEPTEMBER 2025

When the technical channels exist,
but the decision to activate them does not



The effectiveness of warning depends not only on technical channels but also on the integration of forecasts, a threat-verification mechanism, and a clear algorithm for deciding to activate it

START OF THE CHAIN: WARNING LEAD TIME

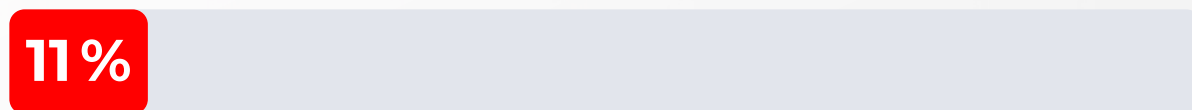


Warnings are often generalized, without a list of affected settlements or consequences. In most cases, technogenic and ecological safety / emergency commissions convened only during or after the emergency — meaning even a perfect siren cannot compensate for a delayed decision

PUBLIC READINESS AND CAUSES

PUBLIC AWARENESS OF EMERGENCY BEHAVIOR RULES

2025 actual



2030 target



An overall indicator, not specific to floods (Report caveat)

CAUSES



- Pace of LACWS deployment is insufficient
- Incomplete funding of flood-protection measures
- Uneven capacity of territorial communities
- No systematic monitoring of training effectiveness specifically for floods



There is no separate record of flood-specific training, nor data on coverage of flood-prone areas

ACCOUNTING CHAMBER RECOMMENDATIONS

18 recommendations, 13 of them to audited entities



By 31.12.2026, develop and approve technical specifications for TACWS/LACWS, prioritizing communities affected by floods in 2022–2025



Provide for separate training measures for the population of flood-prone areas, with coverage indicators



By 01.06.2027, the State Emergency Service of Ukraine to develop standard guidance for communities on checking the effectiveness of warning



Develop a methodology for forecasting local runoff from heavy rainfall to produce geographically specific warnings



Introduce a single coordination mechanism:
\forecasting — warning — response

IMPLEMENTATION OF RECOMMENDATIONS

As of 10.08.2026

23.06.2026	●	The Accounting Chamber's report has been approved
29.06.2026	●	Report sent to Parliament, the relevant committee, and the Cabinet of Ministers
30.06.2026	●	The Committee reviewed the report
07.07.2026	●	The Cabinet of Ministers of Ukraine has instructed the responsible authorities to review the report and take the necessary measures
by 30.04.2027	●	Plans are in place to analyze the availability and capabilities of warning systems in flood-prone areas
by 01.06.2027	●	It is planned to develop and issue standard recommendations for verifying the effectiveness of the public warning and information system

CONCLUSIONS FOR THE WORKING GROUP

1

The question is not “is there a warning system” but “does the signal reach people on time and to the right address”

2

Check not only the technology, but also the activation-decision algorithm and the threat-verification mechanism

3

Assess the whole chain: from forecast quality and lead time to people’s readiness to act

4

Check whether separate records are kept of training specifically on flood topics

TOGETHER AGAINST DISASTERS: AUDIT THAT SAVES LIVES



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THANK YOU FOR YOUR ATTENTION!

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