



**PREVENTION, RESPONSE AND POST-
DISASTER RECOVERY
IN CASE OF FLOOD RISK**

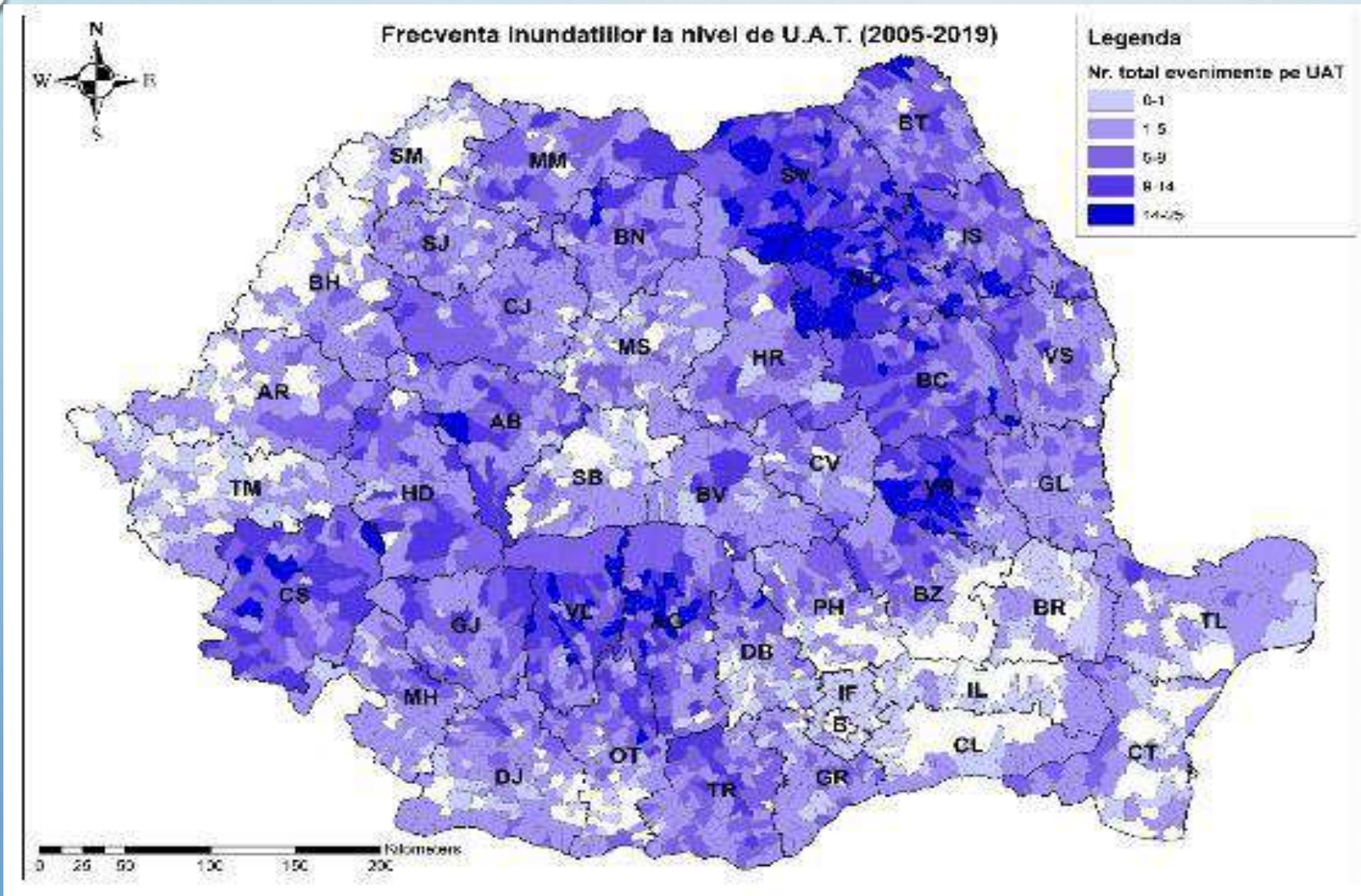


**ROMANIAN
COURT OF
ACCOUNTS**

EVALUATION OF THE EFFICIENCY AND EFFECTIVENESS OF THE PROGRAMS, ACTIONS AND MEASURES UNDERTAKEN TO PREVENT THE RISK OF FLOODING, RESPONSE AND RECOVERY AFTER ITS EFFECTS ON THE TERRITORY OF ROMANIA IN THE PERIOD 2014-2021

The management of any type of risk involves the identification of associated risks, the establishment of responsible authorities, by risk type, the establishment of their areas of action, as well as the distribution of support functions





Flood Directive
2007/60/EC

-Water Law no.
107/1996

-National medium
and long-term
flood risk
management
strategy 2010
(SNMRI)

THE SPECIFIC OBJECTIVES OF THE PERFORMANCE AUDIT



**Evaluation of
preventive activities**

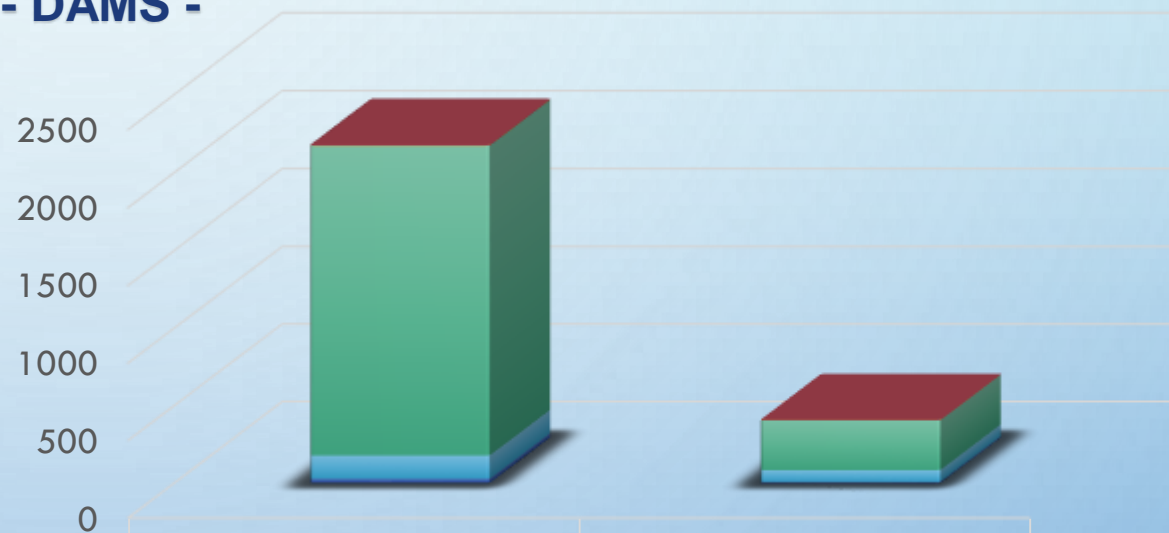
**Evaluation of
operative
management activities**

**Evaluation of the
activities undertaken
after the flood has
passed**

MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION INFRASTRUCTURES IN THE ADMINISTRATION - DAMS -

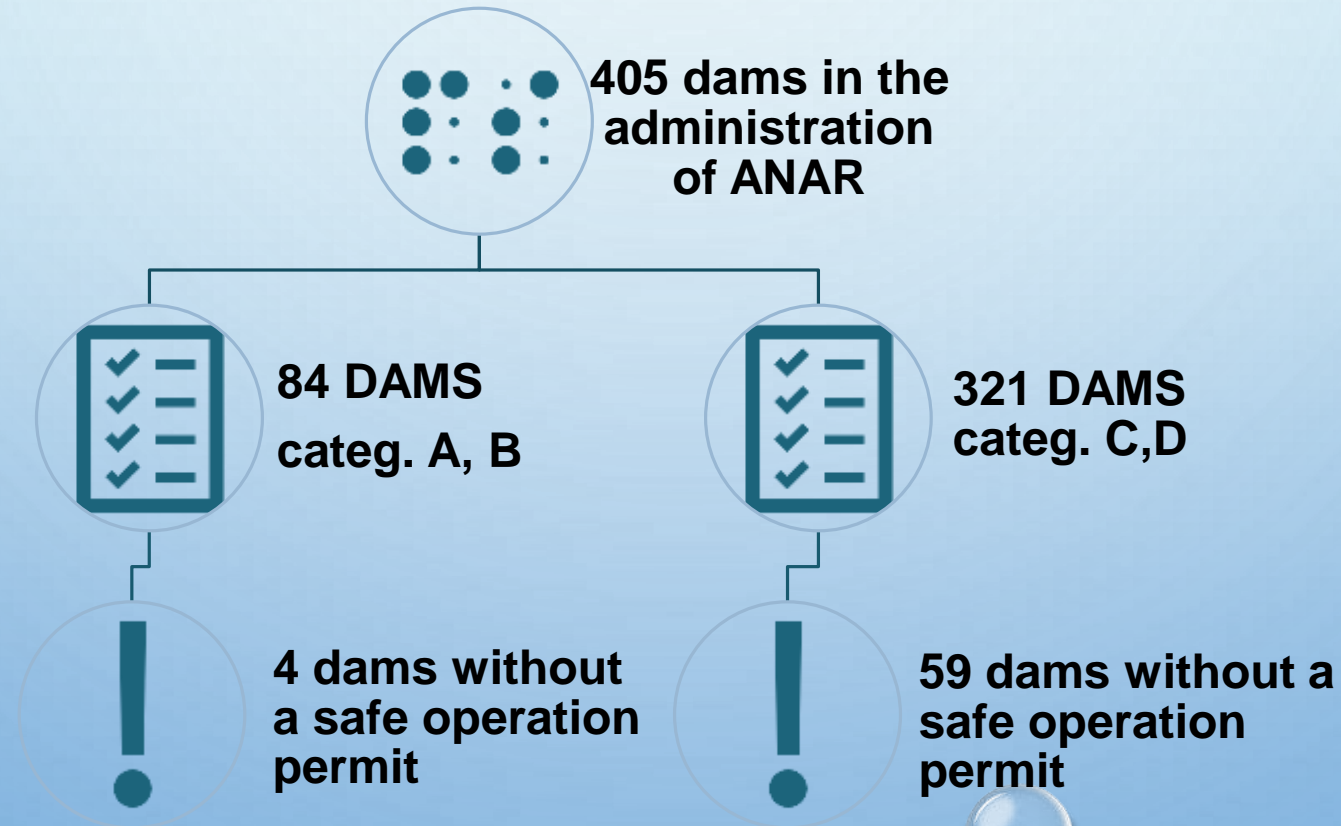
Dams fall into one of the following categories of importance:

- A - dam of exceptional importance
- B - dam of particular importance
- C - dam of normal importance
- D - dam of minor importance



	National, of which:	ANAR
■ Dams in conservation	1	0
■ Dams that cannot be exploited	2	1
■ Category C,D	1994	321
■ Category B	151	76
■ Category A	26	7

MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION INFRASTRUCTURES IN THE ADMINISTRATION - DAMS -



MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION
INFRASTRUCTURES IN THE ADMINISTRATION
- DAMS -



2.013 dams categ. C, D

983 with valid
authorization

221 with expired
authorization

809 were never
authorized

Furthermore, ANAR identified in 2021 and sent to MMAP the situation with a number of 121 dams in the importance category C and D, for which there is no or not known legal owner or administrator

**MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION
INFRASTRUCTURES IN THE ADMINISTRATION
- DEFENSE DYKES -**

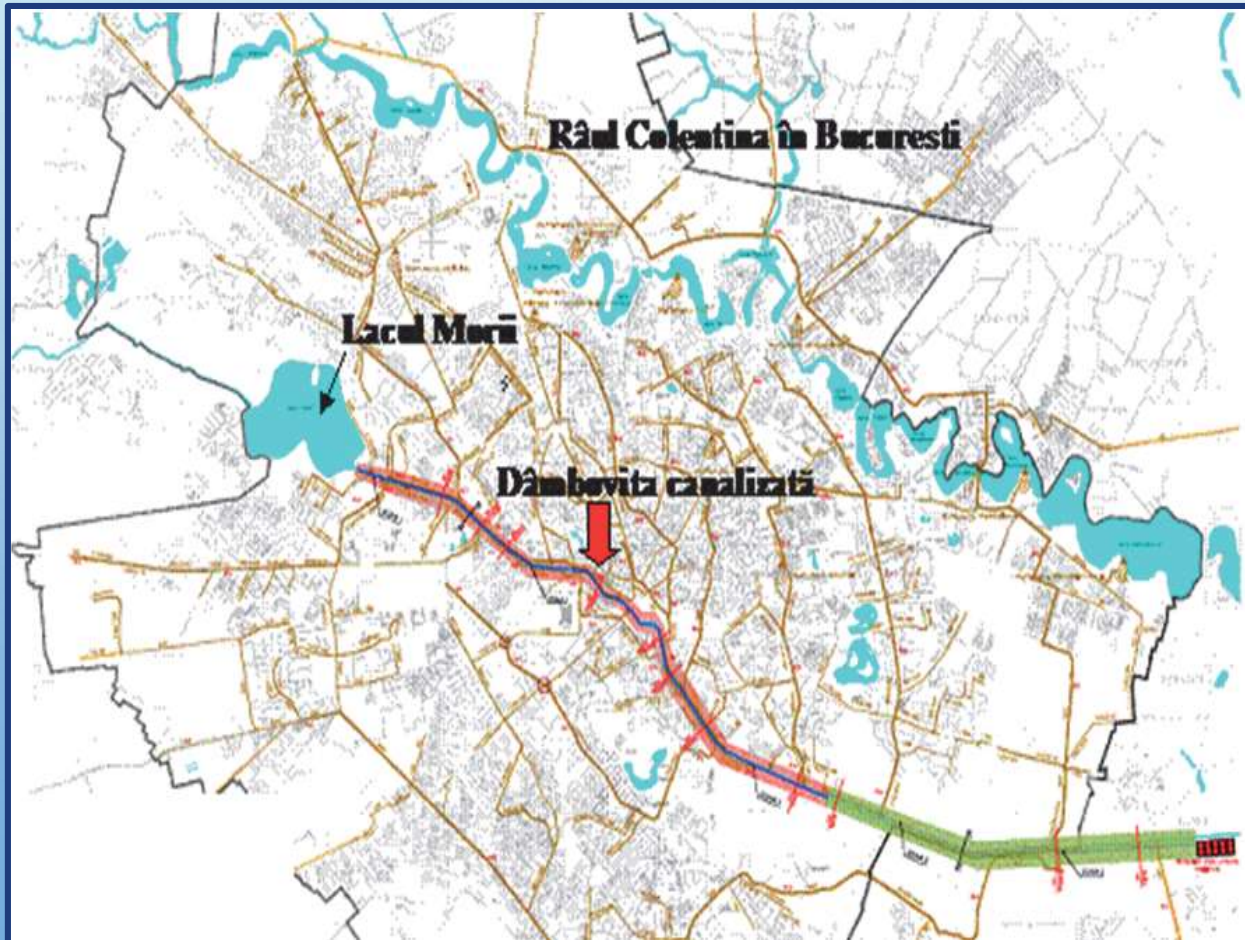
FINDINGS

**Neither performance
compliance agreements
nor safe operation
authorizations have been
issued for any dykes**

**Physical transfer of flood
defense dykes/dams from ANIF
to ANAR, without handing over
their technical books**

**Cadastre works are
complex and difficult to
prioritize**

MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION INFRASTRUCTURES IN THE MUNICIPALITY OF BUCHAREST



Any entry into pressure of the Planșeu Unirii bridge can cause social and economic damage that is difficult to estimate, by affecting the building networks and above and underground transport in the central area of the Capital.

MAINTAINING THE INTEGRITY AND FUNCTIONALITY OF THE FLOOD PROTECTION INFRASTRUCTURES IN THE MUNICIPALITY OF BUCHAREST



❑ At the Lacul Morii reservoir dam: improper functioning of the perimeter drainage system, which can lead to incidents of raising the water table

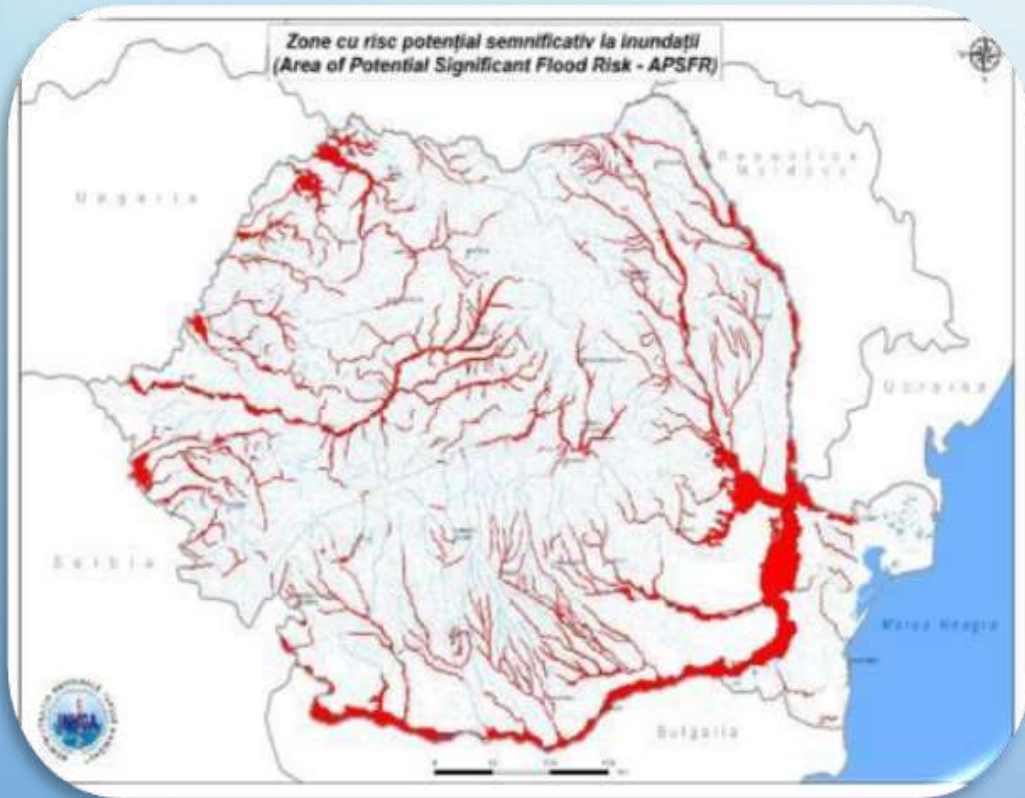


For the Buftea Dam, during the 85 years of continuous operation, only routine repair works were carried out



❑ The Pantelimon I reservoir, since its commissioning in 1972, has never reached the normal retention level and the private properties around it make access from the shore for maintenance work impossible and prevents the free and legally guaranteed access of any person to this public asset.

IMPLEMENTATION OF HAZARD AND FLOOD RISK MAPS

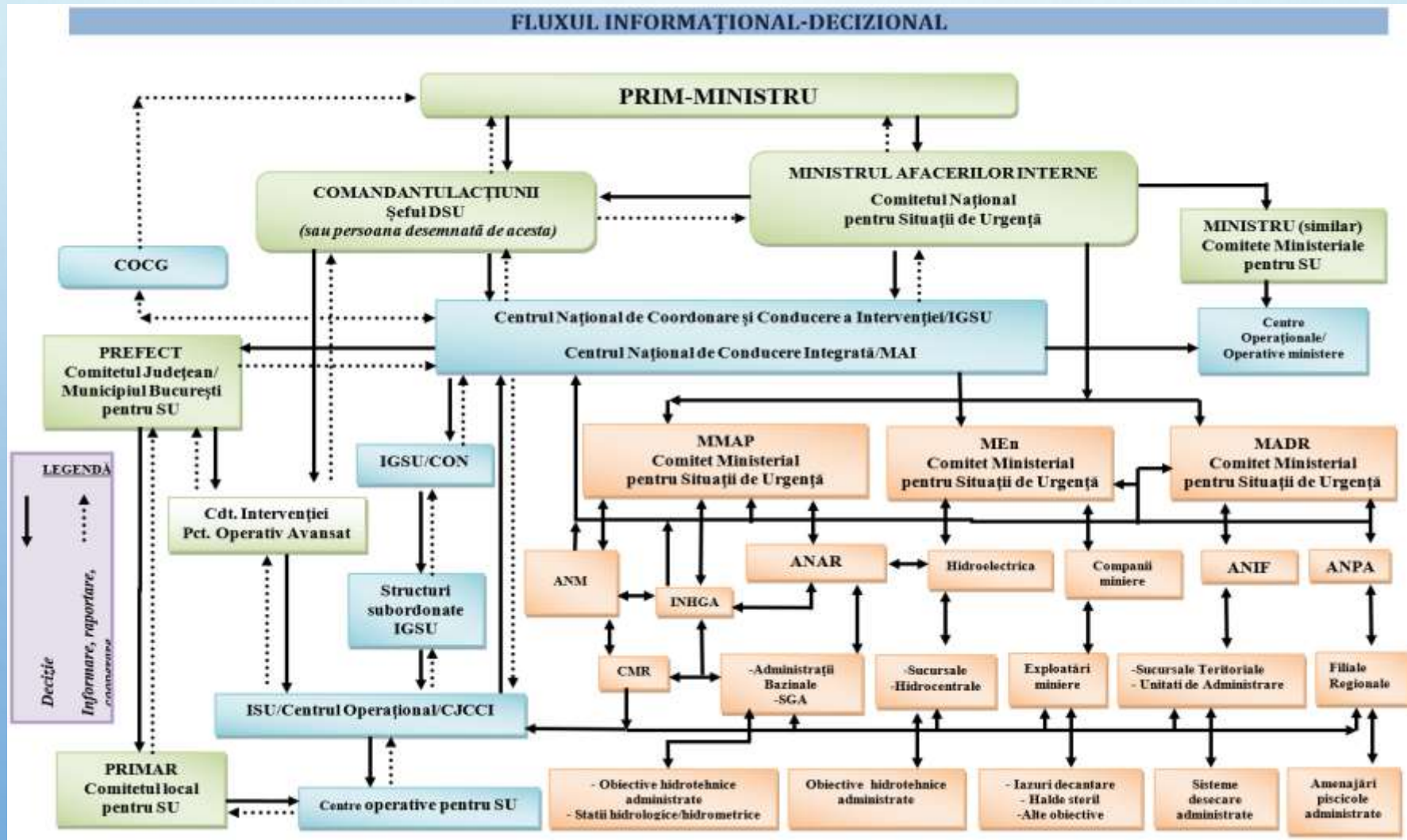


Flood hazard maps show geographic areas likely to be affected by flooding, indicating their likelihood and severity.

Flood risk maps combine hazard information with exposure values, assessing potential damage and impact on the environment, society and economy.

THE VALUATION OF HAZARD AND FLOOD RISK MAPS at the municipality level, by including them in the territorial planning documentation, in order to adopt some categories of measures for flood risk management **IS NOT EFFICIENT**

ORGANIZATION OF THE EMERGENCY MANAGEMENT SYSTEM (SNMSU)



ORGANIZATION OF THE EMERGENCY MANAGEMENT SYSTEM (SNMSU)

FINDINGS



➤ Difficulties regarding the operationalization of SNMSU generated either by the lack of an efficient infrastructure in terms of internal and inter-institutional communication, or by faulty communication/collaboration between authorities



➤ The organization, operation and composition of the CNSU has not been updated to date



Flood Risk Working Group has not been established



The PNRRD dedicated website was developed and completed in September 2022, with a delay of 6 years. The website is currently down

CAPABILITIES INVOLVED IN FLOOD RISK RESPONSE ACTIONS

Technical resources/intervention equipment

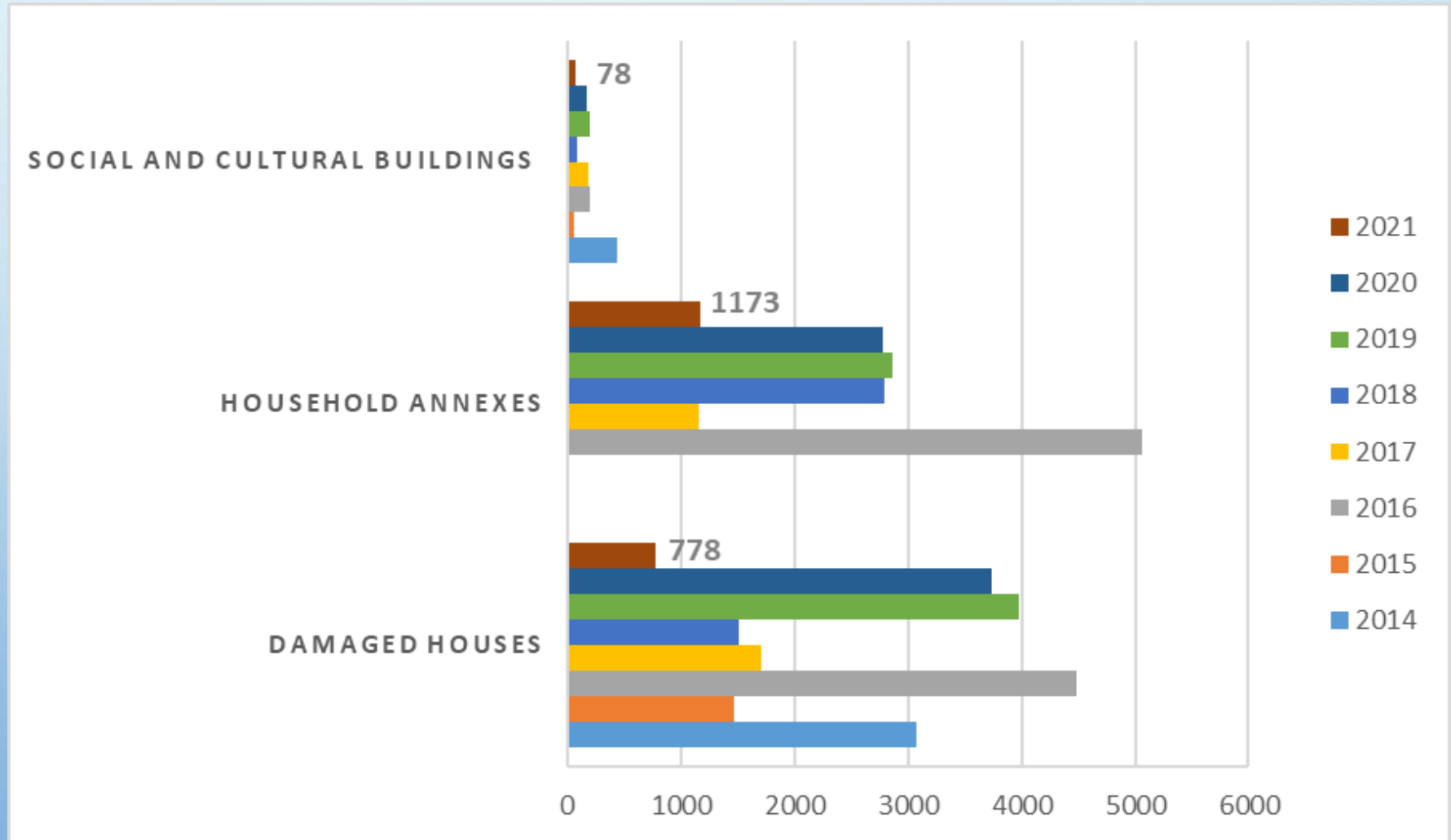
- **IGSU:**
- the technical resources necessary for flood risk management is below 50%
- over 40% of the existing technical resources are over 10 years old
- **ANAR:** Stocks of materials and means of defense against floods ensure at least the minimum required for operative interventions

Human resources (operational staff)

- **IGSU:** at the end of 2021 had a significant staff deficit
- **ANAR:** very large shortage of operating personnel (engineers, hydro agents, electricians, mechanical locksmiths, mechanics, workers) and personnel dedicated to emergency situations (engineer, dispatcher, chemist, technician, architect, hydrologist)

ASSESSING FLOOD DAMAGE

Difficult communication/ collaboration with the local authorities or with the other institutions with responsibilities in areas of competence may lead to the impossibility of assessing the damages in a timely manner to allow for urgent restoration/ rehabilitation measures.



ASSESSING FLOOD DAMAGE

The situation regarding the amount of damage caused by dangerous hydro-meteorological events 2014-2021

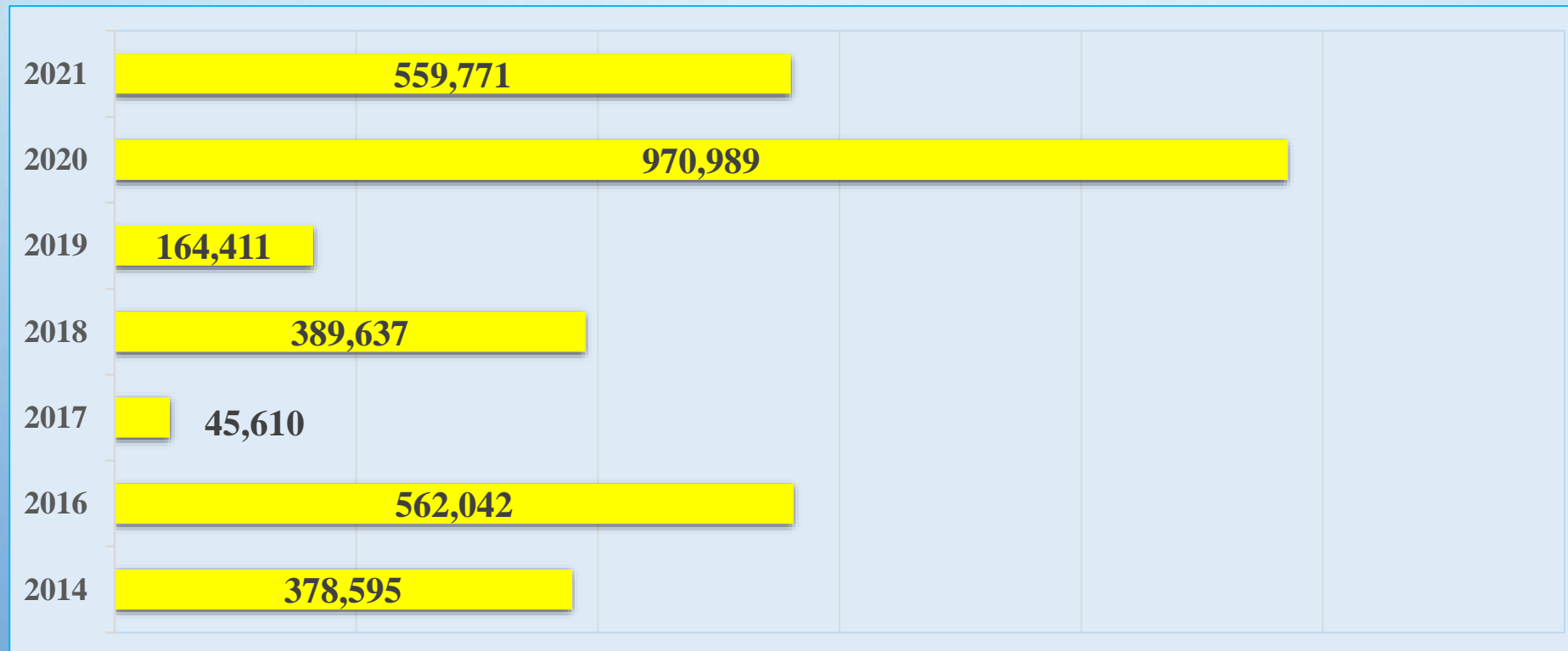
(thousands of lei)



In the absence of a unified methodology, at the national level, for the assessment of damages following the occurrence of emergency situations, there are difficulties in carrying out the process of assessing the losses suffered as a result of floods and there is a possibility that the total financial value of the damages does not reflect the reality


RESTORATION/REHABILITATION OF INFRASTRUCTURE AFFECTED BY FLOODS

The situation of the amounts allocated from the Intervention Fund or from the budgetary reserve at the disposal of the Government for the removal of the effects of floods in the period 2014-2021 (31 Government Decisions)
- thousands of lei -






GENERAL CONCLUSIONS - PRE-DISASTER -



Even if steps and actions have been undertaken in order to carry out preventive activities in accordance with the role, attributions and specific responsibilities in the field of flood risk management, it is necessary to review/improve the way of ensuring financing in accordance with the estimated costs, of prioritizing investments and management in conditions of economy, efficiency and effectiveness of the financial resources allocated to achieve the proposed targets.



The flood protection system that is not fully functional because of insufficient financial, human and material resources. Under these conditions the capacity of the flood protection infrastructure is significantly affected both in terms of the ability to prevent the risk of floods, and in terms of limiting the effects produced by them on the territory of Romania.



GENERAL CONCLUSIONS - DISASTER -



At the level of the audited entities, the emergency management system is well organized. However there may be some difficulties generated either by the lack of an efficient infrastructure regarding internal and inter-institutional communication, or by faulty communication/collaboration between authorities. The equipment for warning/alarming the population, as well as the technical means of intervention must be provided at an adequate level in order to face the challenges generated by dangerous hydrometeorological phenomena.



In this audit it was found that the audited entities face an acute lack of specialized personnel (hydraulic/construction personnel, control personnel, operational personnel) in close correlation with the number of objectives and the complexity of the measures to be undertaken.



GENERAL CONCLUSIONS - POST-DISASTER -



Difficult communication/collaboration with local authorities or other institutions with responsibilities in areas of competence may lead to the impossibility of assessing the damage in a timely manner to allow urgent recovery/rehabilitation measures.



The lack of a unified methodology, at the national level, for assessing damages following the occurrence of emergency situations, leads to the possibility that the total financial value of the damages does not reflect reality, with implications in the value of the amounts allocated by the Government from the Intervention Fund at the disposal of the Government and from the budgetary reserve fund available to the Government.

RECOMMENDATIONS



Analysis and revision/resizing, if necessary, of personnel structures in close correlation with the complexity of the measures, actions and/or targets established in the Action Plan for the implementation of the national strategy

Updating the legal framework in the area

Increase of prevention actions of the authorities for the population

Ensuring adequate and timely financial resources for investment in the flood defense system



THANK YOU FOR YOUR ATTENTION!

