Workshop on the Institutional Development Plan

Center for Social Enterprises

May 20, 2025, Skopje

Improved Implementation of the EU Floods Directive through Harmonization of National Legislation and Preparation of Flood Risk Management Plans

NEAR/SKP/2023/EA-RP/0174, Contract no.12-6481/1

Project implemented by:
eptisa eptisa suez

Institutional Development Plan

Toni Popovski
Institutional Development Expert

PART ONE

Presentation content:

- Profile on flood risks (PIR) in the country
- Strategic goals of PIR
- Recommendations for improving inter-institutional coordination and data management
- Discussion and questions

Profile of flood risks

High exposal to flood risks

- **Natural Factors**: Mountain terrain, variable river flows, unpredictable climatic conditions.
- **Challengers**: Intensive precipitation, quick melting of the snow, growth of underground waters.

Risks increased by human activities

- Urbanization, logging on forests, construction in the zone of wetlands.
- Bad spacious planning and outdated/incomplete infrastructure.

Types of floods

- **Rivers floods**: Big basins, long-lasting precipitation/melting of snow; the swamps are especially vulnerable.
- **Torrents (torrential rains)**: Small basins, steep terrain; quick and devastating action.

Significant Events

- **Floods in Polog (2015) and Skopje (2016)**: Dozens of victims and damager of over 85 million Euros.

Key Challenges

- Weak infrastructure, limited systems for early warning, weak coordination and planning.

Vulnerability and social impact of the floods

- **Disproportionate impact on the marginalized groups!**
- Poor rural population, Roma communities, women, children, elder and people with disabilities.
- Often living in unregulated flood plain areas because of shortage on alternatives.
- Weak implementation of construction regulations and insufficient drainage infrastructure increases the vulnerability **(urban flooding)**.

Urbanization and degradation of the environment

- The uncontrolled construction expansion(e.g. the Polog region) replaces the natural absorption of the water, with solutions that do not absorb water.
- It causes superficial floods and pollution on the surface and underground waters.

Challenges in management of stormwater

- Obsolete systems, pipes and channels, transfer the risk further downstream.
- Incomplete networks and outdated standards increase the risk exposure.

Opportunities for resilience

- Integration of **green infrastructure** and **nature-based solutions**:
  - Collective pools
  - Permeable surfaces
  - Green roofs
  - Constructed wetlands

General recommendation

For reduction of the risks from floods and increase of the resistance/resilience, the state needs to prioritize the following:

- Land use reforms,
- Sustainable water management, and
- Investing in climate-resilient infrastructure.

The reinforcement of the systems for early warning, the development of detailed maps for flood danger and risk, as well as flood risk management plans (FRMP), together with the rehabilitation of the critical infrastructure, are the key steps.

Increasing the awareness of the communities and inclusive planning that takes into consideration the need of the vulnerable groups, is also of essential importance.

Key institutional challenges

- **Institutional fragmentation and shortage of structured coordination**
- **Need from multidisciplinary expertise** - limited institutional capacities
- **Public consultation and communities' involvement** – inclusive and transparent processes on decisions adoption
- **Integration of the aspects of risk from floods in the spatial and urban planning** - sustainable planning in flood risk areas
- **Strengthening on the municipalities** - key role in prevention, responding during state of emergency and development on infrastructure

General recommendation

- The system for floods management must transform from reactive and fragmented approach, towards proactive and integrated access.
- This transformation is conditioned by the political dedication, intersectoral cooperation and the continuous investments in institutional and infrastructural development.
- The acceptance and complete operationalization of the EU flood Directive represents unique opportunity for encouragement on this particular systemic change.
- By strengthening the coordination, strengthening of the technical and local capacities and inclusion of the community in the processes on planning, North Macedonia can build a more resistant and adaptable system for floods management in the future.

Strategic goals of PIR

- **Securing efficient coordination** between the ministries, national institutions and agencies, as well as regional bodies and municipalities, for integration of the management with risk from floods in the development planning.
- **Strengthening of the institutional and human capacities** for implementation of the EU flood Directive through modeling of floods, assessment of risk, planning of management and establishment of functional system for early warning.
- **Development and maintenance of accessible and quality informational systems for risk from floods,** aligned with the INSPIRE directive and the EU's standards for data
- **Strengthening of citizens and local affected sides** through proactive communication, education of the public and participation in the processes of management.

Recommendations related with the existing institutional coordination

- **Strengthening the operational status and functionality of the National Water Council and the River Basin Councils**

- **Connecting the systems for protection and rescue with integrated water management -** Establishing formal communication channels, common data platforms and harmonized risk assessment tools, would significantly improve the outcomes.

- Additionally, **integrating the flood emergency plans from the river basin management authorities into the operational protocols of the Crisis Management Center (CMC) -** will ensure that the measures are appropriately included in the national and local emergency plans**.**

Establishment of National Council for management of flood risks

Purpose: Overcoming on the fragmented institutional system and improvement of the coordination in management with risk from floods.

Mandate: The Council is established under the leadership of Ministry of Environment and Physical Planning (MoEPP), on the foundation of the changes of the Law for water.

Composition:

- MoEPP (Sector for water)
- Ministry for agriculture, forestry and water management (MAFWE)
- Center for management with crises (CUK)
- Directorate for protection and rescue (DZS)
- Administration for hydrometeorological works (UHMR)
- J.S.C. Water management
- Municipalities, academic institutions and civil organizations

National Council for management of flood risks

Functions:

- Strategic coordination and alignment on policies
- Overview of estimates for flood danger and risk
- Harmonization of national and local plans for management of risks from floods
- Tracking of the implementation of the EU Floods Directive in the frames on the Law for Water
- Enabling permanent communication and cooperation between competent institutions about the risks, infrastructure and urgent response

Establishing inter-municipal cooperation through joint municipal working groups

- Based on the changes to **the Law for water**
- In accordance with **the Law for intermunicipal cooperation (2009)**

Purpose: Strengthening flood risk management through coordinated action at local level

Structure:

- **Joint municipal working groups** at the **sub-basin** level
- Composed of heads of departments: environment, urban planning, communal services, protection and rescue

Mandate and strategic role of inter-municipal working groups

- Harmonization of risk scenarios between municipalities
- Identification of critical and vulnerable infrastructure
- Agreement on for priority measures for flood protection and mitigation on sub-basin level
- Coordination for access to finance (EU IPA funds, donors, public investments)

Presentation:

- Municipal coordinators may represent sub-basins in River Basin Councils or, if established, in Sub-basin Councils.

Example: Polog region

- By decision of the councils of all 9 municipalities in the region, a **joint – inter-municipal body in the form of a working group titled "Network for Protected and Resilient Polog“** was established
- In an identical way a **joint department of the 9 municipalities for water management and flood risks** was created, based in Tetovo

- The network (working group) is coordinated by each municipality with a rotation every 6 months.
- The network includes heads of organizational units for environment, communal services and urban planning, as well as employees with duties related to the protection and rescue of citizens and property.
- The network has adopted rules of procedure, which stipulate that it will meet at least three times a year.

- The Joint Department for Water Management and Flood Risks was established based on a previously conducted functional analysis, which determined that in only two (Tetovo and Gostivar) out of a total of 9 municipalities, one job position is foreseen whose job description includes water management, but they are also unfilled (status as of the end of 2023).
- With the systematization, a phased filling of the joint department with 4 employees is envisaged.
- The costs for the functioning of the joint department are distributed in accordance with a signed agreement between the mayors of the 9 municipalities.

Access to information and data management

Recommendations related to data infrastructure:

- **To establish a National Flood Risk Information System (NFRIS) under the authority of the MoEPP.**
- This system will serve as a centralized platform for collecting, managing and analyzing flood-related data – from hazard and exposure mapping to real-time monitoring and predictive modeling.
- The system must be linked to the hydrometric and meteorological databases of the UHMR, including real-time data to support early warning and operational planning.

Recommendation for conclusion of Protocols for the exchange of information

- To introduce a formalized, legally binding inter-institutional protocol for data exchange.
- This protocol can be established through a government regulation or executive order that will mandate the regular and standardized exchange of data in machine- and human-readable formats.
- Institutions should be legally obligated to share relevant data with the MoEPP and the proposed NISR platform, with mechanisms in place to ensure the quality and timeliness of data.
- In addition to institutional cooperation, open access platforms should be promoted that will allow the public, municipalities, researchers and businesses to access flood risk datasets.

Other recommendations for access to information and data management

- Alignment of national data standards with the EU INSPIRE framework to facilitate cross-border cooperation and fulfilmemt of EU reporting obligations.
- Developing and publishing flood hazard and risk maps, tailored for a variety of end users, including schools, businesses and municipal authorities.
- **Establishing an Early Warning System for Multiple Threats,** integrated with local alarm systems and available to the public through multiple communication channels, as well as **establishing of a special working group or committee responsible for coordination and implementation of the system**, with representatives from relevant state institutions, NGOs and communities.
- Ensuring adequate budget and staffing, especially IT and geospatial analysts.
- Encourage participation of the scientific and academic community in data validation and modeling, potentially through externally funded research grants or partnerships with universities.

DISCUSSION QUESTIONS

1. Whether the presented flood risk profile in the country is comprehensive or are there risks that were not covered in the presentation?
2. Do you agree with the formulated objectives of the PIR?
3. What is your view on the formulated institutional challenges and the presented recommendations for improving inter-institutional coordination and data management?

PART TWO

Presentation content:

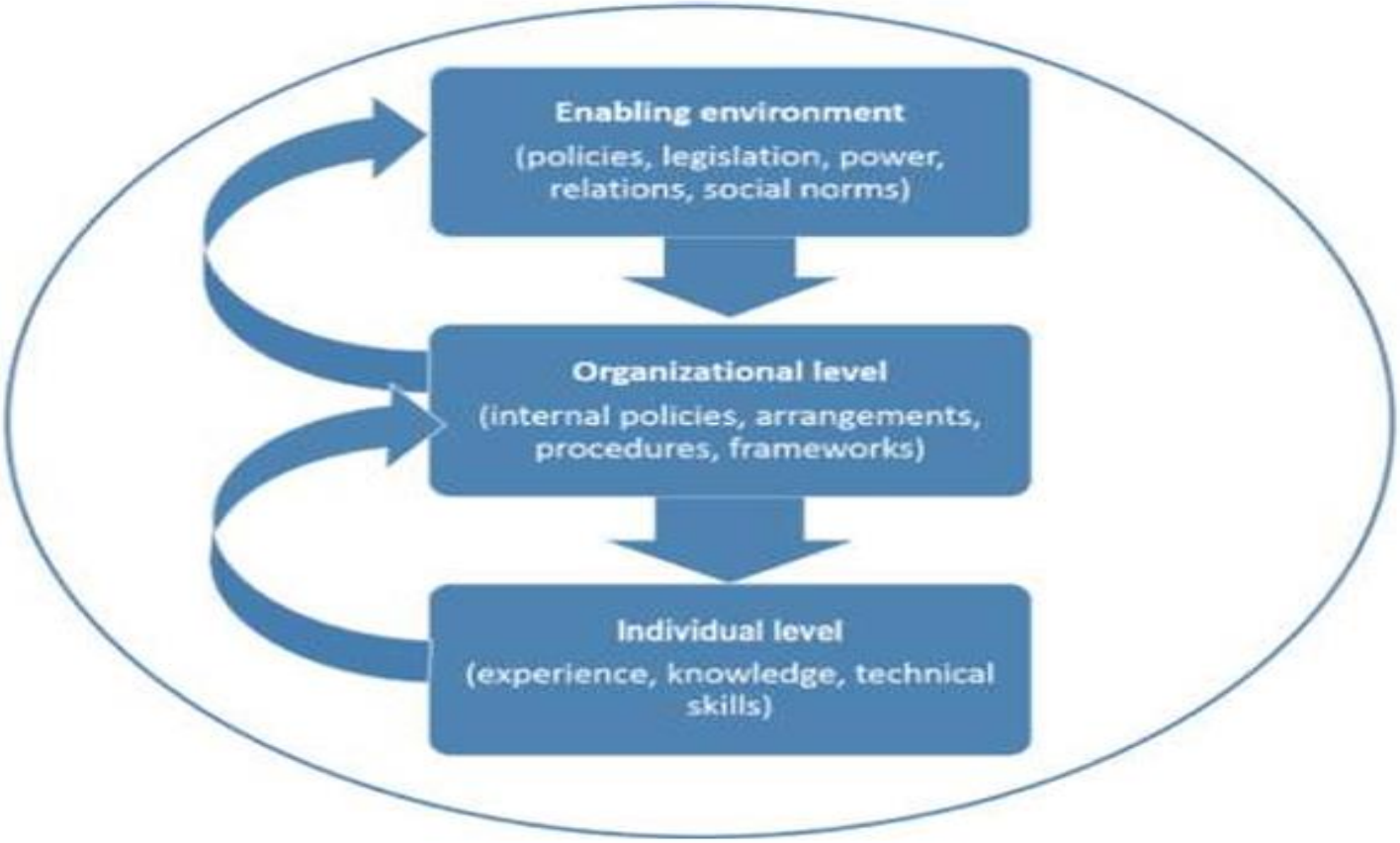
- Methodology for preparing a Capacity Building Plan
- Training plan – rationale for phased/staged approach
- Mobilization of financial resources (financing)
- Discussion questions

Objective of the Plan for Strengthening Flood Risk Management Capacities:

- Advanced knowledge and skills for prediction, readiness, reaction and recovery from floods
- Better understanding of the risks from floods and application on systems for early warning
- Implementation of good practices in spacious planning and design on infrastructure
- Development of technical and operational skills through trainings and education
- Improvement of coordination between government institutions, local self-governance, non-governmental organizations and local communities
- Improvement of management, distribution of resources and decision-making processes

Long-term effect:

- Support towards development of adaptive, common ready Plans for management with risks from floods (PURP)
- Increase of resistance, especially in the areas with high risk of floods and limited resources
- Preparedness for increasingly frequent and severe floods caused by climate change



Capacity levels

Capacity Building Plan

Focus on organizational capacities

The organizational level of capacity refers to the internal policies, regulations, procedures and frameworks that enable an institution to function effectively and fulfill its mission.

Applied Methodology

- Overview of relevant laws and internal acts for the organization and systematization of jobs
- Training needs assessment questionnaires (structured/semi-structured), for assessing staff, knowledge and skills, equipment and budget needs **– FOCUS ON THE WATER SECTOR AT THE MoEPP in the first phase**
- Meetings and interviews
- Meetings of the Working Groups (WG) and Designated (dedicated) Groups (DG)
- Workshops

Correlation between the Capacity Development Plan and the EU Floods Directive Specific Implementation Plan (SIDP)

- The findings from the applied organizational capacity assessment tools will serve as the basis for the development of the SPIDP.
- They will help define the necessary steps for full implementation of the directive, including explaining the current level of administrative capacity (monitoring, reporting and enforcement).
- They will contribute to the formulation of the **Implementation Strategy**, which will define the roles and responsibilities of the various stakeholders, as well as investment needs.
- All identified entities responsible for implementing the directive, together with the Institutional Development Plan and relevant chapters for improving administrative capacities (including staffing levels, competencies and sources of funding), will be included in the SPIDP.

Training Plan – Phased Approach

- **Purpose:** To ensure urgent capacity building and long-term institutional development in flood risk management.

- **In the short term**, conducting targeted training within the project timeframe allows for rapid strengthening of key competencies, overcoming urgent knowledge gaps, and immediately applicable expertise in ongoing activities.

- Due to the complexity and dynamic nature of flood risk management, especially in areas such as data analysis, stakeholder coordination and policy implementation, a more comprehensive and detailed training program is needed as a next step.

Objective of the Flood Risk Management Training Plan

- Improving professional and technical skills at all institutional levels
- Encouraging interdisciplinary learning and collaboration
- Developing a culture of preparedness, adaptation and resilience

Access towards the trainings:

- Structured learning with basic and specialized modules
- Programs adapted for:
  - Technical staff
  - Decision makers
  - People on the front line of response
- Practical directionality for application in real scenarios with floods

Expected result: A trained workforce that is prepared to anticipate, respond to, and recover from flood-related hazards

Phase1: Short-term Training Plan (within the duration of the Project)

In accordance with the Inception Report of the Project, a total of five training events are planned.

Two two-day trainings (up to 10 people) for members of the Designated (Dedicated) Group 1 on strengthening administrative capacities, access to information and public communication

Participants: MoEPP (Sector for water), CUK, DZS, UHMR, P.E. Water management and ZELS

Purpose: To improve the institutional and human capacities of the competent institutions for efficient flood risk management through improving administrative functions, transparent access to information and proactive communication with the public.

Training modules:

- Institutional roles and responsibilities in flood risk management;
- Public administration and disaster risk management;
- Data management and access to information;
- Communication strategies and public information;
- Stakeholder involvement and planning participation;
- Transparency mechanisms;
- Crisis communication and emergency public information;
- Capacity building at national, regional and local levels.

One five-day training (10 people) for members of Working Group 2 on the preparation of flood hazard maps and flood risk maps, using the model and the manual

Participants: MoEPP (Sector for water), CUK, DZS, UHMR and P.E. Water management

Purpose: To build technical capacities for the accurate production, interpretation and efficient use of flood hazard and flood risk maps, in order to support evidence-based planning, risk reduction and informed decision-making in flood-prone areas.

Training modules:

- Introduction to flood hazard and risk mapping;
- Hydrological and hydraulic modeling for mapping purposes;
- Data requirements and sources;
- GIS for flood mapping;
- Flood hazard mapping;
- Flood risk mapping;
- Map validation and quality assurance;
- Stakeholder use of maps;
- Public access and communication of maps..

Two five-day trainings (10 people each) for members of Working Group 3 on the implementation of a Flood Early Warning System and coordination with stakeholders

Participants: Sector for water at MoEPP, UHMR, CUK and DZS

Purpose: To strengthen the technical, operational and coordination capacities of relevant stakeholders for efficient implementation, management and communication of Flood Early Warning Systems, aiming at timely and informed response to flood risks

Training Modules:

- Principles and components of a Flood Early Warning System (FEWS);
- Hydro-meteorological monitoring and data collection;
- Flood forecasting and modelling for early warning purposes;
- Warning communication and distribution;
- Institutional roles and coordination mechanisms;
- Community involvement and risk communication;
- Testing and validation: exercises and simulations;
- Data management, visualization and decision support tools;
- Sustainability and institutionalization of the FEWS.

In addition to classroom training, the following capacity building tools will be applied::

- **Interactive workshops**
- **Workplace/On-the-job assistance**
- **Study visits**

The topics on the study visits will be:

- **First visit** (first year of project implementation): Approaching the EU Floods Directive
- **Second visit** (second year of project implementation): Preparation and implementation of the Flood Risk Management Plan (FRMP)

PHASE 2: Follow-up Trainings – Strategic Goals and Target Groups

Purpose: Strengthening technical, institutional and operational capacities for long-term flood risk management in accordance with the EU Floods Directive..

Target groups:

- MoEPP - Sector for water
- Crisis Management Center (CUK), Directorate for Protection and Rescue (DZS)
- Municipal Services, Utility Companies, TPPE
- UHMR, J.S.C Vodostopanstvo, PE National Forests
- Centers for Development of Planning Regions, River Basin Councils

Focus areas:

- Preparation of tenders for the preparation and assessment of prepared PURPs (*for the Water Sector at the MoEPP*)
- Legal compliance and institutional roles
- Coordination between PURPs and plans in the crisis management and civil protection system
- Technical skills: mapping, GIS, Early Warning Systems
- Financing and implementation of structural and non-structural measures

Conclusions:

The phased approach ensures sustainable and long-term development of flood risk management capacities.

- **Phase 1 - Short-term impact**:
  - Rapid strengthening of skills in line with the project objectives
  - Improvement of coordination and knowledge transfer
- **Phase2 –Long-term development**:
  - Deepening of the technical expertise, alignment of methodologies
  - Focus on advanced topics: financing, integration of GIS data
  - Support for adaptation towards climate changes and compliance with the EU Floods Directive

Progressive learning curve:

- Adapted to institutional capacity
- From basic knowledge to specialized skills

Result: Applicable training that enables institutions to effectively implement and maintain flood risk management in line with national and EU priorities.

Mobilization of resources

- Assessment of existing financing instruments and programs at national, regional and municipal levels – Mapping of financing mechanisms established or enabled by laws and regulations
- Assessment of relevant programs from the State Budget
- Assessment of municipal budgets
- Assessment of other sources of funding

DISCUSSION QUESTIONS

1. Are the objectives of the Capacity Building Plan clear and achievable?
2. What is your opinion on the proposed phased approach to building the capacities of the involved institutions?
3. Which training topics do you think are the most important in the short term (duration of the project)?
4. Which training topics do you think are the most prioritized in the medium term – after the project is completed?
5. Share your experience with financing non-structural and structural measures for flood risk reduction and provide a brief assessment of the existing system for financing these measures.

PART THREE

GROUP WORK

- **TOPIC:** SWOT analysis of the existing flood risk management system

Participants are divided into three groups and choose a reporter - presenter.

- SWOT analysis is a commonly used participatory method to identify the most important internal factors and external circumstances related to the topic of analysis.
- SWOT is an abbreviation from English for: "Strengths, Weaknesses, Opportunities and Threats".
- Strengths and weaknesses are internal factors, or issues that are primarily controlled by stakeholders.
- At the same time, opportunities and threats are external factors, circumstances over which stakeholders have little influence, but they must be aware of and have appropriate mechanisms to respond.

Thank you for your attention.