Floods on Dniester River: events and lessons learnt

Ilya Trombitsky
Eco-TIRAS International Environmental Association of River Keepers
MOLDOVA
Dniester River

- Length 1362 km
- Basin 72100 km² (MD -29%; UA – 71%)
- Population = 7.75 mln (MD – 2.75; UA – 5)
Dniester & Prut basins
Flood 1969 (one dam on Dniester)
Flood 1980 (one dam on Dniester)

upstream  downstream
Flood 2008 (three dams on Dniester) upstream & downstream of Dubasari dam
Flood in Lower Dniester (2008)
Flooded houses in Moldova and Transdniester sector
Relation with other water issues in Moldova and Dniester basin

- Dramatic deforestation in Ukrainian Carpathians
- Land use in favour of agriculture (arable lands > 76% in Moldova)
- Domination of Hydro Energetic interests among stakeholders (Dnestrovsk Hydro Power Complex management by two different juridical persons!)
- No effective mechanisms of stakeholders involvement in decision making
- Not effective land planning and violation of flooding zones’ regime by construction
- Weak implementation of IRBM principles
Institutional and legal arrangements for cooperation – transboundary level

- Intergovernmental Agreement MD-UA 1994 on border (not transboundary!) waters (responsible – water agencies)
- Intergovernmental Agreement MD-UA 1998 on prevention industrial accidents, calamities, natural disasters and liquidation of their consequences (responsible – emergency agencies)
- Protocol on floods control (2006) under 1994 Agreement on border waters:
  - Related to only zone of joint borders
  - Limited number of monitoring points
  - No river basin approach
  - Weak stakeholders involvement

Shortcomings
- No river basin agreement (modern river basin agreement draft OSCE/UNECE exists, which provides river commission), but recently its necessity was opposed by governmental Plenipotentiaries of MD and UA
- No well established information exchange and in time notification
Institutional and legal arrangements for cooperation on national level (2)

• Responsible on floods on national level in Moldova:
  - *Emergency Service of the Ministry of Interior* (system of notification)
  - *State Water Management Agency*
  - *Ministry of Ecology and Natural Resources* (*Hydrometeoservice* – system of notification)
  - *Local authorities*
Notification scheme between competent agencies of Moldova and Ukraine on hydrological situation on transboundary rivers in the period hydro meteorological events or accidents

Hydrometeo Service of Ukraine, Kiev, Ministry of Emergency Situations → State Water Committee, Kiev, Dniester & Prut Basin Committee, Chernovtsy

Hydrometeo Service of Moldova, Chisinau, Ministry of Ecology and Nat Resources

Apele Moldovei State Water Agency, Basin Dept of Water Resources, Chisinau, Costesti-Stinca Hydronode (Costesti, Prut)

Dniester Complex Hydronode Management, Novodnestrovsk

Management of Dubasari Hydropower Station (Moldelectrica) Emergency Situations Service under Min of Interior of Moldova

Dniester Basin observation stations: Drochia, Orhei, Dubasari, Chisinau, Bender, Stefan Voda

Odessa Oblast water Dept., Danube Basin Management Dept. (Ismail)

Basin of Prut and Danube observation stations: Briceni, Ungheni, Hincesti, Cahul
Arrangements for transboundary cooperation

- Strong necessity of river basin agreements for both Dniester and Prut rivers
- Need of creation of river commissions as an institutional basis for floods prediction and management
- Overcoming of hydro energetic interests domination and harmonization of water uses with other interests
- Establishing of computerized transboundary information and flood broadcast systems
Achievements so far: success factors

• Willingness to cooperate
• Existence of external funds to support cooperation
• Existence of specialists
• Existence of understanding of the necessity to cooperate on river basin and transboundary levels
e. Potential improvements: knowledge gaps / learning needs

• Not enough experience in transboundary cooperation

• Lack of experience in modeling of floods on river basin level

• Problematic access to external funds (no enough experience) in projects like EU CBC & ENPI
Potential benefits of cooperation

- Prevention of damages by floods
- Better river basin management
- Harmonized interests of water users
- Flood forecasting and announcement
- Less pollution of the river
- Safeguard clean drinking water
- Urgent repairs and essential improvements to levees and flood control facilities
- Increased flood protection for urban areas
- Evaluation and repair of the current flood control system
Schemes of information and notification under Floods Prevention Protocol (2006)
Challenges and obstacles for transboundary cooperation

• Departmental interests contradict multi-stakeholder approach. Consequences:
  - No river basin agreement and no river commission;
  - Stakeholders interests are not taken into consideration;
  - Notification is not efficient
  - No coordinated emergency planning
  - Flood prevention plans on national, not basin level
Possible solutions to improve transboundary flood management

- New river basin agreement
- Establishing of river basin commissions and basin transboundary councils
- Development of automatic information and notification systems basing on hydrometeo databases
- River basin flood management plans and basin programme
- Multistakeholder approach
- Simplifying of access and exchange of information in both countries
Conclusions:

- Dniester River basin presents a good example of the East European transboundary river to develop a flood forecasting and announcement model for the whole region

- Successful floods management for Dniester River needs legal and institutional improvement of cooperation based on Helsinki Water Convention principles