

# River basin management approach in Turkmenistan



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# River basin principle

- **River basin principle**-more possibilities to manage water, taking into account natural hydraulic and environmental conditions, clearly defined hydrological boundaries, and not so much based on administrative boundaries.
- **Integrated Water Resources Management (IWRM)**, which aims to ensure the coordinated development and management of water, land, and related resources by maximizing economic and social welfare - without compromising the sustainability of vital environmental systems.

# UNECE Environmental Performance Review of Turkmenistan –recommendations on water

*The Ministry of Water Economy should*

*-Establish basin management structures for Murgab, Tedjen and Atrek rivers and also for relevant canal systems and ensure the coordination of actions according to a developed plan.*

*-Develop a national integrated water resource management plan with involvement of relevant water users in the planning process;*

# General Approach With Basins

1. Large river basins-naturally existing wellknown rivers
2. Small river basins-small rivers, sometimes important keep some of those separately
3. Drainage basins-manmade drainage systems , sometimes important to keep some of those separately
4. Interbasin-basin related with Karakum canal as that cross other natural basins

# Optional proposal(1)

- **I-Amu Darya Basin;**
- consisting of the Amur Darya River within Turkmenistan and its tributaries.
- **-Amudarja Lebap zone basin district** . Lebap oasis (midstream of the Amudarya) – with above 330 thousand ha of irrigated lands and around 400 000 of rural population and
- **-Amudarja Dashoguz zone basin district.** Dashoguz oasis (downstream of the Amudarya) – with above 470 thousand ha of irrigated lands and around 600 000 of rural population

# Optional proposal(2)

- **II-Murgab Basin;**
- consisting of the entire Murgab River and its tributaries; except that part which lies in Afganistan, it also includes the upper reaches of the Kushka and Kashan inside Turkmenistan as part of this River Basin. with above 480 thousand ha of irrigated lands and around 500 000 of rural population
- **III-Tedjen Basin;**
- consisting of the entire Tedjen River and its tributaries except that part which lies in Iran and in Afganistan, with above 220 thousand ha of irrigated land and around 150 000 of rural population
- **IV-Atrek Basin:**
- all of the tributaries except that part which lies in Iran Atrek oasis (the Atrek river with tributaries) – less than 15 thousand ha of irrigated lands and around 30 000 of rural population

# Optional proposal(3)

- **V-Karakum canal and related canal system Interbasin**, consists of 9 canal management units, may compose two basin districts:
- **-Karakum canal western basin district**, more than 500 thousand ha of irrigated lands and around 400 000 of rural population and
- **-Karakum canal eastern basin district** , with above 480 thousand ha of irrigated lands and around 500 000 of rural population.
  
- **VI Caspian Sea basin district** basin district is with very small surface flow and more issues are related to water supply issues for inhabitants and coastal zone management.
  
- **VII Small river basins(basin districts)** should be discussed and determined separately



# Proposals to improve current Water legislation(1)

- instead of general and basin schemes, a more concrete term – River Basin Management Plans (RBMPs) and,
- more specifically, River Basins or River Basin Districts as territorial, geographical areas for management should be included into Water Code

# Proposals to improve current Water legislation(2)

- Also some other amendments, such as:
- -objectives and content of RBMPs;
- -timeframe of planned activities;
- -organization of elaboration of such plans;
- -procedures about public participation in process of elaboration of RBMPs.

# River Basin Management Plans for each River Basin District

- an analysis of its characteristics;
- a review of the impact of human activity on the status of waters and an economic analysis of water use;
- ensuring that the price charged for services related to water reflects the true economic costs of providing the service;
- establishing programs for monitoring the status of surface waters and groundwater and protected areas;
- developing and implementing program of measures included in River Basin Management Plans;
- taking action to prevent or reduce the impact of accidental pollution incidents;
- prohibiting the direct discharge of a list of dangerous substances into groundwater.

# Structures and organizations

- a) policy and regulatory
- -National Water Commission,
- -River Basin Organizations with River Basin Administrations; and
- -River Basin Councils.
- b) operational and maintenance
- -Various agencies (irrigation, urban and rural water supply, generation of hydropower , fisheries, tourism,etc),

# National Water Commission (NWC)

- -develop State policies on integrated use of water and protection of water resources for the purposes of irrigation,
- municipal use, industrial use, generation of hydropower, tourism and recreational use, environment protection , etc;
- -develop relevant state programmes in the sphere of effective usage and protection of water resources;
- -develop investment strategies for water resources development, usage and protection;
- -develop policies to mitigate the impact of climate change on the use and protection of water resources; and
- -supervise development and implementation of river basin management plans, the rational usage of water resources for irrigation, municipal, industrial, hydropower, and recreational uses, and setting the norms and limits of water use by water users,

# River Basin Organizations (RBOs)

- -participate in the governance of the respective basins through its representatives in the River Basin Administration.
- -coordinate, consolidate and protect water users interests in the River Basin, contribute to solving problems of water users with regard to access to and distribution of water resources in the river basin;
- -guarantee the increase of public awareness on water management problems of the river basin and current situation in the water management sphere;
- -take into account contribution of Union of water users to solve water management problems across the river basin with regard to delivery, allocation and distribution of water;
- -solve conflict situations and issues among water users, and between River Basin Organization and water users.

# River Basin Council (RBC)

- Tasks-providing consultative services and advice,
- as well as serve as a platform for water users to have a voice in basin planning and management activities and decision-making processes.
- Composition-representatives of government agencies using water resources and also farmer organizations and NGOs

# Way forward

- communication and dialogue between different parties is important,
- participation of the private sector in water resource management activities can be taken into account, also from different sectors-incl construction sector, expertise and water users ,
- National Policy Dialogue as a platform to develop ideas with water management should be used .



# EU practice with water reforms

- Over 10 years of practical reforms towards River Basin Management Approach, first RBMPs were prepared in December 2009,
- In 2012 mid term review of RBMPs will be completed, also new Water Strategy Paper – Blueprint to safeguard European Water Resources will be finalized at the end of this year.
- Good results are still on the way-good water status for all EU waterbodies, as a goal is still problematical to achieve in year 2015.

# Some changes in infrastructure for 10 new EU countries

## 1. The ownership of infrastructure/water companies

- State owned → state owned company → municipally owned → municipally owned company (private company, exceptional)
- For the RBM → grouping of municipally owned companies
- Special requirements needed for companies providing water services, in order to ensure the quality and sustainability of services

## 2. The technical state of infrastructure

- 2000-2010-2015 transition period for urban wastewater treatment directive
- 2000-2013-2015 transition period for drinking water treatment directive

## 3. Upgrading the infrastructure

- Every municipality dreams of becoming a new leader in whole county
- Feasibility studies should be carried out in a river basin scale instead of municipality

## 4. The price of water

- The price of water should consider the consumer capabilities and needs for investments
- Third party price regulator or legally binding price mechanism may be/should be used

# Conditions and outcomes of water management reforms in many new EU states

- The political context
  - In general positive electoral support
  - Weak opposition
  - Scientific disputes to support the implementation of reforms
  - Points of conflict substantial
- Stakeholder involvement
  - Increased by environmental awareness
  - General acceptance of reforms
- The influence of reforms
  - High administrative burden for legislators, strong international support
  - Quickly and constantly changing regulations
  - Lack of financial and administrative resources
- Outcomes(expected outcomes)
  - Almost clear and structured water management system
  - Meeting deadlines and achieving the objectives (drinking water, wastewater)
  - Well managed infrastructure

# Water and land

- IWRM is *'the coordinated development and management of water, land and related resources ...'* and
- Water without land can be as pointless as land without water

Thank for your attention !