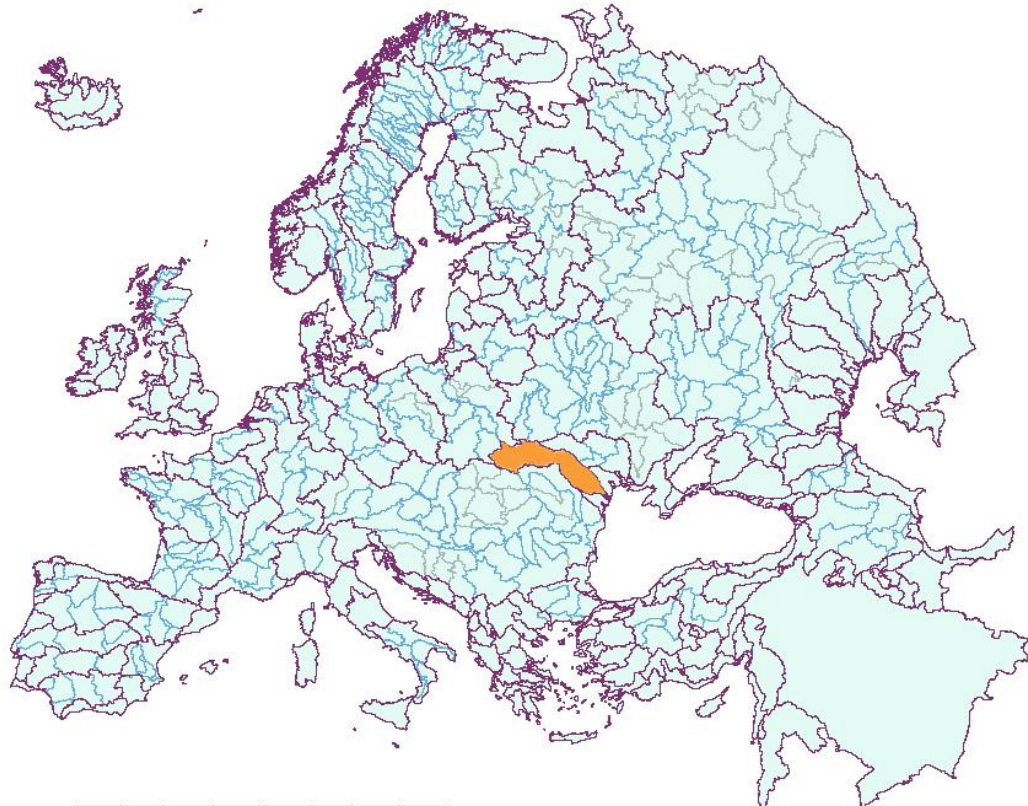


FIFTH WORKSHOP ON ADAPTATION TO CLIMATE CHANGE IN TRANSBOUNDARY BASINS

**Development of adaptation strategy and
implementation plan in the
Dniester River Basin
(Moldova-Ukraine)**

Geneva, 14-15 October 2014



Составление: ЮНЕП/ГРИД-Аредал и Zoi Environment

Strategies of Dniester basin adaptation to climate change have been discussed in main state organizations of Moldova and Ukraine

Strategies of Dniester basin adaptation to climate change, edition 0.1, December 2013 have been publicly discussed in

- State Agency “Apele Moldova” - 13.01.2014
- State Hydrometeorological Service of Republic of Moldova - 14.01.2014
- Ministry of Environment of Republic of Moldova - 15.01.2014
- The State Agency of Water resources of Ukraine
- State Hydro meteorological Center of Ukraine

<http://mediu.gov.md/index.php/serviciul-de-presa/noutati/1600-mediul-si-securitatea>

The screenshot displays the website of the Ministry of Environment and Climate Change of Moldova. The main headline reads: "210114: Ziarul National Alerta de rabie în R. Moldova! Erastă pericoul infecțiilor populatiei. Ministerul Mediului: Nu există impediment nominal pentru limitarea numărului excesiv de vulpi". Below this, a news article titled "Mediul și securitatea" is featured, dated Wednesday, January 15, 2014, at 09:04. The article discusses a meeting of the working group on climate change adaptation and risk reduction, presided over by Lazăr Chiriac, Vice Minister of the Environment. It mentions the implementation of the sub-project "Climate Change and Security in the Dniester Basin" and the "Schimbările climatice și securitatea în Europa de Est, Asia Mijlocie și Caucazul de Sud" project. A sidebar on the right contains navigation links such as "ACHIZIȚII PUBLICE", "ANTICORUPȚIE", "POSTURI VACANTE", "ÎNTREBĂRI ȘI RĂSPUNSURI", "RAPORTARE", "RARITĂȚILE MOLDOVEI", and "CALENDAR DE MEDIU". At the bottom, there are logos for the official page of the Republic of Moldova, the Parliament, the Government, the Presidency, and the Legislature, along with the logo of the State Agency for Environmental Protection (SAEP).

Strategic Framework for basin adaptation

Promotes a common understanding on climate change impact and necessary adaptation measures from the transboundary perspective

Climate – Water - Basin



СОДЕРЖАНИЕ

ВСТУПИТЕЛЬНОЕ слово	5
0. РЕЗЮМЕ	6
1. ВВЕДЕНИЕ	6
2. ОКРУЖАЮЩАЯ СРЕДА БАСЕЙНА ДНЕСТРА: СОСТОЯНИЕ, ПЕРСПЕКТИВЫ, СОТРУДНИЧЕСТВО	8
2.1 Географическое положение и природа	8
2.2 Население, хозяйство и политика	8
2.3 Экологическое состояние и проблемы	8
2.4 Бассейновое сотрудничество	8
2.5 Тенденции и перспективы	8
3. ИЗМЕНЕНИЕ КЛИМАТА В РЕГИОНЕ И БАСЕЙНЕ: ТЕНДЕНЦИИ И НЕОПРЕДЕЛЕННОСТЬ	9
3.1 Глобальный и региональный фон	9
3.2 Будущий климат бассейна Днестра	11
3.3 Факторы и последствия неопределенности	11
4. ВЛИЯНИЕ ИЗМЕНЕНИЕ КЛИМАТА НА ВОДНЫЙ СТОК, ПРИРОДУ, ХОЗЯЙСТВО И НАСЕЛЕНИЕ БАСЕЙНА ДНЕСТРА	14
4.1. Уязвимые ресурсы и отрасли хозяйства	14
4.2. Проблемы, связанные с водной средой	16
4.3 «Горячие точки» воздействия изменения климата в бассейне Днестра	23
5. ПОТЕНЦИАЛ АДАПТАЦИИ К ИЗМЕНЕНИЮ КЛИМАТА В БАСЕЙНЕ ДНЕСТРА	24
5.1. Социально-экономические и институциональные условия	24
5.2. «Регулирующие механизмы» бассейнового уровня	27
5.3. Институты международного и бассейнового сотрудничества	28
6. ПРИОРИТЕТЫ И ДЕЙСТВИЯ ПО АДАПТАЦИИ БАСЕЙНА ДНЕСТРА К ИЗМЕНЕНИЮ КЛИМАТА	31
6.1. Принципы бассейновой адаптации	31
6.2. Обзор возможных мер бассейновой адаптации	31
6.3. Экономические аспекты бассейновой адаптации	35
6.4. Пример: адаптация и защита от паводков	35
7. С ЧЕГО НАЧАТЬ?	37
7.1. Институциональные механизмы реализации	37
7.2. Конкретные шаги	39
ИСПОЛЬЗОВАННЫЕ ИСТОЧНИКИ	40
ПРИМЕЧАНИЯ	43

Strategic Framework for basin adaptation

Меры по прогнозу и анализу риска	Меры по предотвращению и снижению риска	Меры по устранению последствий
Снижение ущерба от экстремальных паводков		
<p>*совершенствование мониторинга и прогнозирования стока и обмена информацией</p> <p>&картографирование риска затопления</p> <p>*инвентаризация защитной инфраструктуры</p>	<p>*обновление и соблюдение правил эксплуатации днестровских водохранилищ</p> <p>*обновление схем противопаводковой защиты</p> <p>#восстановление и оптимизация системы защитных сооружений</p>	<p>&обновление и выполнение планов реагирования на чрезвычайные ситуации</p> <p>*информирование населения и местных властей об опасности наводнений</p> <p>&страхование рисков (в т.ч. с государственной поддержкой)</p>

Reducing damage from extreme floods

Strategic Framework for basin adaptation

Снижение ущерба от дефицита воды		
<p>*совершенствование мониторинга и прогнозирования стока и обмена информацией</p> <p>*оценка и мониторинг состояния лесов</p>	<p>*охрана и восстановление лесов</p> <p>*обновление и соблюдение правил эксплуатации днестровских водохранилищ</p> <p>#модернизация оросительных систем</p> <p>&снижение потребления и потерь воды</p>	<p>#диверсификация водоснабжения населенных пунктов</p> <p>&страхование рисков (в т.ч. с государственной поддержкой)</p>
Снижение ущерба от снижения качества воды		
<p>*совершенствование мониторинга и прогнозирования стока и обмена информацией</p> <p>&совершенствование мониторинга качества воды</p>	<p>#совершенствование систем очистки сточных вод</p> <p>#охрана и регулирование использования водосборов и водоохраных зон</p>	<p>#совершенствование систем водоподготовки и распределения воды</p> <p>#диверсификация водоснабжения населенных пунктов</p>

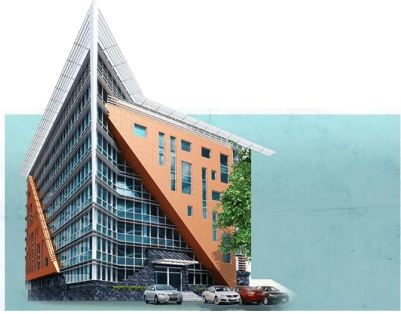
Reducing damage from water deficiency and worsening of water quality

Strategic Framework for basin adaptation

Поддержка и восстановление водных и околоводных экосистем и видов		
<p>*совершенствование мониторинга экосистем, и биологических ресурсов и трансграничный обмен информацией</p> <p>*анализ экосистемных услуг бассейнового уровня</p>	<p>#ограничение деятельности в пределах пойм и водно-болотных угодий</p> <p>#расширение сети ООПТ и экологических коридоров</p> <p>*обновление и соблюдение правил эксплуатации днестровских водохранилищ</p> <p>*#борьба с браконьерством и видами-вселенцами</p>	<p>*восстановление прибрежных лесов, лугов и водно-болотных угодий бассейнового значения</p> <p>*восстановление местообитаний и запасов рыбы</p>
Общие меры адаптации и развития сотрудничества в бассейне		
<p>*информирование о проблемах изменения климата в бассейне Днестра</p>	<p>*учет потребностей адаптации в перспективных планах КУВР бассейна Днестра</p>	

Conservation and restoration of water ecosystems and species

Public awareness



Priority measures adaptation measures to be implemented in the frame of the project

✦ Installation of 4-5 automated water level monitoring stations in the basin, and strengthening the exchange of monitoring data

- Mayaki (Moldova)
- Glynnoye (Moldova)
- Sambir (Ukraine)
- Zhuravno (Ukraine)
- Matkiv (Ukraine)

✦ Calculation of the current and long-term water management balance of the Dniester basin



✦ **Development of a joint platform on data exchange for inter-department and transboundary data exchange**

There is no joint platform where relevant information concerning the entire Dniester basin is presented which causes fragmentation of information flows and makes the work of hydrologists more difficult. It has been agreed that the joint information platform should have national and transboundary parts as well as include a hydrological forecasting component.

✦ **Improving flow forecasting to the Dniester reservoir**

It has been agreed that development of the forecasting system would help ensure a more secure exploitation of hydropower facilities. The need for such a system was emphasized by hydrometeorological organisations of both, Moldova and Ukraine, the State Agency of Water Resources of Ukraine and Ukrhydroenergo.

✦ **Ecosystem restoration and conservation**

- Conducting a feasibility study and low-scale restoration activities to improve water exchange between the Dniester and floodplain meadows by restoring water culverts under the road Mayaki-Palanca.
- Feasibility study for one wetland to be inundated during floods in Moldova and development of the relevant legal justification.
- Creation of forest margins and riverside protective bands at Ramsar site.
- Afforestation events in transboundary areas on the Dniester accompanied by training for local authorities on selection of species and areas for afforestation at the banks and water protection zones.

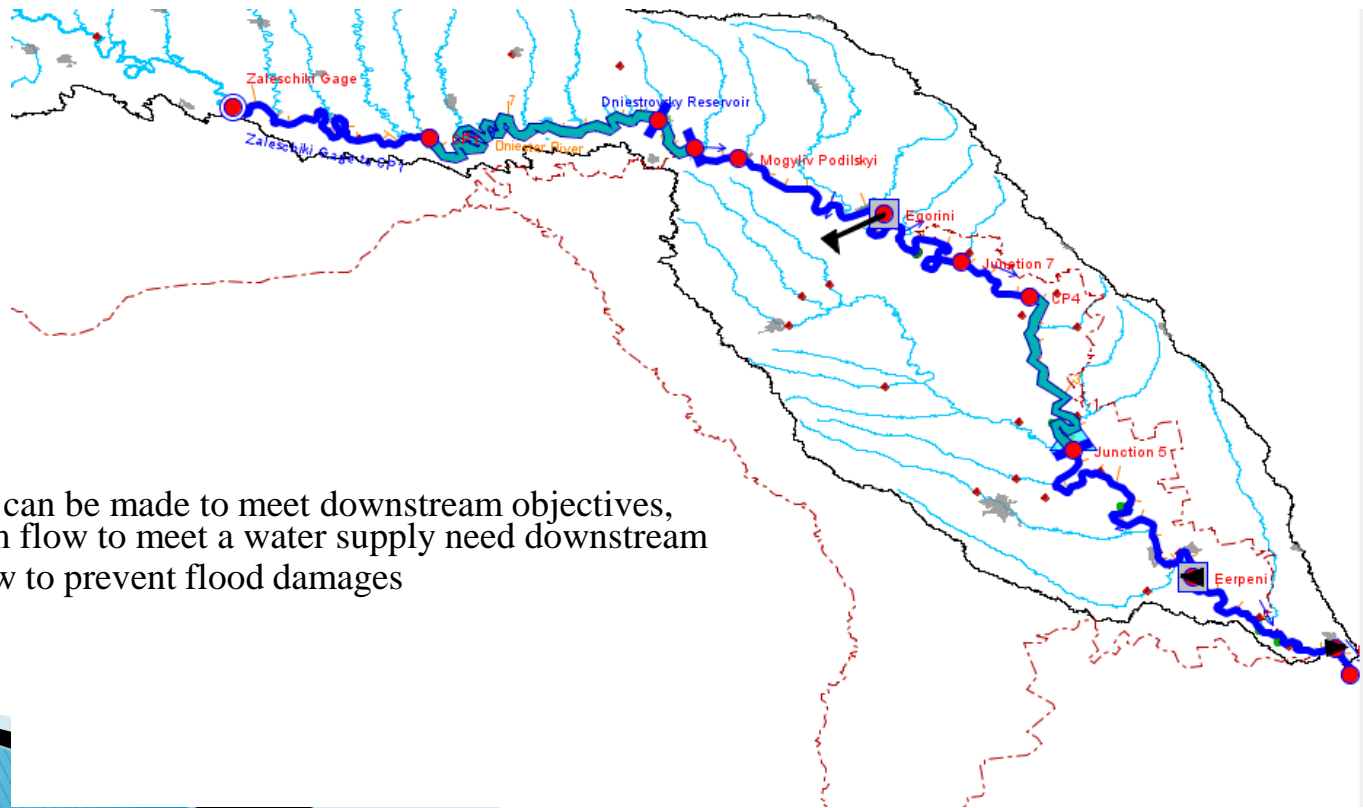
✦ **Conducting the art-contest “Colours of the Dniester” drawing contest, conduction of awareness raising expeditions and the Dniester festival**

RECENT DEVELOPMENTS

General Statement

Work within the framework of the project **Climate Change and Security in the Dniester river basin** provides the possibility and new impulse for the more tight cooperation between professionals of Republic Moldova and Ukraine. Joint work aimed at implementation of adaptation measures in the Dniester Basin contributes to the decreasing of conflict risks during the process of harmonization of actions on flood forecasting and flood protection as well as on joint use and distribution of deficit water resources.

Modeling of Dniester reservoirs by AGWA



Reservoir releases can be made to meet downstream objectives, such as a minimum flow to meet a water supply need downstream or a maximum flow to prevent flood damages

The cabinet today passed the Strategy on adaptation to climate changes in Moldova till 2020 and action plan on its implementation (10 October 2014)

Serviciul Hidrometeorologic x Zimbra: Inbox x Guvernul a aprobat Strate... x The cabinet today passed x Входящие (1) - gherman... x Creedence Clearwater | x

www.gov.md/libview.php?l=en&id=8226&idc=436

Apps DLR - ZKI - Home SRTM Search Result... Watershed Topolog... Reference Data WISE River basin dist... METEOPROG.UA: K... Метеопост - клима... Chernivtsi, Ukraine: ... Data for current con...

Friday, October 10, 2014

keywords - RSS feed Updated: 10.10.2014

 OFFICIAL WEBSITE
GOVERNMENT OF REPUBLIC OF MOLDOVA

RO EN RU

Government Prime Minister's Anteroom on-line Press service Decisional transparency Library on-line Useful information

[Home](#) / [Press service](#) / [Press Communiqué](#) / The cabinet today passed the Strategy on adaptation to climate changes in Moldova till 2020 and action plan on its implementation

The cabinet today passed the Strategy on adaptation to climate changes in Moldova till 2020 and action plan on its implementation

08.10.2014 Views: 179



The document stipulates the creation of the institutional framework in the climate changes till 2018, which will ensure the efficient implementation of adaptation measures at national, sector and local levels.

At the same time, it provides for the creation, till 2020, of a mechanism to monitor the impact of climate changes, associated social and economic vulnerability, and management and spreading out of information about risks and climate disasters, as well as to ensure development of climate resilience, by reducing by half at least the risks of climate changes by 2020 and facilitate adaptation of climate changes in six priority sectors: agriculture, aquatic resources, health, forests, energy, transport.

The strategy was worked out in line with the provisions of the Association Agreement with EU and action plan of the government. The strategy's main goal is to develop and consolidate capacities of Moldova to adapt and respond to real or possible effects of climate changes.

[Home](#) / [Press service](#) / [Press Communiqué](#) / The cabinet today passed the Strategy on adaptation to climate changes in Moldova till 2020 and action plan on its implementation

Government Prime Minister's Anteroom on-line Press service Decisional transparency Library on-line Useful information

lucru_greu-transfer_f...far Show all downloads...

Windows taskbar: Internet Explorer, File Explorer, VLC, Firefox, Chrome, Skype, Mail, Calendar, Search, System tray: RO, 16:27, 10.10.2014

★ State Program of Water Sector Development and Ecological Rehabilitation of the Dnipro Basin

Flood protection in the Dniester Basin

It is planned in 2014 to protect from the floods **7 settlements, 86 individual houses, 154 hectares** of agricultural land.

Currently attention is being paid mostly to transition from the “passive” flood protection (dikes construction, river banks stabilization) to the “active” flood protection meaning creation of anti-flood capacities and polders.

★ Creation of automated informational-measuring systems

Automated informational-measuring systems are considered as an important element of flood management. They provide receiving of operational hydrological information with the aim of warning and preventing possible negative consequences of floods and flash-floods. There are **8 automatic gauging stations** in Carpathian part of the Dniester Basin. It is planned to install **24 automatic gauging stations** more within the frameworks of international cooperation with the aim of decision making support in the basins of Prut and Siret at the territory of Romania and Ukraine.



Lessons learnt

- ▶ **Consultations process which include stakeholders from both countries is complicated and time consuming.**
- ▶ **Some of key stakeholders do not quite cooperative. For example the energy sector that they do not state clearly their position.**
- ▶ **Majority of public servants are not interested in the adaptation to climate change, at least these issues do not present the priorities.**
- ▶ **On the regional and local levels there are no authorities responsible for climate change adaptation.**
- ▶ **Importance of link between political and experts' level, e.g. through creation of a working group and regular meetings**

Lessons learnt

- ▶ **Importance of concrete activities (implementation of some measures) and involving population**
- ▶ **Importance and difficulty to link to national level, need for coordination and mainstreaming**
- ▶ **Producers are more interested in day to day problems and are not thinking strategically.**
- ▶ **Rural population is not aware about the problems linked with the climate change adaptation.**
- ▶ **Importance of joint scenarios, modelling and vulnerability assessment, but extent of harmonization depends on resources and time available**

Future Plans

- ▶ **Finalization of the strategic framework for basin adaptation- Dniester**
 - ▶ **Further development of implementation plan and resource mobilization strategy**
 - ▶ **Implementing of prioritized adaptation measures**
 - ▶ **Next working group meeting in Ukraine in December 2014**
 - ▶ **Sharing of experience at international events**
- 