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EURO-AQUA

Local Water Management in Georgia, Ukraine, Moldova, Belarus and Azerbaijan

A Collection of Local Water Management Insights from across EaP

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INTRODUCTION

When researching and designing the current publication the authors' team "e-thumbed through" a massive amount of reports, publications, books, non-papers, projects' documents, articles and press reports touching, focusing on or devoted entirely to water management (along the associated challenges of the Water Framework Directive implementation) within the Eastern Partnership. The number of available topical materials is genuine vast and seemingly crippling and staggering. The overwhelming majority of them discuss and investigate the institutional and legal frameworks and arrangements of the water management and governance with a distinctive, while perfectly understandable, the central level water governance bias. A prevalent number of the recent publications provide overviews of the current water management laws (legal and institutional, while routinely central scoped) and examine the challenges lying ahead to reform/ adjust/ transform the current water governance regimes, eyeing implementation or adherence (likewise in Belarus) and further enforcement moving towards the approximation to EU acquis in the field of water management as identified by the EU Water Framework Directive (WFD). Introduction of effective Integrated River Basin Management lists as a key topical focus of per excellence central regulator and ministries' scoped papers, along of a huge pile of versatile, usually useful methodology guidelines (however in English only).

Two regional EU founded projects - Environmental Protection of International Rivers Basins and European Union Water Initiative Plus for the Eastern Partnership (EUWI+ 4 EaP) did a tremendous job in terms of methodology adjustment and re-development, legal and institutional water management capacity building, regulatory improvement and its piloting, rendering a consistent, updated overview of current water management frameworks in EaP (we refer in this paper) and the key obstacles and problems, still, by its very nature and profile, being general, heavily central/state-oriented and available again mostly in English only. The praxis entanglements of local participatory development and updating of the River Basin Management Plans (RBMP), piloting so-called River Basin District (RBD), further e.g. forming and main-streaming of in-country River Basin Council remain largely unresearched due its early stage, protracted implementation, fragmentation or perplexing project jargon of the available sources.

All in all the majority of the available papers and sources, when exploring the water management across the EaP and scrutinizing the challenges of WFD implementation, do that in a narrow regulatory, state-oriented perspective (heralding Water Code/Strategy/Basin Management Plan as the keywords), rarely referring field stories or "live testimonies", skipping or omitting the complexity of cross-sectoral, participatory river basin management making-in process (despite declared), paying little attention to various, frequently conflicting interests of a spectrum of water-users (being both public and private, especially those at the bottom level, local authorities, local water management bodies, business e.g. in tourism, agriculture / horticulture / viticulture / fishery and their associations, further the individual water users, their motivations and incentives to comply). Altogether they are too frequent falling to reflect on effective enforcement of the future acquis adjusted water governance in EaP (behind the letter of the law itself).

The recently published - *Water laws of Georgia, Moldova and Ukraine: current problems and integration with EU legislation. Water International, 43(3), 424–435* Vystavna, Y., Cherkashyna, M., & van der Valk, M. R. (2018) stands a notable exception, providing a concise, investigative outline of the water management frameworks in three concerned countries, highlighting its peculiarities and differences, providing informative examples of its fragmentation, discrepancies and inconsistencies e.g. on water resources ownership versus land ownership: *in UA all water bodies are the property of the Ukrainian people and can only be rented. Yet, according to the land law (§59, Land Code of Ukraine, 2001), small confined reservoirs (less than 3 ha) can be owned, per appropriate decision of local executive authorities or the local government. According to MD water law (Law of the Republic of Moldova on Water, 2011), water is a public good, but individuals or legal entities have the right to use water under a legislative framework. For example, the land under a water reservoir can be subject to both public and private ownership.* To quote a line.

After tedious browsing, reviewing and surveying the available materials the authors, along the project team decided to go differently: instead of repetitive, fairly pointless referral work on the general perspectives on acquis driven water management transformation in selected EaP countries, lacking resources to "investigate

and stockpile” the complexity of cross-cutting, multi-stakeholder, “pretty inconsistent and informal” landscape of local water management in EaP (being by far much more complex than the central level water management), we went for a collection of informative, local water management related problem stories. Thus the current volume brings together a collection of local case-studies, insights and testimonies of the local water management problems, along the brief country relevant background introductions.

We realize the limitations of the approach, along the gaps entailed. The provided stories are just a mere selection of initial collection: we struggled to offer the representative testimonies. Not all of the early pre-identified problems are included and disused, as we lack an authoritative local “picture” or a source for the story e.g. est. of illegal, non-registered or semi-registered flow-through fishing ponds, redirecting and diverting the river steam in Georgia, being a huge debacle for integrated flood management inter alia. The comprehensive, all-embracing multi actors and multi-sectoral mappings of local water management landscapes are missing. These are the problems and shortfalls to be further investigated and addressed, under the future projects within the consortia, including those under the EaP CSF.

The current publication is a result of EURO AQUA: AA-driven Integrated Local Water Governance in EaP project, leaded by Peipsi Center for Transboundary Cooperation, Estonia, and implemented in partnership with: EcoContact (Moldova); International Charitable Organization “Environment-People-Law” (Ukraine); Foundation Caucasus Environment (Georgia); NGO “Ecohome” (Belarus); Azerbaijan Ornithological Society; Development Policy Foundation (Poland).

RUS:

При изучении и разработке текущей публикации команда авторов провела работу над большим количеством информации: отчеты, публикации, книги, документы, документации проектов, статей и сообщений в прессе, затрагивающих в той или иной степени тему управления водными ресурсами (наряду с соответствующими задачами реализации Рамочной директивы по водным ресурсам) в рамках Восточного партнерства. Количество доступных актуальных материалов является огромным и вероятно даже ошеломляющим. В подавляющем большинстве в них обсуждаются и исследуются институциональные и правовые рамки и механизмы управления водными ресурсами и управления с характерным, хотя и вполне понятным, предвзятым подходом к управлению водными ресурсами центрального уровня. В распространенном числе недавних публикаций приводятся обзоры действующих законов об управлении водными ресурсами (правовые и институциональные, также в основном на центральном уровне), и рассматриваются проблемы, стоящие впереди, чтобы реформировать / скорректировать / трансформировать нынешние режимы управления водными ресурсами, рассматривая реализацию или приверженность (аналогично Беларусь), а также дальнейшие меры принуждения к приближению к *acquis* ЕС в области управления водными ресурсами, как это определено Водной рамочной директивой ЕС (WFD). Внедрение эффективных интегрированных систем управления речными бассейнами в качестве ключевого акцента на центральном регуляторе передового опыта и областных документах министерств, наряду с большим количеством универсальных методических рекомендаций (однако, только на английском языке).

Мы понимаем ограничения подхода, связанные с пробелами. Представленные истории - всего лишь простой выбор первоначального ряда: мы старались предложить репрезентативные свидетельства. Не все ранние заранее определенные проблемы включены и не используются, поскольку нам не хватает репрезентативной локальной «картины» или источника для истории, например. незаконных, незарегистрированных или полуправовых прудов для разведения рыб, перенаправляющих и отводящих речной поток в Грузии, что является большой проблемой для комплексного управления наводнениями. Отсутствуют всеобъемлющие многопользовательские системы и многосекторальные карты местных ландшафтов управления водными ресурсами. Это проблемы и недостатки, которые необходимо дополнительно изучить и рассмотреть в рамках будущих проектов в рамках консорциумов, в том числе в рамках КС РП.

Текущая публикация является результатом EURO AQUA: интегрированное управление водными ресурсами на основе АА в рамках проекта Восточного партнерства, возглавляемого Центром



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GEORGIA

Introduction: In Georgia about 95% of the urban and 35% of the rural population is supplied by centralized water service. This indicates high network coverage by international standards. However the actual performance of this system is a problem. Poor quality of the distribution network results in a water loss rate of 10-51%, including 40% water loss in capital. All urban households suffer from interrupted supply, receiving water much less than 24 hours a day, in some cities as little as 8-10 hours a day. In rural areas the supply system often does not function at all. This affects mainly people living on higher floors of buildings, because of low pressure in the system. The major reason for that is the shortage of electricity supply due to a lack of payment and also physical shortages. Drinking water quality problems are related to leaking pipes and cross contamination from the sewage system. The centralized sewage system exists in 37 towns in Georgia. The systems are in poor condition. Wastewater treatment facilities are serving 33 towns, with the total daily design capacity of 1.42 million m³. There are 19 traditional mechanical/biological treatment plants, with a total design capacity of 1.39 million m³/day. Four purely mechanical treatment plants with a design capacity of 0.03 million m³/day are available as well. The plants are typically 10-25 years old; some are still unfinished, and most is not well maintained. None of the existing plants is actually providing biological treatment since the technical facilities are out of order. Power and other resources are also an issue. They are not delivered, as they are not paid for. Mechanical treatment is effective to a certain degree only in Tbilisi (GWP's Treatment plant serves Tbilisi, Rustavi and Gardabani), Rustavi, Kutaisi, Tkibuli, Gori and Batumi and its total estimated daily capacity is 0.7 million m³. As a result, the wastewater (municipal and industrial) discharged into the environment is insufficiently purified or not purified at all, causing pollution and health hazards. Water quality is affected by diffused pollution from agriculture as well.

There is a need to reform water sector policies and improve regulatory and institutional frameworks to bring them in line with the principles of integrated water resource management (IWRM). The economic aspects of water management should be addressed through the introduction/upgrade of economic instruments for water resources management. Water allocation rules and flood protection management should be further developed and incentives for water-use efficiency identified and implemented, using a mix of policy instruments.

Source: <http://www.nispa.org/files/GE-report.pdf>; author: David Melua

[http://www.euwipluseast.eu/images/PDF/Final Inception 2018.pdf](http://www.euwipluseast.eu/images/PDF/Final%20Inception%202018.pdf)

Stinky problems of Kakheti region

Date of information: June 2017



picture: Untreated sewage pours into the river

The sewerage system in Kakheti region is underdeveloped to say the least. The system works well only in Televi and Signaghi towns. With the absence of sewage system, water purifying stations rivers and artesian wells are contaminated with the waste water. In 2012, 39% of all finances directed to program of village development (government funded) were spent on creation and restoration of water supplying systems and only 2% on sewerage systems. During journalistic investigation it was found that there are no sewerage treatment plants in any town of the region. The sewerage waters are being poured into irrigation canals, ravines and then flow to Alazani river eluting the fertilizers, pesticides and other chemicals on the way.

In recent years a reconstruction of old and building new lines of drinking waters began. Yet the sewage situation remains unchanged. According to the requirements of the Georgian act "About water", discharges of polluted waters into the rivers without purification is prohibited. From 104 water purification inlets that are fed from surface waters, 22 fixed the violation of water quality standards.

It is regretful, that there is no mechanism of water security protection in the country. According to the 2006 amendments of the Georgian act concerning licenses and permission, the government control in the field of pollution was abolished. As of now there is no state or local authority entity responsible for overseeing the water pollution. Law claims that all waters inlets in the region must be protected and fenced, sewerage pipes must be separated and do not inflow into water mains and irrigation canals, yet no one oversees it.

Telavi is the biggest town in Kakheti region. 70% of its territory is covered with sewerage system, unfortunately the pipes are old and frequently out of order. The sewerage main line inflows straight into the irrigation canal near village Kurdgelauri. Houses in the village are located on both sides of the canal and the canal was not cleaned for last 20 years. The situation deteriorates in dry periods when water doesn't outflow from the canal and the sewerage runoff remains in the pipe. In normal circumstances the waste water flows for several kilometres: from canalization exit in the village, then through open ditch (eluting fertilizers, pesticides and other chemicals) and finally enters the Alazani river. All sewerage systems of Telavi, Akhmeta and other regions of Kakheti discharge their sewerage waters into the river. The polluted waters of Alazani river are used for watering of vineyards and gardens, so it threatens not only the drinking water, but soil and vegetation too.

Source: <https://www.sciencedirect.com/science/article/pii/S1512188717300556>; authors: Zurab Lomsadze; Ketevan Makharadze; Marat Tsitskishvili; Rusudan Pirtskhalava

The disaster in Chuberi village and risks of Nenskra hydro power station construction

Date of information: 6th July 2018



picture: Nenskra valley

On 5th July Nenskra River flooded the mountainous area as a result of heavy rains. The disaster struck several villages in the Chuberi community.

Nenskra river flows in the valley where the "Nenskra hydro" plant is about to be build. According to the National Environmental Agency specialists in terms of geologists and hydrology were sent to Svaneti to study the causes.

The JSC Nenskra Hydro company excludes that disaster was caused by construction of the plant. Company claims that at the beginning of 2018 preparatory works were stopped and performed works were limited only to rehabilitation of roads and bridges.

The construction meets big resistance throughout the local population, ethnicity called Svan. One of the reasons is the 200 hectares of woods that are ought to be cut. Underneath please find arguments of both parties:

Davit Chipashvili - "Green Alternative" according to specialists in terms of biodiversity, in around the planned power plant there is a presence of pristine environment. We have confirmed photo and video footage, which shows that this forest is an array of rare species. The landscape over here was so difficult for movement that forestry activities were impossible in the past. Due to that the forest kept the characteristic of primeval and should be placed under protected area. Forest - if cut down is generally impossible to be recreated to the natural state. The project site was originally proposed to be included within the European system of protected areas as the 'Svaneti 1' Emerald site. In January 2016 the Georgian government attempted to exclude all territories to form part of the planned Nenskra EBRD Project, without providing any evidence that the Nenskra and Nakra valleys are less important in terms of biodiversity than the rest of the Svaneti region. This resulted in a complaint to the Bern Convention on the Conservation of European Wildlife and Natural Habitats. The complaint will be reviewed by convention bodies. Moreover it is planned that the lower part of the valley will be left with only 5% of the river flow, which means that the river ecosystem will be irreversibly harmed. Without the cooling effect of water the microclimate downstream will change and temperatures will rise. This in turn will be reflected in the harvest and living conditions. The "Nencara Hydro" is about to stabilize the seasonal excess of water, but in nature there is no such term. The river must retain its variation throughout the year to sustain the ecosystem. The biggest risk of this investment is the deterioration of the environment and living conditions of Svan people.

"Nenskra Hydro": There is no pristine environment in the project area. The company and independent institutions carried out the research that highlighted the timber was chopped in the project area for decades and forest diversity is limited. It is noteworthy that the project area is completely removed from the Svaneti Planned Protected Areas. Places for restoration of forest have already been selected and their total area is about four times higher than the project area. Detailed information on these areas is given in the relevant chapters of the forest restoration strategy, document published on the company website. In the lower part of the Nenskra and Nitra waters, the timber has been cut off illegally for years. These places are the most appropriate areas of forest restoration. All pre-selected areas are to be agreed upon with local population before final selection. Other territories may be selected as well. It is worth of mention that we will differentiate whether picked up regions can support natural regeneration on their own or require seedlings of local varieties. The bed of the river valley won't change due to investment. A certain number of water can be transmitted through the tunnel in the reservoir. The quantity of moved water will be calculated according to the Swiss standard approved by a number of international organizations. It has been confirmed that the overflow of water from the river, which has created a huge problem over the years (including recent flood), as well as building a water flow regulator will have a positive effect for Svan people.

Source: <https://commerciant.ge/ge/post/svanetshi-mdinare-im-xeobashi-adidda-sadac-nenskra-hidro-nenskrahess-ashenebs>; author: Salome Lemonjava

Dashtapa village demands to solve the water problem

Date of information: 10th July 2015



picture: Marneuli outskirts

Dashtapa village with Azeri inhabitants (Marneuli municipality) held a protest rally today demanding to solve the problems of drinking and irrigation water in the center of the village. According to the participants, drinking water is supplied to the village only twice a week, but there is also a problem of irrigation canal that is completely damaged.

Marneuli Municipality Gamebeli met with participants of the protest and promised to solve the problem step by step. According to the Marneuli Gamegeoba, due to high temperatures, the water level has deteriorated on the river Debeda, demand is high and that is why drinking water schedule is so restrained. As per irrigation water the process of rehabilitation is actively underway and by the end of 2016*, the population will have 24 hours of drinking and irrigation water.

*As of October 2018 there are no reports about any improvements in Dashtapa village

Source: <https://bpn.ge/ekonomika/13487-sofel-dashthafas-mosakhleoba-tsylis-problemis-mogvarebas-ithkhovs.html?lang=ka-GE>

Tbilisi flooded – tragedy focused on the Zoo

Date of information: 8th July 2015

It was a unusual scene, a hippopotamus suddenly freed from its paddock, roaming innocently through the streets of Tbilisi, nibbling the leaves from the trees, until the dart with soothing chemicals allowed to transport this massive animal back to the zoo. The unusual event of Tbilisi's escaped animals attracted world attention. International readers were more interested in the faith of zoo inhabitants rather than human toll of the flood. In most cases animals were shot down, but in few stances zoo employees managed to tranquilize and move the creatures back to their enclosures.



picture: Who would not be upset by the spectacle of a hippo wandering innocently through the streets until it was shot by a tranquillizer dart?

The daily portion of sad world news leave us struggling to feel pity or compassion for everyday victims of different occurrences. We became callous due to overload. Yet a tranquilized hippo in a flooded city street is a completely different topic.

Georgians were annoyed at the way the animals' plight had captured the world's attention. It was also the city's worst human disaster in years. Between 13 and 14 June a landslide was released above the village of Akhaldaba, about 20 km southwest of Tbilisi. The landslide, carrying 1 million m³ of land, mud, and trees, moved down into Tbilisi and dammed up the Vere river at two points, first at a 10m wide channel at Tamarashvili Street and then at a channel under Heroes's Square, a major traffic hub, connected with Tamarashvili Street through the Vere Valley Highway. In result the flash flood claimed 20 lives, including 3 zoo workers. Four days after the flood, an escaped tiger killed another man and was subsequently shot down. One African penguin was found at the border crossing with Azerbaijan, having swum some 60 km south of Tbilisi.



picture: The Zoo after cataclysm

Even though this disaster took human lives and turned an entire city upside down, the world public was more interested in pictures of a bear perched on a house's air conditioning unit – probably before being shot – or a dead tiger being carried away on a stretcher. The zoo has lost more than 300 animals, either drowned, or shot dead by police – over half of its pre-flood population.

Source: <https://www.theguardian.com/world/2015/jul/08/the-tragedy-of-tbilisi-zoo-what-happened-next-georgian-capital>; author: Andrew North

https://en.wikipedia.org/wiki/2015_Tbilisi_flood

UKRAINE

Introduction: There are more than 22,000 rivers with a total length of over 170,000 km in Ukraine. They belong to catchment areas of the Black, Azov and Baltic seas. Rivers and reservoirs are polluted mainly by organic compounds (mostly from domestic waste-water), nitrogenous compounds, heavy metals (from energy production), phenols and petroleum products (from housing and communal services and the ferrous metal industry). The most heavily polluted rivers are in the catchment areas of rivers Zakhidny Bug, Siversky Dinets and in the area of the Azov Sea.

The capacity and effectiveness of water purification facilities cannot meet the increasing demand in terms of quantities of wastewater. In some cases this leads to accidental discharge of polluted waste water to the outside environment. For example, only 45% of the waste water discharged in the Dnipro is treated. The Dnipro basin is the Ukraine's main water-body and supplies water to two thirds of the Ukrainian population; most of the surface and underground resources originate from it. Its ecosystem has been destroyed to a great extent due to intensive consumption of water, discharge of pollutants originating from industries, agriculture and sewage etc. This situation has been aggravated by serious contamination by long-living radionuclides after the catastrophe at Chernobyl NPS in 1986. The outcome is eutrophication of water-bodies, the decline of fish stocks, more heavily polluted water and river sediments (toxic chemicals, heavy metals etc.) and unsatisfactory water quality for industrial, agricultural and domestic use. The pollution of underground water is also a growing problem.

Source: <http://www.un.org/esa/earthsummit/ukrai-cp.htm#ch21>

Ukraine is generally rich in water resources, but access to these resources vary; poorer areas in the East and South have less access. Drinking water in Ukraine is extracted from surface water (65%) and groundwater resources (35%). Ukraine has reasonable access to water supply and sanitation services. Of the urban population, 86% has access to piped water, but only 22% has access in rural areas; 72% of the entire population has access to flush toilets and 37% most of whom live in urban areas, is connected to wastewater treatment. Approximately one-third of collected wastewater is effectively treated, resulting in large volumes of untreated wastewater directly discharged into the environment, causing pollution and health hazards. Water quality is affected by discharges of untreated municipal and industrial wastewaters, as well as by diffuse pollution from agriculture. While access to water supply and sanitation services is relatively high throughout the EaP region, especially in urban areas, the quality of services is not always considered sufficient. The increased frequency of severe flooding and droughts is another serious issue impacting the region.

The key challenges Ukraine faces concerning water resource management include:

- limited or obsolete regulatory and institutional frameworks
- deficient water allocation mechanisms and flood protection management
- weak incentives for water-use efficiency and underdeveloped policy mixes
- incomplete adoption and implementation of River Basin Management Plans (RBMPs)

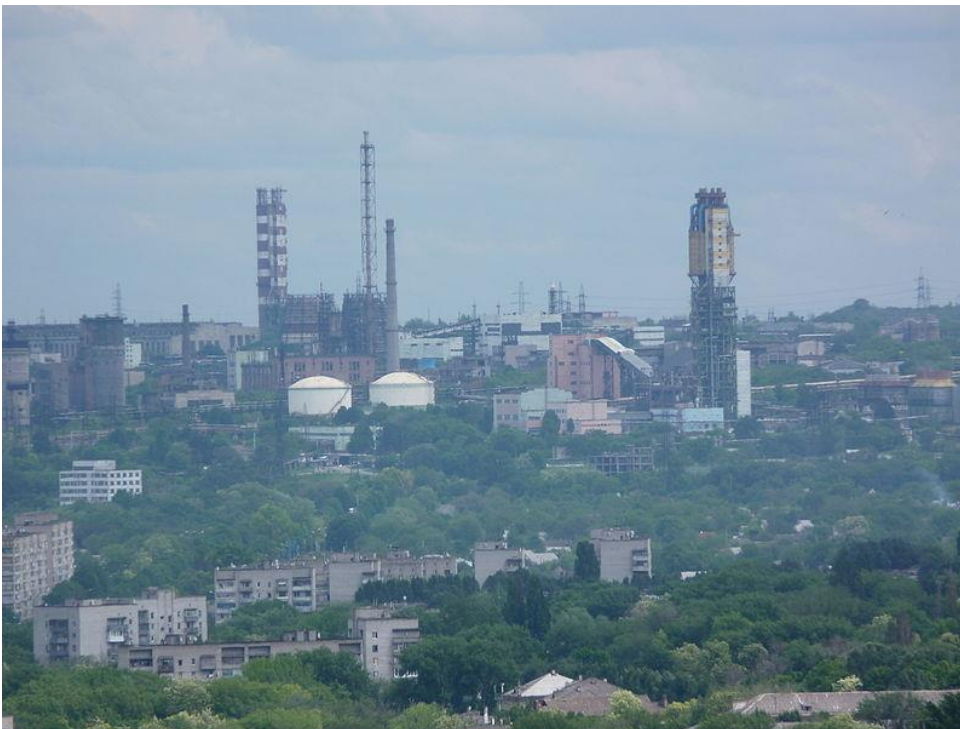
- limited water monitoring infrastructure and capacity.

There is a need to reform water sector policies and improve regulatory and institutional frameworks to bring them in line with the principles of integrated water resource management (IWRM). The economic aspects of water management should be addressed through the introduction or upgrade of IWRM instruments. Water allocation rules and flood protection management should be further developed and incentives for water-use efficiency identified and implemented. This will require a mix of policy instruments.

Source: http://www.euwipluseast.eu/images/PDF/Final_Inception_2018.pdf

Chlorine shortage threatened clean water provision across Ukraine

Date of information: 25th July 2018



picture: JSC Dniproazot chemical plant

JSC Dniproazot resumed the work in the chlorine group of plants. The statement reads: “Those interested in the supply of liquid chlorine, sodium hypochlorite, caustic soda, hydrochloric acid should contact the sales department for the conclusion of direct supply contracts.” In the same time monopolist increased the price of chlorine three times from 400 USD to 1240 USD excluding tax-free.

Between 15th June and 20th July Dniproazot chemical plant halted its chloride production. Dniproazot is the sole producer of water purifying chloride in Ukraine. This caused a frenzy through Ukrainian water treatment plants. Two thirds of the Ukrainian population could find itself without clean water.

According to Dniproazot (belonging to oligarchs Ihor Kolomoisky and Gennady Bogolyubov’s Privat Group) the plant ceased operations due to increased gas prices. However some believe that the stop of production

was politically motivated. More than 170 water treatment and supply plants across the country are dependant of Dniproazot's liquid chlorine. While the water plants did have some stored chlorine, the stock was rather limited (it varied from seven to forty days). The association of Ukrainian water enterprises, Ukrvodokanalekologiya, led by Deputy Prime Minister Gennady Zubko, were working to come to an agreement with Dniproazot to relaunch production. As contingency plan Ukraine planned to purchase chloride from Poland, Slovakia and Uzbekistan. Reportedly Hungary has sent three tons of liquid chlorine to Zakarpattia region as a humanitarian aid.

More recently, a third of Kyivans have been left without hot water, many for over two months, due to disagreements between owned by Ukraine's state gas monopoly Naftogaz, Kyivteploenergo (city's company that heats the water) and Kyivenergo which is controlled by Ukraine's richest oligarch, Rinat Akhmetov.

Source: <https://www.kyivpost.com/ukraine-politics/chlorine-shortage-threatens-clean-water-across-ukraine.html?cn-reloaded=1>; author: Matthew Kupfer

<https://www.ukrinform.net/rubric-economy/2502781-dniproazot-resumes-chlorine-production.html>

<https://112.international/finance/launch-of-dniproazot-triples-prices-for-chlorine-30559.html>

Due to electricity debts Lutsk city water might be switched off

Date of information: 26th October 2018



picture: Lutsk city

Volynoblenergo informed about plans to switch off buildings of Lutskvodcanal (responsible for water in the city). Energy will be switched off in stages starting from 12th November 2018. Within last half a year debt for unpaid electricity of Lutskvodcanal grew to 13,3 millions of UAH (414 000 EUR). Buildings of Lutskvodcanal will be switched off in stages. The energy company clarified that they tried to negotiate with water enterprise, yet till today they haven't received any constructive plan of paying off the debt. Previously filed lawsuit did

not speed up the issue either. Due to above circumstances the energy company is left with no other option but to switch off the power.

If the solution to the problem won't be found soon, 200 000 Lutsk inhabitants will find themselves with dry taps.

Source: <http://profidom.com.ua/novosti/zemla/29137-iz-za-dolgov-za-elektrichestvo-lutsk-ostanetsya-bez-vody>

Quality of water in Donbass does not meet any standards

Date of information: 21st March 2018



picture: Tap water after break in supply

In 2016 the water quality tests were conducted both on government controlled and occupied territories of Donbass.

Samples were taken from deep wells, shallow wells, springs, reservoirs. Results showed that 90% of samples doesn't match the sanitary norms. Norms showed excess of iron, manganese, heavy metals such as mercury, copper, zinc, lead, petroleum and chemical products.



picture: Ukrainian polluted rivers

Scientists concluded that it is impossible to use such water for consumption therefore it can be argued that there is already a shortage in the quantity and quality of water in the Donbass. The war in the region accelerated collapse of economic activities, including the closure of mines, thus increased the number of uncontrolled leakages of mine waters. Such waters pollute not only surface, but also groundwater. Due to that forecast of the water supply in the region is grave.

Source: <https://nv.ua/ukr/ukraine/events/defitsit-vodi-cherez-10-15-rokiv-i-pusteli-cherez-80-jaki-problemi-z-vodopostachannjam-chekajut-na-ukrajinu-2459126.html>

MOLDOVA



picture taken by: Lilia Curchi

Introduction: Moldova has generally sufficient access to water resources from its transboundary rivers, yet the inadequate wastewater treatment causes problems. The Republic of Moldova (hereafter “Moldova”), located between Romania and Ukraine, occupies a land area of 33 846 km². Between 1990-2015, population declined by some 20%, mostly due to immigration with the EU and the Russian Federation (hereafter “Russia”). In 2015, as per the last census data, the population amounted to 3 555.2 thousand people, out of which some 57.6% was considered rural. The two major rivers in Moldova, the Dniester and Prut, are both transboundary. There are two hydrographical basin districts: - Dniester District - Danube-Prut and Black Sea District. Total renewable water resources amount to 11.65 km³ (CIA 2011). Total water withdrawal in 2014 amounted to 840 MCM, i.e. below 10% of the former figure. It has slightly reduced since 2010. However, in terms of indicators such as water intensity of gross domestic product (GDP) (per 1 000 of USD purchasing power parities), Moldova is behind other Eastern Partnership (EaP) countries such as Belarus. The key challenges faced by Moldova in water management include the following:

- incomplete or not fully consistent regulatory and institutional frameworks (not least, concerning the economic regulation) and underdeveloped policy mixes

- deficient water allocation mechanisms
- need to strengthen risk management both of water-related hazards (over the last decade, floods and droughts as well as extreme weather events – showers and snow storms – have been more frequent and severe), as well as risks for water resources and water infrastructure (e.g. from diffuse pollution, or impact of extreme temperatures)
- high water intensity of GDP and weak incentives for water-use efficiency
- implementation of River Basin Management Plans (RBMPs).
- Adapting Water Supply and Sanitation to Climate Change in Moldova.
- Limited water monitoring infrastructure and capacity.

Policy makers are aware of these challenges and water sector reform is ongoing. However, there is a need to strengthen policies and further improve regulatory and institutional frameworks to bring them in line with the EU water acquis and principles of integrated water resource management (IWRM), as well as with recent international obligations of the country (foremost, water-related Sustainable Development Goals [SDGs] and the Paris Agreement on Climate Change). Another task is addressing the economic aspects of water management by introducing or upgrading economic instruments for water resources management. Water allocation rules, as well as flood protection management, should be further developed and incentives for water-use efficiency identified and implemented. This will require an appropriate mix of policy instruments.

Source: http://www.euwipluseast.eu/images/PDF/Final_Inception_2018.pdf



Poor water supply exposes villagers to epidemics

Date of information: 3rd August 2014



picture: Moldovan well in Bravicea village

In the Lozova village, with approximately 6000 inhabitants, there is no organized water supply. The villagers, have to dig wells to get the water. Yet digging a well is an expensive venture – it cost approximately 1500 USD, while average salary is 260 USD. The quality of dug water is poor. Almost nobody does the water analysis in the wells due costs and troubles. It is worth of notice that in 1999 some 200 people in this village got infected with hepatitis A, supposedly because of bad water. People still suffer from the consequences of the disease, being dependent of expensive medicines. The latest hepatitis A victims were registered this year in Syrets, another Moldovan village with no water supply.

Those who can't afford the well, need to carry the water from closest sources. Often one can see women carrying a heavy buckets of water. Maria Budu, elderly female from Gelesht village says: "I've been bringing home three or four buckets of water every day all my life. It's not so bad in summer, but the winters are hard." Some people from Gelesht village don't look forward to a planned aqueduct construction, claiming that quality of the water from that source will be poor anyway as it will flow straight from Dniester and Prut rivers that are known to be polluted.

In some other villages the water quality is even worse. Some of them specialize in cow herding. The cattle faeces get through the sands and mix with the ground waters. The latrines situated close to the wells influence the situation as well. After analysis it occurred that significant portion of wells are contaminated with excrements. The fact of illegal landfills and wide usage of pesticides do contribute to this state as well. The National Center for Public Health, reported in March 2013 that approximately 84% of the wells in the country provide water that contain chemical substances like sulphates, fluorine and nitrates in dangerously

high doses. The situation further complicates in the times of droughts that are more common recently. In such circumstances villagers stay without water as wells are completely dry.

Source: <https://www.kyivpost.com/article/content/russia/in-moldova-poor-water-supply-exposes-villagers-to-epidemics-359153.html?cn-reloaded=1>; author: Petru Botnaru

Sirbu (Gaugasia): Farmers from the region won't have underground water for irrigation anyhow soon.

Date of information: 16th July 2014



picture: Gauagasia region

Officials from the executive committee of the Gagauz autonomy expressed doubts in terms of plans to use the ground water for irrigation in the near future. The Parliament of the Republic of Moldova, on July 12, passed in first reading a bill proposing to allow the use of groundwater for drip irrigation. It is proposed to do this in places where there are no necessary surface sources, but there are sufficient reserves of groundwater. Parliament agreed to use such water for drinking as well. Such reserves of groundwater will be rationally used for the development of agriculture, in particular for perennial intensive plantings such as orchards, vineyards, berries.

Unfortunately the process of extracting water from underground sources is very expensive. In addition the legal conditions for the use of this water are not yet fully defined. It is worth to mention that not all groundwater will be suitable for irrigation due to its mineral composition. Today, there is not a single farm in Gagauzia that would use groundwater resources. It is highly unlikely that such system will appear in the near future."

Source: <http://gagauzinfo.md/index.php?newsid=13229>

Moldovan PM asks General Prosecutor's Office to investigate mode of management of country's irrigation stations

Date of information: 11th September 2018



pictures: non-functional water systems

The faulty management of Agency Apele Moldovei (AAM) (The waters of Moldova) and the deplorable situation in the public irrigation sector were severely criticised by Prime Minister, Pavel Filip. During a recent cabinet meeting a video was presented showcasing the disastrous situation at the Carpineni irrigation technical station in Hancesti district. Since 2014, the station is inoperative. However - not working station – employs 11 people and its salary debts exceed MDL 154 thousand.

Other 11 Technological Plants for Irrigation in Moldova work in similar fashion. All together they employ 521 people with the yearly salary fund of over MDL 18 million.

It seems that there is a lack of responsibility in irrigation management on all levels. Neither head of AAM, who was appointed during the whole time of the problem existence, nor the responsible managers - employed in those state-owned enterprises - ringed the alarm over the situation. It is worth of mention that responsible ministers did not react as well. Especially Ministry of Environment, now the Ministry of Agriculture, Development Regional and Environment (MADRM) can be suspected of mismanagement. None of the above mentioned people showed any political will to draw attention and tackle the issues.

The 11 enterprises, managed by AAM, caused losses of MDL 59 million in 2014 – 2017. The tariffs for pumping water do not cover the actual costs of rendering services. Discrepancy coming for it was covered by the state budget.

Prime Minister asked the General Prosecutor's Office to start the criminal case in order to elucidate the circumstances and punish the guilty for the disastrous situation in the public irrigation sector. The PM also expressed the need for urgent reorganisation of AAM and optimisation of the expenditures.

Source: <https://www.moldpres.md/en/news/2018/09/11/18008080>

Moldovan cabinet sets new measures to improve quality of drinking water

Date of information: 8th November 2018



picture: drinking water

The quality of the water meant for consumption will be improved, with its purity ensured and any risk for people's health removed. In this respect, the cabinet today approved a draft law on the quality of drinking water. The document establishes the process of monitoring the quality, conditions of water's quality, as well as the authorities in charge of informing and monitoring. Under the draft, the running water for consumers, the bottled drinking water, as well as the water used in the process of production at food enterprises must meet the parameters established. The water must be clean, lacking microorganisms, parasites or substances which, by their concentration, pose potential danger to people's health. To this end, the producers and distributors will be obliged to observe the quality parameters and to work out plans on water's safety. The National Agency for Public Health (ANSP) will monitor the quality of the water at each stage of production and the National Food Safety Agency will supervise the quality of the drinking water used by food enterprises and of the bottled water sold. Also the sources providing drinking water in the rural environment, for instance wells, will be subjected to control. They will be checked by the ANSP territorial subdivisions once in three years. If laboratory analyses show that the water does not meet the needed conditions, its use will be banned for consumption by people, animals and for irrigation.

Source: <https://www.moldpres.md/en/news/2018/11/08/18010011>

Belarus



picture taken by: Альгерд Чарняўскі

Introduction: Belarus has sufficient water resources to meet its current and future consumption needs, but inadequate quality remains a problem in certain rivers. The Republic of Belarus (hereafter “RB” or “Belarus”) is a landlocked country between Poland, Lithuania, Latvia, the Russian Federation (hereafter “Russia”) and Ukraine. It occupies a land area of 207 600 km². As per BelStat data, the population in 2016 amounted to 9498.7 thousand people; some 22.4% was considered rural. Belarus is famous for its forests (e.g. Belovezhskaya Puscha) and large wetlands from which many small rivers outflow. There are five major river basins, all transboundary: Baltic Sea Basin: Neman, West Bug, West Dvina rivers. Black Sea Basin: Dnieper River (with its largest tributaries: Pripjat, Berezina, Sozh). Pripjat River forms the fifth basin. A small share of Belarus also forms part of the Lovat River Basin: the Lovat inflows into the Lake Il’men, Baltic Sea Basin. Multi-year annual run-off (total renewable fresh water resources) amounts to 57.9 km³; some 34 km³ forms on the territory of Belarus (precipitation), while the balance inflows from the neighboring countries of Russia and Ukraine. Available fresh water resources amount to 3 580 m³ per capita per annum, which is double the “water stress” threshold (1 700 m³ per capita per annum). Renewable fresh groundwater resources in more than 320 discovered deposits amounting to 15.9 km³. Available estimates (dating back to the mid-1980s) suggest that some 2.6 km³ could be extracted without risk of resource depletion. In 2014, annual fresh water extraction amounted to 1 510 MCM; 667 MCM of surface water (some 1.2% of renewable surface water resources); and 843 MCM of groundwater (some one-third of annual useful groundwater resources). The government set the policy target to limit groundwater abstraction to 800 MCM per annum. The trans-basin water transfer amounts to 137 MCM per annum. Without the transfer, Minsk City and Minsk Oblast (province) – where some one-

third of the total population of Belarus lives and some 37% of all fresh water abstracted in the country is used and consumed – would experience water stress. Available data suggest that since 1990 over the transition to a market economy, Belarus has observed a decoupling of economic development from fresh water abstraction

Source: http://www.euwipluseast.eu/images/PDF/Final_Inception_2018.pdf

Surface waters for rent!

Date of information: 1st March 2017



picture: fishing on ice

Surface water bodies can be leased for fish farming on the basis of decisions taken by local Councils of Deputies. Before making a decision the local authority have to establish if there are no legal restrictions bonded with land to be leased by the fish farming.

In the city of Gomel, even in the city center, there are many anglers fishing on the Sozh river ice. The river before was rich in fish species. Yet the anglers complain about the decrease in the number of fish in the river and blame the tenants of the river for it.

Mr Anatoly, who has been fishing in Gomel for 15 years now complains: “Before, there were more fish. And now everything is furnished with the nets of the tenant Mikhail Kuks.”

Tenants claim that they have restocked the river with three tons of fry. Yet the anglers claim that fry went with the current and will not enrich the fauna of the river. They are irritated: “How was it possible to buy out 20 kilometers of the river ?!”



picture: fishing on ice

Anglers claim that the tenants block the river and conduct massive fish catchment. They claim that set up rules are not executed towards the fish business. According to them the main decline occurred 8-9 years ago and this coincided with the advent of leased sites on the river. They doubt that angling activity can impact the fish stock so drastically, while if somebody partitions the river completely then the damage is far greater. Moreover anglers believe that tenants use the echo sounders to scan the river bed. Then they put the nets in the hollows to pick up great quantities of fish that hides in more still water. Fishermen say that the fry is restocked to the river indeed, yet it is not equaling the damage done by the fish business. They stress that tenants catch during the day and night, and even during spawning.

The situation was commented on by Viktor Sheremetyev, State Inspector of the Gomel Interdistrict Inspectorate for Flora and Fauna: "Fishermen do not cause serious damage to the environment as long as they do not use nets, electric shocks and other means of fishing prohibited by law. As for tenants, fishing quotas are set for them on the basis of scientific research. Each tenant has all the necessary fishing documentation and they can't catch more than allowed by the Academy of Sciences. We follow this very carefully. Decrease in the number of fish can be contributed to the fact that fish do not have access to oxygen due to ice. In all other respects, the Academy of Sciences keeps track of the number of fish in our rivers, and it has actually become less. But the main reason, most likely, is climate change and some relatively snowless winters in a row."

Source: <http://homel.greenbelarus.info/articles/01-03-2017/rybaki-arendatory-ili-klimat-iz-za-kogo-v-sozhe-stalo-menshe-ryby>; author: Яўген Мепкіс

Azerbaijan

Introduction: Azerbaijan is a country with limited water resources with an average 1 000 m³ of water per capita available per year. Over two-thirds of surface water in Azerbaijan originate from neighboring upstream countries and water quality is often a concern. In addition, water resources of the country are distributed unevenly. Absheron and Kura-Aras lowlands are the most water-poor regions, where river run-off amounts to only 10-20% of total annual run-off during the vegetation period. Water quality is affected by discharges of untreated municipal and industrial wastewaters, as well as by diffused pollution from agriculture. While access to water supply and sanitation services is relatively high throughout the region, especially in urban areas, the quality of services is not always sufficient. Water policy in Azerbaijan is mainly implemented through water legislation, particularly, through the Water Code (1997). According to the code of “Water resource management and economic balances”, the integrated water resource use and protection plan, the water cadaster and water use records should combine hydrological and administrative-territorial principles. However, the Water Code does not directly address integrated water resource management (IWRM). There is a need to update the code by adopting secondary legislation that applies the principles of IRWM and integrated river basin management (IRBM).

Source: http://www.euwipluseast.eu/images/PDF/Final_Inception_2018.pdf

According to residents of some Barda villages, water user associations sell them water at an inflated price, but the responsible structures see the source of the problems in the farmers themselves.

Date of information: 3rd July 2017

A group of residents of the village of Garademirchi, Bardinsky District, is seriously concerned about the lack of water for irrigating crops. One of them, Israfil Pashabeyli, told that farmers had a great problem throughout the season in land improvement and irrigation issues.

According to him, water user associations (WUAs) engaged in water supply to the local population sell water very expensively. “They give water to cotton, the grain remains un watered. You ask for water, they say: ‘There is no water! Yet when the need for it is felt by themselves, they immediately find it!’”

The Tariff Council set the price of 50 kyapikov for every thousand cubic meters of water, but Pashabeyli argues that WUAs sell people 25% more water than admitted. "And they want 30 manats for irrigation of fields. It is very expensive," he says.

"Honestly, I myself get water from another WUA. The pump is on the balance of the Water Management Station, and I pay them ten manats each time. However during several last payments I told them to give me a cash receipts and I was ignored each time" said the farmer.



picture: irrigation drain

He claims that so far WUA have not issued receipts for the water he buys, even though their contract is formalized. But this time, according to Pashabeyli, he refused to pay for water until the receipt was issued.

The executive director of one of the local WUAs Ragim Ragimov, commented on the problem. According to him, WUA acts as a legal entity and provides reports on its work. Ragimov called the complaints of villagers unfounded, while adding that receipts for the water they buy are always issued to them.

In another WUA the representatives of the Department of Redistribution reported that they sell water to people, depending on the area, for a maximum of 1-1.3 manat: "For every thousand cubic meters, 50 gyapikov are paid to the Barda Irrigation Systems Directorate. The remaining amount is used for pump repair and other works.

The Bardin Office of Irrigation Systems underlined that the activities of all WUA are under their constant supervision. "In the specified village, irrigation canals are periodically cleaned, damaged pipes are being repaired or replaced with new ones," the Department said. They also noted that difficulties with irrigation are often due to the fact that some individuals do not fulfill contracts.

"We always respond promptly to citizens' complaints, and we report on the work done to the Melioration and Water Management OJSC of Azerbaijan," the Bardin Management assured.

Source: <https://ru.sputnik.az/economy/20170703/410957803/barda-fermery-net-vody-oroshenija.html>;
author: Рамиль Ибрагимов

Links to resources:

<http://www.nispa.org/files/GE-report.pdf>

http://www.euwipluseast.eu/images/PDF/Final_Inception_2018.pdf

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