Rivernews – Water Newsletter – July 2022
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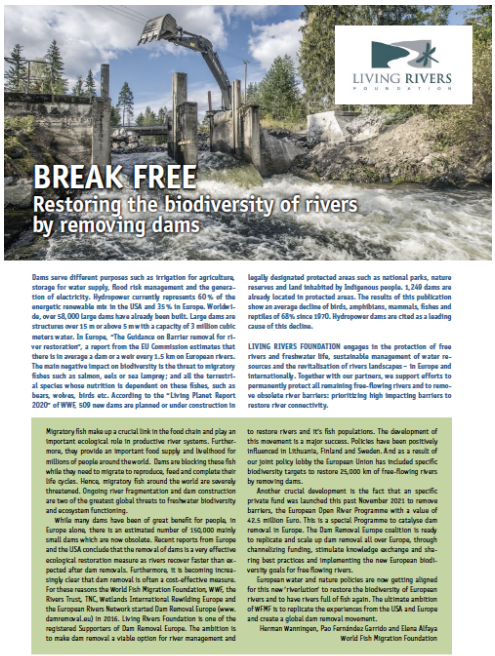
BREAK FREE – Restoring the biodiversity of rivers by removing dams



The publication "**BREAK FREE – Restoring the biodiversity of rivers by removing dams"** addresses the effects of barriers on migratory fish highlighting the worrying and catastrophic situation on the Mekong River (going across 5 countries in Asia) where the constructions of hydropower dams are putting not only the river and its components at risk but also all the already vulnerable populations depending on the Mekong River. The intensive use of water for agricultural irrigation can even lead to the complete drying out of the river bed as it is the case for the Colorado River. A number of dam construction projects are also on the table in the EU, including Northern Italy.

Historic hydroelectric dams on the west coast of the USA had some dramatically negative effects on migratory fish. The construction of the dams on the Elwah River on the Olympic Peninsula caused the number of migrating salmon to plummet from 400,000 to about 4,000. The removal of the 63m high Glines Canyon Dam on the Elwah is still considered the world's largest dam removal project. In the USA, more dams are now being dismantled than built. But there are also significant dismantling projects in Europe. On the Sélune in northern France, the second dam is currently being removed to support an important salmon reservoir. In Finland, weir removals are now common practice. The projects on the Elwah River, the Sélune and the Keravanjoki were included as case studies in the Break Free brochure.

Authors: Michael Bender and Athénaïs Georges, with contributions provided by World Fish Migration Foundation, Free Rivers Italy, WWF Finland; David J. H. Blake, Herman Wanningen, Pao Fernandez Garrido and Elena Alfaya.

EU Commission presents draft for Nature Restoration Regulation

The EU Biodiversity Strategy published on 20 May 2020 stipulates that at least 25,000 river kilometres across the EU should be restored to free-flowing rivers by 2030, primarily by removing barriers that are no longer in use and restoring floodplains and wetlands. The EU Commission's draft EU Regulation on nature restoration* (*Regulation on nature restoration), published on 22 June 2022, aims to require member states to establish an inventory of all transverse structures in rivers, deconstruct obsolete structures as a priority, and restore floodplain functionality in the process, in order to achieve this goal.

The EU's overarching target is to restore 20% of the EU's terrestrial and marine areas by 2030 (Article 1), followed by "Member State area-based targets", including river restoration (Article 7) and restoration of agricultural peatlands (Article 9(4)), and "indicator-based targets", including urban ecosystems (Article 6), pollinators (Article 8), agricultural ecosystems (Article 9(2)) and forest ecosystems (Article 10). The proposal also requires national restoration plans for each Member State and assessment and review by the Commission (Articles 11-15).

The full Commission proposal can be found at the following link (in English):
https://environment.ec.europa.eu/publications/nature-restoration-law_en

Mass development of aquatic plants Natural phenomenon or serious problem? - IGB FACT SHEET

The Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) has published a Fact Sheet to give all interested parties a brief research-based overview of the mass development of aquatic plants (macrophytes) that is now more frequently observed.

In the IGB Fact Sheet, the researchers emphasise that macrophyte stands promote biodiversity due to their diverse structure: A species-rich growth of algae and bacteria can develop on their surface, which in turn is the habitat and food base of small animals (zoobenthos).
Macrophytes offer small animals protection from predators and are themselves food for various water birds. In rivers, macrophyte stands increase the diversity of habitats with different flow velocities. Aquatic plant stands are also valuable spawning and hunting grounds for fish and refuges for their larvae and young fish. From a water ecology point of view, the advantages for nature clearly outweigh the disadvantages in most mass developments of macrophytes.

"Macrophytes had disappeared for decades due to excessive nutrient inputs and are now growing again with improved water quality and lower nutrient inputs," explains Dr Sabine Hilt, who researches aquatic plants at the IGB. "Macrophytes take excess nutrients such as phosphorus and nitrogen out of the water body and release oxygen through their metabolism, which improves the aeration of the water bodies and their sediments," adds Dr Jan Köhler, who also conducts research on macrophytes at the IGB. In flowing waters, backwater effects caused by macrophytes could lead to higher water levels in the river and in the groundwater and thus contribute to water retention in the adjacent areas. "In terms of climate change adaptation, this is a particularly positive and important effect, and it can also slow down excessive erosion of banks and the riverbed".

If stakeholders in water management decide to take measures against macrophytes, weeding - i.e. mowing or removing aquatic plants - is the most common measure. It often only serves to improve the quality of use for certain interest groups and does not lead to an improvement of the ecological status. Since weeding is not very selective, rare plant species are also quickly reduced, diverse habitats are destroyed and many animals living in the stands of aquatic plants are killed. From a research point of view, economic, ecological and social aspects should be equally included in the consideration and planning of measures in the future. If a reduction of aquatic plant populations is necessary, sustainable measures such as the further reduction of nutrient inputs and, if necessary, the planting of riparian trees should be favoured.

"Small-scale weeding for spatially limited uses, such as swimming at bathing sites, is usually acceptable from a water ecology point of view, if no large populations of legally protected macrophyte species grow there," explains Jan Köhler. However, large-scale weedings, in which

almost all aquatic plants of the water body are removed for the interest of only a few users, would have disproportionately high costs and disadvantages.

Press release and factsheet on the web:
https://www.igb-berlin.de/news/massenentwicklungen-von-wasserpflanzen-natuerliches-phaenomenoder-serious-problem
https://www.igb-berlin.de/sites/default/files/media-files/downloadfiles/igb_fact_sheet_mass_developments_water_plants.pdf

DWA presents position paper "Floods and heavy rainfall

In view of the 2021 flood disaster, the DWA demands that building in flood-prone areas be regulated much more stringently overall and that a general absolute ban be imposed on building in particularly endangered areas. In existing buildings, adaptation measures must be intensified within the framework of self-preparedness. In order to involve the citizens in flood prevention, an offensive and, above all, comprehensible risk communication is necessary.
The DWA welcomes the creation of uniform federal standards for risk assessment for floods and heavy rainfall flooding as envisaged in the coalition agreement of the federal government. Obstacles to the publication of heavy rain hazard maps under data protection law must be removed as a matter of urgency. Improved risk communication also includes practical, effective and comprehensible early warning in the event of an incident. This requires a climate-resilient critical infrastructure linked to pipelines.

The DWA position on floods and flash floods in the network
https://de.dwa.de/files/_media/content/01_DIE_DWA/Politikinformationen/Positionspapiere/Positionspapier_Hochwasser%20Sturzfluten_2022_Netz.pdf

Leaflet DWA-M 541 "Statistical analysis of low water parameters".
Knowledge of the low-flow conditions in a watercourse is of great importance for its targeted water management use and for ecological assessment. Low water is primarily caused by a lack of precipitation but can also result from the retention of precipitation in the snow cover, in glaciers or in the frozen subsoil, and can be intensified or weakened by various management measures in the water body or its catchment area. In the DWA leaflet DWA-M 541 "Statistical analysis of low-flow parameters", the most important parameters for low-flow are first defined and based on this, the probability analyses of low-flow discharges, underflow durations and discharge deficits are derived.

July 2022, 111 pages, ISBN 978-3-96862-221-7, retail price: 109 Euro
Available in the DWA Shop: www.dwa.de/shop

German small water bodies network with online events

A small water bodies network is currently being established in Germany. The primary objective of the network is to achieve an efficient exchange of information between different actors and interested parties for the conservation and better protection and management of standing (and flowing) small water bodies and their ecosystem functions in Germany. The German Small Water Network is an offshoot of the European Pond Conservation Network and can be found on the EPCN website: EPCN Germany | EPCN (www.europeanponds.org).
The National Contact Point Germany is supervised by Dr. Marlene Pätzig
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WWF project "Networked Biodiversity on the Treasure Coast" (2021 - 2026)
On 5 July 2022, **Katharina Brauer (WWF Baltic Sea Office**) presented her sub-project on the renaturation of small bodies of water on the coast. The "Treasure Coast" (https://schatzküste.com) focuses on the hotspot Vorpommersche Boddenlandschaft and Rostocker Heide. The implementation of the measures began in 2021 and will continue until 2025. A guide to action for imitators is to be published in 2026.

The presentation by Katharina Brauer (WWF Baltic Sea) can be found here: www.grueneliga.de/images/Dokumente/Wasser/2022-07-05_Kleingewaesser-Netzwerk_WWF_Kleingewsserrenaturierung_KBrauer.pdf

Ponderful -Ponds in climate change
Sandra Brucet (UVic-UCC coordinator) presented the project "Pond ecosystems as resilient landscapes in global change (PONDERFUL)" (www.ponderful.eu) in the second part of the event. This project aims to "investigate the importance of ponds and pond landscapes for mitigating and adapting to climate change impacts, protecting biodiversity and providing ecosystem services." This European project is studying 30 ponds in 8 countries to quantify the contribution of ponds and pond landscapes to climate adaptation and mitigation. The aim is to standardise the process and enable the analysis of climate gradients and hydroperiodic effects, as well as linking land use and ecological impacts.

The entire presentation can be found here (in German): www.grueneliga.de/images/Dokumente/Wasser/2022-07-05_Kleingewsser-Netzwerk_IGB_Ponderful_TMehner.pdf.

No concessions for new construction of small hydropower plants in Bosnia-Herzegovina

According to a river activist from Bosnia-Herzegovina, the Federation's parliament has banned the construction of new small hydropower plants with a capacity of up to 10 MW by decision of 7 June 2022. No more concessions are to be issued for these plants. This means that no more building permits will be issued for new projects. This is likely to directly affect 111 previously planned plants in 60 rivers.

UN Water Conference 2023 - Special accreditation for non-governmental organisations and other stakeholders

The United Nations Conference on the Comprehensive Mid-Term Review of the Implementation of the Goals of the International Decade for Action on Water for Sustainable Development 2018-2028 (**UN Water Conference 2023**) will take place from 22 to 24 March 2023 at UN Headquarters in New York. The conference will be co-hosted by the Netherlands and Tajikistan. For more background information on the conference, please visit: https://sdgs.un.org/conferences/water2023

Stakeholder participation: Apply by 15 July 2022!
Relevant non-governmental organisations, civil society organisations, academic institutions, academia, the private sector and philanthropic organisations whose work is relevant to the conference and who are interested in participating in the UN Water Conference 2023, but who do not have consultative status with ECOSOC or who are not accredited to the World Summit on Sustainable Development, **must apply for special accreditation by 15 July 2022.**
Click here to apply: https://indico.un.org/event/1001019/

Dates preview 2022 International :

24 – 30 July 2022 **Barby** – At the ferry http://www.elbe-saalecamp.de/html/anfahrt.html	**Outlook Elbe - 30th years of commitment to living river landscapes** International Elbe-Saale Camp 2022. In 2022, the Elbe-Saale Camp will enter its 30th year. A good occasion to look back as well as forward. A warm invitation to all friends of free-flowing rivers! http://www.elbe-saale-camp.de/
23 August – 1 September 2022 **Stockholm, Sweden**	**World Water Week 2022** https://www.worldwaterweek.org
5 – 6 October 2022	**3rd Symposium "Vital waters in Baden-Württemberg"** www.vitale-gewaesser-bw.de
5 – 17 Dec. 2022 **Montréal, Canada**	**UN Biodiversity Conference (COP15)** https://www.unep.org/events/conference/un-biodiversity-conference-cop-15
6 – 8 December 2022 **Paris, France**	**UN- Water Summit for Groundwater** https://www.un-igrac.org/agenda/un-water-summit-groundwater
Wednesday, 22 March 2023	**World Water Day**
22 March – 24 March 2023	**United Nations 2023 Water Conference** https://sdgs.un.org/un-2023-conference-water-action-decade

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Umwelt Bundesamt

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