

# NO MORE NEW HYDROPOWER IN EUROPE: A MANIFESTO

For decades in Europe we have been building hydropower plants along our rivers, damaging one of the most precious resources for all life on earth: rivers and freshwater ecosystems. The time has come to put an end to the expansion of hydropower in Europe before we wipe out entire ecosystems and all the services they provide to people and nature. New hydropower is of negligible benefit in transitioning to climate neutrality in the EU and its irreversible impacts on biodiversity, landscapes and even sometimes water supply<sup>1</sup> can no longer be justified.

## GREEN HYDROPOWER IS A MYTH

Hydropower severely impacts freshwater ecosystems, which are already under threat. Only 40% of surface waters in the EU (rivers, lakes, wetlands, transitional and coastal waters) are in good ecological condition<sup>2</sup> and populations of migratory freshwater fish species have plummeted by 93% in Europe since 1970.<sup>3</sup>

Building hydropower plants in Europe, including small and run-of-the-river plants, has negative consequences on rivers' flow, fish migration, habitat loss, sediment transport and on erosion, to quote only its most direct impacts, and runs directly counter to the commitments expressed in the EU Biodiversity Strategy's proposal to restore 25,000 km of free-flowing rivers.

A recent study on the effects of dams in the Mediterranean basin shows that hydropower, including small projects, is the most important driver of potential fish species extinction. The study states that "should hydroelectric expansion in the region go ahead as planned, 74% (186) out of all (251) threatened freshwater fish species will be negatively impacted, with 65% (163) set to decline due to small projects alone."<sup>4</sup> Building a hydropower plant across a river is almost like suffocating it, sometimes to death. There is no green hydropower.

## THE BENEFITS OF NEW HYDROPOWER IN EUROPE ARE NEGLIGIBLE

The expected contribution of planned hydropower to the energy transition is negligible. Even if all of the 5,500+ hydropower plants planned in the EU (in addition to the 19,000+ existing ones) were built, the share of the EU electricity generation provided by hydropower would go from 10% to 11.2-13.9%.<sup>5</sup> And this contribution will become even less significant as we move to the near-full electrification through wind and solar – whether directly or indirectly – of sectors such as transport, heating and industry.

Hydropower is also losing its comparative financial advantage, as stricter regulations, land availability and growing recognition of its serious environmental impacts are increasing installed costs, while the costs of alternatives such as solar, wind and various forms of energy storage are dropping rapidly.<sup>6</sup> The potential of hydropower to contribute to mitigating

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<sup>1</sup> WWF, [Seven sins of dam building](#), 2013.

<sup>2</sup> EEA, [European waters: Assessment of status and pressures](#), 2018.

<sup>3</sup> IUCN, WFMF, WWF, TNC, ZSL, [The Living Planet Index \(LPI\) for migratory freshwater fish](#), 2020.

<sup>4</sup> Freyhof Jörg, Bergner Laura, Ford Matthew, [Threatened Freshwater Fishes of the Mediterranean Basin Biodiversity Hotspot](#), 2020.

<sup>5</sup> Eurostat, 2017.

<sup>6</sup> IRENA, [Renewable power generation costs in 2019](#), 2020.

climate change is also limited. Life-cycle carbon emissions are generally underestimated, as the emissions from building the plants and from methane emissions are typically disregarded.<sup>7</sup> In addition, water scarcity could reduce overall hydropower production in Europe<sup>8</sup>, while river fragmentation created by hydropower plants reduces the capacity of rivers to mitigate the impact of droughts or floods<sup>9</sup>, with negative impacts on climate adaptation.

### **SMALL IS NOT BEAUTIFUL**

91% of existing and planned plants in Europe are small, meaning they have a capacity of less than 10 MW<sup>10</sup>, and yet do and will have dramatic environmental impacts. As noted by the Regional Strategy for Sustainable Hydropower in Western Balkans commissioned by the European Commission (2018), the contribution of small hydropower plants of a capacity of 10 MW or less to the global energy production is “extremely limited” while “their impacts on the environment are disproportionately severe.”

Despite this, small plants continue to benefit significantly from public finance. In 2016-2017, EU Member States gave more than 4.2 billion euros of public support to hydropower projects, mostly in the form of feed-in tariffs and premiums, but also through green certificates and investment grants, with the blessing of the European Commission.<sup>11</sup> In 2018, 70% of renewable energy support in the Western Balkans went to small-scale hydropower, which generated only 3.6% of total electricity supply.<sup>12</sup>

### **THE ENERGY TRANSITION AND NATURE PROTECTION MUST GO HAND IN HAND**

The climate and biodiversity crises must be tackled together. And in many ways require the same action to be taken. We cannot stop runaway climate change – something that would itself be catastrophic for much of life on Earth – without protecting and restoring natural ecosystems. Equally, we cannot have a sustainable energy transition that is oblivious to nature. Climate and nature protection must be addressed in tandem if we are to provide a sustainable future for our planet and for human societies.

Rivers, as common goods, should be the basis for social development and the benefits they provide should be shared. There is therefore no point building and operating a hydropower plant to supply a community with electricity if the same plant deprives that community of its source of subsistence and well-being: a healthy river which provides drinking water, cools the bordering towns or cities and enables people to fish and swim in its waters or to walk along its banks.

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<sup>7</sup> Recent studies suggest that methane emissions from reservoirs even in temperate climates could fall in the range of emissions previously reported for tropical reservoirs. Maeck, A. et al., [Sediment Trapping by Dams Creates Methane Emission Hot Spots](#), 2013.

<sup>8</sup> Turner, S.W., J.Y. Ng and S. Galelli, 2017, [Examining global electricity supply vulnerability to climate change using a high-fidelity hydropower dam model](#), Science of the Total Environment 590-591, 663-675.

<sup>9</sup> Grill G., Lehner B., Zarfl C., [Mapping the world's free-flowing rivers](#), May 2019, Nature 569.

<sup>10</sup> EuroNatur, GEOTA, RiverWatch, WWF, [Hydropower pressure on European rivers: The story in numbers](#), 2019.

<sup>11</sup> Extracted from: CEER, Status Review of Renewable Support Schemes in Europe for 2016 and 2017, 2018.

<sup>12</sup> Bankwatch, Euronatur, RiverWatch, WWF, [Western Balkans hydropower: Who pays, who profits?](#), 2019.

## OUR DEMANDS

We call on the EU institutions to stop supporting the construction of new hydropower plants:

- Public finance for new hydropower in Europe needs to stop. In light of the commitments in the European Green Deal, public subsidies and loans that are harmful to biodiversity and nature protection are unacceptable. In particular, hydropower – including small hydropower – should no longer be eligible for State Aid, and EU financial institutions should no longer finance new hydropower projects in any way.
- Public finance for hydropower should be redirected to the ecological refurbishing of existing plants<sup>13</sup>; to the removal of obsolete dams; and to investment in low-cost, low-carbon, low-impact alternatives such as appropriately sited solar and wind power, combined with energy efficiency, demand side response and the many forms of energy storage. Transparency over project approval and investments should be enhanced, including for projects financed by financial intermediaries.



<sup>13</sup> As required under the Water Framework Directive, Birds and Habitats Directives and Environmental Impact Assessment Directive

Comitato per lo sviluppo sostenibile dell'Alta Val Brembana **AVB**



Coordinadora Ecologista d'Asturies



LITHUANIAN FUND FOR NATURE



DNR DEUTSCHER NATURSCHUTZRING



EcoAlbania



ecopana



FRONT 21|42



euRONATUR



flow : europe for the love of water



Za Zemiata Friends of the Earth Bulgaria



GRÜNE LIGA Netzwerk Ökologischer Bewegungen

GRUPPO 183







WORLD FISH MIGRATION  
FOUNDATION



Sustainable Water Network  
**SWAN**



**Ab Ovo Association**

**AEMS-Ríos con Vida**

**AEPIRA - Asociación en Defensa del Piragüismo y el Uso Público del Agua**

**Alliance of Associations Polish Green Network**

**Allier Sauvage**

**Alsace Nature**

**Anglerverband Niedersachsen**

**ANP em Associação com a WWF**

**APROAM - Asociación Profesional de Agentes Medioambientales de Organismos  
Autónomos del Ministerio de Medio Ambiente**

**Arnika**

**Asociación Acuíferos Vivos de Almería**

**Asociación Asturiana de Amig@s de la Naturaleza**

**Association for Nature and Environment Protection - Green Osijek**

**Association for Nature, Environment and Sustainable Development Sunce**

**Association of Friends of the Ina and the Gowienica Rivers**

**Association Protectrice du Saumon pour le bassin de la Loire et de l'Allier**

**Balkan River Defence**

**Balkanka Association**

**BIOS Moldova**

**BirdLife Europe**

**BirdLife Montenegro**

**BROZ - Regional Association for Nature Conservation and Sustainable Development**

**Buglife – The Invertebrate Conservation Trust**

**BUND – Friends of the Earth Germany**

**CEEweb for Biodiversity**

**Climate Action Network - Europe**

**Club of the Friends of Dunajec**

**Coalition Clean Baltic**

**Coalition for fight against environmental corruption, Serbia**

**Colectivo Ecologista de Aviles**

**Comitato per lo sviluppo sostenibile dell'Alta Val Brembana**

**Comitato Tutela Fiumi di Biella**

**Comito Peraltrestrade Dolomiti**

**Coordinadora Ecoloxista d'Asturies**

**Cuenca Azul**

**Danube Environmental Forum**

**DEPANA - Lliga per a la Defensa del Patrimoni Natural**

**Deutscher Naturschutzring**

**Dr. Martin Schneider Jacoby Association**

**EAA – European Anglers Alliance**

**ECO-Team Montenegro**

**Eco-TIRAS – Association of Dniester River Keepers**

**EcoAlbania**

**EcoContact, Moldova**

**EcoKosWomen - EKW**

**Ecological Society Rzav**

**Ecopana**

**EEB - European Environment Bureau**

**EFFATA – Polish Association of Social Initiatives**

**EKOEnergy Ecolabel**

**EkoZ - Youth Ecological and Security Zone**

**Environmental Citizens Association "Front 21/42"**

**ERA - Environmentally Responsible Action, Kosovo**

**ERN – European Rivers Network**

**Euronatur**

**Fédération FNE - Midi-Pyrénées**

**Fédération FNE- Auvergne-Rhône-Alpes**

**Federazione Nazionale Pro Natura**

**Finnish Association for Nature Conservation**

**Flow : Europe**

**Fondazioni Jeshil**

**Foundation for Sustainable Development, Poland**

**France Nature Environnement**

**Free Rivers Italia**

**Free Rivers Poland**

**Friends of the Dunajec River Valley**

**Friends of Slonsk Society**

**Fundacja Strefa Zieleni**

**GAIA, Kosovo**

**GegenStrömung**

**Generation Earth**

**GEOTA**

**Green Home**

**Green Light Foundation**

**Green News Poland**

**Greenmind Foundation**

**Grune Liga**

**Gruppo 183 Onlus - Association for the defense of soil and water resources**

**INFOE e.V.**

**Institute for Promotion and Protection of Aquatic Ecosystems - Leeway Collective**

**International Association for Danube Research (IAD)**

**Italia Nostra Lazio**

**Italian Alleanza Pescatori Ricreativi**

**Italian Centre for River Restoration**

**Justice and Environment, Croatia**  
**Klub Gaja**  
**Konkretino Odgovorno Dostojanstveno**  
**Kosovo Advocacy and Development Centre**  
**Kosovo Civil Society Consortium for Sustainable Development**  
**Kosovo Democratic Institute (Transparency International Kosovo)**  
**Kosovo Environmental Education and Research Center**  
**Kosovo Foundation for Open Society (KFOS)**  
**Kosovo Wildlife Care**  
**Lašišos dienoraštis, Lithuania**  
**Legal Informational Centre for NGOs, Slovenia**  
**Let's Do It Peja**  
**LIPU, Italia**  
**Lithuanian Environmental Coalition**  
**Lithuanian Fund for Nature**  
**Małopolska Ornithological Society**  
**MedINA**  
**NABU**  
**National Ecological Center of Ukraine**  
**Nature Friends International**  
**Naturpuunt**  
**North Atlantic Salmon Fund - Germany**  
**NVO Nasa Akcija**  
**Olive Society BOKA**  
**Österreichischer Fischereiverband**  
**Our Beaver, Poland**  
**Pindos Perivallontiki**  
**Pishtarët Kosovo**  
**Plataforma Contra la Privatización del Canal de Isabel II**  
**Plataforma de Toledo en Defensa del Tajo**  
**Plataforma en defensa de l'Ebre**  
**Polish Society for the Protection of Birds**

**Pro Natura - Friends of the Earth Switzerland**  
**Pro Open Coalition, Kosovo**  
**ProTejo - Movement in defense of Tagus**  
**Qytetarët Aktivë, Kosovo**  
**Raba's Friends**  
**Red del Tajo**  
**Red Tree Heritage Institute**  
**Reptile Amphibian Fish Conservation Netherlands**  
**Revivo**  
**Rewilding Europe**  
**Riverwatch**  
**Salmon & Trout Conservation**  
**Save the Rivers Coalition, Poland**  
**SEPANSO Aquitaine**  
**Sharawatch**  
**Slovenian Dragonfly Society**  
**Slovenian Native Fish Society**  
**Societas Europaea Herpetologica (SEH)**  
**Society for Ecological Restoration Europe**  
**Sources et Rivières du Limousin**  
**Spinning Club Italia**  
**Sportvisserij Nederland**  
**Stowarzyszenie Przyjaciele Doliny Dunajca**  
**Sustainability Leadership Kosovo**  
**Sustainable Water Network (SWAN)**  
**The Ecological Association EKO-UNIA**  
**The Society for Earth, Poland**  
**Toka: The Organisation to Conserve the Albanian Alps**  
**Umweltdachverband**  
**UNIPESCA**  
**Vogelbescherming Nederland**  
**World Fish Migration Foundation**

**WWF European Policy Office**  
**Za Zemiata – Friends of the Earth Bulgaria**  
**Zelena Akcija – Friends of the Earth Croatia**