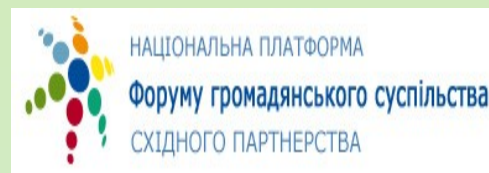
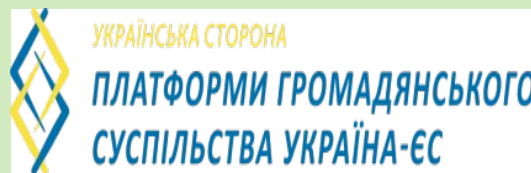
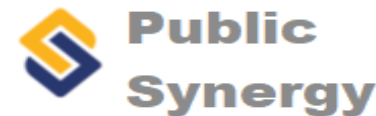




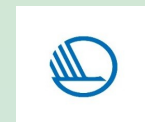
Climate change impact on rivers



**National Ecological
Centre of Ukraine**

"Hydropower energy development in Ukraine - Public Analysis in the Context of European Integration Processes. Climate change impact on rivers

*Green Summer University
"Hydropower energy development in Ukraine"
July 14, 2018 Janow Podlaski*



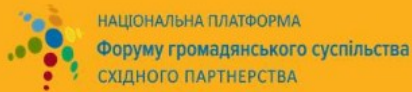
Hydropower development program: what was it?

- ~~• *Memorandum of Understanding on Cooperation in the Energy sector, 2005*~~
- ~~• *Protocol on Accession of Ukraine to the Treaty on Establishing of the Energy Community, 2011*~~

Method of program approval

- **Without** developing of the Program concept
- **Without** energy and economic justification
- **Without** considering of alternatives
- **Without** conducting the State ecological expertise
- **Without** conducting SEA and EIA
- **Without** consent with the Ministry of Natural Resources of Ukraine
- **Without** disclosure and discussion with the public
- **Without** reaction to the appeal of public organizations
- **With** imitation of public discussions postfactum
- **No** financial guarantees of creditors

Results of public discussion of the Program



СПІЛЬНЕ ЗВЕРНЕННЯ

Робочої групи 3 УНП
та Робочої групи 5 УС ПГС

до Прем'єр-міністра України Володимира
Гройсмана

щодо перегляду політики Уряду у сфері
гідроенергетики

Must be provided

*preparation of the new
edition of the Program, its
public discussion and
Strategic Environmental
Assessment*

Why is public against hydropower energy in Ukrainian realities?

Resolutions of 3 seminars

Key messages

- *Relevance of energy priorities to European, priority of energy saving and energy efficiency*
- *Eco-imperative, preservation of historical and cultural heritage of Ukraine, Europe and the world*
- *Taking into account the position of local Chernivtsi communities and meeting the priorities of local development*
- *Objective and independent assessment of hydropower programs and projects*

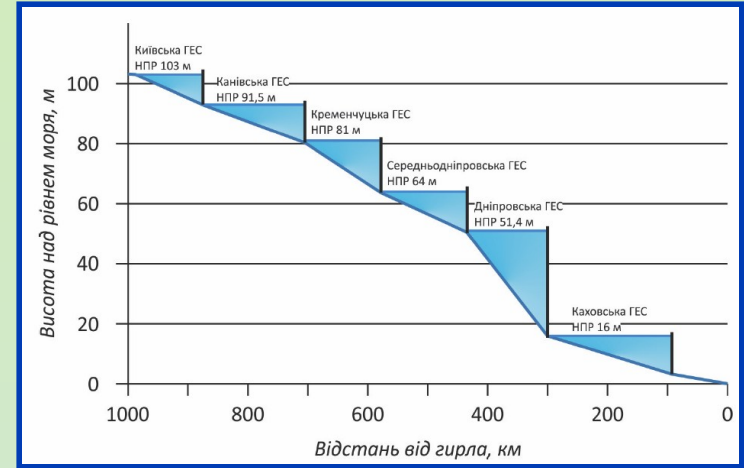
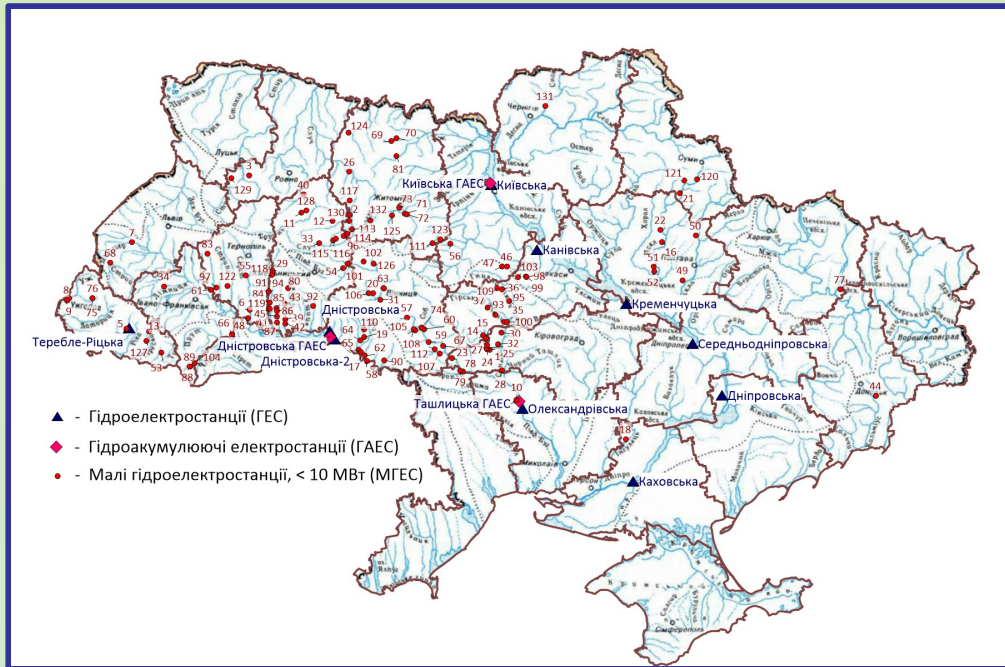
Kyiv



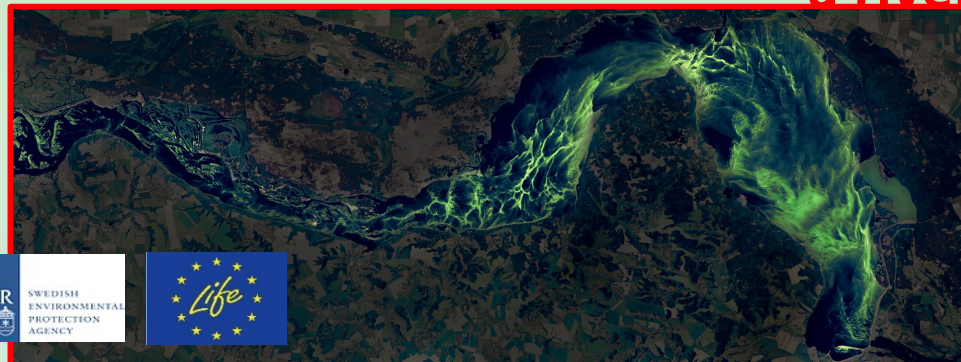
Mykolaiv



Hydropower energy of Ukraine: how it changed our environment



**Does Dniester in Ukraine
a river?**



Real cost of realization of hydropower projects

What is the cost of environmental degradation?

What are the ecosystem services of rivers lost?

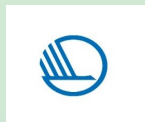
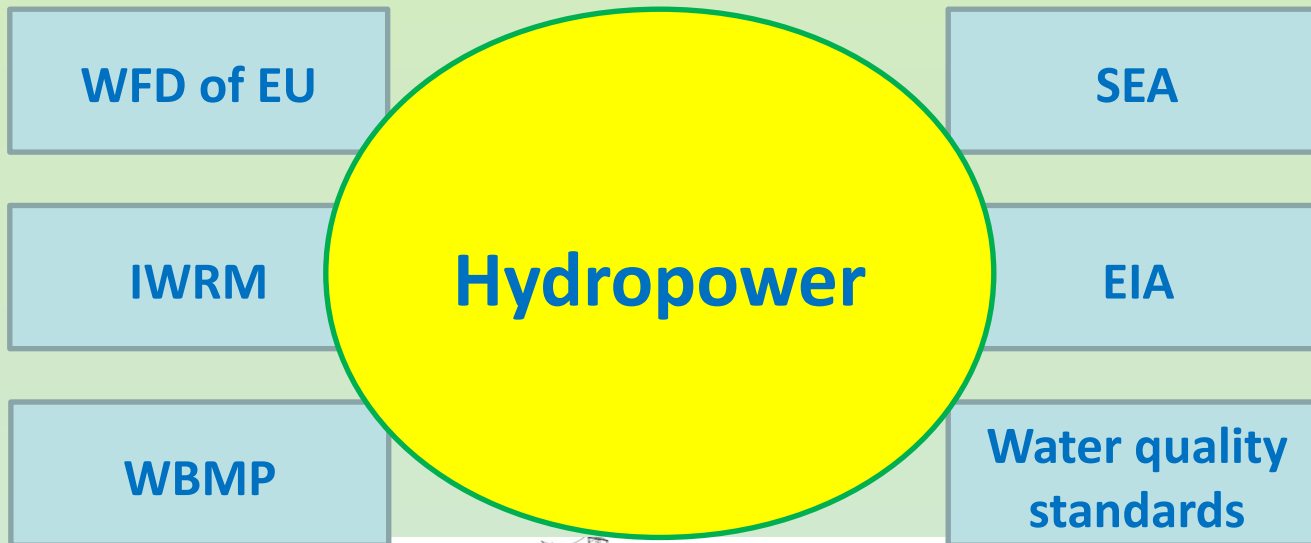
What awaits us with the continuation of the previous policy in the field of hydropower energy?



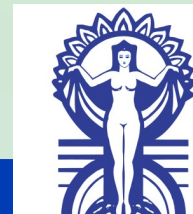


We live in another world, therefore

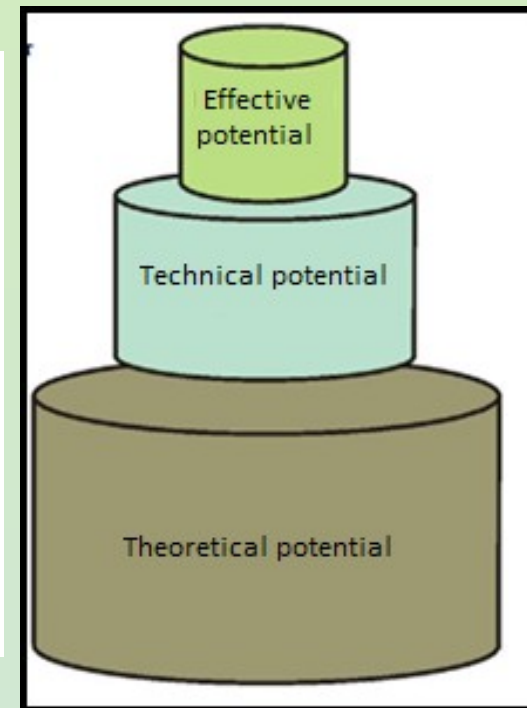
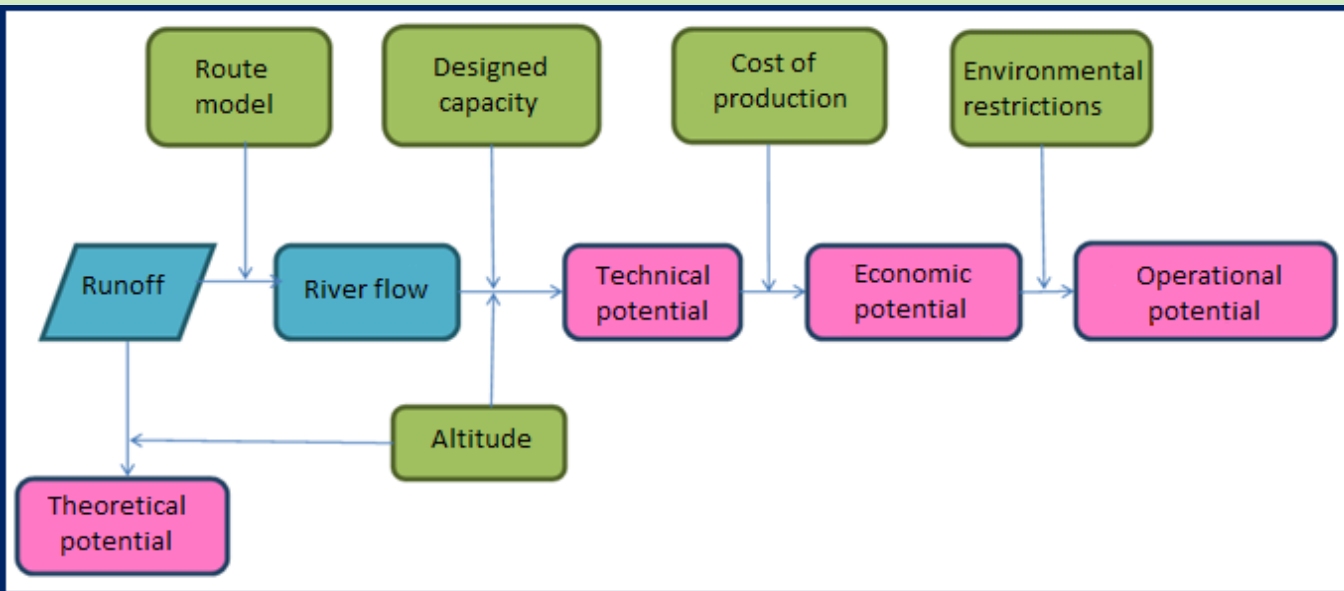
Ukraine needs a new environmental strategy, which should change the attitude of energy to the environment.



Future is renewable energy of sun and wind and distributed smart grids



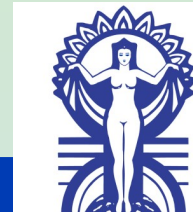
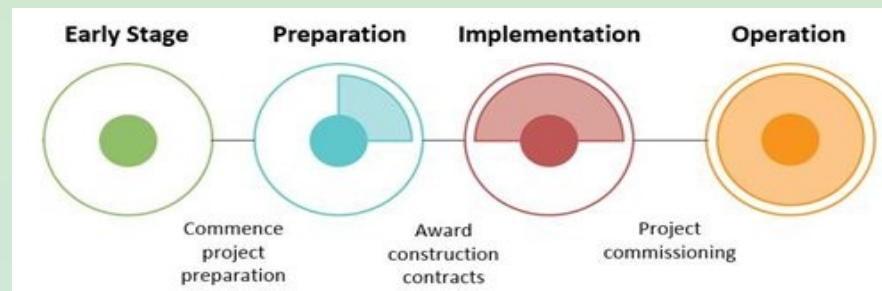
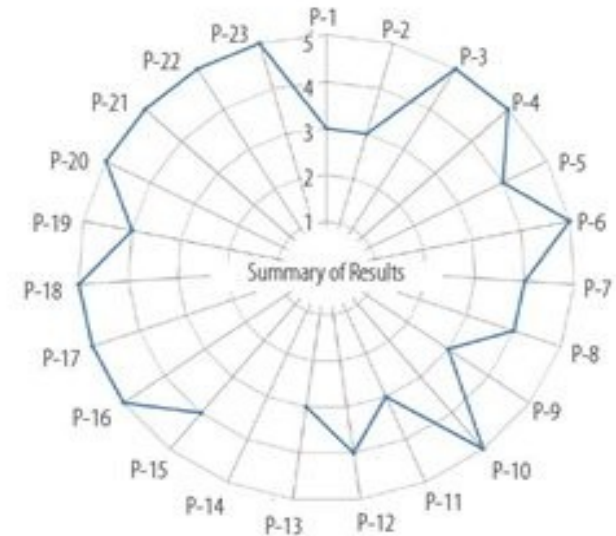
View changing on hydropower potential



Protocol for Assessing Sustainable Development Plans for Hydropower Projects (IHA)

Example List of Topics Assessed:

- | | |
|---|--|
| P-1 Communications and Consultation | P-13 Project-Affected Communities |
| P-2 Governance | P-14 Resettlement (Not relevant) |
| P-3 Demonstrated Need and Strategic Fit | P-15 Indigenous Peoples |
| P-4 Siting and Design | P-16 Labour and Working Conditions |
| P-5 Environmental and Social Management | P-17 Cultural Heritage |
| P-6 Integrated Project Management | P-18 Public Health |
| P-7 Hydrological Resource | P-19 Biodiversity and Invasive Species |
| P-8 Infrastructure Safety | P-20 Erosion and Sedimentation |
| P-9 Financial Viability | P-21 Water Quality |
| P-10 Project Benefits | P-22 Reservoir Planning |
| P-11 Economic Viability | P-23 Downstream Flow Regimes |
| P-12 Procurement | |



What principles of hydropower development should be implemented urgently:

- *Publicity and transparency*
- *Involvement of the public, scientists and experts*
- *Compliance with the criteria of sustainable development*
- *Environmental safety and compliance with SEA and EIA procedures*
- *Consideration of alternative solutions*
- *Creation of the bank of the best technologies*
- *Understanding the value of water as the key resource of humanity*
- *Security principles*



Suggestions for priority actions:

- *Implementation of measures to reduce the negative impact of certain objects of hydropower on environment*
- *Updating of the Dnipro river ecological improvement program*
- *Investigation of the situation with the illegal development of the Tashlytska HPP*
- *Development and implementation of methodology for all hydropower objects EIA conducting without exception*
- *Revision of the Hydropower Development Program, conducting the SEA Program*
- *Implementation of the ecosystem approach in assessing hydropower resources taking into account the factor of climate change*
- *Decision-making on hydropower projects in the framework of Integrated Water Resources Management*



Environmental, Climate and Social Guideline of EIB on Hydropower Development

We propose to include three major principals for the hydropower developer to the Preamble:

- Hydropower designers should be guided by the principle of eco-imperative as a base.
- Taking into account the threats posed by global climate change, the EIB will not finance the construction of hydroelectric power plants on "living rivers", that rivers which are practically in a natural state and creation new dams.
- The EIB will finance projects for the modernization of existing hydropower facilities, with a view to improving their economic performance and environment rehabilitating, and hydropower plants functioning without dams.

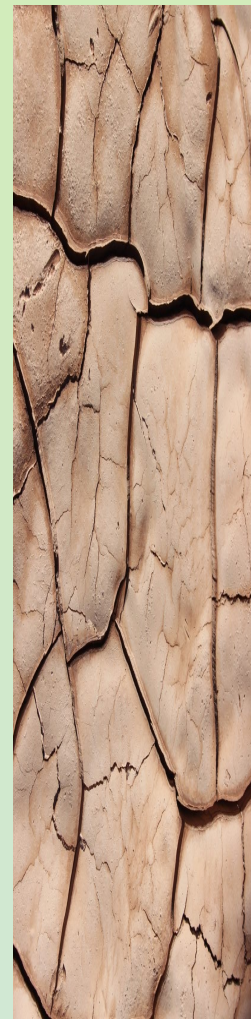


Inland water way E40

New threat for ecosystem of Polessia and conservation of fresh water. *This threats are increasing in climate change framework.*

During last decades:

- average annual temperature increased on 0,8°C , the most intensive growth of winter – 0.9°C and summer – 1.3 °C;
- Polessia becomes vulnerable: duration of warm period was equal to 278 days which is on 40 days more as to climate norm.
- Total evaporation is increasing and there is a lack of water to meet the needs of plants ;
- the role of drained territories of Polissia as sources of CO2 emissions is still underestimated



Analytical materials



Yaroslav Movchan
1957-2017

What will we choose for the future of Ukraine?

More 6000 signatures were collected by our colleague in Mykolaiv against Oleksandrivske reservoir level up.



Thank you for your attention

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