Concept note of the side-event at the National pavilion of Tajikistan in the framework of the UN Climate Change Conference (COP27)

6-18 November 2022 Sharm El-Sheikh, Egypt

The Role of Hydropower in Achieving Climate Resilience

Rationale

Hydropower is a clean, renewable, and environmentally friendly source of energy. It produces 3930 (TW.h).a−1, and yields 16% of the world's generated electricity and about 78% of renewable electricity generation (in 2015). Hydropower and climate change show a double relationship. On the one hand, as an important renewable energy resource, hydropower contributes significantly to the avoidance of greenhouse gas (GHG) emissions and to the mitigation of global warming. On the other hand, climate change is likely to alter river discharge, impacting water availability and hydropower generation. Hydropower contributes significantly to the reduction of GHG emissions and to energy supply security. Compared with conventional coal power plants, hydropower prevents the emission of about 3 GT CO2 per year, which represents about 9% of global annual CO2 emissions. Hydropower projects may also have an enabling role beyond the electricity sector, as a financing instrument for multipurpose reservoirs and as an adaptive measure regarding the impacts of climate change on water resources, because regulated basins with large reservoir capacities are more resilient to water resource changes, less vulnerable to climate change, and act as a storage buffer against climate change. At the global level, the overall impact of climate change on existing hydropower generation may be expected to be small, or even slightly positive. However, there is the possibility of substantial variations across regions and even within countries. In conclusion, the general verdict on hydropower is that it is a cheap and mature technology that contributes significantly to climate change mitigation, and could play an important role in the climate change adaptation of water resource availability. Roughly more than a terawatt of capacity could be added in upcoming decades.

Goals

The main goal of the event is demonstration of the potential and role of the hydropower development for achievement of the climate related sustainable development goals and targets through generation of clean energy, providing long-term water availability and reducing risks and harms of water related natural disasters. Climate Agenda requires close cooperation and partnership at national, regional and global levels, thus a complimentary goal is to showcase that joint development of hydropower resources provides good opportunity to improve climate action planning and implementation. It's also aimed at providing a platform for different stakeholders to collaborate and amplify their work.

Objectives

1. To raise awareness and attract global community attention to the hydropower development;
2. To demonstrate the important role of hydropower development in climate change adaptation and mitigation, as well as in achieving resiliency;
3. To provide a platform for discussing existing problems and obstacles, possible solutions, initiatives and campaigns for hydropower development;
4. To call and encourage companies to adopt sustainability standards to reassure investors, to build climate resilience into planning and operations, and to consider retrofitting non-powered dams with hydropower.

Guiding questions

The event will be guided by the following questions aimed at facilitating the interactive and inclusive discussion among key stakeholders around the main issues:

1) What are the advantages of the hydropower development compare to other renewable energy resources?
2) What can hydropower development do for contribution to the Climate Agenda?
3) How could we get more finances resources for hydropower development?

Expected outcome

Messages and recommendations that could help incentivize new sustainable hydropower projects and bridge the gap between planned versus needed capacity.

Organizers

Organizer: Tajikistan

Co-organizers: IHA, ITAIPU Binacional, IEA

Agenda for Discussion

Side Event at UN Climate Change Conference Egypt 2022 (COP27)

6-18 November 2022, Sharm El-Sheikh

The Role of Hydropower in Achieving Climate Resilience

15th November 2022, 13:30 -15:00 local time

Venue: Tajikistan National Pavilion

Zoom Link: https://undp.zoom.us/j/88679696167?pwd=NUVQVkZYRDc1T2s2bkNTbjlVcFJHZz09
Zoom ID: 886 7969 6167
Zoom Code: 147205

13:30-13:35	**Introduction to the side event** Moderator: Mr. Eddie Rich, Chief Executive Officer, IHA
13:35-13:50	**Opening remarks by Organizer and co-organizers (4 minutes each)** • **Mr. Jamshed Shoimzoda**, First Deputy Minister of Energy and Water Resources of the Republic of Tajikistan • **Mr. Ulises Lovera,** Director of National Directorate of Climate Change of Paraguay • **Mr. Paolo Frankl,** Head of Renewable Energy Division, International Energy Agency **(virtual)** • **Mrs. Aida Sitdikova,** Director, Head of Energy Eurasia MEA, Sustainable Infrastructure Group, EBRD
13:50-14:05	**Presentation: "Building climate resilience of HPPs in Tajikistan"**, Mrs. Aida Sitdikova, Director, Head of Energy Eurasia MEA, Sustainable Infrastructure Group, EBRD
14:05-14:30	**Keynote speakers:** • **Ms. Jinsun Lim** • Environment and Climate Policy Analyst, International Energy Agency: "Hydropower and climate change: adaptation and mitigation"; • **Mr. Alex Campbell**, Head of Research & Policy, Management Team, International Hydropower Association: ***"Hydropower's role in tackling climate change: action needed";*** • ***Mr. Ariel Scheffer da Silva,*** Head of Environmental Management, ITAIPU Binacional; ***"ITAIPU Binacional - a sustainable hydropower development solution showcase"***
14:30-14:45	**Panel session** **Panelists:** • Retno Setianingsih, Senior Energy Program Specialist USAID; • Mrs. Aida Sitdikova, Director, Head of Energy Eurasia MEA, Sustainable Infrastructure Group, EBRD • Conrad Albrecht - Managing Director of the Directorate for Sustainability, Eurasian Development Bank.

	Guiding questions: 1. What are the advantages of the hydropower development compare to other renewable energy resources? 2. What can hydropower development do for contribution to the Climate Agenda? 3. How could we get more finances resources for hydropower development?
14:45-14:55	**Discussion with audience**
14:55-15:00	**Summary and conclusion –** Mr. Eddie Rich, Chief Executive Officer, IHA