

General Presentation

The International Commission on Large Dams (ICOLD) was founded in 1928 to provide a forum for discussion and for the exchange of knowledge and experience in dam engineering for engineers and others concerned with the development of water resources. Its objectives are to encourage improvements in dam engineering in all its aspects, and in all phases of the planning, design, construction and operation of dams and associated works.

With a present total of 106 member countries, ICOLD leads the profession in ensuring that dams are built and operated safely, efficiently, economically, and with a minimum environmental impact. For more than 30 years, ICOLD has been particularly concerned to enhance the profession's awareness of the social and environmental aspects of dams and reservoirs, and to broadening its perspective in such a way that these aspects receive the same attention and conscientious treatment as the technical aspects.

To reflect the growing concern for the environment marked by the first Earth Summit of Stockholm, a Committee on the Environment was formed in 1972 and has been renewed four times since. In June 1980, ICOLD published a comprehensive matrix in Bulletin No. 35 as a **G**uideline for the identification and evaluation of all conceivable effects of individual dams on the specific parts of their environment. In 1999, ICOLD published a **P**osition paper on Dams and Environment, which is available on its website (<http://www.icold-cigb.org>).

ICOLD maintains and intensifies activities to harmonize the development of water resources with the conservation of the environment and with regard for the people affected by a project. It increases our understanding of environmental interactions and progress in the methods available to control them by the collection, analysis, evaluation, and publication of actual experience, including the elaboration of guidelines based on such experience. It encourages the application of environment conscious criteria and objectives, as well as the establishment of an adequate legal and institutional framework tailored to every country's specific condition and needs. It provides its members with up-to-date information on the current norms of environmental care and the state-of-the-art in dealing with environmental issues.

ICOLD has published in 2012 a World Declaration on Water Storage for Sustainable Development, jointly signed by ICID and IWRA. ICOLD is working through 27 Technical Committees that gather **700** experts from different countries in order to reach a set of recommendations on a particular subject.

Here follows recent ICOLD actions that are relevant to Global Compact Initiative:

Environment

1) ICOLD is active in preparing the 9th World Water Forum organized in Dakar by Senegal. The preparation process has been affected by the pandemic but many meetings took place by online conferences.

The Dakar Forum will center on “Water security for peace and development”. ICOLD has already received in his Paris office Mr Abdoulaye Wade, who heads the Organizing Committee for the Dakar Forum and has expressed its full support for the Senegalese Organizing Committee, with a true convergence of views emerging from the discussions.

2) ICOLD has created a Technical Committee specifically dedicated to climate, whose mission is to collect and review the guidance and policies currently used in planning for the impacts of global climate change on dams, reservoir, and the associated water resources. The Committee has now published its report, which became the 169th Technical Bulletin of ICOLD. This work has been disseminated in COP22, with a workshop co-organized by the Moroccan Government and ICOLD during a pre-COP meeting devoted to water.

The Committee is currently working on:

Collecting and reviewing the guidance and policies currently used in planning for the impacts of global climate change on dams, reservoir, and the associated water resources.

Assessing the role of dams and reservoirs in adapting to the effects of global climate change, and determining the threat posed by global climate change to existing dams and reservoirs.

Recommending measures designed to mitigate against or adapt to the effects of global change on water storage facilities. Such recommendations would be developed in light of: scientific predictions of future climate changes; possible impacts from factors such as: increased or decreased precipitation, a change in the rate of evapotranspiration, water quality, erosion, and siltation, prolonged drought, flooding.

Preparing an ICOLD position paper and guidelines for 'climate change and dams, reservoirs and the associated water resources". These documents would be used by the ICOLD membership, governments, the United Nations, the World Bank and other organizations in need of guidance with respect to water resource protection and development.

3) The Technical Committee on Environment is currently working on “Integrating dams with the environment”. The goal is to get together case studies involving planning, construction and operation of dams demonstrating environmental and socioeconomic benefits.

4) Concerned by the recent wave of dams failures, ICOLD has issued a World Declaration on Dam Safety, which is calling upon all involved professionals and industries to make a firm commitment to dam safety the institutions. The Declaration stresses the terrible impact a dam failure can have on humans and on environment. It reminds the essential contribution made by ICOLD to dam safety during its century of existence and restate the main principles of dams’ safety, elaborated by the first generations of ICOLD engineers and constantly refined and improved by the work of the Technical Committees.

Development

4) Initially founded by Western countries, ICOLD has since the 60s worked for the sustainable development of mankind, even if the concept did not exist yet formally. ICOLD has always been particularly sensitive to the problematics of development, including the development of the poorest African countries. In 2008, ICOLD has thus launched a World Declaration on Dams and Hydropower for African Sustainable Development, cosigned with the African Union (AU), the Union of Producers, Transporters and Distributors of Electric Power in Africa (UPDEA), the

World Energy Council (WEC), the International Commission on Irrigation and Drainage (ICID) and the International Hydropower Association (IHA). This Declaration has been a landmark and has set a reference for financing institutions throughout the continent. The ensuing development of dam projects resulted in many African countries joining ICOLD and led to the organization of the first ICOLD conference specifically dedicated to Africa in 2013, which took place in Addis Ababa, in the headquarters of the African Union. Two other conferences were organized in 2017 and 2019. Another one was planned for 2021 in Kenya but was postponed to 2022 because of the pandemic.

5) ICOLD has welcomed 2 new member countries in the last years. The 105th member of ICOLD is the Republic of Congo, which joined the Commission in 2023. The Republic of Congo has a great future for dam project development with an urgent need for information and knowledge transfer from ICOLD member countries. The 106th member of ICOLD is Rwanda, which joined the Commission in 2023. Rwanda's Human Development Index (HDI) value doubled, from 0.250 to 0.524 between 1990 and 2017. The development of six dams played an important role in this

ICOLD is deploying everything to help those countries to access to the best dam technology available, so they can use it to trigger sustainable development in their country. ICOLD has in particular developed a Capacity Building program, which produced several training sessions for engineers coming from these countries.

6) ICOLD is supporting the SDGs but is especially concerned with SDG 6 and 7. The Reservoirs created by dams are delivering Water and Power to satisfy those two goals.

Gender

7) For a long time, ICOLD was an organization of "old white males". This was a reflection of the sociology of dams engineering. This changed first with the creation of the Young Engineers Forum in 2011. ICOLD is proud to say that three out of four persons elected president of this YEF are women, which is a performance in a dam engineering profession still predominantly male. The last one is Priska Miller, from Norway. ICOLD also had a female Vice-President for the first time in 2010 (Maria Bartsch)

During 2023 Annual Meeting, it has been decided to create an "Ad hoc Committee on Gender Diversity and Inclusion". Its mission is "to explore how ICOLD can be inclusive to all genders, raise the awareness and educate on gender aspects within ICOLD, as well as to support and promote increasing participation of female professionals in the dam sector". This committee will be chaired by Maria Bartsch.

ICOLD culture is to concentrate on science and engineering discussions, not considering the skin color, the gender or the political system. Nevertheless, the above mentioned new committee will "set up targets and key figures to form a basis for periodic follow up of gender diversity and inclusion aspects such as female participation and women in leading positions within ICOLD."

Reflecting the growing role of women into ICOLD, Mrs Sera Lazaridou has been elected as the President of EuRCOLD, the regional Club of ICOLD for Europe. Mrs Lisa Bensasson has been elected as ICOLD vice-President in 2023.