



# Kyoto Congress is a success :



**a new African President for ICOLD and a World Declaration launched !**



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## Hydropower and dams' positive role is now widely recognized

It's a new golden age for the dams community. During the 90s some western nations and institutions seemed to have forgotten the major role dams played for their development. Although there were some lawful critics of the dams negative social impact, the dams positive impact on economy and development was completely put on the side.

In major emerging countries, like China, Brazil or India, there was no debate: dams were considered as a crucial tool for development and betterment of the standard of living in the world.

Things have changed: major western institutions, like the World Bank and the Worldwatch Institute, now recognize the role of dams for development. In the 6th World Water Forum that has been widely recognized, to the point that the perennial dam opponents were obliged to adopt a defensive attitude. The 6th World Water Forum has recognized something ICOLD always defended in explaining the multipurpose nature of the reservoirs: the Water-Food-Energy nexus. (see page 4)

Reflecting this new political reality, a total of \$40-45 billion was invested in large hydropower projects worldwide in 2010. The global use of hydropower increased more than 5 percent between 2009 and 2010. Hydropower use reached a record 3,427 terawatt-hours, or about 16.1 percent of global electricity consumption, by the end of 2010, continuing the rapid rate of increase experienced between 2003 and 2009.

In its last Vital Signs Online publication, the Worldwatch Institute, a NGO not especially in favor of dams, was obliged to recognize the advantages of hydropower: "The cost

of hydropower is relatively low, making it a competitive source of renewable electricity. The average cost of electricity from a hydro plant larger than 10 megawatts is 3 to 5 U.S. cents per kilowatt-hour. Hydropower is also a flexible source of electricity since plants can be ramped up and down very quickly to adapt to changing energy demands." *The WWI of course goes in depth in the critics of environmental impact of dams but concludes that : "In the future, hydropower is likely to continue to grow--- despite the environmental challenges involved in expanding it---because of its competitive price and climate benefits, which make it an attractive option as countries seek to lower their greenhouse gas emissions."*



Even the dam critics are recognizing it: it's a new era for dam building. ICOLD will continue to do its best to serve those experts who want to use the best available knowledge and technology to build dams for the sustainable development of their nations.

Michel de Vivo, Secretary General

Above : elected President Adama Nombre and congress in Kyoto. Below : ICOLD President and Secretary General with ICID and IWRA representatives proudly present the World Declaration during ICOLD Congress in Kyoto.

# Successful Congress in Kyoto



1350 participants from 69 countries with many young engineers, a World Declaration issued, ICOLD 25th Congress has been a resounding success in the framework of a global recognition of the need for Water Storage.

The 25th Congress of ICOLD took place in Kyoto, Japan, from June 4th to June 8th. It was a resounding success with a high attendance of 1367 participants coming from 70 countries, including 208 accompanying persons and 110 young engineers.

Given the economic crisis that the world is facing since 2008, given the distance and the cost endured by the trip and despite the consequences of the terrible tsunami which hit the country in 2011, Japan attracted many delegates to ICOLD Kyoto Congress because of its technological knowhow but also for its history and its culture.

Last but not least, everybody could check for himself the famous Japanese hospitality !

## A World Declaration on Water Storage

One of the high points of the meeting was the issuance of the "World Declaration on Water Storage for Sustainable Development", also signed by the International Commission on Irrigation and Drainage, the International Hydropower Association and the International Water Resources Association.

The signers take into account the challenges of the decades to come, because of continuously increasing demands of water, food and energy that will challenge the natural resources. The Declaration states that "Humanity is facing a more severe water situation than it has ever faced in the past" and calls for "Joint efforts to develop water storage infrastructure in a sustainable way." For the full text of the Declaration, see page 6/7.

1200 people participated to the Symposium organized by the Japanese Committee on the

theme "Dams for a changing world", which drew 112 oral presentations on June 5th. Among the 251 accepted papers, 31 came were presented by young engineers. 59 companies and organizations were present at the technical exhibition center during the whole Congress.

## A new President from Africa

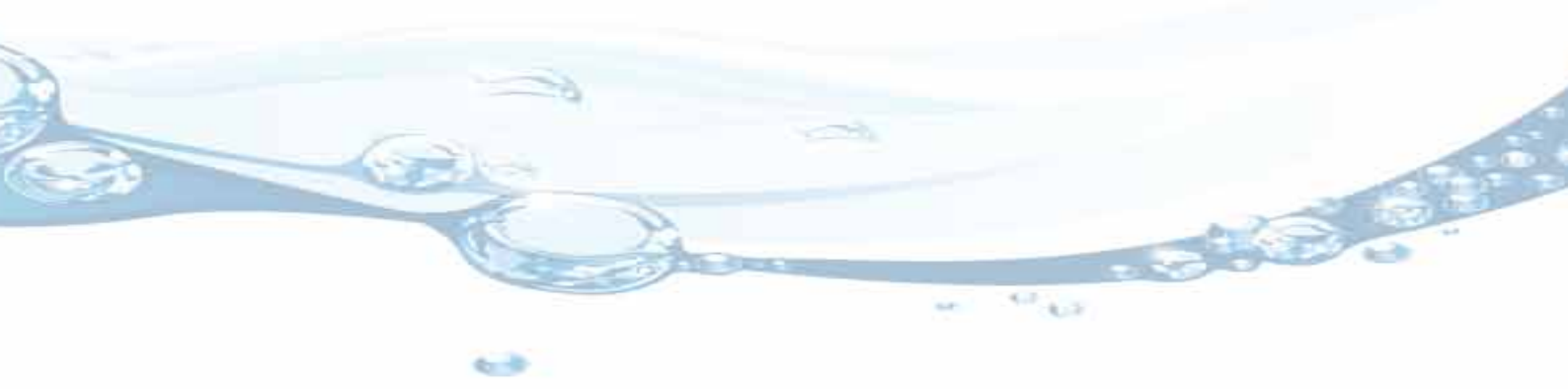
During the General Assembly, Mr. Adama Nombre, from Burkina Faso, has been elected President for the next three years. It is the first time ICOLD has a President coming from sub-Saharan Africa (except for Mr. Van Robbroeck, from South Africa, who was President in 1994-1997) and it is highly symbolic. Coming from a region where water and energy needs are the most acute in the world, Mr. Nombre is passionately engaged in matters of sustainable development and eager to explain to the world the benefits of dams for development.

Two new vice-President were also elected: Mr. Anton Schleiss (Switzerland) for the European zone and Mr. Gerrit Basson (South Africa), for the African zone.

Norway was elected as the hosting country for ICOLD 26th Congress, which will take place in Stavanger in June 2015. Indonesia was elected to host the 82nd annual meeting in Bali (June 2014)

## Educating for the future

During the Congress, ICOLD had prepared a Forum for Young Engineers in order to promote the participation of younger generations. The first



Golden Temple in Kyoto



edition of the Forum was extremely successful with 60 participants. Awards were given to the three winners of the competition, organized by the Japanese Organizing Committee, among the young engineers presenting papers at the Symposium (Dams for a changing world). The award consisted of a very nice Medal and the free participation to ICOLD's next annual meeting, offered by JCOLD. In expectation of the next meeting in Seattle, the Young Engineers Forum will prepare their terms of reference, taking into account the feedback of the Kyoto meeting. Vice-President Alessandro Pujol and the Secretary General will supervise the YEF activities.

During the press conference, ICOLD departing President Jia Jinsheng stressed that investing in reservoirs was investment in the green economy. Secretary General Michel De Vivo insisted on the importance of educating engineers for what he called a "new golden age for dams". He explained that there is now a new goal for ICOLD: to encourage Universities to educate qualified engineers for tomorrow's tasks.

High level people participated at the Congress. Their presence demonstrates that more and more countries and international organisations are showing a great interest in the activities and initiatives of ICOLD.

- Japanese Senior Vice Minister of Land, Infrastructure, Transport and Tourism, Mr K. Okuda,
- Governor of Kyoto Prefecture, Mr K. Yamada,
- Mayor of Kyoto City, Mr D. Kadokawa,
- Chairman of Kansai Economic Federation, Mr S. Mori,
- Sister International Organisations such as ICID and IWRA,
- Several Prestigious International Institutions such as the World Bank,
- National & International media representatives.



Bank Alessandro Palmieri (right) exchanges with Vice-Minister K. Okuda during the Opening Ceremony



International Conference Center from Kyoto was the beautiful venue for the Congress.

## 6<sup>th</sup> World Water Forum stresses Water-Food-Energy nexus

The 6th World Water Forum was held during 12 to 17 March at the French city of Marseille. 35 000 delegates from 60 countries attended the mega event, which was organized at the magnificent 'Parc Chanot' venue by the World Water Council in cooperation with French Government.

As an elected governor of the World Water Council, ICOLD played a key role in organizing this Forum. President Jia and Secretary General also participated in all the events pertaining to the WWF6, including the opening and closing ceremonies, the different Board meetings, etc.

ICOLD participated in the organization of different sessions, including a session with ICID on the target 2-2-5, "Securing World Food Supplies Through Increased Water Storage Systems" and a session with IHA on target 2.3.5, "The Hydropower Power Sustainability Assessment Protocol: A Global Framework to Promote Best Practice". President Jia spoke during that session.

ICOLD also organized its own "Special Focus Session on Water Storage for Sustainable development", on Friday 16th. Those "special focus sessions" had great policy weight and a very high visibility in the forum.

An official dinner was co-organized by CHICOLD and the Central Office to welcome the Chinese delegation, headed by HE Minister Chen Lei. Representatives of the French Government, ICID, IHA and the City of Marseille participated to this event, as well as EDF's hydropower boss.

Through those focused sessions, ICOLD has reached the bulk of the community of water professionals interested in the question of storage. But ICOLD message was also conveyed to the public through very large pavilions like EDF's or Suez's or the Three Gorges Company's, which all had material to demonstrate the interest of multipurpose water storage infrastructure for sustainable development.

Forum provided an excellent platform for all to meet experts from several countries, listen, and learn from experiences on various thematic areas of the Forum. The whole event was marked by a theme that has been promoted by ICOLD for a long time: there is a water-food-energy nexus and integrated solutions like multipurpose water storage infrastructure are needed. You cannot solve one problem without thinking of the other sides of the problem.



ICOLD President Jia Jinsheng and Secretary General Michel De Vivo during the 6th World Water Forum



A general view of the high level session organized by ICOLD during the Forum



# The WCD question in Marseille

Is the era of the World Commission on Dams definitely belonging to the past ?

**6**th World Water Forum in Marseille: the World Bank has confirmed that it has now turned the page of the WCD era, even if it is still difficult to admit it politically. During an intervention at a high level panel on Water Infrastructure for Development in Large countries, Rachel Kyte, Vice President for sustainable development at the Bank, gave a very strongly worded position in favor of large water infrastructures and hydropower.

For her, "the criteria for evaluating large scale water projects that are applied by the World Bank, the regional development banks or the private banking sector, are now converging. And that is a good thing." She referred to the era of the World Commission on Dams, a joint operation of the World Bank and the International Union for the Conservation of Nature, created in 1998. Its final report, issued in November 2000, met a lukewarm welcome.

While there was general agreement on the five core values and the seven strategic priorities expressed by the WCD, ICOLD and other groups expressed strong reservations regarding the Commission's policy principles and guidelines. They singled out the principle according to which "Decisions affecting indigenous peoples should be taken with their free, prior and informed consent." According to them, that principle would mean that basically no dam could be built. On the contrary, all the anti-dam organizations considered the WCD report as an unsurpassable bible, since it gave them the mean to block all dam projects.

At that time, the World Bank financed very few project in the world and it shared the WCD conclusions that while "dams have made an important and significant contribution to human development," in "too many cases an unacceptable and often unnecessary price has been paid to secure those benefits, especially in social and environmental terms, by people displaced, by communities downstream, by taxpayers and by the natural environment."

12 years later, the situation has changed radically. The Vice-President for Sustainable Development stated that "Large scale water infrastructure have an essential role to play, especially in light of the

climate change mitigation". After explaining the multi-purpose nature of a dam, which brings benefits for power, agriculture, flood protection, water supply, navigation and tourism, she concluded: "Large hydropower facilities have become a key milestone for green growth".

In a later interview with this author, she was more cautious, stating that "A lot of the ideas included in the WCD report have gone through. For example, the Free Prior Informed Consent of the indigenous communities, which was wrongly understood as a Veto Right from their part, is now seen as a process of developing dialog on the project. Another example is that the project developers have now recognized that there is a financial cost in neglecting that kind of social dialog in the conception phase of the project. This is a direct result of WCD work !"

On the contrary, John Briscoe from the Harvard School of Engineering and Applied Sciences, interviewed the same day stated : "My opinion on WCD is that it was over since it published its final report. At that time, none of the large dam-building nations supported it and nobody used it since then to build a dam. So, I do consider it now belongs to the past. Another signal for that is coming from the German government, which was one of the rare strong supporters of WCD. During the conference on Water & Energy nexus last November, there was no mention of WCD, neither during the conference nor in the final recommandation."

Together with Kyte and public figures from Odebrecht Energy, UNESCO-ICIWaRM, WWF, and the governments of Uganda and India, Briscoe participated in a debate organized by the World Water Council on March 16th : "Increasing Resilience to Climate Change: What is the role of Water Storage?"

Asked on a difference between now and 12 years ago, he answered: "If we had at that time the kind of debate we had today, the NGOs would have constantly mentioned WCD guidelines. Today, they did not dare to utter the word WCD because they know it has completely lost credibility in the developing sector." He was referring to the presentation by Zachary Hurwitz, policy program coordinator at International Rivers, who was so

# World declaration

## Water Storage for Sustainable Development



### In 2050 world population will likely exceed nine billion inhabitants

The global increase in population, both rural and urban, and the socio-economic development with increasing living standards for all, will continuously raise the requirement for water, food and energy consumption. Populations will continue to concentrate in cities where the need for water, food and energy will be most acute. The rapid population growth and socio-economic development means that by 2050:

**The continuously increasing demands of water, food and energy will challenge the natural resources. We need to face this exceptional situation because at the same time:**

- Due to climate change, water distribution may become more irregular, and disasters related to floods and droughts will worsen.
- Energy sources are limited:
  - Fossil energies are polluting and emitting greenhouse gases and their reserves are limited;
  - Nuclear energy is restricted to industrial countries which have the technology and the security of nuclear energy has aroused

existing water systems and further develop new water storage infrastructure. This will require adequate legislation and funding. It must also include the optimization of the use of water by combining multiple purposes:

- Flood management and drought mitigation
- Irrigation for food production
- Energy production
- Drinking water and sanitation
- Industrial water supply
- Navigation
- Environmental services
- etc.

**There is need to improve the maintenance and operation of existing water storage infrastructure.**

Taking into account the aging process, improved knowledge, and the effects of climate change, there is a need to increase efforts to maintain the existing water storage infrastructure. For example, modern monitoring and engineering can improve the safety of structures against extreme earthquakes and floods. Climate change is likely to make

additional production will require efficient use of existing irrigation facilities and extending the area under irrigation through increased water storage facilities. It is estimated that 80% of additional food production by 2025 will need to come from irrigated land.

- **Energy production**  
Hydropower supplies about 16% of the world's electricity today. Hydro supplies more than 50% of national electricity in about 65 countries, more than 80% in 32 countries and almost all of the electricity in 13 countries. The flexibility of this renewable resource is fundamental in matching electricity services with demand and contributes to the development of other intermittent sources of electricity production such as solar and wind, which are less flexible. Consequently, the energy stored in water, converted through pure hydropower and pumped storage, improves the reliability of power systems in a clean and efficient manner. Only 30% of the world's identified hydropower potential has been developed. Transforming the undeveloped hydropower potential into reality would save extraordinary amounts of fossil fuel, reduce greenhouse gas emissions substantially and improve the management of water resources.

- **Drinking water and sanitation**  
One in eight people in the world do not have access to safe water for drinking, cooking and sanitation. With the expected population growth and without investment in storage

- **Environmental services**  
Water storage infrastructure can keep the healthy life of rivers through ecological operation and serve wider environmental services. They can allow upkeep of minimum flows during dry seasons which enable the preservation of many aquatic animals and plants during droughts. Moreover, dams and reservoirs contribute to stabilizing ground water levels in adjacent land areas. Reservoirs can also be used to create new and biologically desirable habitats and to irrigate wetland biotopes or wetland forests.

**We, therefore, call for joint efforts to develop water storage infrastructure in a sustainable way.**

Today, water and energy schemes can be built in a safe, economic, and eco-friendly way. Water, food and energy services are intricately linked and need to be developed in an integrated approach. Based on the multi-faceted and cross-boundary nature of water issues in the present world, we call for:

- Continued cooperation among various stakeholders, government authorities, research institutions, businesses, civil societies, local communities and so on, to speed up the development and implementation of effective and sustainable water solutions.
- Development of sharing rivers with

reservoir regulation more difficult as hydrological patterns change. Reservoir regulation must be optimized to store more floodwater, while considering the requirements of both upstream and downstream areas. With the latest forecasting systems and real-time acquisition of data, dynamic operations to control water levels in reservoirs can achieve the best balance between infrastructure safety and the wise use of water resources.

**There is need to accelerate the development of new water storage infrastructure for multiple purposes.**

**■ Flood management and drought mitigation**  
Floods and droughts are the greatest water management problem for many countries with insufficient water storage infrastructure. Every year, more than 200 million people are affected by flood damage. Due to climate change, floods and droughts will become more frequent and severe. Water storage infrastructure is a key component of water disaster mitigation, especially in developing countries.

**■ Irrigation for food production**  
Irrigated agriculture covers about 277 million hectares, about 18% of the world's arable land. This makes this land remarkably more productive, providing about 40% of the world's crop output. Irrigated lands also concentrate agricultural employment, with nearly 30% of the rural population working in these areas. Much of the world's food production must be in regions with long dry seasons. Since arable land area is limited, the

people's wide concern.  
**•** Variable renewables such as wind and solar sources are valuable and should be developed as much as possible; however, they need back up. Hydropower can play this role, but policies and markets are not encouraging this.

**Water is precious and water storage infrastructure will become increasingly important!**

Water storage infrastructure, providing multiple water services, is vital for human development. Out of the 40,000 km<sup>3</sup> of freshwater available each year, only 9,000 km<sup>3</sup>/year is accessible. Through the construction of more than 50,000 large dams and millions of small reservoirs throughout the world over the past 5,000 years, many communities are able to enjoy reliable water services. These water storage facilities regulate about 4,000 km<sup>3</sup>/year.

The role of dams and reservoirs in sustainable development has already been acknowledged in various declarations: World Summit on Sustainable Development (2002), Beijing Declaration on Hydropower and Sustainable Development (2004), Dams and Hydropower for African Sustainable Development (2008), and the Ministerial Declarations of the Fifth and Sixth World Water Fora (2009/2012).

**Humanity is facing a more severe water situation than it has ever faced in the past.**

To face this century's greatest challenge – to manage water sustainably – we need to strengthen



**Approved on 5<sup>th</sup> June 2012 in Kyoto, by:**  
 The International Commission On Large Dams (ICOLD),  
 The International Commission on Irrigation and Drainage (ICID),  
 The International Hydropower Association (IHA),  
 and the International Water Resources Association (IWRA).

- Improved policies, guidelines and protocols to evaluate and mitigate environmental and social impact of various storage options and to address the concerns of affected communities.
  - Funding agencies to effect action in countries which need water storage, promoting national and regional development, with innovative financing mechanisms.
- In conclusion**
- **Water is life and water storage infrastructure is an indispensable tool for society.**
  - **Investment in water storage infrastructure is investment in the green economy.**
  - **The services they provide will be crucial in the mitigation of, and adaptation to, climate change.**
  - **To meet growing demands for water, food and energy, it is time to develop solutions for better use of water resources, especially for developing countries, and to match political commitments with action.**
  - **A balanced approach, combining large, medium and small reservoirs, is required; one that takes into account sustainable development, with full commitment to minimize negative impact.**
  - **The organizations signing this declaration commit to collaborate with all partners and stakeholders that share this common vision.**

growth, and without investment in storage, access to water will reach 4.2 billion by 2025. One of the Millennium Development Goals calls for halving, "by 2015 the proportion of the population without sustainable access to safe drinking water and basic sanitation". Investment in sustainable water storage infrastructure in developing countries would help achieve this goal.

**■ Industrial water supply**  
Every manufactured product uses water during its production process. Industrial water use includes purposes such as processing, washing, diluting, cooling, or transporting a product as well as for sanitation needs within the manufacturing facility. Industries that use large amounts of water produce food, paper, clothing, chemicals, refined petroleum, or primary metals, all of which would aid developing countries to increase the value of their natural resources. However, sustainable and reliable water supply is a precondition to encourage establishment of such productive industries.

**■ Navigation**  
Inland navigation for goods transportation, compared with land and air freight, has many environmental and economic advantages. Inland navigation is also well suited for handling large quantities of cargo and items with large dimensions. For those reasons, nations have encouraged inland navigation on canals and natural river courses. The control of levels in water courses for navigation requires water storage, and this can be an important role for multipurpose reservoirs and infrastructure.

••• defensive he was led to say that “he is not against dams, but against the impact of large dams”!

During another panel, organized on March 14th by the US Army Corps of Engineers (Mr. Steven Stockton, director for Civil Works and Mr. Jerome Delli Priscoli, head of the Institute for Water Resources), many other leaders of large countries also expressed the idea that dams are an absolute necessity.

The Chinese minister of Water resources, Mr. Chen Lei reminded the gigantic efforts of his country to achieve water conservancy: 87,000 reservoirs, 300,000 km of river dikes, 230 GW of installed hydropower capacity among many other impressive figures. Thanks to these efforts, “China has been able to feed 21% of the world population with 6% of the world’s freshwater resources and 9% of the world’s arable land”. He also stressed that “infrastructures that we are building are crucial for adapting to climate change consequences and fighting against floods.”

Steven Stockton US ACE Director for civil works reminded the crucial role played by the engineers in the building of the USA nation, taking the famous example of the Tennessee Valley Authority.

He stressed that “the efficiency of a large water project to generate growth depends highly on its multipurpose nature.” The more you have this multipurpose aspect, with the food-energy-water nexus, the more you tend to trigger an economic development that profits all the layers of society.

Jerson Kelman, former President of the Brazilian National Water Agency, now President of the Light Group, the Rio de Janeiro Power Company, recognized that “dam builders made many errors in the past” by not taking sufficiently into account the environment. He concluded that “not all the technically feasible projects should be built”. But he stressed that there is no such thing as a “without dams alternative”. He advocated that a few large dams were much better than many small dams, for the environment and for the economy giving the example of water evaporation, much larger in small projects than in large ones. The question that is often forgotten and that should be asked is: “what happens if this project is not built ?”

Rachel Kyte basically answered that question: no green growth. •

Emmanuel Grenier



Rachel Kyte during the Forum in Marseille



John Briscoe “My opinion on WCD is that it was over since it published its final report.”



# Central Europe goes for PSP storage plants development

An European initiative signed by Germany, Austria and Switzerland calls for the development of more pumped-storage power plants.

Those plants are the only existing mean to store large quantities of electricity. Beside playing a crucial role for stabilizing the network frequency by easing the supply-demand balance, power storage is becoming absolutely necessary because of the rapid development of intermittent renewable energies like wind or solar.

This is recognized by the three signatory ministers: Phillipp Rosler of the Austrian Republic's Ministry of Economy and Technology; Reinhold Mitterlehner of Germany's Ministry of Economy, Family and Youth; and Doris Leuthard of the Swiss Council for the Environment, Transport, Energy and Communications. They declare pumped storage is essential if Europe wants to reach its energy and climate policy objectives. Those objectives are often familiarly called the "20-20-20 targets".

European countries have agreed in 2008 to lower their greenhouse gas emissions 20% by the year 2020 below 1990 levels. That would be accomplished by investments in renewable electricity generation like wind and solar power: 20% of European energy is to come from renewable resources. The third objective is to increase overall energy efficiency by 20%.

As the initiative notes, however, "pumped storage power plants are the only industrially available



The Nand-de-Drance (Switzerland) pumping-storage scheme is using the Emosson dam as lower reservoir.

storage technology present," and their development is essential to "offset the volatile supply of wind and solar systems."

The agreement not only calls for the expansion of existing pumped-storage facilities but also cross-border transmission of energy currently being produced. But the agreement does not mention the obstacles to the use of pumped storage plants, like the rates applied to electricity transport which make the operation much less profitable (utilities operating a pumping storage station have to pay twice for electricity transport).

The original text (in German) of the joint initiative can be read on the German's ministry for science here.

# ICOLD Regional Clubs

## Report on Regional Clubs

By **Emmanuel Grenier**  
 derived from a report prepared  
 by **Giovanni Ruggeri** for the ICOLD Board

Between ICOLD, the global organization on Dams, and the National Committees on Large Dams, there is an intermediary level of organization under development: the Regional Clubs. The European Club (21 member countries) was founded in 1995, soon followed by INCA (Association of ICOLD Nat. Committees of the Americas, 14 member countries) and AAA (Africa Australasia Association of ICOLD Nat. Committees, 14 member countries), both founded in 2000. In 2002, a fourth regional club was founded: the East Asia Pacific Group of ICOLD National Committees, with 17 member countries



A meeting of the African regional club during last Congress in Kyoto

Another local organization should be mentioned : the East Asian Area Dam Conference was founded in 2004, with the unique aim of organizing periodic conferences. It is limited to three countries : China, Japan and South Korea.

A Constitution has been defined by each one of the four Clubs. The East Asia Dam Conference is only aimed to the organization of Dam Conferences. Therefore it has not a "Constitution" but a simpler "Agreement". The Clubs have rather similar objectives. The main aim is the exchange of information, experience and knowledge, through meetings, events or Working Groups.

Websites of European Club and INCA :  
 European Club : <http://cnppgb.inag.pt/icoldClub/index.htm>  
 INCA : <http://www.abirh.org/inca>

The European Club has already organized 8 Symposia, the 9th one being scheduled in 2013, in Italy. INCA has organized 7 Workshops, the last four ones having taken place in Argentina. The East Asia Pacific Group has organized none, but there were 6 symposia organized by the East Asian Area Dam Conference.

The European Club and the INCA Club have their own website, giving information about the organization, its objectives, membership and activities.

### What is the interest of Regional Clubs ?

Regional Clubs can be very effective for exchanging knowledge, with particular reference to topics of shared interest at regional scale. They can also play a key role in increasing the dissemination of ICOLD's policies and culture, by involving individuals or organizations that can hardly afford "worldwide" activities.

The main interest of Regional Clubs is to work with ICOLD methods on subjects which are of main and shared interest at regional scale.

Up until now, only the European Club has Working Groups. Eight of them have finished their work on the following subjects

- "European Dam Legislation"
- "Geomembranes & Geosynthetics"
- "Uplift Pressures Under Concrete Dams"
- "Sliding Safety of Concrete Dams"
- "European Water Directive"
- "Seismic Criteria"
- "Ageing of Concrete Dams"
- "Education"

Five other Working Groups are currently working on:

- "Internal Erosion in Embankment Dams"
- "Dam Safety of Existing Dams"
- "Floods"
- "Public Safety"
- "Dam Safety Risk Assessment and Management"

The existing reports can be freely downloaded from the above-mentioned website.

As a whole, the ICOLD community has had, till now, a very limited information about the activities, and sometimes even about the existence, of ICOLD Regional Clubs.

Synthetic information about the Clubs is now available in ICOLD's website. •

# INCA

## a Wind of Energy

By Johanne Bibeau, President of INCA

INCA Meeting and Symposium in Neuchen (Argentina) in 2010



INCA, the ICOLD National Committees of the Americas, is a Regional Club established since the year 2000. The By-Laws were signed in Venezuela by seven National Committees representatives. Eleven years later, the INCA has evolved and is developing more than ever a Wind of Energy.

Its mission is to encourage cooperation and exchange of information, experience and opinion concerning dam related subjects among the different American nations, by discussing dam issues in the Americas, promoting the benefits of dams and informing about their concerns, and enhancing access to ICOLD knowledge and experience.

In 2012, there are 17 active National Committees INCA. The interest of National Committees is increasing and, hopefully, more than 25 National Committees could join INCA in the near future.

#### Activities:

The INCA group met in Kyoto, Japan, on June 5th during the ICOLD Annual Event. Some highlights were:

1. Eleven (11) countries were represented for a total of 15 participants. A new edition of the By-Laws was discussed and its updating is under progress;

2. The web site is now linked to the ICOLD one. The Spanish version which is currently being translated to the English, is on its way (<http://www.abirh.org/inca> or <http://www.icold-cigb.net>);
3. The next annual INCA meeting will be held in August 2013 in Seattle, USA;
4. The next Symposium/Workshop will be held in the province of Saskatchewan, Canada (September 24-26, 2012);
5. A recent network has been developed to disseminate the benefits of joining the ICOLD and INCA associations to the overall American countries, with the help of Alejandro Pujol acting as 6th Vice-President of Americas for ICOLD.

The INCA Regional group is evolving as its members are blowing in the same direction while fed by a wind of energy. ICOLD members and current as well as future INCA members are welcomed at the next Symposium/Workshop which will be held in Saskatchewan, Canada next September. Interesting subjects as Legislation on Dam Safety, Dams Construction Challenges will be part of the themes to be discussed. Actual INCA members are encouraged to promote the benefits of being a member of ICOLD to their neighbors of Americas and invite them to the next Annual Meeting, in Seattle, August 2013. ●



## ICOLD activities

### A film on dams

An excellent documentary film has been produced by the Economic Community of West African States, with the support of the International Union for the Conservation of Nature.

<http://www.youtube.com/watch?v=8PsMo1kniz8&lr=1>

Adama Nombre, former vice-President of ICOLD, is appearing in the program and is able to convey ICOLD's main message about the urgent necessity of dams for development.

The documentary film is only one part of a regional consultation process on large infrastructure projects in the region, a dialog on dams that is summarized in an English language pamphlet that can be downloaded here:

[http://www.dialoguebarrages.org/dialoguebarrages/images/stories/downloads/Depliant\\_dialogue\\_en.pdf](http://www.dialoguebarrages.org/dialoguebarrages/images/stories/downloads/Depliant_dialogue_en.pdf)

### Short course in South Africa

The South African National Committee on Large Dams organizes a short course on "Advanced Technologies for Construction of Dams and Environmental Considerations during Implementation"

This short course takes place in Pieter - maritzburg, 1/3 August 2012. Registration can be done on SANCOLD's website :

[www.sancold.org.za](http://www.sancold.org.za)

The SANCOLD Management has agreed that SANCOLD should form a Young Engineer Forum that would liaise with the ICOLD Forum. An initial meeting of interested persons will be held during the forthcoming SANCOLD Course.

It is to be noted that South Africa is preparing a candidacy to host ICOLD meeting in 2016.



## Water Storage and Hydropower Development for Africa

Addis Ababa, Ethiopia ~ 16-18 April 2013

ICOLD co-organizes with Aqua International and the Ethiopian Electric Power Corporation a first-of-its-kind African conference. With more than 7300 MW of hydro capacity at various stages of implementation, and a comparable amount planned, Ethiopia is the leading country for current hydro development in Africa.

The Conference will take place under the patronage of H.E. Alemaheyu Tegenu, Minister of Water & Energy

[http://www.hydropower-dams.com/africa-2013.php?c\\_id=89](http://www.hydropower-dams.com/africa-2013.php?c_id=89)

TheDamsNewsletter n°12 July 2012

Published by ICOLD-CIGB - ISSN: 0534-8293  
Central Office: 61, avenue Kléber 75116 Paris - France  
Tel.: (33) 1 47 04 17 80 - Fax: (33) 1 53 75 18 22  
Publishing Director: Mr Michel de Vivo, Secretary General of ICOLD  
Editor: Mr Emmanuel Grenier

