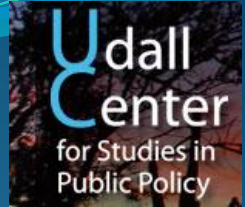




# Workshop Hydroenergy and Climate Change



## HYDROPOWER DEVELOPMENT AND THE URUGUAY RIVER CASE

**Víctor Pochat**  
**Buenos Aires, 29 July 2014**

# URUGUAY RIVER BASIN

Area 365,000 km<sup>2</sup>



**LA PLATA  
BASIN**  
3.1 M km<sup>2</sup>



**URUGUAY RIVER**  
Length 1,850 km  
Mean annual flow 4,500 m<sup>3</sup>/s

# URUGUAY RIVER BASIN DAMS UNDER OPERATION



Foz do Chapecó



Rincón del Bonete



Salto Grande

Countries	Rivers	Dams	Capacity (Mw)	
<b>BRAZIL</b>	Uruguay	Itá	1,450	
		Foz do Chapecó	855	
		Canoas	Campos Novos	880
		Pelotas	Barra Grande	708
		Passo Fundo	Passo Fundo	226
		Chapecó	Quebra-Queixo	121
		Machadinho	Pelotas	1,140
<b>URUGUAY</b>	Negro	Rincón del Bonete	160	
		Baygorria	108	
		Palmar	333	
<b>ARGENTINA- URUGUAY</b>	Uruguay	Salto Grande	1,890	



## WORLD DECLARATION WATER STORAGE FOR SUSTAINABLE DEVELOPMENT (Kyoto, 2012)

The **global increase in population** and the **socio-economic development** with increasing **living standards** for all, will continuously **raise the requirement for water, food and energy** consumption.

Due to **climate change, water distribution** may become **more irregular**, and **disasters** related to **floods and droughts** will worsen.



## WORLD DECLARATION WATER STORAGE FOR SUSTAINABLE DEVELOPMENT (Kyoto, 2012)

**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 **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**.



## WORLD DECLARATION WATER STORAGE FOR SUSTAINABLE DEVELOPMENT (Kyoto, 2012)

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



# ENVIRONMENTAL AND SOCIAL CONCERNS



Misiones dice:  
**NO a Garabí**

**NO a la Represa de Garabí**  
Que **NO** inunden nuestros pueblos  
Que **NO** enfermen a nuestros hijos  
Que **NO** nos dejen sin hogar  
Que **NO** nos mientan más  
Que **NO** destruyan lo que Dios creó  
Que **NO** agredan a la naturaleza  
Que **NO** nos engañen, ya sabemos lo que es una represa.  
**Únete con tu firma al NO a Garabí.**



Facebook, Email, Twitter, YouTube icons

**DÍA INTERNACIONAL  
DE ACCIÓN CONTRA LAS  
REPRESAS Y POR LOS RÍOS  
EL AGUA Y LA VIDA**





## UNITED NATIONS ENVIRONMENT PROGRAMME DAMS AND DEVELOPMENT PROJECT

The role of dams is considered in the context of **sustainable development**. This involves dealing not only with **environmental** and **social** issues but also **economic** aspects associated with the **benefits** of dams.

A **narrower** perspective, focusing **only** on **negative** social and environmental **impacts**, leads invariably to **polarizing** the debate on whether dams **should be built** or **not**.

When the **full range** of social, environmental and economic issues is **considered**, **dams** become a **valid option** and the question changes to **how** to **build** a **good dam**.





## UNITED NATIONS ENVIRONMENT PROGRAMME DAMS AND DEVELOPMENT PROJECT

**Sustainability of dams** involves consideration of the **engineering, environmental, social, economic** and **financial** aspects within the context of an **informed** and **participatory** decision-making process.

This **integrated** approach also **includes** dealing with the **entire basin** when planning, developing and managing water resources, recognizing **upstream** and **downstream** interlinkages and being aware of particular **stakeholder interests** and areas of **potential conflict**.

*Source: United Nations Environment Programme, Dams and Development. Relevant practices for improved decision-making, available at [www.unep.org/dams](http://www.unep.org/dams)*

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**THANK YOU VERY MUCH**

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