

# Capacity building in the water sector: Creating and developing training centers for water professionals

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Governor of the World Water Council

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# PRINCIPLES GOVERNING THE DESIGN OF TRAINING CENTERS IN THE WATER SECTOR (I):

1. The Center positions itself as a service provider specialized in its areas of competence, linked to the water sector.
2. The Center's business strategy is based on the demand for capacity building in the sanitation sector.
3. Commitment to meet market expectations in terms of demand and need.
4. Offer differentiated training in the market, with practical approaches and real situations.
5. Application of the concept of Pedagogical Engineering.
6. Managers of the Center with profiles and abilities to exercise their functions.

## PRINCIPLES GOVERNING THE DESIGN OF TRAINING CENTERS IN THE WATER SECTOR (II):

7. Trainers and Instructors of the Center with specific differentiated characteristics to carry out the training attributions.
8. Business management: commitment to efficiency and budgetary and economic management, seeking economic-financial sustainability.
9. The Center should take a leadership position in the modernization of the water sector.
10. The Center as a complementary service provider.
11. Demonstration of results for the sector through performance indicators.
12. Contribute to the construction of a policy for professional efficient and sustainable training in the sector.

## A REALITY IN BRASIL:

- **Low wastewater treatment index:** only 37% of generated wastewater is treated;
- **Low personnel productivity index:** 55% of water and wastewater services operators, have the indicator **below 400 connections/employee<sup>1</sup>**;
- **High non water billed index:** 33% of water and wastewater services operators (49% of urban population), have the non water billed index **above 30%**;
- **Low cash sufficiency index<sup>2</sup>:** 47% of water and wastewater services operators (32% total population), have the index **lower than 1,00**.

<sup>1</sup>Connections (water + wastewater) per employee

<sup>2</sup>Reserves / (OPEX + debt service+ taxes)

SOURCE: SNIS 2014



# EVOLUTION OF THE NUMBER OF EMPLOYEES (IN THOUSANDS)

(1) BNDES → R\$ 10 million  
increase in civil construction  
= 530 direct and indirect jobs

2007 → 187,4

2014 → 218,2

2030 → 250,9

Direct → 149,3  
Outsourced → 68,9

Generated through investments (1) →  
646,5

SOURCE: SNIS 2014

## THE WATER SECTOR AND ITS PROFESSIONAL PROFILE

Actual situation in Brazil: the principal actions in capacity building are concentrated in the strategic and tactical levels.

Little and isolated actions exist. Insufficient for today's and future demands.

10%

### Strategic

Direction, Management

20%

### Tactical

Team leaders, Technical experts

70%

### Operational

Operators,  
Electricians,  
Plumbers...

## TRAINING, CAPACITY BUILDING AND QUALIFICATION IN WATER AND WASTEWATER



**Hydrus**  
FORMAÇÃO, CAPACITAÇÃO E QUALIFICAÇÃO EM ÁGUA



New associates



Destined, principally, to employees in water  
in Brazil and LATAM

Water Governance  
Brasilia, DF

Technical Operational  
São Paulo State

# INITIAL WATER GOVERNANCE COURSES

THEME	COURSE
MANAGEMENT OF RAINWATER AND FLOOD RISK	Flood risk prevention
	Basin and alternative techniques: Construction
INDUSTRIAL WATER REUSE AND RECYCLING	Hydrological efficiency in the industry
IRRIGATION AND WASTEWATER REUSE IMPROVEMENT PRACTICES	Reuse of Wastewater in irrigation



# INITIAL TECHNICAL-OPERATIONAL COURSES

THEME	SUBTHEME	COURSE
WATER	Losses and leakages	Improvement of the Efficiency of Distribution Networks: strategy and organization
		Search for leakage and buried pipes
	Treatment	Water Treatment operation: fundamental basis (level I)
		Water Treatment operation: clarification and disinfection (level II)
WATER / WASTEWATER	Automation	Operation and maintenance of telemetry, telemanagement, automation and protection systems
	Pumps and Stations	Maintenance of stations
		Stations in wastewater networks
WASTEWATER	Treatment stations	Technical management
		Wastewater Stations Operation – level 1

**THANK YOU!**