

# International Cooperation in Water and Wastewater Management by JICA

UNEP Consultative Meeting  
on Water and Wastewater Management  
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# Today's topics

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1. About JICA
2. JICA's approach on water and wastewater management
3. JICA's support for partnership and networking
  - (1) Case studies
  - (2) Challenges for partnership and networking

# 1. About JICA



## If people living on our planet are 100 persons...

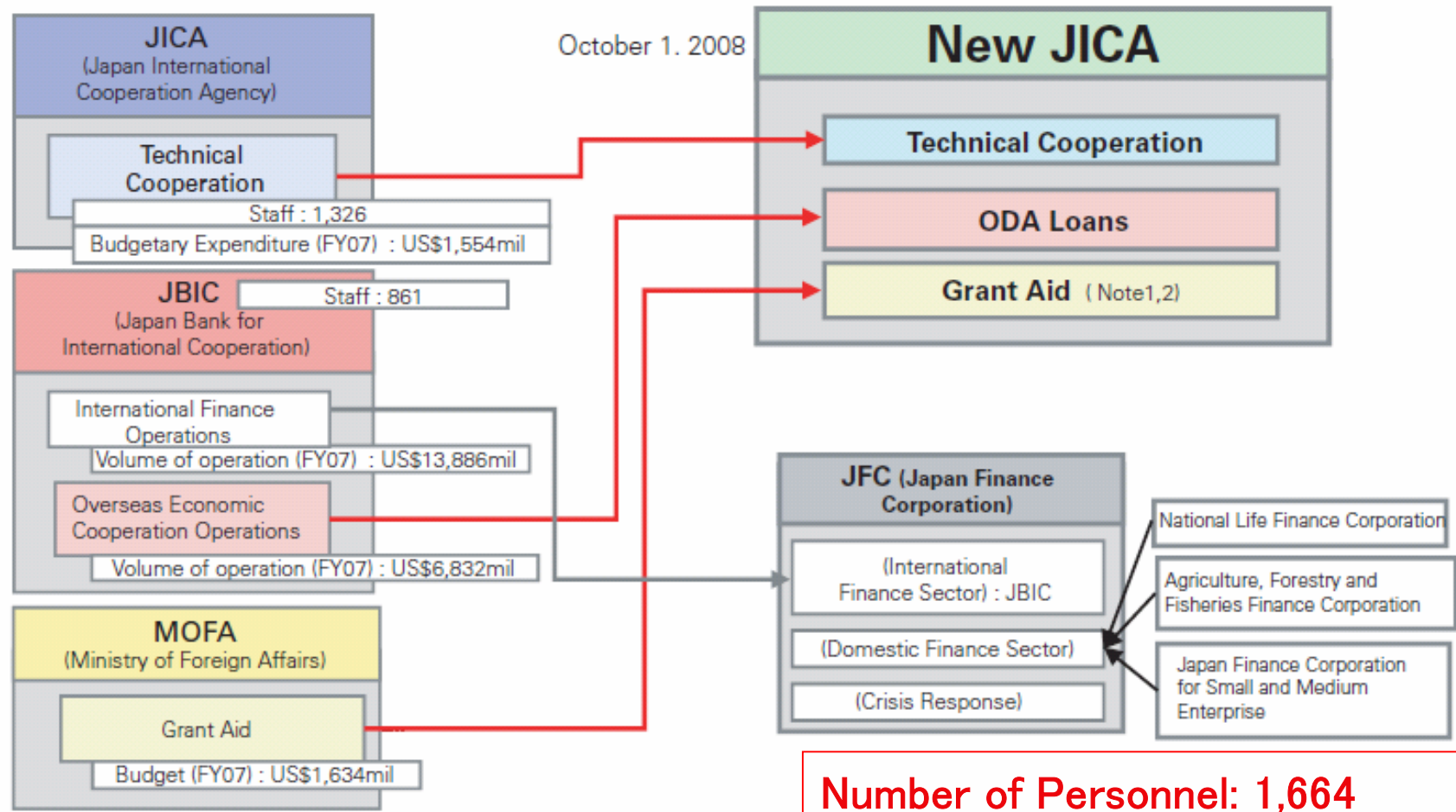
Population living in developing countries	80	(about 5.2 billion)
People surviving on an income of less than 2 dollars a day	40	(about 2.6 billion)
People who do not have access to safe drinking water	17	(about 1.1 billion)
Children who cannot live to be 5 years old	8	(about 0.5 billion)
People who cannot take sufficient nourishment	17	(about 1.1 billion)
People who do not have access to electricity	25	(about 1.6 billion)
Illiterate population	18	(about 1.2 billion)

Source: UNDP, Human Development Report 2007/2008

The numbers in parenthesis indicate actual numbers related to the world's population.



# New JICA established (October,2008)

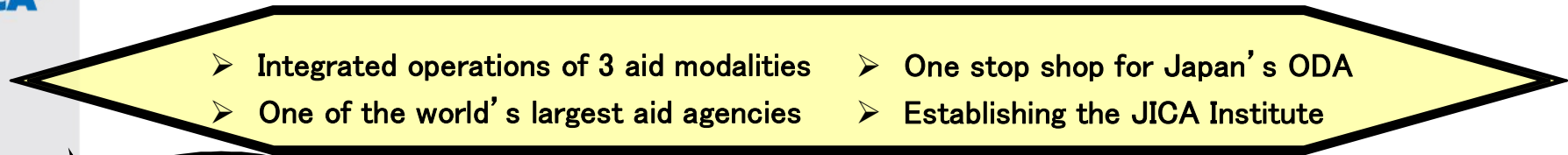


Exchange Rate used : JPY100.10/US\$ (IFS rate for 2008 March end)

**Number of Personnel: 1,664**  
**Size of Operation: US\$ 10,280mil**



# New JICA's vision, mission and strategy



Vision

**Inclusive and Dynamic Development**

Mission

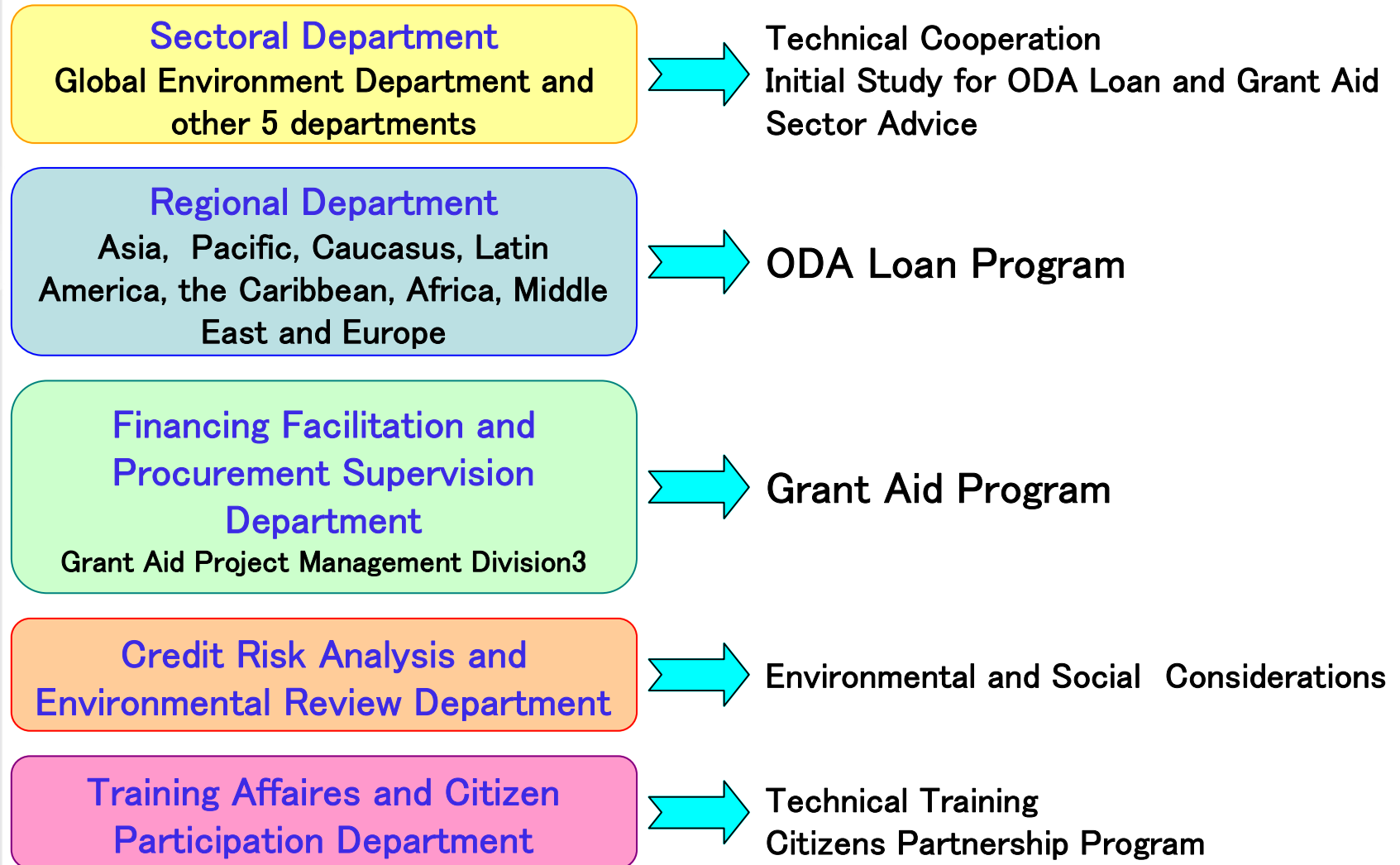
- ① Addressing Global Agenda
- ② Reducing Poverty through Equitable Growth
- ③ Improving Governance
- ④ Achieving Human Security

Strategy

- Integrated Assistance
- Seamless Assistance
- Promoting Development Partnerships
- Enhancing Research and Knowledge Sharing
- Achieving synergy of merger  
(Speed-up, Scale-up, Spread-out)
- Tackling complex and difficult issues flexibly  
with the field-based approach
- Fostering expertise for providing professional solutions
- Efficient and transparent operation

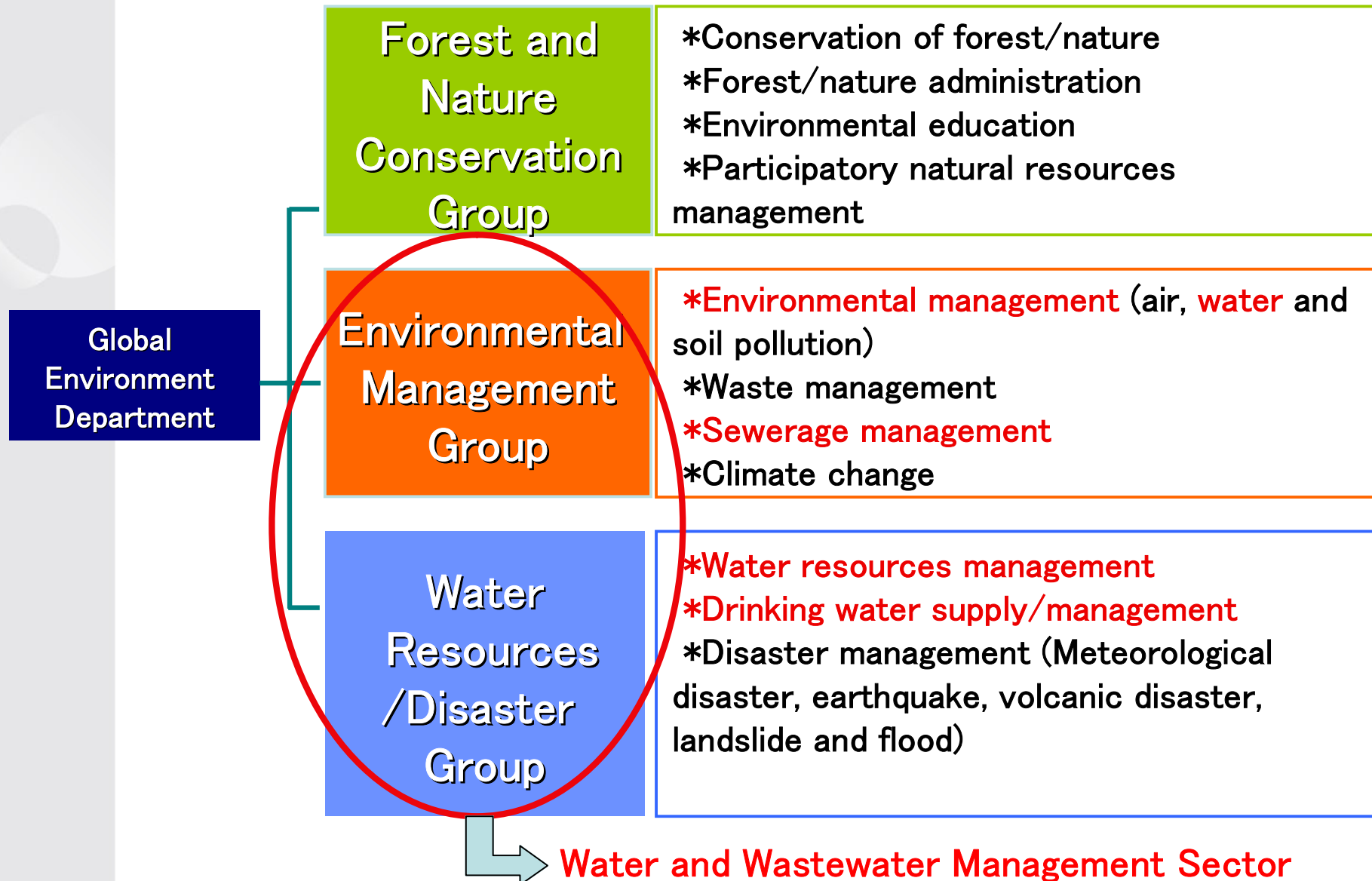
## Departments related with water and wastewater management

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✂ JICA works in over 150 countries and regions and has 17 domestic and some 100 overseas offices.

# Global Environment Department

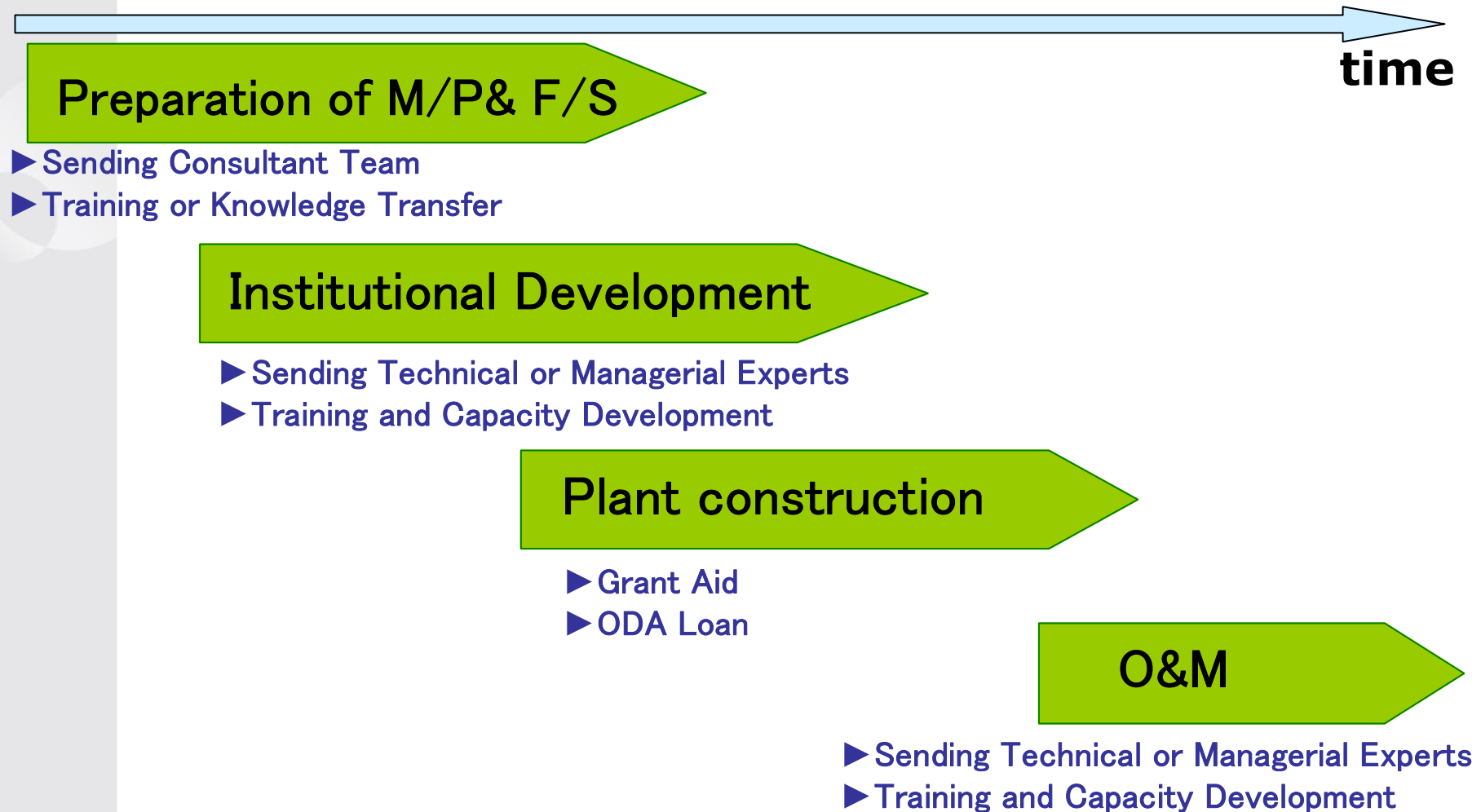


## 2. JICA's approach on water and wastewater management





# JICA's comprehensive approach on water and wastewater management



## Capacity Development in the water and wastewater sector for the enhancement of human security

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Solving such water-related issues is essential for allowing people to escape the poverty trap and for enhancing **“Human Security”**. In order to develop a system to effectively manage water resources and to ensure access to stable, equitable and safe water for people, using **“the Capacity Development (CD) approach”** is an important strategy.

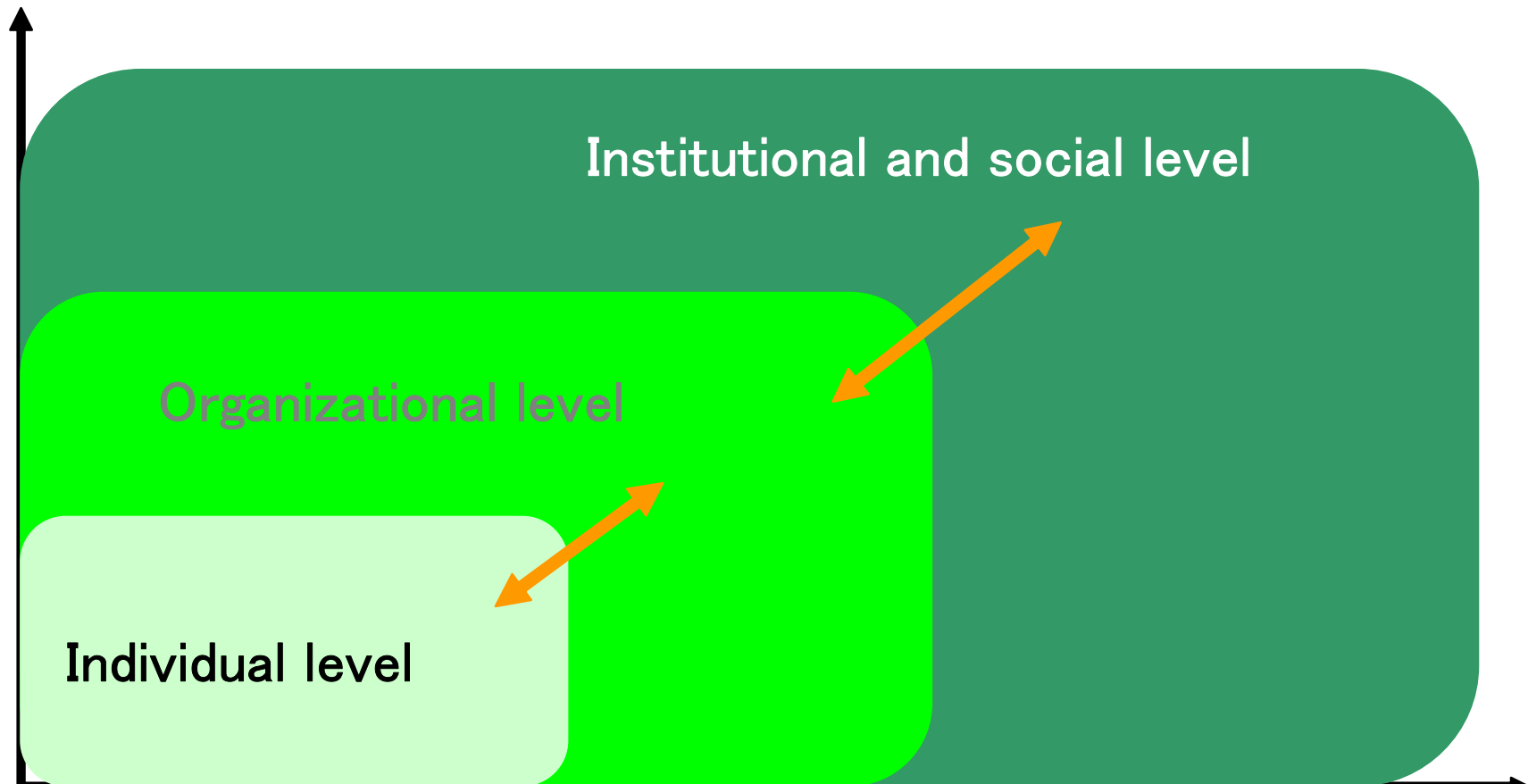


# Capacity Development (CD)

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- CD is defined as “the process of development for individuals, organizations, systems and society to solve problems through playing the roles individually or collectively and the process of development of the capacity (capacity to cope with problems) to set and meet goals”.
- The concept is aimed at helping developing countries with their endogenous and continuous process of improvement.

## Three layers of Capacity Development (CD)



**Inclusive perspective beyond individual and organizational levels  
is the key to sustainable development**

### 3. JICA's support for partnership and networking



# (1) Case studies



**Case1: Guinea Worm Eradication Project in Zinder, Niger**  
~Water supply project with sanitation and hygiene 2004–2006  
<Grant Aid Project>

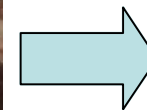
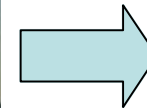
**Construction of boreholes + Safe Water and Hygiene Promotion**

- \*Conducting hygiene promotion sessions
- \*Training of 91 Water User Committees on Hygiene and Sanitation
- \*Video shows in 18 villages
- \*Training of Sanitation Animators on the usage of the Image Kit

Awareness raising activities



Change in Hygiene Behavior



## Case2: Sewage development in 15 cities along Yamuna river in India Yamuna Action Plan (Phase1)1992 (Phase2)2003 <ODA Loan>

This project includes construction of sewage system, along with construction of public toilets and public participation and awareness activities in sanitation for urban poor.

### Results and Impacts!!

☆More than **1,200 public toilets** have been constructed based on the hearings from users in communities. Number of users is more than **700,000 persons per day**. (Year 2004 research)

☆User fee 1 rupee per person is collected. “**Family Pass**” for 30 rupees for a family per month is also available. The number of users is increasing.

☆Maintenance of the toilets are contracted to **local NGOs**. In the future, the work is planning to be transferred to the local community based organization.

Awareness raising activities



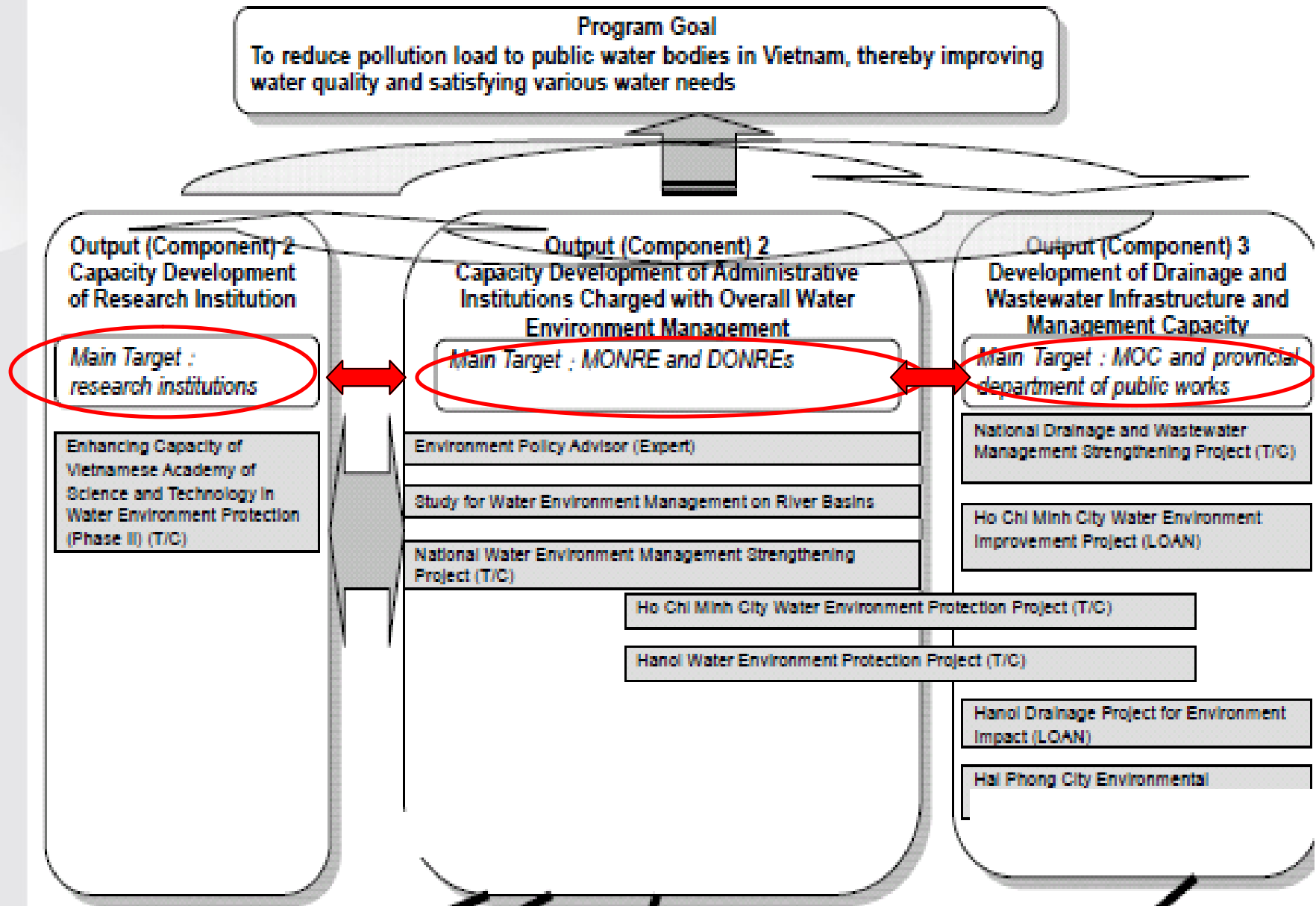
Public toilet



Toilet keeper



## Case3: JICA Program on Vietnam Urban Water Environment Management





# JICA Program on Vietnam Urban Water Environment Management

## Component 1: Capacity Development of Research Institution

### Enhancing Capacity of Vietnamese Academy of Science and Technology in Water Environment Protection 2008–2012



#### ●Background

- urbanization causes an increase of domestic water and the municipal solid waste resulting in accelerating environment deterioration
- The government of Viet Nam has adopted the Law of Environmental Protection in 1993; and followed by setting up environmental regulations and standards to improve the environment. However, Viet Nam's water environment is facing many problems in terms of technology, facilities, and human resources to realize environmentally sustainable development.
- In 1<sup>st</sup> november 2003 the project was commenced with 3years cooperation period

#### ●Project purpose:

Scientific and technological basis of VAST(IET) for the improvement of the water environment will be further strengthened

#### ●Outputs :

- 1.VAST researchers' abilities to conduct water quality monitoring and to develop analysis methods are improved
- 2.VAST researchers' abilities to develop and apply suitable technologies on domestic and industrial wastewater treatment are improved
- 3.VAST staff members' abilities to conduct training courses on water quality monitoring and wastewater treatment for central and local organizations are improved
- 4.VAST researchers are to contribute to MONRE's and related organizations' activities of water environment protection

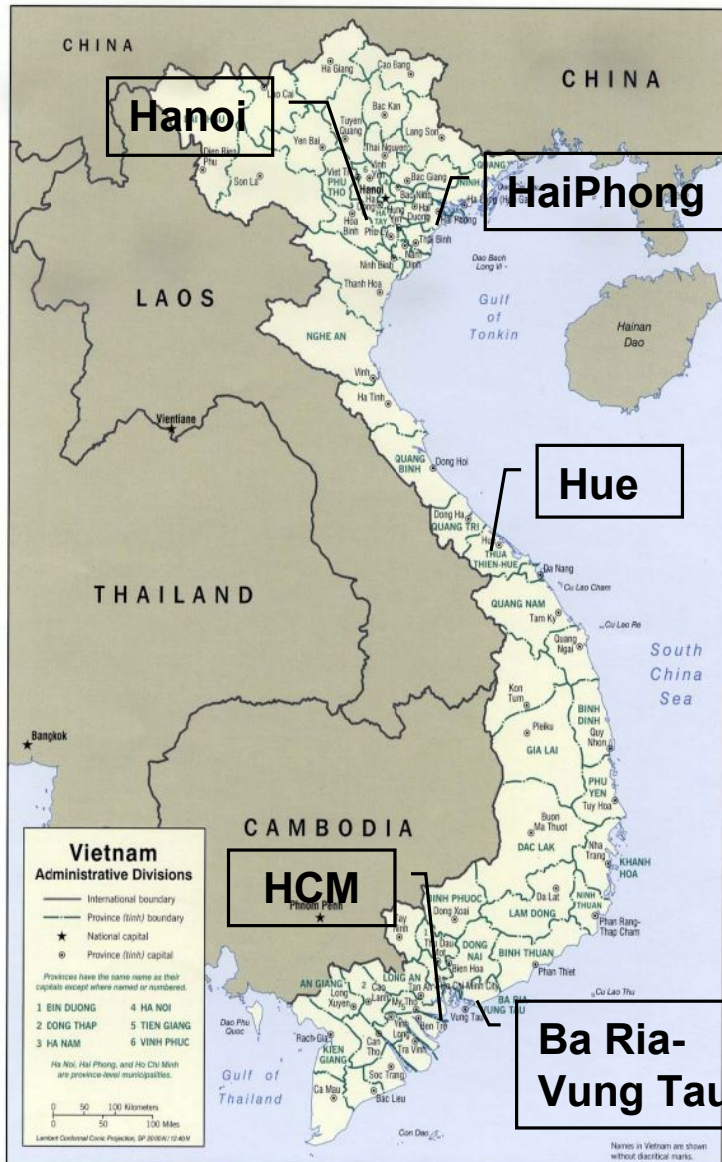
● partner country organization: Vietnamese Academy of Science and Technology, Institute of Environmental Technology



State of the laboratory VAST/ IET  
Japan International Cooperation Agency

# JICA Program on Vietnam Urban Water Environment Management

## Component 2: Capacity Development of Administrative Institutions Charged with Overall Water Environment Management



### Project Purpose

Capacity of MONRE and target DONREs on water environmental management is strengthened.

(1) Counterpart: MONRE and target DONREs

(2) Implementation Period : 3 years (2010–2013)

(3) Project sites : Hanoi, HaiPhong, Hue, Ba Ria-Vung Tau and HCM

(4) Output

- ① Strengthening MONRE's capacity of making policy & systems that are more effective & enforceable.
- ② Strengthening enforcement capacity of target DONREs on basic water pollution control.
- ③ Strengthening target DONRE's capacity of making effective water pollution control measures.
- ④ Strengthening target DONRE's capacity of promoting awareness of public and industrial sectors on water environment.
- ⑤ Strengthening capacity of MONRE and DONREs on information management and utilization.

## JICA Program on Vietnam Urban Water Environment Management Component 3: Development of Drainage and Wastewater Infrastructure and Management Capacity

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### M/P, F/S

Hanoi city environmental management plan (2000)

Hai Phong city environmental management plan (2001)

### Technical Cooperation

Capacity development on sewerage management  
in Ho Chi Minh City

### ODA loans

Urban water environmental  
management projects  
in Hanoi, Ho Chi Minh, Hai Phong,  
Hue, and Binh Duong Provinces.  
Total ODA loan amount is  
about US\$150 millions.





## Case4: Regional cooperation in urban water supply

### Capacity development of urban water supply authorities in Lao People's Democratic Republic <Technical cooperation> 2003-2006

\*JICA dispatched experts from the water bureaus of several cities including Saitama, Sapporo, Tokyo, and Kanagawa Pref. The experts supported the preparation of textbooks and operational manuals and also conducted training programs to disseminate knowledge to all water operators.

\*JICA volunteers gave valuable feedback during the preparation of textbooks and manuals.



Dispatched Thai experts from NWTTI to support for preparing training textbooks

Training programs at NWTTI

### Capacity development for water supply systems in Cambodia <Technical cooperation>2003-2006

\*JICA dispatched experts from the water bureaus of several cities including Kitakyushu and Yokohama to transfer technologies to operate and maintain water treatment plants, to manage water distribution and to control water quality.  
\*The training program in Japan provided opportunities for participants to learn not only technological skill, but also the processes water operations in Japan use to improve their daily operations.



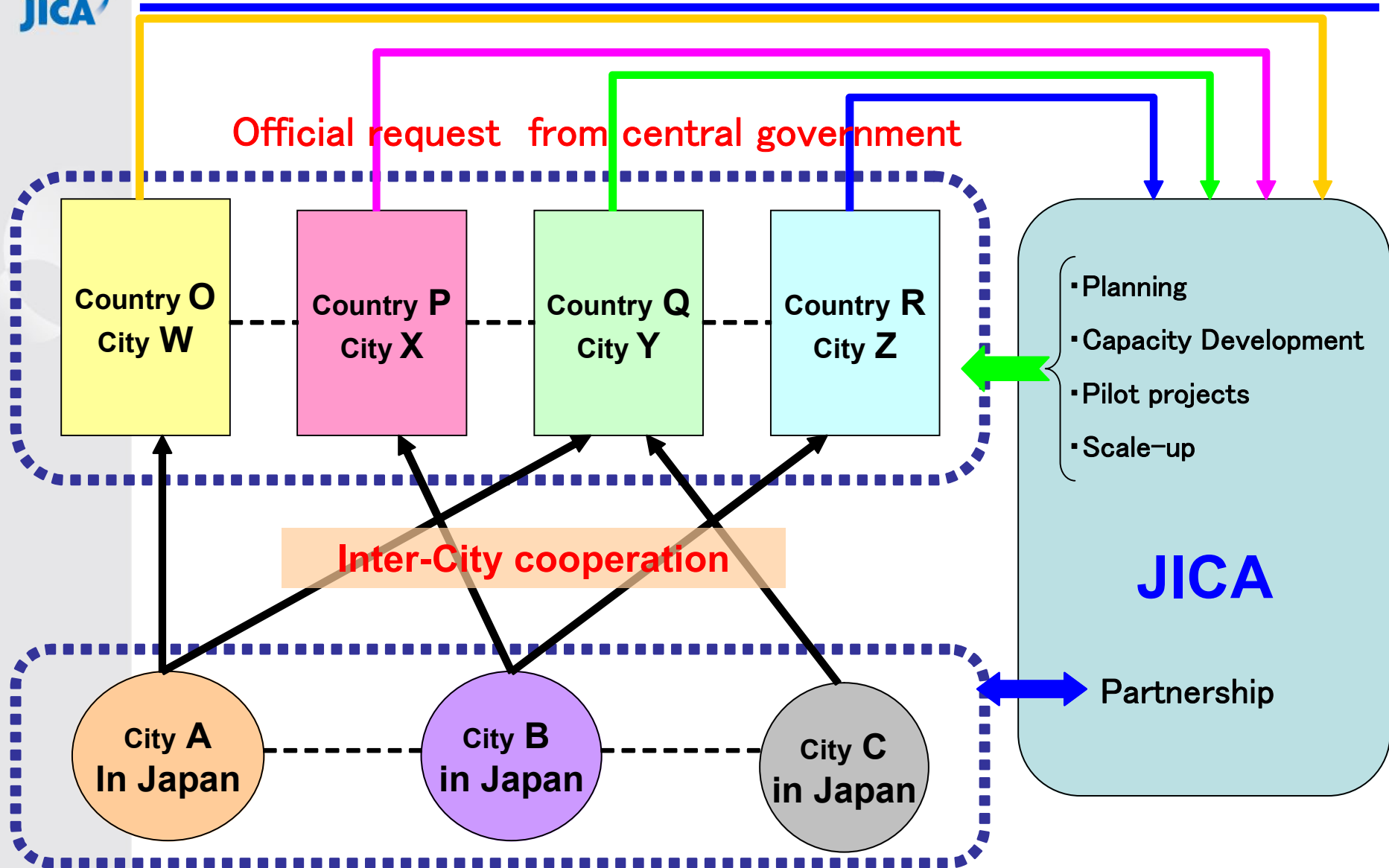
### National Waterworks Technology Training Institute (NWTTI) Project in Thailand <Technical cooperation> 1985-1999

\*JICA dispatched experts from water operators of the municipalities of Sapporo, Yokohama, Tokyo, Osaka, and Nagoya to NWTTI.  
\*NWTTI officials visited several water operators in Japan to participate in training programs.  
\*Japanese and Thai engineers have worked together on the ground to find appropriate remedies to improve the maintenance of facilities, to reduce non-revenue water and to enhance customer service.



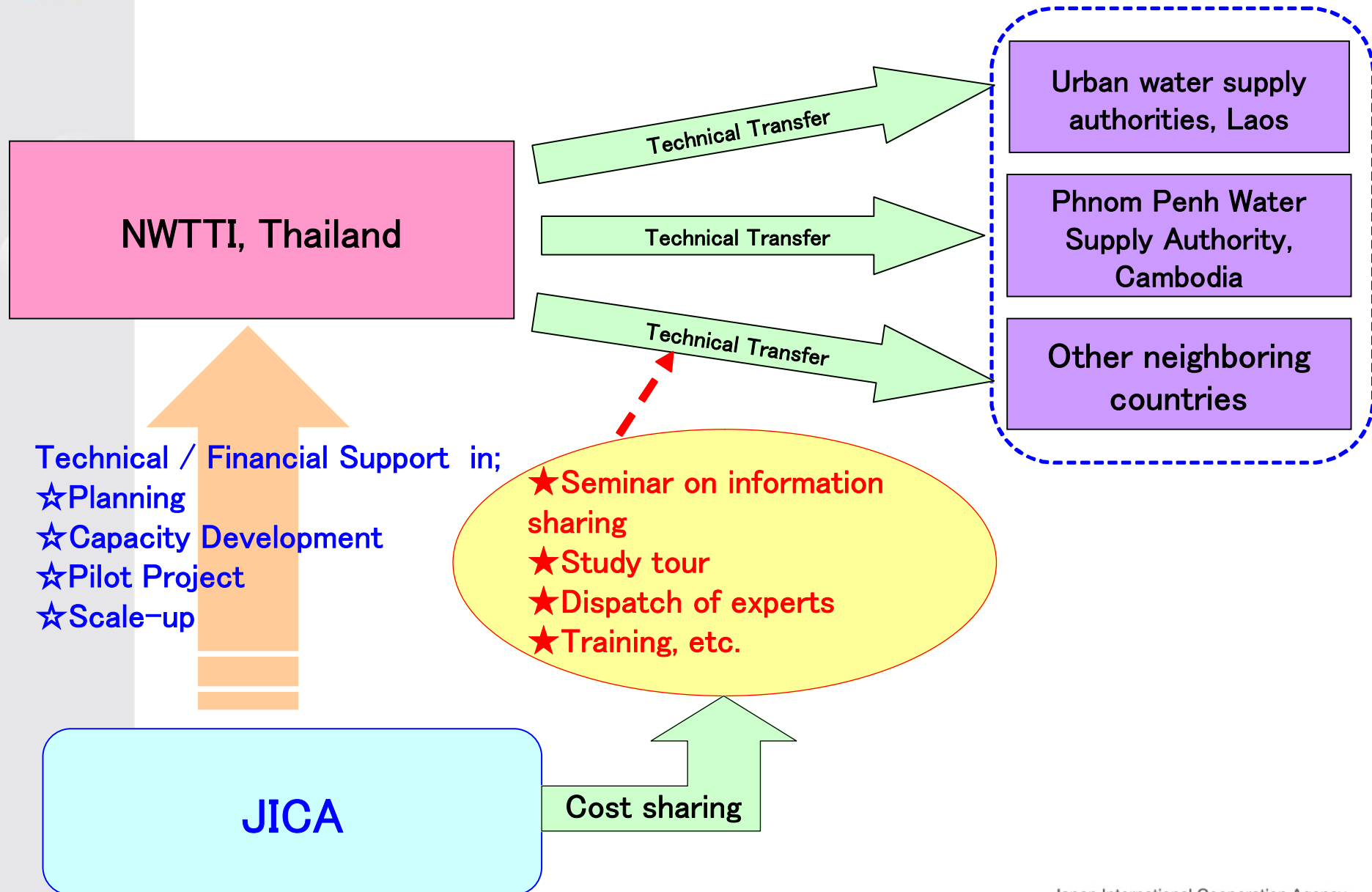


# Regional cooperation program

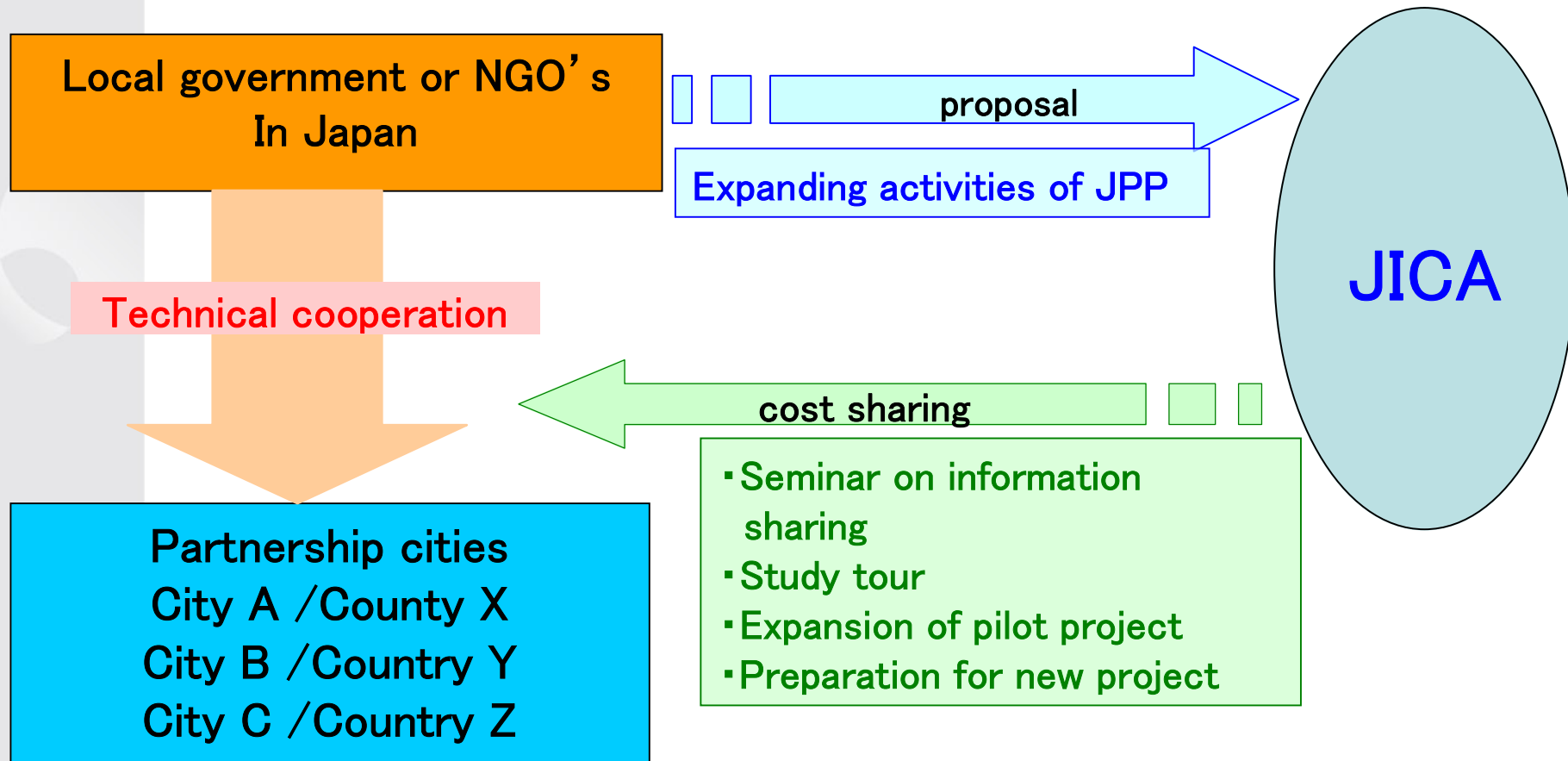




# Third country training program



# JICA Partnership Program (JPP)



★ Some examples of JPP on water and wastewater management sector

\*Potable Water Quality Control Project II in Mexico City ••• Nagoya city (2008–2011)

\*The Improvement of Water Quality Management Capacity in City of Surabaya, Indonesia

••• Kitakyusyu city (2007–2009)

\*Integrated Approach for Arsenic Mitigation in Uttar Pradesh state, India ••• University of Miyazaki (2008–2010)

\*Lalibela Water Project in Ethiopia ••• NPO Futaro Fund for Forests (2005–2007)

## (2) Challenges for partnership and networking → sustainability after JICA's support

**2003-2007**  
**THE PROJECT ON CAPACITY DEVELOPMENT FOR WATER QUALITY MANAGEMENT IN MONTEVIDEO AND METROPOLITAN AREA**  
 → Main component : Development of M/P for CD  
 → Establishment river basin committee for Santa Lucia River basin (pilot project)

Legal framework was not realized.  
 Lack of support by government & budget

Disappear of the committee

**2008-2011**  
**THE PROJECT ON WATER POLLUTION CONTROL AND MANAGEMENT OF WATER QUALITY IN THE SANTA LUCIA RIVER BASIN (SLRB)**  
**<Change in approach for strengthening partnership and networking>**  
 → Improvement of access for information on water quality and pollution sources (Renovation of DB)  
 → More involvement of legal department (advice for legal and institutional framework)  
 → Consultative meeting for budget allocation  
 → Promotion of secondment of staff



(Santa Lucia River Basin and Pando River Basin)



# Outcomes

More information on water quality and pollution sources

## Fact-base river basin management

Awareness raising for all stakeholders

Promotion of dialogues

Promotion of policy development

**\*Promotion of "National System of Protected Area" (establishment of protected area in down stream area of SLRB)**  
**\*Press release for integrated water resource management etc.**

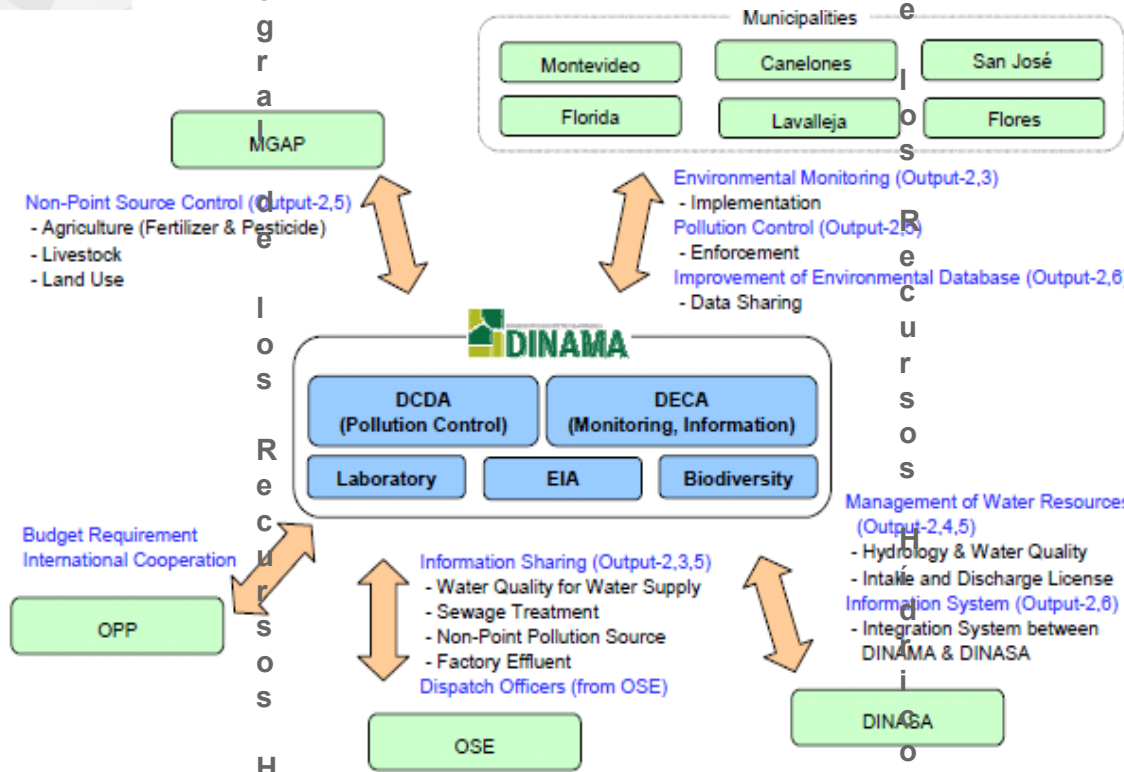


Figure 3.2 Coordination and Collaboration of Organizations in Project Activities

<Press release>22 de marzo, 2010  
 Día Mundial del Agua Presentan Agenda de Acción hacia Plan de Gestión Integral de Recursos Hídricos En el marco del Día Mundial del Agua, la DINASA y DINAMA -junto a OSE y MVOTMA- presentaron la Agenda de Acción hacia un Plan de Gestión Integral de los Recursos Hídricos. ....



**Thank you for your attention**

<http://www.jica.go.jp/english/index.html>