

Japan Business Forum
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**New Private Sector Initiative on Water
-Establishment of Global Water Recycling
and Reuse System Association, JAPAN-**

Dr. Masaru KURIHARA

**Chairman of Consultative Committee,
Global Water Recycling and Reuse System Association, JAPAN,
Executive Advisor, Toray Industries, Inc.**

GWRA

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System Association, JAPAN

Background of GWRA



1. Water Resource Project (COCN - Council on Competitiveness – Nippon)

In March 2008, the COCN proposed “An Approach to the Rapidly Exploding Global Water Business Market,” a successor project led by the COCJ (Committee on Competitiveness of Key Technology Industries-. Japan; active from 2004 to 2005)

2. All-Japan Team

Water Security Strategy Organization “Team Water Japan”

Liaison Meeting of Concerned Government Ministries

Global Water Recycling and Reuse System Association, JAPAN “GWRA”

- The GWRA was established as a body to promote the recommendations in the “Water Resource Project” led by the COCN (November 28, 2008).
- It aims to establish a base of the water recycling and reuse system steering business for global operation.

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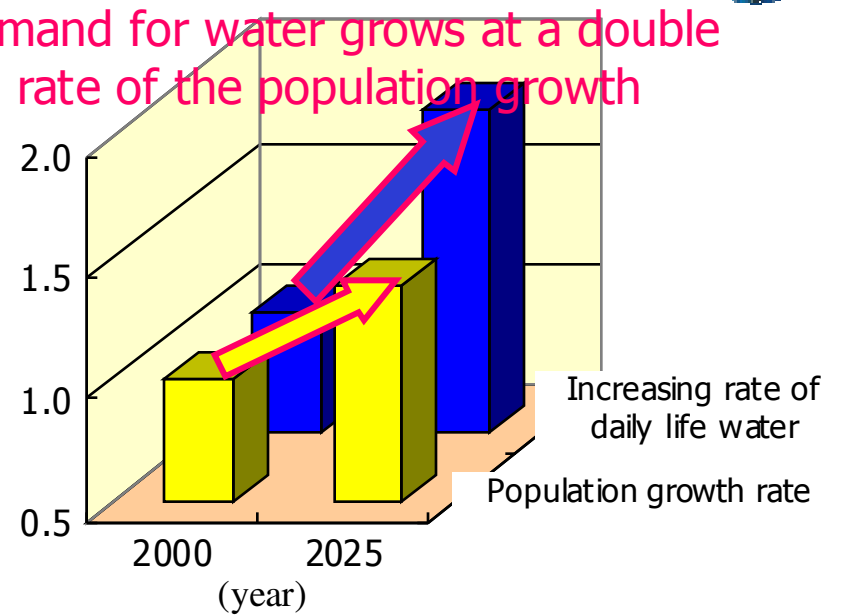
Solve Water Issues on a Global Basis








Water issues (water shortage and aqueous contamination) should be treated as critical as the global warming

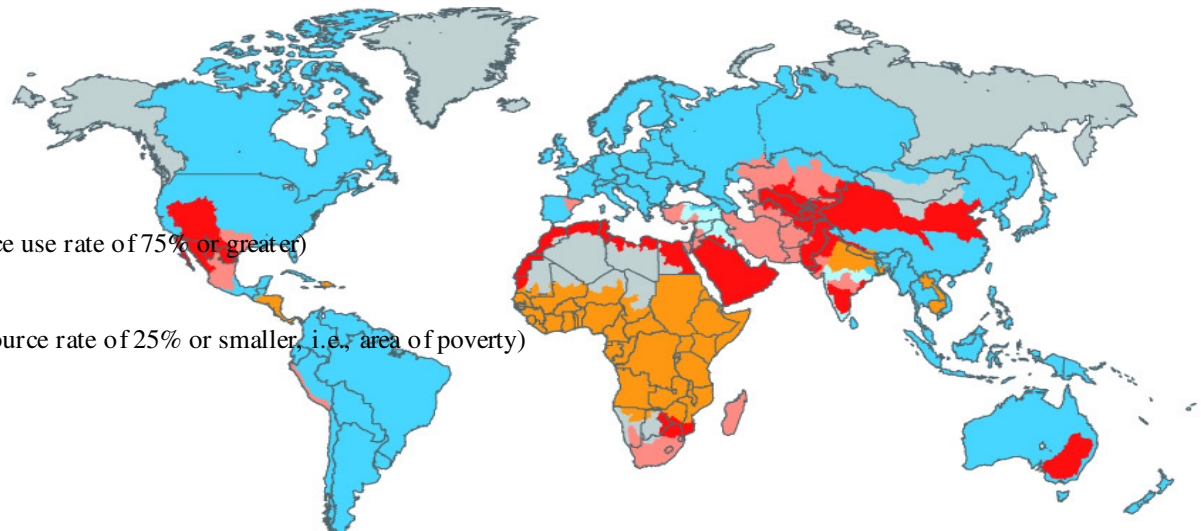


Demand for water grows at a double rate of the population growth



Global water shortage (Source: IWMI Report 2006)

-  Area which does not have draught
-  Area of physical draught (a water resource use rate of 75% or greater)
-  Area near physical draught (ditto)
-  Area of economical draught (a water resource rate of 25% or smaller, i.e., area of poverty)
-  Not evaluated



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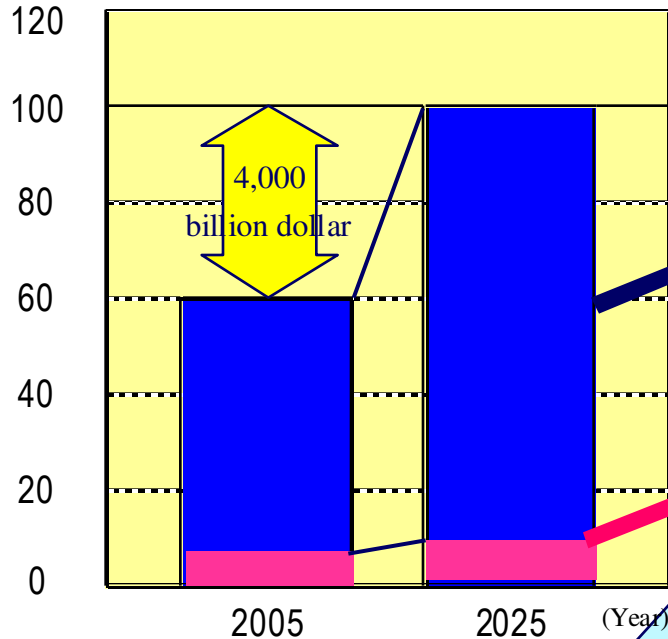
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World Water Business Market

The water business will grow greater than 1 trillion dollar-scale, whereas Japan receives orders for EPC, equipment and materials worth less than 10 billion dollar from global countries.



10Million \$ [Estimation of Toray]



Forms of Water Business

Water Projects (Water supply/Sewage)	Management (Owing assets)
	Operation (Maintenance and management of operatin of the facilities)
New water projects (Desalination, and recycling)	Construction
	Engineering
Building a plant (EPC)	Pumps
	Membrane
Equipment, materials and supply	

Area where overseas water business players are dominant

- (1) European water business majors
Veolia Water (France), Suez (France) (an 80% share)
- (2) Newly entered businesses through M&A
GE (US), Siemens (Germany)
- (3) National strategies
Netherland, Spain, Singapore, Korea, Germany, China and Australia

Areas where Japanese firms have a strong grip

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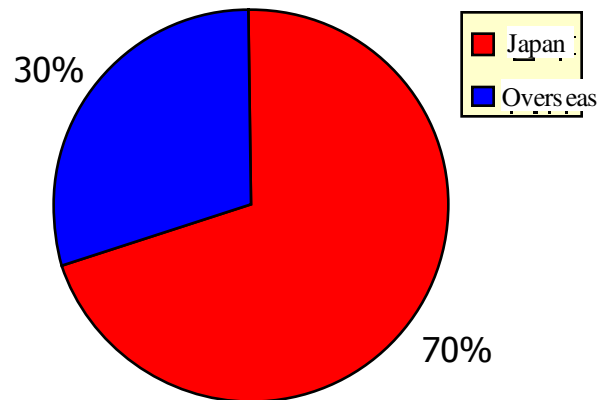
World Water Business Market: Typical Example



Share of Japanese membrane suppliers in the water treatment membrane supply market

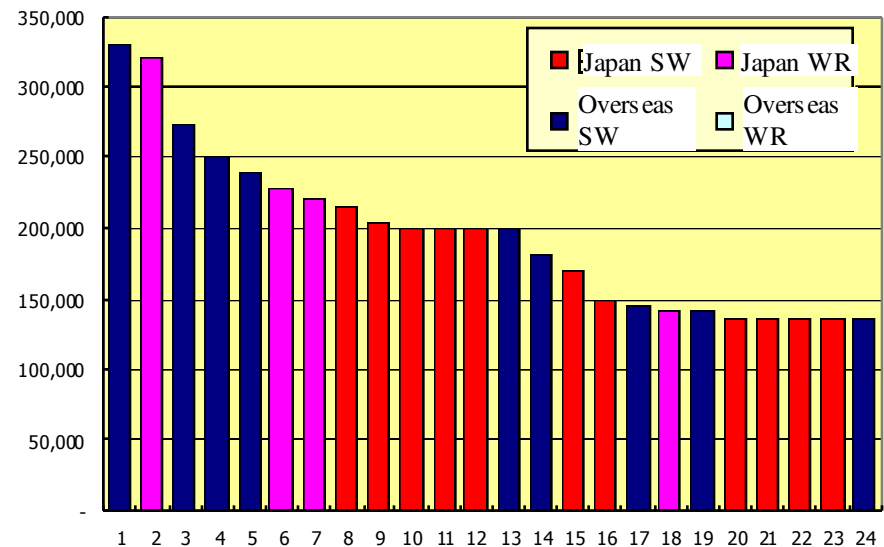
Japanese membrane manufacturers' supply volume for large RO membrane plant in the world

Membrane Supply for Seawater Desalination



[Survey by the Association of Membrane Separation Technology of Japan]

Plant Capacity (m3/d)

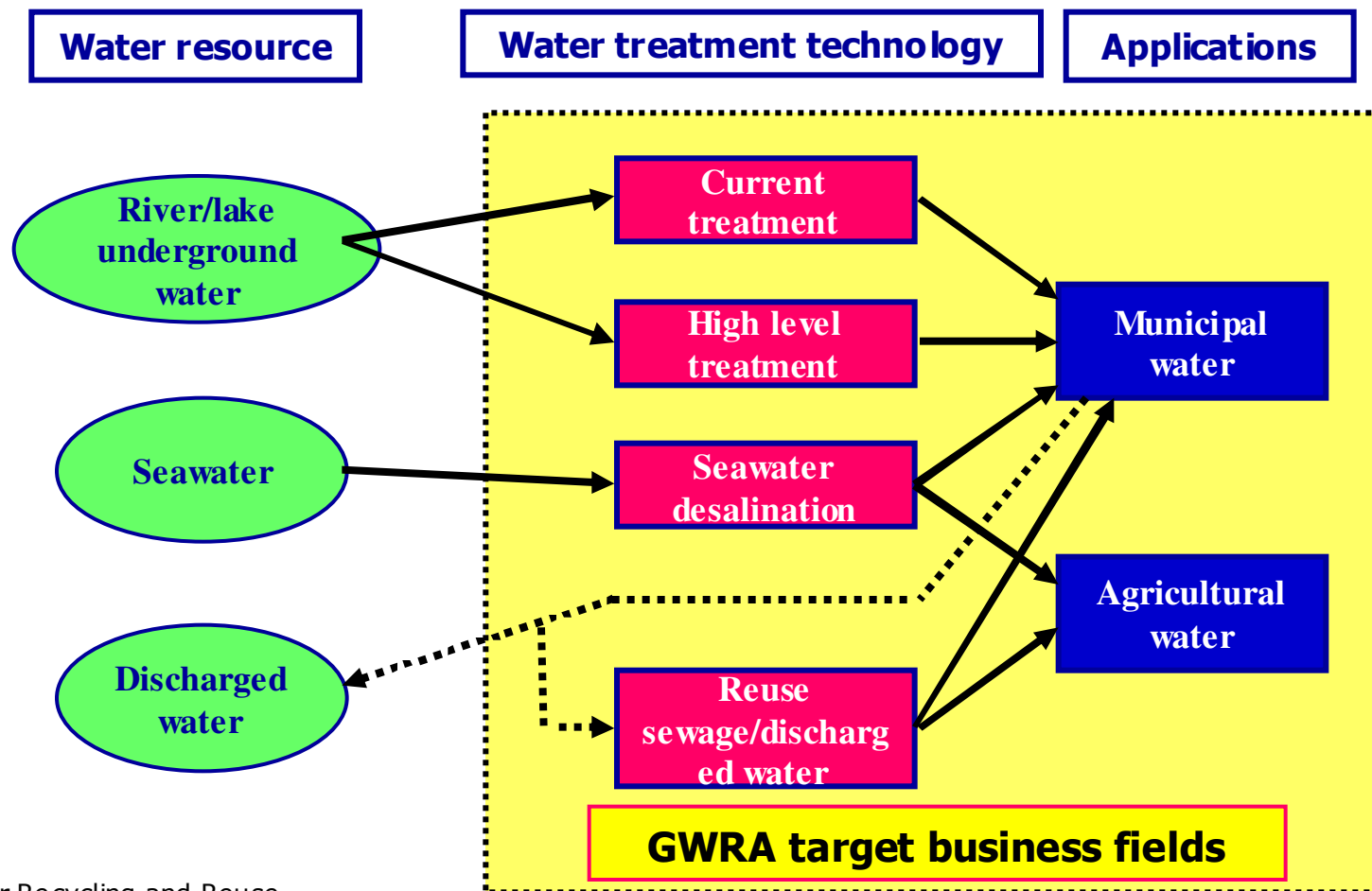


[Survey by Toray]

Water Business Fields



Considering water source shortage, market growth and our technological capacity, we will target the municipal water and agricultural (irrigation) water business fields.



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Fundamental Strategies to Advance in the Global Water Business Market



Tactics for Japanese firms to obtain the competitive edge and develop the world water business market.

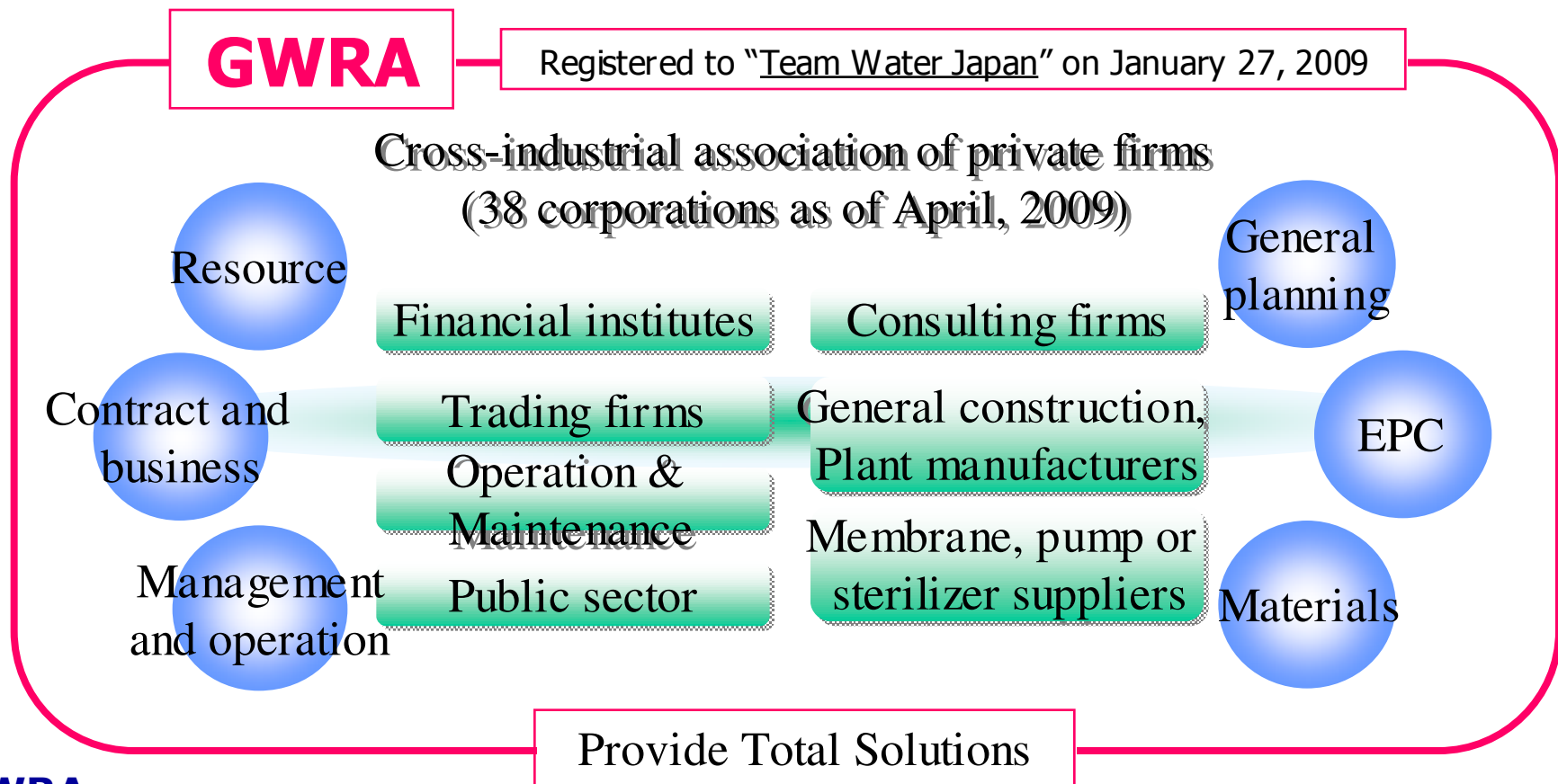
		Water resource	
		Affluence ←	→ Shortage
		Current technology area	Advanced technology area
Ample funds ↑ ↓ Scarcity of funds	TOP Top of the pyramid	A Countries in the world	C MENA countries, China Urban areas
	MOP Middle of the pyramid		
	BOP Bottom of the pyramid	B South Asia countries Center countries of Africa	D Others

- A: Area where European water business majors are dominant,**
- B: Area where Japanese international cooperative activities, such as ODA, are active,**
- C: Area where Japanese advanced technology can be maximized, and**
- D: Area of which markets have a large potential, and where the business will be heavily dependent on future R&D activities**

Our All-Japan Power will Contribute to Solving Global Water Issues



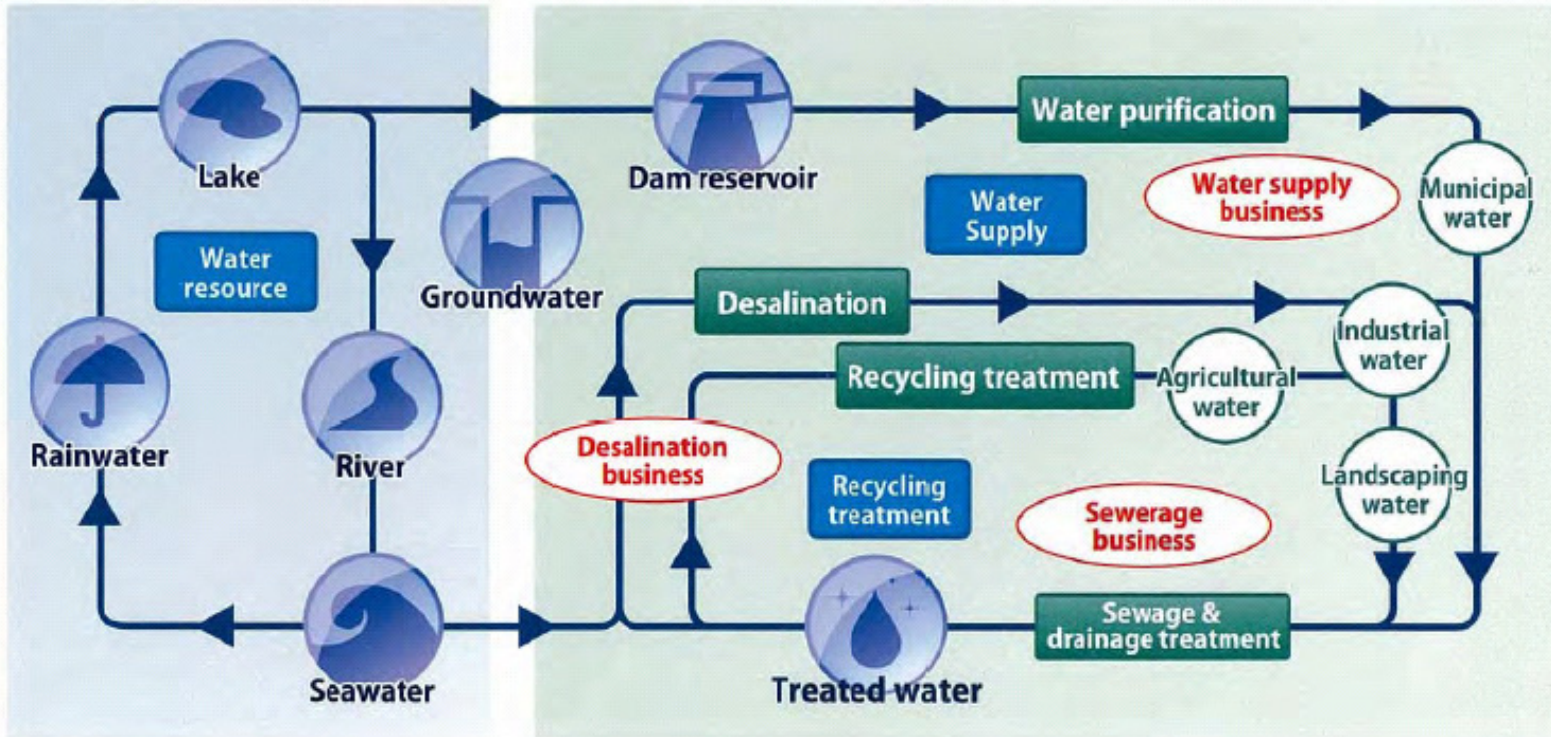
- “Water Security Strategy Organization” (Team Water Japan)
- “Liaison Meeting of Concerned Government Ministries”



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Target Domain of Global Water Business



Inaugural Meeting



<From left to right>

- Chairman of Consultative Committee
Dr. Masaru Kurihara
- Vice-President
Mr. Akihiro Nikkaku
- President
Mr. Hiroshi Kuwahara
- Vice-President
Mr. Masatoshi Urashima
- Head of Steering Committee
Mr. Masami Itou

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Business Purposes of GWRA



Establish an infrastructure for the **Water Recycling & Reuse Steering Business** to make inroads into global markets

- ◆ **Market surveys (needs, regulations, contract conditions and procurement) – including international exchange and policy recommendation.**
- ◆ **To strengthen the competitive edge with a total system in the international market by developing technologies and forming and running domestic development bases.**
- ◆ **Accumulate know-how of operation and management by evaluating business models.**
(Collaboration with concerned government ministers, local governments, universities, research institutes, private entities, domestic relevant firms, etc.)