

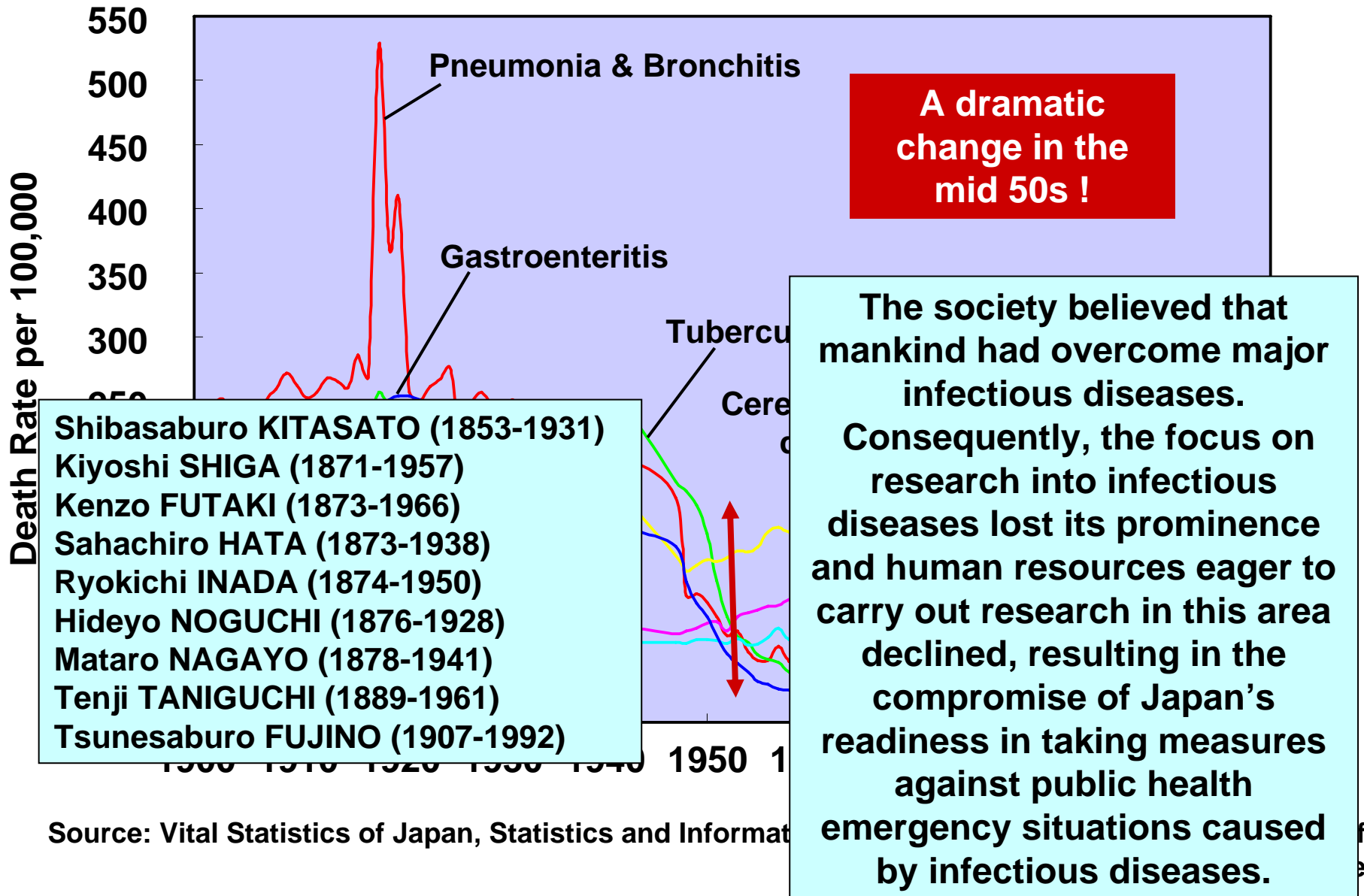
*Challenges for Science and Technology in Achieving Sustainable Development in Asia: Session 4, “Measures against Infectious Diseases”* Oct. 5, 2007, Tokyo

# **Japan's new program to establish an international research network for infectious diseases**

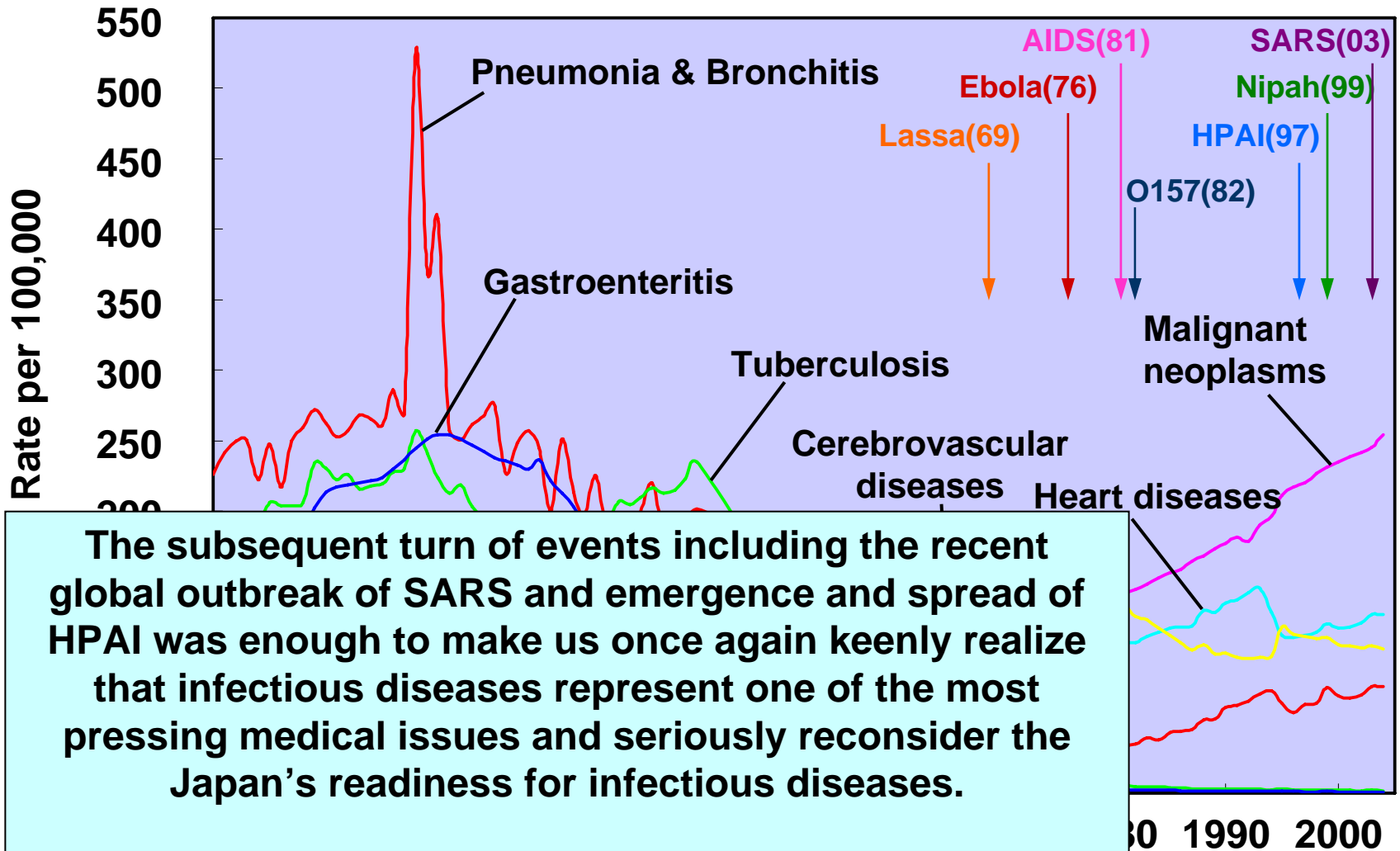
**Yoshiyuki Nagai**

**Center of Research Network for Infectious Diseases (CRNID), RIKEN**

# Mortality Trends for Leading Causes of Death in Japan



# Mortality Trends for Leading Causes of Death in Japan



The subsequent turn of events including the recent global outbreak of SARS and emergence and spread of HPAI was enough to make us once again keenly realize that infectious diseases represent one of the most pressing medical issues and seriously reconsider the Japan's readiness for infectious diseases.

More conventional diseases such as AIDS, malaria, tuberculosis and dengue continue to be major threats to mankind worldwide.

Against these backdrops, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) determined to revitalize research and train human resources in the research area by launching in the 2005 fiscal year the **PROGRAM OF FOUNDING RESEARCH CENTERS FOR INFECTIOUS DISEASES**, with an outline for Japanese universities and research institutions to **establish bilateral collaboration research bases** in countries where emerging and reemerging infections are breaking out or will likely break out and **their networking**.

**K. Morita**

**Vietnam**  
National Institute of Hygiene and Epidemiology  
- (Nagasaki University)  
Bach Mai Hospital  
- (International Medical Center of Japan)

**China**  
Institute of Biophysics, CAS  
Institute of Microbiology, CAS  
Harbin Veterinary Research Institute, CAAS  
- (The University of Tokyo)

2005~

**Y. Takeda**

**India**  
National Institute of Cholera and Enteric Diseases  
- (Okayama University)

2007~

2005~

**Y. Nishimune**

**Thailand**  
National Institute of Health  
- (Osaka University)  
National Institute of Animal Health  
- (National Institute of Animal Health)

2005~

- Japan -
- ▶ Hokkaido University
  - ▶ The University of Tokyo
  - ▶ Osaka University
  - ▶ Kobe University
  - ▶ Okayama University
  - ▶ Nagasaki University
  - ▶ National Institute of Animal Health
  - ▶ International Medical Center of Japan

**Ghana**  
Noguchi Memorial Institute for Medical Research, University of Ghana  
- (Tokyo Medical and Dental University)

under review

**Philippines**  
Research Institute for Tropical Medicine (RITM)  
- (Tohoku University)

under review

**Zambia**  
The University of Zambia  
- (Hokkaido University)

2007~

**Indonesia**  
Tropical Disease Center, Airlangga University  
- (Kobe University)

2007~

**CRNID, RIKEN Tokyo**

## **Preexisting conditions that helped rapid development of the current bilateral collaboration program**

- 1. Building infrastructures and technology transfer (capacity building) as a measure against infectious diseases in the partner countries through ODA-JICA framework.**
- 2. Active admission of post-graduate students from the partner countries and education and encouragement of the students to earn academic degrees.**
- 3. Rich experience of research collaboration with the scientists of the partner countries at the personal level.**

## ODA to the participating institutions in the past

Country	Counterpart Agency	Project	Implem. Years	Amount (100 Million Yen)	Total Amount (100 Million Yen)
Vietnam	Bach Mai Hospital	Improvement Project	1997~2000	63.2	86.63
		Technical Cooperation Project	2000~2005	12.02	
	National Institute of Hygiene and Epidemiology (NIHE)	Improvement of Safety Laboratory	2006	8.91	
		Technical Cooperation Project	2006	2.5	
India	National Institute of Cholera & Enteric Diseases (NICED)	Construction	1991~1992	24.59	32.49
		Project for Prevention of Diarrhea Diseases (Technical Cooperation)	1998~2008	7.9	
Indonesia	Tropical Diseases Center (TDC) Airlangga University	Construction	1996	8.56	9.66
		Project of Malaria Control in Lombok and Sumbawa Islands	2001~2004	1.1	
Zambia	Department of Veterinary Zambia University	Establishment	1983~1984	39	39
		Technical Cooperation Project	1985~1997		
Thailand	National Institute of Health (NIH)	Construction	1984~1985	39.06	100.64
		Improvement Project	1998~2004	9.08	
	National Institute of Animal Health (NIAH)	Construction	1984~1985	23.6	
		Researches on Animal Health and Production	1986~1998	23.9	
		Infectious Diseases Control of Animals in Thailand and Neighboring Countries	2001~2006	5	

**Grant Total: ¥ 26.8 Billion ≒ \$ 250 Million**

**The research topics at each collaboration base have been autonomously determined with an absolute bottom-up system on the basis of the partner country's scientific and public health needs and the scientific interests and capability of Japan side.**

**The pathogens studied include a wide variety of those regional and/or global impact, and research has been directed to a wide range including biology of pathogens, their interaction with the hosts, epidemiology, surveillance, diagnosis, therapy, and prevention.**

**Through these activities, the program expects to nurture young personnel of talent who will actively participate in the research field of infectious diseases.**

**Emphasis has been put on the introduction of modern technology such as molecular/structural biology and bioinformatics.**

## Creed

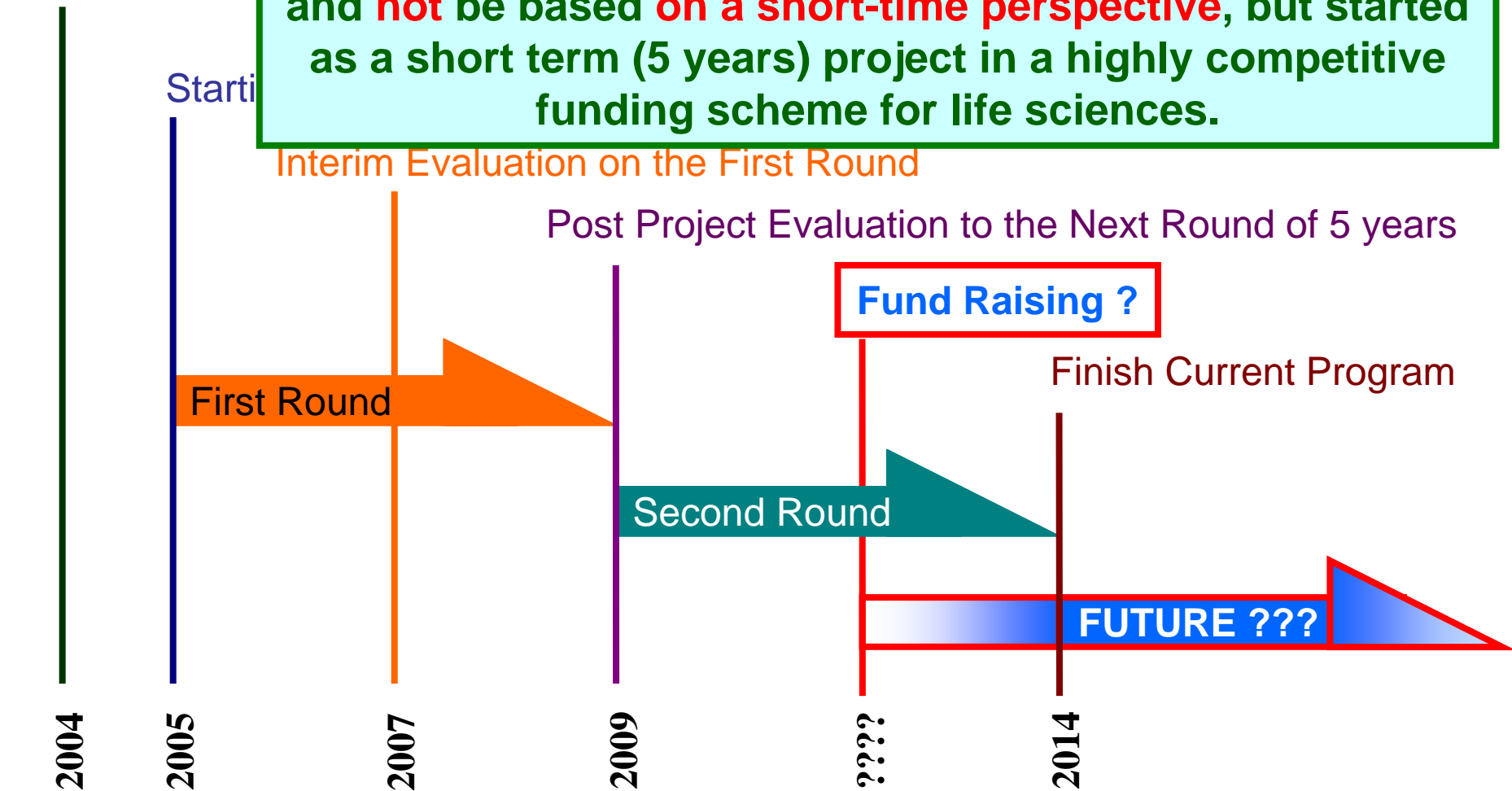
The bilateral joint efforts are based on equal partnership and aim to contribute to the security and safety of the own and partner countries by facilitating **(1) better understanding of infectious diseases of the regional and/or global impact, (2) technology innovation in their diagnosis, therapy, prevention, etc and (3) human resources development in the field.**

# Future Perspective

The program should be implemented **over the long run** and **not** be based **on a short-time perspective**, but started as a short term (5 years) project in a highly competitive funding scheme for life sciences.

Prior Evaluation

Start



## **Conditions for (Semi)-Permanency**

- 1. Achievements that meet the criteria of evaluation; the criteria should involve not only the scientific outcomes but also the development of mutual trust between the scientists of both countries.**
- 2. Preparation and proposal of the roadmap feasible for the next round.**
- 3. Settlement of some logistics issues possibly through bilateral consultation at the higher (G-G) level.**
- 4. Secure funding. From private sectors?**

独立行政法人理化学研究所  
感染症研究ネットワーク支援センター 御中

# Surveys on the Understanding and Expectation of the Current Program in Japanese Societies---Preliminary Results

感染症研究実施体制に対する理解及び期待  
に関する現状調査【中間報告】

2007年9月27日



株式会社 日本総合研究所  
The Japan Research Institute, Limited

# Comparison of donation per year between US and Japan

	US (2004)		Japan (2000 - 2 estimated )	
Recipient	Billion Yen	%	Billion Yen	%
Religious organizations	10,220.7	35.5	91.6	11.9
Educational/Research Institutes	3,912.3	13.6	199.7	25.9
Foundations	2,778.0	9.7	(-)	(-)
Medical	2,534.9	8.8	42.4	5.5
No specification	2,465.5	8.6	69.0	8.9
Human resources supporting	2,210.8	7.7	23.0	3.0
Culture	1,620.5	5.6	152.2	19.7
Community				
Environment	891.3	3.1	49.1	6.4
International	625.1	2.1	19.6	2.5
<b>Total</b>	<b>28,763.9</b>	<b>100</b>	<b>778.0</b>	<b>100</b>

**Difference of three figures!**

**Our Program**

**ca. 3.0 per year**

**There appears to be no big difference in tax deduction for charitable contribution (donation); e.g. 30 (→ 40) % (Japan) and 50 % (US) of individual (personal) income. No big difference, either, regarding credit against corporate tax.**

**The three-figure-difference may be largely due to cultural climates regarding contribution to the society; e.g. willing to contribute to specific purposes of their own interest or concern (US and Western countries) and less willing to do so (unaware or rarely having the habit of doing so) (Japan).**

# Suggestions

In view of the status quo in Japan, majority of the budget for the program extension would inevitably rely on the government. However, efforts should be made to make the program more publicly recognized and to get supported by both governmental and private sectors.

## Efforts

Inner factors

Less recognition of the program

More public communication

Develop human resources  
(Especially coordinators)

Outer factors

Shortage of donation scheme

Search various gates to donation