

# A Milestone in Global Recent Push for Environmental Protection and the Japanese Experience of the “Big Four” Pollution

## Diseases through the Lens of International Aid

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### Abstract

*This paper explains a brief examination of a milestone in global recent push for environmental protection, the world-renown ‘four’ big pollution diseases of Japan, and their use inside country’s development assistance. This branch of foreign policy was selected because of its exceptional potential to disseminate country’s voice, ideal niche for experience to be heralded, and opportunity to actually prevent similar catastrophes in other countries, thanks to its access to resources and political leverage. Experience is an overtly accepted source of lessons but, as a social phenomenon, it is not static. This essay is an examination of the use of the ‘four’ big pollution diseases experience inside Japanese initiatives on international aid, looking for the changes in understanding such tragic events. Attention is placed on the elements introduced and the nuances of meaning among them. The period reviewed, from the late 80’s to 2005, indicates a positive movement of the official view towards a comprehensive recognition of the history, not without voids and pending challenges.*

### Keywords

pollution; diseases; Japan



### I. Introduction

Experience is one of the pillars of knowledge. Philosophically speaking, it is in the extreme opposite to reason, intuition lying somewhere in the middle. Yet, in a broader sense, it is the source of authority for those who have worked out some problems or gone through any kind of crises. This applies to individuals as well as organizations, societies or states, all of whom usually extract lessons from such experiences that later feedback and frame the system. Most of the times, this process of learning is the base for progress, for better system performance and for others to eschew unnecessary harm. However, it is also recognized that, in this process, society’s power structure and the relative position of stakeholders may privilege certain interpretations of facts, menacing some relevant knowledge to fade away. The case is popularly acknowledged when saying “History is written by winners”, but, is it the case in the realm of environmental degradation?

The following pages are a brief examination of a milestone in global recent push for environmental protection, the world-renown ‘four’ big pollution diseases of Japan, and their use inside country’s development assistance. This branch of foreign policy was selected because of its exceptional potential to disseminate country’s voice, ideal niche for experience to be heralded, and opportunity to actually prevent similar catastrophes in other countries,

thanks to its access to resources and political leverage. At the same time, the evolution of lessons avowed by the establishment about one same experience, can serve as a prelude for a new examination of the crisis, let us rescue some relevant lessons, while also help understand the unfinished tensions among the actors involved inside the country.

Thus, I will start presenting basic elements of both the ‘four’ big pollution diseases and Japanese international cooperation, in order to contextualize the reader. Then, two interpretations of the Japanese experience would be distinguished: one extracted from four reports embedded in the first global wave of environmental action, epitomized by Rio Summit and the emergence of the sustainability paradigm; and a second view related to present uses of the experience, documented with two sources: a lecture by a JICA expert inside an international short course on Environmental Management organized in Minamata city the place were one of the major outbreaks took place and the report Japan’s Experiences in Public Health and Medical Systems Towards Improving Public Health and Medical Systems in Developing Countries by the Japanese International Cooperation Agency (JICA, 2005), which includes a chapter precisely on Minamata disease. This research is part of a project to review the ‘four’ diseases experience and to construct a theoretical framework for the analysis of human security, paper which is due for early 2009.

## **II. Review of Literature**

### **2.1 ‘Four’ Big Pollution Diseases in a Nutshell**

After the Second World War, Japanese government had the imperative to quickly recover from the dismal situation and rebuild the country. Economic growth was, then, the top priority. First under the Allied Forces command and later by themselves after the signature of the Treaty of San Francisco in 1952, trade and industrialization were at the heart of national policies, evolving after three decades into what is commonly known as ‘the Japanese Miracle’. The ‘four’ big pollution diseases were a by-product of this race for development, caused by the unexpected impacts of industrialization in human life’s supporting ecosystems, and worsened by the social conditions under which they emerged.

The ‘four’ were actually three: Yokkaichi asthma, Itai- itai disease and Minamata disease, yet a second outbreak of the latter, known as Minamata-Niigata disease, is also counted as part of the serious outbreaks of pollution-related ailments that hit the archipelago between the 50’s and the 70’s. Besides the common origin in pollution, their divergence between sources, ecosystem services affected, effects, among others, make them representative of the upcoming environmental challenge for the world, reason why basic courses on environmental issues usually make mention of them.

Yokkaichi asthma was a severe case of air pollution, tip of the iceberg of an ailment already affecting life in major cities. It was one of many cases caused by daily exposition to outdoors SO<sub>2</sub>, by-product of sulphur-containing fuels combustion. The breaking point reached in this city of around 200.000 people in Mie prefecture – close to Nagoya – was that the absence of any source of contamination different from a new industrial cluster built in 1957, finally gave the reason to patients complaints on an causal link still scientifically unproved (Kitabatake, 2002). The court success escalated into compensation schemes and industry transformation plans that reverted most of the problems by the end of 70’s. Initially filed by eleven plaintiffs, to 1995 the number of people alive compensated under the resolution raised to 682 in this city. Yet, under the same designation act, areas in Osaka and Kawasaki cities were also included, mounting the number to 17199 victims during the first

recognition in 1969, and reaching a total in whole Japan of 75150 in the next ten years (Ministry of the Environment, 1996).

The other two diseases were both caused by pollutants poured into water resources, reaching later humans through food chain accumulation. On the one hand, Itai-Itai disease was the case of chronic cadmium poisoning in Toyama prefecture, ingested through rice grew with water from the Jinzu River, which contained mining run-off. The mineral disrupted the equilibrium of calcium metabolism, of special importance in women, resulting in over-fragile bones and renal failure. The name of the disease means literally ‘hurts- hurts’, denoting the level of pain entailed by the ailment. The disease was officially recognized in October 1955 (MOE, 1996), a suit filed in 1968 and final decision reached in 1971, when the mining company was indicted and ordered to compensate 156 patient.

On the other hand, Minamata disease was the case of methyl-mercury poisoning, principally attacking the central nervous system, through the consumption of contaminated fish. Due to the characteristics of the disease chronic as well as acute effects, plus theratogenic sequels, heavily enlarging the magnitude of the harm and the struggle for recognition that followed, it is the most documented of the ‘four’ diseases. The source of the Minamata outbreak was the effluent from Chisso Corporation plant of Acetaldehyde production into the city’s bay, where local fishermen got their catch. First cats started dying, and then several patients, especially fishermen, were reported with poor motor coordination, sensory disturbances in the extremities, lost of speech and of hearing capacity. As intoxication proceeded, those symptoms intensified, deteriorating the patient’s condition till dead. The outbreak was acknowledged by the government in May 1956, giving way to several research teams, mediating commissions and social movements that were finally appeased with paltry payments to fishermen and patients in 1959.

The principal obstacle for a categorical support to victims was uncertainty on the source of the disease<sup>1</sup>. However, after a second outbreak in Niigata in 1965, distortions to the research process in the initial phase were unveiled and social movements got reinvigorated. A lawsuit was filed in 1967 by Niigata patients, which was ruled in 1971, while Minamata patients filed in 1969 and the verdict was rendered in 1973. In Niigata 690 persons were certified and compensated, plus 2265 in Minamata. Nevertheless, the following process of patients recognizing, marked by the arbitrariness of the criteria and the financial burden every additional patient represented, prolonged the tensions with the patients’ movement, reaching to a second agreement in 1995, when 10,353 more victims received a one-time compensation, but not certification. Anyway, around 5000 patients more keep litigation for recognition, while the government has ruled out a broader epidemiological research (Japan Times, 2007). Recent studies sustain that symptoms of the disease would not be evident after the age of around 50, giving new air to the problem (JT, 2008).

Thanks to the convulsion produced by the behemoth of environmental problems, several changes took place in Japanese system. First, a whole set of laws designed to get rid of pollution and help conserve ecosystems were enacted in the so-called “Pollution Session” of the Diet in July 1970. In 1971 the Environmental Agency was created as a technical group to help enforce the ruled legislation and, with the time, the bleak condition proved to be fertile ground for fast technology development, with the consequent recovery of most of the physical damages inflicted to the ecosystem.

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<sup>1</sup>Mercury was a precious reactive, so it was unthinkable that company was spilling it; furthermore, mercury used by the company was inorganic, while symptoms observed fitted an organic mercury intoxication, giving space to other – sometimes ill-intentioned – theories (Ui, 1992)

## 2.2 The Context of Japanese Aid

The system of international cooperation is led by the Ministry of Foreign Affairs (MOFA), and mostly implemented through JICA, merged in October 2008 with the Japanese Bank of International Cooperation (JBIC), and the grant divisions of MOFA. Autonomy of the Ministry is limited, since actual allocation of resources, especially on concessional loan making, remains conditioned by the Ministry of Economy, Trade and Industry (METI, previous MITI) and the Ministry of Finance (Watanabe, 2006, pp. 304-308). Other governmental dependencies, for example Environment or Agriculture Ministries, support initiatives that fall into their field of expertise. Collaboration from NGOs exists, with notable examples, and has been given incentives by the government recently, though the leverage of those groups remains puny in international standards<sup>2</sup>. Nevertheless, I will focus on government agencies from here on.

Japanese aid efforts started in the mid-1950s as the initiation of war reparations programs. Hirata (2002) divides its evolution in three phases:

- The first until mid-70s, called economy-first policy, denoting the use of cooperation for their own re- construction efforts,
- Second phase, from mid-70s to late 80s, marked by the beginning of aid diversification and politicization, especially the support of the country to its Western allies during the Cold War.
- Followed by a phase from late-80s to present, when further diversification and politicization of aid in a post- Cold War world has taken place,

During first two phases, predominant patterns of cooperation were macro projects of infrastructure, resource diplomacy, support to Japanese companies abroad and strategic aid, referring to geopolitical interests derived from the ongoing war. The end of the Cold War brought along a new broader agenda for international action, which came to coincide with domestic scandals of corruption over the use of aid resources. Renovated efforts by Japanese government took the country to the top of donors during 90's decade, centering on peace-keeping, democratization, human rights and market economy, while including emphasis on soft aid strategies and less developed countries (LDC) (Hirata, 2002, pp. 164-176)<sup>3</sup> . It is precisely this third phase when environmental issues start to gain leverage inside the international community and, thus, the moment Japanese experience concerning pollution cases started to be heralded as key example for world environmental awareness.

## III. Discussion

### 3.1 The ‘Four’ inside the First Wave of Environmental Action

The Brundtland Report in 1987 and all the concern and movement culminating in the Rio Summit, marked a first mainstream wave of discussion around the world about the environment. Japan viewed in this a big opportunity to establish itself as global leader in environmental global affairs, based on developmental success, pollution control and advanced technology (Wong, 2001). Out of the first wave, I will look for the first interpretation of Japan experience, based in four reports that make explicit mention of the

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<sup>2</sup>Views are contested in this regard, and there are some more optimistic views, for instance Hirata (2002). Just to mention one of them. Nonetheless, the presented opinion was sustained by a former Vice- Minister of Health in a paper for a UN Foundation conference in October 2006.

<sup>3</sup>The amount of cooperation rose to US\$ 230 billion to the year 2005, “ranked as the world’s largest donor country for 10 consecutive years from 1991” (Ministry of Foreign Affairs, 2006, pg. 4). But then the Asian financial crises occurred, and since then ODA has been steadily reducing, regardless international commitment.

‘four’. Two of them developed under the supervision of the Environmental Agency (EA, nowadays MOE), and the other two in company with the World Bank. It has to be bore in mind that, just as it happens now, those days’ initiatives had problems defining what the environment was. Mochizuki (1995, pp. 416-417) points out how projects supported in the name of the environment were not necessarily focusing primarily on improved environmental management and that “quite few of them are supposedly projects with environmental components”. Then, the reader may find in the nuances of the discourses that follow, not only the re- interpretation of the Japanese experience, but also the interpretation of what an environmental problem was.

The Study Group for Global Environment and Economics, part of the EA, published in 1991 the report “Pollution in Japan Our Tragic Experience”, presenting case studies of pollution-related damage at Yokkaichi, Minamata and the Jinzu river. The scope of this report was a “purely economic angle” (p. 100) and the justification for such approach was stated in the first three sentences of the foreword:

“This report offers a rough analysis of the cost- effectiveness of pollution control measure. Needless to say, pollution control measures should not be implemented solely from financial considerations. However, even from purely financial standpoint, an approach to economic development which includes pollution control is much more fruitful than one which neglects environmental issues.” (p. 92)

Throughout this report, presented by the country during the Rio Summit, the three big diseases are then decomposed in expenses and costs, reaching to the data presented in table 1. As a conclusion from the ‘four’ big diseases experience, the authors close suggesting promotion of control-at-the-source measures, commenting on the role of the local environmental bureau as enforcer, and the costs to implement such strategy.

In 1989, the World Bank, with the cooperation of the UNDP, launched the Metropolitan Environmental Improvement Program to explore solutions for the environmental challenges pressing large urban centers in the Asia region (Takemoto & Nakazawa, 1995). A revision of the Japanese experience was included inside the study in order to shed light on the task. Regarding the period when the ‘four’ big diseases outbreak, the authors praise the 1967 Law for Environmental Pollution Control, the creation of the EA, the enforcement of laws and standards, the accompanying subsidies, and the compromise of industry, local and national governments. The data used is the same that in table 1, complemented with graphics of industry’s response to measures. Nevertheless, authors add before the conclusion of the paper that “... perhaps the most important of the many lessons to be learned from Japan’s experience is that the participation of the people is essential for adequate solution to environmental problems” (p. 89). Following reports were to echo such finding.

**Table 1.** Damage Expenses vs. Pollution Control Costs (unit: million Yen FY1989)

One-year damage expenses	One-year pollution control costs
<b>Yokkaichi</b>	
Health damage compensation	1,331
Assumed one-year damage expenses for a patient certification rate of 7.27% throughout the Yokkaichi City area	21,007
Total	22,338
	14,795
<b>Minamata</b>	
Health damage compensation	12,63

Bay pollution damage	4,271	2
Fishing damage compensation	690	
Total	12,632	125
<b>Jinzu River Basin</b>		
Health damage compensation	743	
Compensation for agricultural damage	1,775	
Compensation for crop loss	882	
Soil restoration costs	893	
Total	2,518	603

Source: Adapted from Study Group for Global Environment and Economics (1991, pp. 95-96)

A follow-up of the aforementioned “Pollution in Japan Our Tragic Experience”, Prime Minister Ryutaro Hashimoto presented in 1997 the “Japan’s Experience in the Battle against Air Pollution” report, produced by the Committee on Japan’s Experience in the Battle against Air Pollution, also supervised by the EA. Because of the theme of the report, only Yokkaichi experience is considerate, yet it is worth examination because of the work step aside of the exclusive economical scope. Besides the already mentioned lessons from economic evaluation that praise regulation, industrial commitment and role of local governments, the authors included perspectives of the environmental problem regarding bioethical concerns about human life and citizen’s movements role in problem recognition and national consensus. The report adds observations on the difficulty of establishing quality standards, which imply a harm tolerance, and the “trial and error” nature of the process. It is also remarkable how it brings out the importance of information and, finally, the balance of all these lessons in the conclusion. However, there are two drawbacks to point out in this report before moving on: the limited focus on air pollution and the top-down nuance of the final recommendations, centered on business, government and technology, which ends in a rather technocratic proposition of engineering society to overcome the negative impact of development.

In the same line, the work “Urban and Industrial Management in Developing Countries: Lessons from Japanese Experience” (Cruz, Takemoto & Warford, 1998), expands the first view of the World Bank research, collecting brief views from several Japanese experts and pointing out areas of immediate relevance for developing countries. The ‘four’ big are commented by several of the authors gathered, reaching to a list of issues to be evaluated for developing countries that include:

- The role of legal system
- The environmental impact assessment system  Relationships between government and industry
- Central-local government relationships
- The role of voluntary pollution agreements
- Self-monitoring by industry
- Financial and economic incentives
- Regulatory instruments
- Training and dissemination of technologies
- Urban and industrial zoning and collective treatment
- Pricing policies for energy and water resources

Also worth mentioning, editors include a list of factors that enhanced the Japanese success:

#### Decentralizing of decision-making

- A strong and efficient, as well as democratic, local government system
- A technically competent labor force
- A well-educated, articulate population
- A relatively equitable distribution of income
- A free and active press

Conclusions point to the nonsense of repeating Japanese “Grow Now, Clean Up Later”, which hindsight shows could be replaced by “win-win” opportunities through technology, pricing and government-industry partnership. Role of the public, NGO and media is also underscored, though “... much of the responsibility for improving community participation lies with governments, both national and local” (p. 48). In order to achieve community action, participation should be included in the guidelines, mass media campaigns used to raise public awareness, but, above all, efforts on education should be undertaken.

Let me observe, before going to the next section, that all the reports are linked by another lesson out of Japanese experience: education. First technical, specialized, necessary to scientifically understand the magnitude of the problem and transfer the appropriate technology, control industries and tailor measures. But later, education pleas become more general, designed to raise awareness, public-oriented, divulged from schools, mass media and public health and hygiene specialists. Yet, it is not totally clear the grounds for the specificity of the former – the best of the Japanese technical labor force was in charge of the companies that produced the diseases – neither the contents of the latter. It could be imagined that what is to be taught is the Japanese experience itself, so let's see the next round of interpretations. .

### 3.2 Contesting JICA Views

JICA (2005) recent study including a review of the country's experience on pollution – Japan's Experiences in Public Health and Medical Systems towards Improving Public Health and Medical Systems in Developing Countries takes a new approach. The big ‘four’ are classified as part of the fourth phase of Japanese public health history, when infectious diseases were practically overcome and the major reasons of concern were modern ailments lifestyle related diseases, environmental and drug induced sufferings, and occupational health. Because of this, it is stated that lessons from this period should be more suited to countries classified by the World Health Organization (WHO) as “Developing country with low mortality rate”, making reference to both children and adult rates. With this, authors take a step towards adjusting lessons to recipient conditions.

When addressing pollution cases, the report picks the response to Minamata disease to illustrate the Japanese experience. After stating the basic elements of the tragedy, researchers consider four different actors “concerned” namely Corporations, Local Government, National Government and Physicians and Scientists and point out responsibilities of every one of them in the failure to reduce the scale of the tragedy:

- Corporation's refusal to recognize the causal link between the pollutants and the disease, to share information and to cooperate with the prefectural university research. Reticence to treat the wastewater diluting it instead as well as delaying tactics to make agreements be more favorable to the company is also highlighted.

- Local government inaction, derived from its lack of power to impose measures, over-dependence on company's revenues, and inability to compensate fishers and, thus, to ban fish catch.
- National government more precisely, the Ministry of International Trade and Industry (MITI, today's METI) high priority on industries, enough to avoid measures against them, as well as overtaking actions that discredited the local research.
- Some of Physicians and Scientists alignment with official view, underrating the role of pollution and, thus, delaying reaction.

The environmental pollution control measures that followed the outbreak are then briefly described, including in the list: legislation, technical measures, decentralization, punishment, financial assistance, planning, assessments, research, the use of courts, compensation and education; all of them already mentioned in previous reports.

Jumps to the sight, a warning presented by the end of the section about blindly using the Japanese approach in other countries. The authors enumerate seven differences between Japan and developing countries that may alter the applicability of the experience. They are: (1) level of industrial development, (2) regional structures, (3) nature of government intervention, (4) public opinion formation and social movements, (5) separation of exclusive, legislative and judicial powers and level of authority afforded to local government, (6) level of expertise in pollution technology and (7) international involvement in environmental pollution fields. They lack elaboration on their foundation – it is only mentioned that the differences have been identified – although somehow resemble the last report from the World Bank aforementioned. Anyway, its inclusion adds relevance to the report.

The general conclusion around environmental pollution, presented in the last chapter, goes as follow (italics by the author): “Japan’s experience of delayed response due to priority given to economic development teaches us the importance of prevention. A system of environmental assessments, and training the personnel to conduct them, is effective.” (p. 281). In the final summary of lessons, it is literally accepted that all the lessons are derived from Japanese failure, and that what is needed to avoid new environmental emergencies in developing countries consists basically of stakeholders’ commitment – private organizations, academia, national and local governments – and education.

On the other hand, there are lessons introduced through training courses, one of which I further review based on fieldwork. The course “Environmental Administration with Community Participation” was developed by JICA between October and November 2007, based in Minamata city. It was one and a half months’ course oriented especially to governmental officers or NGO staff, and it was aimed to share the tragic experience of Minamata and the following efforts of restoration and sustainable development, helped by citizens’ collaboration (JICA, 2007). In 2007 occasion, the group of twelve trainees gathered officers from Asia, Africa and Latin America, with different academic backgrounds, all except one governmental officers, this person being a member of a NGO. According to the JICA website, these trainings started in 2005 and would end in 2009, though through officials in charge only info of 2006 and 2007 was available. Name changes every year, being the previous one “Construction of a Model Environmental City by Community Participation”. The program included a one-year follow up but information about it was neither available. Hence, the analysis is focused on the contents presented to the participants and one lecture by JICA expert about the utilization of cases in Japan for the environmental policies of various countries.

The lectures can be divided between those addressing the disease struggle and those concerned with present environmental situation in Minamata city and Japan. The former

takes no more than a week and includes talks with the local government, Chisso Corporation, patients, welfare system personnel, research staff from the National Institute for Minamata Disease (NIMD), prefectural government, JICA staff in the headquarters, Ministry of the Environment and the Supporting Center for Minamata Disease Soshisha. Most of them took one hour and a half and were informative in essence. Some participants interviewed expressed that the content of the visit to the company was nowadays production processes, and that the ministerial presentation was about general policies of the office. NIMD presentation, also remarked by the interviewees, was a very technical explanation about organic mercury impact inside the body. The latter set of lectures consisted of visits to several facilities involved with recycling, compost, water treatment and ecological tourism.

Of special interest was the lecture from JICA central office, entitled “Essence of Japanese Lessons in Coping With Serious Pollution Problems”. The “essence” was composed of two rules of the thumb: a “Step by step approach” and the use of “The Force of the Market”. The first one referred to a gradual enforcement of regulations, related by the presenter to GNP growth. A “step” was the process of selecting a target the most urgent problem – assessing the feasibility of regulation in terms of technology, economy and human capacity, proceeding with a soft application for industrial to get prepared and then, finally, applying stringent measures. This rule implies not to require companies to achieve standards that are not feasible, either for technology or costs, and gradually strengthening of the standards.

The rule of the “Market” made reference to the effect the introduction of environmental preferences into consumer values has over polluting practices. Informed and organized leagues of consumers might change their consumption patterns according the environmental performance of the companies, promoting voluntary actions even beyond legal agreements. Notable examples of consumer movement in Japan, including housewives movement boycott to phosphate-base detergents that obliged companies to develop environmental friendly products, illustrated the presentation.

#### IV. Conclusion

Whenever one experience is asserted as source of authority to help someone else, two perils could overshadow the good will: bias toward lessons that somehow are of donor interest and leaving behind lessons that may be as important as those selected. The former was already evident in the history of Japanese international aid, when in the starting period aid was used to support companies abroad. The same pattern can be followed to the very beginning of environmental action. It cannot be overlooked that the first report hereby presented was published by a magazine of the chemical industry, accompanied by an extensive catalogue of Japanese companies selling pollution prevention related technology (Study Group for Global Environmental Economics, 1991).

The ethical dilemma of ‘profiting from tragedy’ is quickly overhauled by making more comprehensive reports about the experience. The next three reports reviewed, part of what I call the first wave, progressively encompass more aspects than the only financial issue. Governance, decentralization, law system, enforcement capacity, standards and technology, all show up then as the core of historical lessons and, therefore, they constitute the message to spread through aid. However, a second bias emerges from this view: a top-down technocratic over-emphasis.

No matter the first wave reports acknowledge the importance of bottom-up initiatives that move actors to work on environmental problems, there are few lessons about how to

propitiate such a thing. The stated answers are limited to awareness and education – the few times the latter is not related to specialized knowledge – yet, those two are scarcely elaborated or researched in depth.

Changes in this sense might require sharp inquiry not only about the experience, but also about the receptor conditions. Kanda and Kuwajima (2006), in their review of JICA Institute for International Cooperation research, note that from the end 80's to the first years of twenty first century the focus has moved from technology transfer to institutional and social issues. The JICA (2005) report moves a step forward by proposing parameters to evaluate before replicating strategies. Although it leaves obscured the details about education and awareness, the assertion of responsibilities in the tragedy of the four identified actor is also an advance to structure the knowledge out of the tragedy – yet, measures remain a disconnected check list.

In the end, maybe the most prominent step in this evolution is the final recognition of system failure. “Learned from failure” could be a breaking point when digging up facts from the big ‘four’ history because it gives the opportunity to stop presenting what the “Japanese miracle” was and to stress more on what the stakeholders did wrong. In the beginning, it went without saying that pollution was the ‘wrong’ but, as the scope is opened, pollution shifts to the background – the unintended consequence of human actions and the failure of society to react emerges as the big question. The optimism produced by this advance is dimmed by lessons stated in other scenarios, as the fieldwork revealed, still entrenched in the previous technocratic vision. It is not to say that such lessons are to be proscribed, but reevaluated and balanced under a broader framework of analysis.

This is nothing new and researchers out of the official sphere have been talking about it since the occurrence of the tragedy. Those are the forgotten lessons from the big ‘four’ aforementioned. For instance, it is less regarded that after Minamata and Itai-Itai diseases were recognized, local researchers were not invited into official teams of investigation and were excluded from funding. In both cases, money from the US alleviated the discriminative situation (McKean, 1981; George, 2001). George (2001), in what is considered the most complete recount of Minamata history, emphasizes that the struggle is a prominent example of what democracy means in a country out of western tradition. Upham (1976) stressed how the Japanese traditional informal rules prevented faster legal indictment, delaying action and worsening the tragedy. The mere use of the number ‘four’ to keep telling the story of the tragedy may serve as a good reminder of the complexity of the experience: from the beginning, four were the lawsuits, not the diseases (Asahi Shinbun, 1969).

It has to be conceded that acknowledging failure has a cost, but it does not justify the replication of mistakes through international aid. The evolution in the discourse about the ‘four’ big seems to be a positive step forward, opening space to a broader support of initiatives based on country’s failures. Still, it jumps to the sight that information does not reach all branches uniformly and business-as- usual lessons keep displacing new perspectives. Might this be part of the adoption of human security as pillar of Japanese ODA, it is only a step in the long way for a real impact of the experience in the countries that need it.

## References

Asahi Shinbun (1969). Desorotta yondaikougaisoshou (The four pollution lawsuits appeared altogether). Issued June 15th.

Committee on Japan's Experience in the Battle against Air Pollution (1996). Japan's Experience in the Battle against Air Pollution. Japan: the Pollution-Related Health Damage Compensation and Prevention Association.

Cruz, W., Takemoto, K. and Warford, J. (Eds.) (1998). Urban and Industrial Management in Developing Countries: Lessons from Japanese Experience. Report from a seminar organized by the Economic Development Institute of the World Bank and the Foundation for Advanced Studies in International Development, EDI Learning Resources Series. Washington: World Bank.

George, T. (2001). Minamata: Pollution and the Struggle for Democracy in Postwar Japan. Cambridge: Harvard University Press.

Hirata, K. (2002). Civil Society in Japan: The Growing Role of NGOs in Tokyo's Aid Development Policy. New York: Palgrave Macmillan.

Japan Times (2007) Minamata ills still exact toll government won't pay. Issued October 3rd. Retrieved January 22, 2008 from <http://search.japantimes.co.jp/cgi-bin/nn20071003f3.html>

Japan Times (2008) More Minamata cases uncovered. Issued November 6th. Retrieved November 7, 2008 from <http://search.japantimes.co.jp/cgi-bin/nn20081106f1.html>

Japanese International Cooperation Agency (2005). Japan's Experiences in Public Health and Medical Systems -Towards Improving Public Health and Medical Systems in Developing Countries-. Tokyo: JICA.

Japanese International Cooperation Agency. (2007). Environmental Administration with Community Participation. [Brochure] Tokyo: Author.

Retrieved January 9, 2008 from <http://www.icetex.gov.co/BancoConocimiento/b/becas/DESCARGAS/julio/ENVIRONMENTAL%20ADMINISTRATION%20GI.pdf>

Kanda, M. and Kuwajima, K. (2006). The Overview and New Orientation of Technical Cooperation of JICA—In the Framework of Capacity Development and Human Security. *Technology and Development* 19: pp. 36–51. Tokyo: Japan International Cooperation Agency.

Kitabatake, M. (2002). Pollution problems and the effects of environmental improvement in Yokkaichi City. *Yokkaichi University journal of environmental and information sciences*, 5 (1/2), pp. 1-18

McKean, M.A. (1981). Environmental protest and citizen politics in Japan. Berkeley: University of California Press.

Ministry of Foreign Affairs of Japan (2006). Diplomatic Bluebook. Retrieved February 3, 2008 from: <http://www.mofa.go.jp/policy/other/bluebook/2006/index.html>

Ministry of the Environment Government of Japan (1996). Quality of the Environment in Japan 1996. Retrieved November 28, 2007 from <http://www.env.go.jp/en/wpaper/1996/index.html>

Mochizuki, K. (1995). Economic Development and Environmental Issues in Asia: Focusing on Official Development Aid. In R. Kojima, Y. Nomura, S. Fujisaki and N. Sakamoto (Eds.) *Development and the Environment: The Experiences of Japan and Industrializing Asia* (pp.410-420), *Development and the Environment Series* No. 1. Tokyo: Institute of Developing Economies.

Study Group for Global Environmental Economics (1991) Pollution in Japan – Our Tragic Experience. In Japan Chemical Week (Ed.) *The Environment and Our Future*. Tokyo: The Chemical Daily Co., Ltd.

Ui, J. (Ed.). (1992) *Industrial Pollution in Japan*. United Nations University: Tokyo.

Upham, F. (1976). Litigation and Moral Consciousness in Japan: An Interpretative Analysis of Four Japanese Pollution Suits. *Law and Society Review*, 10:4, pp. 579-619.

Watanabe, T. (2006). Footing the Reconstruction Bill. In *The Reality of Aid 2006*. Retrieved February 3, 2008, from:  
<http://www.realityofaid.org/roareport.php?table=roa2006&id=1>

Wong, A. (2001). *The Roots of Japan's International Environmental Policies*. New York: Garland Publishing, Inc.