

Country Name	Project for Strengthening of the National Food Safety Program
Chile	

### I. Project Outline

Project Cost	291 million yen	
Project Period	December, 2005 –December, 2008	
Implementing Agency	<ul style="list-style-type: none"> <li>- Ministry of Health (Ministerio de Salud)</li> <li>- Institute of Public Health (ISP: Instituto de Salud Publica)</li> </ul>	
Cooperation Agency in Japan	<ul style="list-style-type: none"> <li>- Ministry of Health, Labour and Welfare</li> <li>- Yokohama Quarantine Station</li> </ul>	
Related Projects (if any)	<u>Cooperation by Japan</u> <ul style="list-style-type: none"> <li>- Dispatch of Senior Volunteer (Food Control Inspection, October 2011 – October 2013)</li> <li>- Training in Japan (Food Health Administration Course, 2008)</li> </ul>	
Background	<p>In Chile, in order to detect and act in timely manner against the problems which can be a risk for food related consumers' health, a reform was needed in the National Food Safety Program. Besides, the food industry has experienced an expansion in terms of quantitative growth, diversification of products and introduction of new technologies, but the health system for food safety control has not been developed with a same speed. The Government of Chile has been proactively improving regulations, including obligation of introducing in the food industry Hazard Analysis and Critical Control Point (HACCP) and the modification of maximum residue levels (MRLs) of pesticides. However, regarding the inspection system about health control in the analysis process of chemical substances and of processed from foods, there are still problems related with technical and analytical capacities. Because of this situation, the objective of the Project was set to strengthen and update institutional and technical capacities of Health Sector required to secure a food safety in order to protect consumers' health and improve food monitoring systems. With this background, the Government of Chile requested the Government of Japan a technical cooperation project aiming at strengthening of capacity of Ministry of Health regarding administration for food safety of Chile.</p>	
Inputs	<u>Japanese Side</u> <ol style="list-style-type: none"> <li>1. Experts 2 experts of 2 areas for Long term, 14 experts of 7 areas for Short term</li> <li>2. Trainees Received: 10 trainees</li> <li>3. Equipment: 109 million yen</li> <li>4. Local Cost: 14 million yen</li> </ol>	<u>Chilean Side</u> <ol style="list-style-type: none"> <li>1. Counterpart: 28 persons</li> <li>2. Land and facilities: Project office</li> <li>3. Local Cost: 712 million Chilean pesos</li> </ol>
Project Objectives	<u>Overall goal</u> Safety of food in Chilean markets is improved and security level of Chilean consumer is increased.	
	<u>Project Purpose</u> Chilean National Food Safety Program <sup>1</sup> is strengthened through the introduction HACCP <sup>2</sup> and food residues monitoring	
	<u>Outputs</u> <ul style="list-style-type: none"> <li>• Capability of food safety management of MINSAL is strengthened.</li> <li>• The level of inspection and supervision of food safety inspector is improved.</li> <li>• Capability of food analysis at laboratory network of MINSAL is strengthened.</li> <li>• Capability of formulation and implementation of sampling plan is strengthened.</li> </ul>	

### II. Result of the Evaluation

Summary of the Evaluation
<p>In Chile, it was necessary to enhance function of the Ministry of Health in order to strengthen the food safety system. In January, 2005, while the health reform of the Ministry, aiming at reinforcement of public health, was implemented, together with the reform process the National Food Hygiene Control Program was analyzed and later was named as the National Food Safety Program. For the ensured food safety, it was indispensable to introduce regulation modifications according to the development of the industry, such as the obligation of HACCP implementation. Therefore, it was necessary to improve</p>

<sup>1</sup> The target provincial examination stations for the Project were Temuco, Valparaiso, Talca, and Puerto Montt. In terms of HACCP surveillance, while the Ministry of Health formulates a supervision and support plan of HACCP surveillance, the HACCP surveillance teams of the provincial offices implement the surveillance. In terms of food examination, ISP is responsible at the central level whereas the examination stations of the provincial offices implement at regional level.

<sup>2</sup> HACCP is abbreviation of Hazard Analysis and Critical Control Point.

capacities of inspectors introducing the competences of process audits.

The Project has achieved more than the targets on the number of food samples collected for food residue monitoring and the number of pathogenic organisms and also inspection items, for the project purpose of “enhancement of implementation of the National Food Safety Program by introduction of HACCP and food residues monitoring. The number of factories and facilities of first category which introduced HACCP reached 1,374 of the all categories of facilities, including the first category. In addition, the overall goal has been partially achieved. Among the four indicators for the overall goal, while the increases in the number of cases of food sampling and the number of analyses as well as the improvement of consumers’ awareness of food safety were verified by alternative indicators, the precise number of cases of food poisoning incidence and the number of cases of nonconformity foods could not be verified due to the lack of systematized data, though the downward trends in the number of cases of food poisoning incidence has been observed, therefore only partial results can be recognized. As for sustainability, some problems have been observed in terms of structural and budget aspects. There is a bill under consideration that the Ministry of Agriculture and Food can be established and the tasks of food inspection for the food producers can be transferred from the Ministry of Health to the Ministry of Agriculture. Some of the regional offices have not allocated sufficient budget for the laboratories to maintain their analytical equipment. In addition, although the cooperation with subsidies controlled by other ministries, such as the Ministry of Economy, has been essential for small and medium size enterprises (SMEs) to introduce HACCP, it has been still under discussion.

For relevance, the Project has been highly relevant with Chile’s development policy, development needs as well as Japan’s ODA policy. For efficiency, the project period and the project cost were mostly as planned.

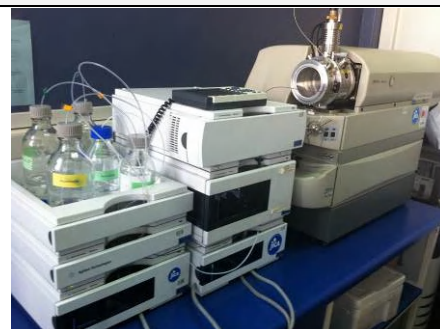
In the light of above, this project is evaluated to be highly satisfactory.

### 1 Relevance

This project has been highly relevant with Chile’s development policies of “Public Health 10 year Plan (2000-2010 Health Indicator)” and “2011-2020 National Health Strategy” aiming at “health protection of Chilean consumers through food safety”, development needs of Chile which includes “improvement of inspection system by obligation of HACCP introduction and the food production standards (GMP) based on the food hygiene regulations”, as well as Japan’s ODA policy for Chile to address “environment conservation and health improvement”, at the time of both ex-ante evaluation and project completion. Therefore, relevance of this project is high.

### 2 Effectiveness/Impact

This project mostly achieved “Strengthening of the National Food Safety Program” for the project purpose. Although the introduction of HACCP was delayed for a part of food producers due to the earthquakes and the deterioration of the Chilean economy affected by the earthquakes, the number of facilities introducing HACCP reached 1,374 of all categories of facilities, including the first category. In addition, the number of food samples and analyses significantly exceeded the target values of the indicator. For the overall goal, the targets of the number of food monitoring and analyses have been achieved. The number of cases of food poisoning incidence decreased from 2009 to 2010, and increased in 2012. It is because that the more accurate number of cases of food poisoning incidence can be known by more thorough reporting, since the promotion of reporting in case of food poisoning incidence with investigation of causes is one of the food safety target indicator set by the National Health Strategy 2011-2020. Although the inspections have been continuously executed, it was difficult to verify whether the number of nonconformity of food has been decreased due to the lack of systemized data at the time of ex-post evaluation. Also, the increase in the volume of information for the consumers through mass media could not be verified due to the lack of quantitative monitoring data. However, improvement of the consumers’ awareness of food safety can be confirmed by the increase in the number of claims on food safety from the consumers to the Ministry of Health through its website.



High speed liquid chromatograph mass analysis equipment installed in ISP

In addition, the Project contributed to improvement of ISP’s advantage in the national laboratory network under the Ministry of Health since the analytical system appropriate for localities, including the four target laboratories, have been improved by the enhanced capacity of ISP by the Project. According to some food producers with HACCP, the introduction of HACCP led some indirect effects, such as more commitment of food producers to food safety through the improvement of production control process, the reduction of claims from the consumers as well as the expansion of export destinations by the improved reliability.

Therefore, its effectiveness/impact of this project is high.

#### Achievement of the Project Purpose and the Overall Goal

Outcomes	Indicators (Target)	Actual Achievement
<u>Overall Goal</u> Improvement of food safety in the Chilean market and the health protection of the consumers.	There will be a tendency of reduction in percentage of nonconformity foods in Chilean market during the period from 2008 to 2015.	(At the time of ex-post evaluation in 2012) - The Ministry of Health does not compile the data of the number of nonconformity though the regional offices collect them by their inspection. (It is planned to compile the statistics after 2013.) - The number of inspections:

		<ul style="list-style-type: none"> <li>- 106,562 cases in 2009</li> <li>- 127,870 cases in 2010</li> <li>- 94,423 cases in 2011,</li> </ul> <p>*Due to the change in the data collection methodology in 2011, it is difficult to compare the data by time series.</p>
	There will be a tendency of reduction in the number of food poisoning incidence during the period from 2008 to 2015.	<ul style="list-style-type: none"> <li>- The number of food poisoning incidence:</li> <li>- 910 cases in 2009</li> <li>- 741 cases in 2010</li> <li>- 654 cases until 34<sup>th</sup> week in 2012</li> </ul>
	The number of monitoring sample and analysis will be increased from 2008 to 2015.	<ul style="list-style-type: none"> <li>- The number of samples:</li> <li>➤ By ISP:</li> <li>➤ 4,866 samples in 2008</li> <li>➤ 6,764 samples in 2011 (only for microbe, additives, residual animal drugs, residual pesticides, shellfish toxin / mycotoxin)</li> <li>➤ Valparaiso: 225 samples in 2008</li> <li>➤ 279 samples in 2011 (only for additives, heavy metals)</li> <li>➤ Taruka: 906 samples in 2008</li> <li>➤ 1,575 samples in 2011 (only for residual pesticide)</li> <li>➤ Temco: 906 samples in 2008</li> <li>➤ 170 samples in 2011 (only for residual animal drugs)</li> <li>➤ Puerto Montt:</li> <li>➤ 516 samples in 2008</li> <li>➤ 442 samples in 2011 (only for shellfish toxin [only amnesic] )</li> </ul>
	The information related to food safety to consumers through mass media will be increased from 2008 to 2015.	<ul style="list-style-type: none"> <li>- No monitoring by the Ministry of Health on volume of information</li> <li>- The number of claims on food safety from consumers to the website of the Ministry of Health: 206 cases in 2008, 3,281 cases in 2011. It is because of the increases in awareness of the consumers by increasing information provided to the consumers.</li> </ul>
<u>Project Purpose</u> Enhancement of the National Food Safety Program by introduction of HACCP and food residues monitoring.	All the facilities of enterprises in the primary category based on the technical criteria of food safety regulations introduce HACCP by December 2008.	<p>(At the time of project completion in 2008) [Knowledge and technologies introduced by the Project]</p> <ul style="list-style-type: none"> <li>- 90% of the target facilities introduced as of September 2008</li> <li>- 1,374 facilities of the total target facilities</li> </ul>
	Number of food sample for monitoring residues and pathogenic organisms reaches at least 500, and the number of analysis reaches at least 2500 by December 2008.	<p>(At the time of project completion in 2008)</p> <ul style="list-style-type: none"> <li>- The number of food samples: 741</li> <li>- The number of analysis: 3,150</li> </ul> <p>(Reference: monitoring plan in 2012)</p> <ul style="list-style-type: none"> <li>- The number of food samples: 3,921</li> <li>- The number of analysis: 9,791</li> </ul>

Source: Terminal Evaluation Report and interviews with counterparts.

### 3 Efficiency

The inputs were appropriate for producing the outputs of the Project, and both the project cost and the project period as planned (ratio against the plan: 100%, 100%). Therefore, efficiency of this project is high.

### 4 Sustainability

The Project has been continuously important for Chile based on the National Food Safety Policy. The organizational structure to implement the Program has been maintained. While the Ministry of Health, the implementing agency reduced the number of staff from 8 staff in 2008 to 5 staff in 2012 due to the separation of the zoonotic infection and vector from the Food and Nutrition Division and retirement, the regional offices increased the number of staff for the HACCP audit team from 66 to 87 and the regional office inspection stations maintained the number of inspectors of 188. In Valparaiso, three laboratories are going to be integrated in one laboratory in 2014 and the Viña del Mar laboratory has been disseminating inspection skills using the analytical equipment provided by the Project. On the other hand, there is uncertainty about how to sustain the organizational structure, including the Ministry of Health, Agriculture and Livestock Service (SAG) from the Ministry of Agriculture and Fishery Service (SERNAPESCA) from the Ministry of Economy in order to unify inspection tasks (or modernize the institutional structure), since there is a possibility to establish the Ministry of Agriculture and Food in order to unify food safety inspection operations through a transfer of the inspections for food producers from the Ministry of Health to the Ministry of Agriculture and actually its bill is under consideration. The regional offices of Ministry of Health have been working with other relevant public institutions in order to utilize the existing support system which can be adequate for local industries. In terms of technical aspects, no problem has been observed. Most of the surveyors of the HACCP surveillance team are veterinaries and received more than 1 course of HACCP training. Also many analysts of ISP and the provincial offices have academic backgrounds of pharmaceutical chemistry, chemical biology, and environmental studies and so on, and participated in technical trainings by the Ministry of Health and ISP. The budget for food safety considerably increased from 39.5 million pesos in 2009, to 309 million pesos in 2011 and 308 pesos in 2012 in total of the Ministry of Health, since the National Food Monitoring Plan was budgeted in 2011. However, the maintenance cost for the analytical equipment of the provincial office laboratories have not been sufficiently allocated by some provincial offices.

Therefore, due to some problems in, structural, technical and financial aspects of the counterpart agencies, sustainability of the project effect is fair.



Practical training on inspections for inspectors in Temco

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### III. Recommendations & Lessons Learned

#### Recommendations for Implementing agency

- In terms of promotion to introduce HACCP into SMEs, the Ministry of Health has been considering utilization of the existing systems managed by other ministries, including the Ministry of Economy. However, according to the implementation of the national food monitoring, it should be jointly discussed to make necessary institutional coordination as a common issue among the Food Safety Agency (ACHIPIA) and the other agencies.
- In Valparaiso, the three laboratories are going to be integrated in one laboratory in 2014 according to the decision considering sustainability of operation. During the process of integration, the Viña del Mar laboratory will continuously utilize the equipment provided by the Project and disseminate skills transferred by the Project. However, systematization of their knowledge at ISP and the Viña del Mar is essential to be optimally and smoothly transferred to new human resource.
- There are opinions of companies to welcome the HACCP surveillance as a good opportunity to improve in terms of practical comments by the surveyors. It is desirable to compile case studies of points to be improved and to share them among the surveyors and the companies. It is also effective to deliver the outputs compiling case studies by the counterpart staff of the Ministry of Health and a senior volunteer dispatched by JICA.

#### Lessons learned for JICA

- Some indicators to verify achievement of the overall goal were not measurable at the time of ex-post evaluation due to the lack of necessary data. On the other hand, in Chile the government sets forth indicators in the national policies, sector policies or technical and administrative targets of improvement. In these cases, the existing indicators can be applicable for the Project Design Matrix and more accessible to data to verify achievements of the overall goal.
- In terms of the indicator 1 for the project purpose, some food producers delayed their introduction of HACCP even after making it obligatory to all facilities, because they needed to change their production lines or to reduce their production volumes due to the conditions of Chile affected by the earthquakes. Thus, it is necessary to carefully consider important assumptions since Chile has many damages by natural disasters including earthquakes. In addition, since the introduction of HACCP requires establish some support system for food producers, including financial supports, which cannot be covered by the Ministry of Health, the indicators should reflect such situation. Furthermore, in Chile, there is ACHIPIA which is responsible for coordination among the relevant organizations while the food safety administrations are divided in the three ministries. Also, the private sector needed to thoroughly practice the Good Manufacturing Practice (GMP) while the consumers had limited awareness of food safety. Therefore, the project design which can address broader stakeholders concerning food safety, through utilization of the Project or trainings in Japan, can be more effective despite that the Project assumed that "the stakeholders (governmental agencies, private sector, food consumers, etc.) perform their own role properly" as an important assumption.
- The Project addressed the enhancement of analytical capacity through the training courses in Japan including not only new analytical methods but also accuracy management method in order to improve reliability of analyses. Therefore, the Project contributed to the improvement of advantage of ISP for the ISO17025 certification, supports for the provincial

offices in the certificate process through the national laboratory network of the Ministry of Health, and the laboratory network promoted by ACHIPIA. The support for not only technology but also quality can improve reputation of the counterpart organization and increase sustainability of project effects.

- Since Chile has a long territory, there are different characteristic in industry by region. The Project considered necessity to establish a food safety surveillance system reflecting variety of industrial characteristics, and supported analytical capacity building at regional level. Therefore, the Chilean side established a management model of the national laboratory network of the Ministry of Health based on the system established by the Project after the project completion. It is important to allocate inputs at regional level in order to reinforce regional characteristics and advantages.