

ANNEX II Achievement Grid of the Project

Criteria Activities	Evaluation Items	Confirmation Items	Source of Info.	Results
1-1-1 Rearing of broodstock	<p>Development of Pejerrey seed production techniques</p> <p>Development of techniques for obtention of high quality eggs</p>	<ul style="list-style-type: none"> • Number of reared broodstock • Length and weight of reared broodstock • Number of eggs obtained from the reared broodstock 	<p>Project report, Interview/questionnaire to Japanese Experts and C/P, Observation</p>	<p>- Eyed eggs of Pejerrey, which were introduced from Kanagawa, have been reared in the water tanks at the Project site for three (3) years maintained as healthy broodstock. From the original stock, 580 are now kept at INTECH and reared up to 450g and 30 cm of average standard length.</p> <p>- Second generations from these fishes, hatched at the end of 2003, are now kept 500 at INTECH and 500 at EHC respectively, with an average body weight of 230g. These stocks are the basic broodstock for the Project.</p> <p>- The Project has obtained 2.15 million eggs by December 2004 from 312 female broodstock of three (3) years old from Kanagawa. The method was natural spawning. Fertilization rate reached 33% and hatching rate were 30%.</p>
				<p>- Broodstock rearing technologies have been developed by the Project, i.e. those in rearing method with water current in cylindrical water tanks, water quality management, feeding with formulated feed.</p> <p>- Both EHC and INTECH have been rearing broodstock of indigenous strains, e.g. Junin and Chasico lagoon as well by applying technologies transferred through the Project. In INTECH, 800 broodstock of Junin strain and 150 from Chasico have been reared till now, while 400 of Junin have been done in EHC.</p>
				<p>- 1,758 of broodstock have been reared by the Project as of May 2005, with 229.2g in weight and 30.0cm in length on average.</p> <p>- Test in hormone administration was carried out.</p>
1-1-2 Establishment of induced spawning techniques	<ul style="list-style-type: none"> • Clarification of favourable conditions under which fish aquaculture is induced, in terms of hormone, photoperiodicity, water temperature, and fish food • Number and quality of eggs which were obtained with application of induced spawning techniques • Number of broodstock that spawned with application of induced spawning techniques 	<p>Project report, Interview/questionnaire to Japanese Experts and C/P</p>	<p>- Based on already known data, induced spawning techniques have been developed at experimental level and fundamentally established in order to determine favourable conditions of water temperature, photoperiodicity, quantity and frequency of hormone administration and feeding.</p> <p>- Trials on induced spawning techniques have been carried out as well and seeing good results for part of them on Junin strain.</p> <p>- It is planned to receive a short-term expert from Japan in August 2005 to further improve those techniques.</p> <p>- 50,750 eggs were obtained by application of induced spawning techniques from nine (9) females spawned out of ten (10) with application of the techniques.</p>	
1-2 Establishment of suitable feeding regimes				

<p>1-2-1 Development of artificial feeds</p>	<ul style="list-style-type: none"> • Comparison of the cost between artificial feeds that the Project has developed and the existing ones both from Argentina and from Japan • Results of comparative analysis on fish growth between those two categories above • Results of the comparison above 	<p>Project report, interview/questionnaire to Japanese Experts and C/P</p>	<ul style="list-style-type: none"> -Formulated feed for broodstock has been ordered to local feed company, while the Project implemented experiments to develop those for juveniles. The results of those activities show that broodstock rearing is possible with formulated feed and seed production with locally available feed. -The broodstock have been fed with formulated feed which was developed by the Project. -It can be said that it is possible to rear broodstock with locally formulated feed. However, it has not been clarified yet how it affects the spawning rate of broodstock, so, there is room for further research. -The Project will continue further experiments and improvement in this field by the end of the project term. -Costs for feeds are as follows: 6.2 peso/kg and 5.7 peso/kg for local artificial feeds (in sales price), 4.5peso/kg plus transfer costs for the one imported from Japan. On the other hand, the Project has found the suitable formula at the minimum cost of 2.5 peso/kg in material price.
<p>1-2-2 Research on feeding regimes</p>	<ul style="list-style-type: none"> • Number of Project-produced seeds and survival rate to see if the developed feeds do grow fish or not • Comparison of growth rate between fishes grown with Project-developed feeds and those with the existing ones 	<p>Project report, Research results</p>	<ul style="list-style-type: none"> -Feed regimes development tests are already carried out. The Project has just clarified the feed regimes and they are applied through actual seed production activities. The data on number of produced seeds is available in the technical report, which is more than 100,000. -The comparison data of survival rate and growth rate by applying artificial feed has been obtained. -It has been also made clear that seeds can be nurtured to one (1) gram in weight with <i>Artemia nauplii</i>, cladocerans, and formulated feed, clarifying proper dose and duration of each application, which have been documented for reference.
<p>1-3 Genetic identification of Japanese and Argentine Pejerrey stocks</p>	<ul style="list-style-type: none"> • (Refer to the applicable seen above) 	<p>(Ditto as above)</p>	<ul style="list-style-type: none"> -The short-term expert gave training to the C/P in genetic identification procedures and genetic information analysis, while the C/P was received and trained in Japan for two (2) months from December 2003. -The above contributed to upgrade the C/P's technology level in genetic identification techniques and facilitated the clarification of polymorphism in Pejerrey both from Kanagawa strain, Salada Grande and Chascomus by applying micro-satellite. -Genetic identification practice is in progress by applying the same techniques comparing Kanagawa strain against wild animals from the Salado river basin. -Genetic characteristics based on nuclear DNA analysis have been identified both on Pejerrey from Japan and Argentina. Comparison analysis is also in progress. -A short-term expert will be dispatched in August 2005 to provide technological guidance on completing genetic identification activities as well as advices on statistical interpretation based on the results of the comparison analysis.

2. Research on mass seed production techniques for Pejerrey

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<p>2-1 Investigation on suitable facilities and tools</p>	<ul style="list-style-type: none"> • Frequency and conditions of equipment/ facilities usage, clear recognition of how and for what to use each • Fish density in unit area • Quantity and cost of water necessary for project implementation 	<p>Project report, Interview/questionnaire to Japanese Experts and C/P</p>	<ul style="list-style-type: none"> -Facilities for seed production have been built and prepared in 2003, as infrastructure building for the Project, with development and installation of appropriate facilities and equipment for seed production and spawning, as well as broodstock rearing. -Those facilities made the C/P organizations to improve the seed production tests in efficiency, while showed desirable aquaculture methods for seeds and broodstock. -The investigation on improvement of facilities and tools will be continued by the end of the Project. -Almost all the equipment/facilities are found appropriate with specific ways of usage for the Project activities and frequently utilized during the term. -The Project sites are using groundwater for the activities, so it costs only for electricity to pump up water. The fish density is 150/m³ for seeds and 40/m³ for juveniles with the weight of 120g.
<p>2-2 Development of methods for mass seed production of food organisms</p>	<ul style="list-style-type: none"> • Quantity and quality of produced food organisms • Comparison in number of produced seeds, survival rate, and others between fishes grown with the developed food organisms and those with artificial feed 	<p>(Ditto as above)</p>	<ul style="list-style-type: none"> -Mass production method of food organisms has been applied by fertilizing water with chicken manures to propagate rotifers and cladocerans as feeds for juveniles. -By applying mass seed production of food organisms, both survival and growth rates of juveniles have been improved. Growth rate was found as 250% when applied with the developed methods compared with 150% only with artificial feeds. -As for chicken manures, the Project established access to free manures from chicken farm in Chascomus. -The produced food organisms were rotifers and cladocerans. The rotifer density in tank is 10/ml. As for cladocerans, the density has not been quantified.
<p>2-3 Establishment of disease prevention and treatment methods</p>	<ul style="list-style-type: none"> • Cases of diseases • Process and methods of treating sick fishes • Process and methods of preventing diseases 	<p>(Ditto as 2-1)</p>	<ul style="list-style-type: none"> -Basic techniques on how to treat diseases caused by improper rearing conditions and management have been transferred to the C/P. -Method has been developed for identification and treatment of parasite Gyrodactylus, while those for prevention of bacteria not yet firmly set up. Technical guidance has been also provided on disease prevention method. -Necessary measures have been taken to prevent spreading of Gyrodactylus to neighbouring water area while applying preventive methods into practice at the Project site.

<p>2-4 Research on seed marking techniques</p>	<ul style="list-style-type: none"> Cases of review, research, or discussion on seed marking techniques from the perspective of feasibility Cases of review, research, or discussion from the perspective of cost Cases of review, research, or discussion from the perspective of how to fully utilize data Quantity and quality of collected information 	<p>(Ditto as 2-1)</p>	<ul style="list-style-type: none"> The Project has established the mass seed production techniques and just reached the stage to start feasibility study in Pejerrey propagation. Thus, cases pointed out as confirming items have not been reviewed nor collected. By the end of the Project term, technical report will be prepared on seed marking techniques for releasing juveniles by reviewing and examining applicability of various marking techniques for Pejerrey propagation by stocking. As for local Pejerrey, follow-up study is required after releasing Argentine seeds into lagoons but technologies have not been transferred to the C/Ps yet. Releasing Pejerrey from Kanagawa strain needs to wait for obtaining the results of genetic identification.
<p>3. Planning of aquaculture and other related forms of production</p>			
<p>3-1 Survey of legislation on water resource utilization</p>	<ul style="list-style-type: none"> Process of the survey implementation Survey results 	<p>Project report, Survey results</p>	<ul style="list-style-type: none"> The C/P was received and trained in Japan in November 2004 to learn about legal system on inland water fisheries in Japan. After the C/P training in Japan, there was a presentation of the issue in Japan in JCC. The survey has been in progress and it will be documented compared with Japanese experience by the end of the project term.
<p>3-2 Technical and financial evaluation of possible model Pejerrey aquaculture and other related forms of production</p>	<ul style="list-style-type: none"> Process of the evaluation implementation Evaluation results 	<p>Project report, interview/questionnaire to Japanese Experts and C/P</p>	<ul style="list-style-type: none"> Two (2) short-term experts have been dispatched in the fields of feed survey and market survey respectively. The Project has been implementing six (6) pilot studies on semi-intensive and extensive aquaculture and propagation by stocking with seed releasing to ponds in pasture. Added to them, tests have been carried out on breeding juveniles in net cages set in lakes and ponds. One of the pilot studies for checking profitability has been finished and obtained the first results in April 2005 and others are being implemented. The surveys on feeds and market have concluded that intensive aquaculture of Pejerrey was not found profitable at the present conditions in Argentina. With the basis of these results, evaluation is under way in terms of technologies as well as finance to indicate possible model Pejerrey aquaculture, by carrying out pilot studies. As seen above, several possible models of Pejerrey aquaculture have been already prepared and executed to the stage of verification.
<p>3-3 Preliminary evaluation of candidate sites for model Pejerrey aquaculture and other related forms of production</p>	<ul style="list-style-type: none"> Process of the preliminary evaluation implementation Evaluation results 	<p>Project report, Survey results</p>	<ul style="list-style-type: none"> Preliminary evaluation has been conducted to find favourable sites for model Pejerrey aquaculture and other related forms of production in private farms, small ponds in pastures, and lakes. The pilot studies mentioned on Activity 3-2 have been carried out in the selected sites through the evaluation. Preliminary evaluation is being implemented by the end of the project term.
<p>4. Consideration of monitoring/evaluation results for improvement of the project</p>			

4-1 Periodical monitoring and assessment	<ul style="list-style-type: none"> • Frequency of monitoring activities • Contents of monitoring activities • Implementing system of monitoring activities 	Project report, Monitoring results	<ul style="list-style-type: none"> -Argentine Pejerrey Aquaculture and Propagation Council has been held once and Joint Coordinating Committee (JCC) for this Project been held three (3) times till present. Apart from the Council and JCC, the Project Consultation Team from Japan conducted the monitoring and evaluation of the Project. -The Council and JCC have facilitated the collaboration among the concerned research organizations, which resulted in information sharing among those who are related with the Project. -Another session of JCC is scheduled in June 2005 simultaneously with final evaluation.
4-2 Improvement of activities based on the results of monitoring/evaluation	<ul style="list-style-type: none"> • Cases of improvements made based on monitoring results 	Project report, Interview/questionnaire to Japanese Experts and C/P	<ul style="list-style-type: none"> -Several improvements have been made in the Project by following the recommendations from the Council and JCC. It is exemplified as expanding the coverage of the Project to net cage culture activities and newly assigning personnel for the implementation of the Project. -Regarding public relations activities which were pointed out by the Project Consultation Study Team, the Project co-hosted "Workshop for Biological Studies of Pejerrey" jointly with INTECH, which was the organizer of the workshop. -Project homepage has been set up. (http://project.jica.go.jp/argentine/30355008E0/spanish/index.htm) -"Pejerrey Tasting Event" was carried out in March 2004 in Chascomus and in February 2005 in Buenos Aires with the purpose to popularise fish-eating culture in Argentina. More than 120 people participated both from Japanese and Argentine sides and received good reputation as well. -Pamphlets and T-shirts (600) have been prepared and distributed to governmental organizations concerned, media active, the participants to Pejerrey fishing event held on 14th and 15th May, and others. -In March 2005 EHC made an exhibit on Pejerrey in FERIAAGRO, which is a large-scale international agriculture and stockbreeding fair with participants from 35 countries, to disseminate the outputs of the Project.
4-3 Compilation of a manual based on the research and development results	<ul style="list-style-type: none"> • Existence of manual • Contents of manual 	Project report, Observation	<ul style="list-style-type: none"> -Data has been compiled from several activities and researches in seed production, genetic identification, feed development, disease prevention and treatment, and feasibility/ profitability of aquaculture and other forms of Pejerrey production. -Documentation works are in progress for preparing a set of technical protocols for researchers and it will be finalized within the Project term.
Output1: Development of Pejerrey seed production techniques	Source of information <ul style="list-style-type: none"> • Monitoring records • Project report 	Results	<ul style="list-style-type: none"> -As of the end of December 2004, the Project produced approximately 2 million high quality eggs. -The basic induced spawning techniques have been established and a short-term expert will be dispatched for further improvement. Those techniques would enable the C/P organization to obtain a large amount of eggs at one time, resulting from an efficient utilization of facilities, mass-production of seeds, mitigation of workload, and others. -The Project has clarified that it is possible to rear broodstock with locally formulated feeds. Appropriate feed regimes have been also clarified for seed production. -Identification of genetic characteristics is in progress and a short-term expert will be dispatched in order to finalize the identification. Technical guidance will be also provided by the short-term expert on comparison analysis and statistical interpretation.

Output2: Research on mass seed production techniques for Pejerrey	Indicators	Source of Information	Results
Output2: Research on mass seed production techniques for Pejerrey	①Determination of adequate facilities and tools	• Project report	-This activity has been almost finished with development and / or installation of proper facilities/equipment for seed production, spawning, and broodstock rearing, which will be successfully attained by the end of the term.
	②Existence of mass-production techniques for food organisms	• Project report	-By fertilizing water with chicken manures, large-lot of feeds for juvenile, i.e. rotifers, and cladocerans have been successfully propagated. This success led the increase in both survival and growth rates of the juvenile, which shows success in developing mass-production techniques for food organisms. -The techniques can be said appropriate also in terms of cost and sustainability with access to free chicken manures as raw material.
	③Existence of techniques for prevention and treatment of diseases	• Project report	-The Project has established proper method to control parasite Gyrodactylus and provided technical guidance for diseases prevention.
	④Existence of method for marking of seeds	• Project report	-The Project has just reached to the stage of feasibility studies and will prepare a technical report on the issue by the end of the Project term.
Output3: Planning of aquaculture and other related forms of production	①Report on the legislation of water resource utilization	• Project report • Observation of the report on both its existence and the contents	Results -The survey has been in progress and it will be documented compared to Japanese experience by the end of the project term.
	②Planning of aquaculture and other related forms of production	• Project report • Observation of the plan (document) on both its existence and the contents	-Draft plan of aquaculture and other related forms of production is under preparation by evaluating the probability of extensive aquaculture and of propagation by stocking of artificially reared juveniles, since surveys on market and feeds have concluded that intensive aquaculture was not found profitable under the present conditions in Argentina. -Possible models have been proposed and executed to the verification stage, which requires continual implementation. -Survey report is to be documented by the end of the term.
	③Preliminary survey of candidates sites for model Pejerrey aquaculture and other related forms of production	• Project report • Observation of the report on both its existence and the contents	
Output4: Consideration of monitoring /evaluation results for improvement of the project	Indicators	Source of Information	Results
	①Existence of monitoring activities	• Report on monitoring activities • Project report	-Argentine Pejerrey Aquaculture and Propagation Council and JCC have been held once and three (3) times respectively, and several recommendations have been realized such as expanding the coverage of the Project to net cage culture.
Project Purpose	②Distribution of a manual	• Observation of manual on both its existence and the contents • Records of manual distribution on number and recipients • Project report	-Data have been compiled in the related fields and will be documented in a set of technical protocols for researchers by the end of the term.
	Description Development of fundamental techniques for aquaculture and propagation of Pejerrey	Indicators/Expected Results ① Number of seeds produced	Evaluation -More than 100,000 juveniles with 1 gram of body weight, which is one of the targets as a starting point for aquaculture and propagation by stocking, have been produced in the process of seed production tests of this season. It is further expected for the Project to improve the technologies to guarantee a stable production of this scale. -Besides, approximately 20,000 of high quality seeds of Junin Pejerrey have been successfully produced as well.

Overall Goal	Execution of model Pejerrey aquaculture and other related forms of production in the Chascomus area and surroundings	<p>② Existence of a plan of activities</p> <p>① Number of model Pejerrey farmers</p> <p>② Profit of model aquaculture</p>	<p>• Project report</p> <p>• Reports from CONICET /INTECH</p>	<p>-Possible models for aquaculture and propagation by stocking have been clarified and preceded to verification stage. Those models and part of verification results are to be compiled as a document, i.e. plan of activities, by the end of the project term.</p> <p>-No model Pejerrey farmers are yet to be developed.</p> <p>-Still, several spontaneous actions have been found nearby the Project site: there could be found cases of local people who have got interested in the Project and asked the Project to provide Pejerrey seeds for their trial.</p> <p>-Profitability of Pejerrey aquaculture will be judged partly from the results of the verification tests that are ongoing at present.</p> <p>-Through the Project activities, the followings were found as crucial needs to be continuously tackled for achieving the overall goal:</p> <ul style="list-style-type: none"> • To produce suitable natural feed and artificial compounded foods at lower cost • To improve the precision of the results of genetic comparison analysis between Kanagawa strain (originally coming from Argentina) and Argentine indigenous Pejerrey and its statistical treatment • To implement further pathological studies • To examine the effectiveness of the technologies in seed marking for propagation by stocking activities of artificially reared juveniles • To intensify and standardize the breeding and the "cage-culture" as a part of the activities of technical and financial evaluation of Pejerrey aquaculture models.
Super Goal	Promotion of Pejerrey aquaculture and fisheries activities in and around the Province of Buenos Aires	<p>① Number of Pejerrey fish farmers</p> <p>② Number of Pejerrey fishermen</p> <p>③ Number of Pejerrey seed producers</p> <p>④ Number of employees in the above and other related forms of production</p>	<p>• Statistics on Pejerrey aquaculture and other related forms of production to be collected by the INIDEP, Universities etc.</p>	<p>-As seen above, the Project does not cover dissemination and application of the technologies and it is not surveyed how many Pejerrey fish farmers are there.</p> <p>-Market survey results, however, show strong preference and interest in Pejerrey fish in Argentina. There is another expectation on how to apply the developed technologies through the Project to other kinds of fish species. Those facts lead positive evaluation on the applicability of the developed technologies.</p>

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ANNEX III Evaluation Grid of the Project

Criteria	Evaluation Items		Confirmation Items/Methods	Results
	Main Items	Sub Items		
Comparison between the plan and the actual inputs/outputs	Has the input been made as planned?	Input from Japanese side	No significant gaps with the original plan, No significant delay/obstacles led by the delay, insufficiency, or low quality of input	<ul style="list-style-type: none"> - Three (3) long-term experts, two (2) of who have been assigned at this moment, and four (4) short-term experts were dispatched for the Project till now. Added to them, two (2) more short-term experts are to be dispatched by the end of the project term. Number and speciality of the experts were found mostly appropriate. - Eight (8) C/Ps have been trained in Japan. Argentine side has been found mostly satisfied with the contents, duration and timing of the implementation. - Facilities for aquaculture as well as research activities have been provided to the Project, which is equivalent to approximately 6 million yen. Many of them have been purchased locally and found appropriate in most cases both in quality and quantity from high evaluation from Argentine side. Those facilities/equipment have been well maintained and utilized frequently. - Operational cost is to be disbursed by JICA with the amount of approximately 20 million yen for purchasing necessary facilities/equipment by the end of the term. - Eleven (11) C/Ps have been assigned for the Project. Added to the nine (9) who were assigned at the beginning of the Project, two (2) more C/Ps took part in the Project activities since December 2004, one of who is from Buenos Aires State Government and another is from INTECH, both of them have been engaged in net cage culture. Apart from them, INTECH newly assigned a full-time staff for broodstock aquaculture to support the Project activities after receiving a recommendation from the JICA Project Consultation Study Mission - New facilities/equipment have been provided by the Argentine side, while utilizing those in existence before the Project inauguration. The inputs have been made mostly in time with an exception due to the deteriorating financial conditions at the commencement of the Project. - 33,000 USD (excluding personnel cost) has been disbursed by the Argentine side as a local cost as of the end of March 2005. Budget has been disbursed mostly in time without causing any delay in the Project implementation. - Activity 2-2 "Development of methods for mass seed production of food organisms" has been attained, while most of the Activities have made proper progress as planned. Thus, the Project can expect to finalize most of the set activities within the term. - Regarding seed production, most of the necessary technologies have been developed with the exception of those in genetic identification. Those for mass seed production have been done as planned as well except seed marking techniques. Plan of activities for aquaculture and propagation by stocking is under preparation based on the survey results in market, feed, and the concerned laws and regulations. It can be expected to have a draft plan of activities by the end of the project term. Monitoring activities have been carried out through the project period.
		Input from Argentine side	Ditto as above	
	Have the outputs been produced as planned?		No significant gaps with the originally set indicators (the degree to which the Project is expected to produce by the time of the mid-term evaluation)	

	Is it possible to expect the full attainment of the Project Purpose at the end of the Project period?		Ditto as above	<ul style="list-style-type: none"> - As seen above, most of the outputs have been produced as planned. Thus, it can be possible to attain the project purpose during the term. - Number of seeds produced by the Project has reached and exceeded 100,000, which is a general target as a starting point for further development of Pejerrey aquaculture and/or propagation by stocking. - Possible models for aquaculture and propagation by stocking have been proposed by the Project and it is at the stage of verification. - Most of the activities have shown proper progress compared with the original schedule. Mass seed production techniques have been already developed. Thus, the Project can expect to attain its purpose by the end of the term. - As for genetic identification, the C/P has learned the method of genetic characterization using micro-satellite primer and been making analysis by locality. - Development of seed marking techniques will be finished by the end of the term. - As seen above, the Project has made proper progress in its activities except the two (2) pointed out above. - The C/Ps have seen upgrading in their technologies through learning new technologies such as micro-satellite techniques, discussion and working with the Japanese experts, and training in Japan. - No significant delay or problem has been found in the method of technology transfer. - JCC and Argentine Pejerrey Aquaculture and Propagation Council have been set up for monitoring the Project activities and held three (3) times and once respectively till now. JCC, for example, made a recommendation to the Project to newly introduce the net cage testing as its activity which was put into action since the beginning of this year. - Besides, the Project Consultation Team which was dispatched by JICA Headquarter made a review of the progress of the Project. Following the results, the Project has made several improvements in its activities and management, which are exemplified as employment of a full-time staff at INTECH for broodstock rearing activities.
Process of Activities	Has each activity been carried out as planned?	No significant delay in the progress. If yes, what is the reason(s) of the delay?	No significant delay compared with the original schedule	
	Has the Project adopted adequate approach for technology transfer?	If no, which approach in which technical area(s) is inappropriate? How should we modify it, and is it possible?	No significant delay in the progress, Improvement in the C/Ps' understandings and capacity as expected	
	Is there any problem in the management system of the Project?	Has the monitoring system been already set and operated?	Format for monitoring prepared and formally adopted, it has been set and agreed on who and how to deal with the monitoring results, Regular meetings held with participation of those who are concerned	

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		Has sufficient and smooth communication been made among the C/Ps and Japanese experts?	No serious problem led by lack of/ insufficient communication. Progress as planned, Sufficient and meaningful linking of the results of the Project activities,	<ul style="list-style-type: none"> - There were difficulties in the communication due to language and cultural barriers between the Japanese experts and the C/Ps due to during the first half of the Project term. It did not, however, lead any delay in the progress of the Project. Presently sufficient communication is found between the C/Ps and the Japanese experts. - Most of the activities have made proper progress on time. - It can be pointed out that the concerned governmental organizations, i.e. Secretariat of Agriculture, Livestock, Fisheries and Foods (SAGPYA), both at national and provincial level in Buenos Aires, Chascomus municipality, General Belgrano municipality, and El Chocon municipality have been showing strong interest as well as expectation to the Project. BsAs MAA has got very interested in promotion of aquaculture with application of the developed technologies not only to Pejerrey but also to other species. It can be said, thus, that the concerned government organizations have provided strong policy support to the Project. - As for financial support as well, budget has been allocated and disbursed on time and in the amount of necessity during the Project term. It is seen an increasing trend of financial support recently.
		Has the decisions been made without delay or obstacles?	On-timing decision-making made within / among the implementation bodies	<ul style="list-style-type: none"> - Decisions have been made on time and it facilitated the smooth implementation of the Project.
		Has JICA, both Headquarter and office in Argentina provided sufficient and on-timing support for facilitating the progress of the Project?	No serious problem or significant delay due to lack of support from JICA side	<ul style="list-style-type: none"> - JICA Headquarter and JICA Argentine office have provided necessary support on time and sufficiently, which has also contributed to the smooth implementation of the Project.
		Have the concerned organizations provided sufficient and on-timing support for the Project in good communication/ collaboration among Argentine side?	Ditto as above	<ul style="list-style-type: none"> - The Project has been well supported by the concerned organizations of Argentine side, both at national and at provincial levels, in good collaboration among themselves and in proper manner. Especially the C/P organizations, i.e. INTECH and EHC could be found working in good combination and collaboration, which helped the Project produce outputs and attain the purpose.
	How is the ownership of those who are concerned?	The concerned Ministries of Argentine side	No significant delay in the progress or serious obstacle for activities due to budget allocation matter, Necessary support has been provided on time.	<ul style="list-style-type: none"> - No significant delay has occurred till now due to insufficient or improper budgeting from the Argentine side to the Project. However, it should be mentioned that the Argentine side could not allocate and disburse necessary budget to set up the facilities/equipment for aquaculture in the first half of the Project term. The Japanese side had to, therefore, allocate part of the operational cost for those facilities/equipment instead of the Argentine side not to lead enormous delay of the Project. - Necessary support has been provided mostly on time.

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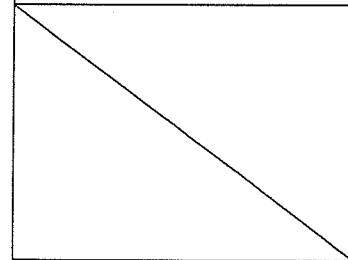
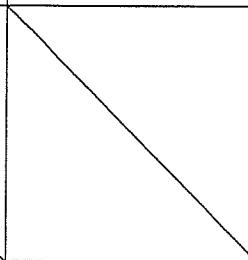
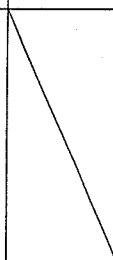
			<p>The implementing bodies, judging from the assignment / employment of personnel, public relation activities, and others</p>	<p>Keen or not in proper staff assignment in terms of their number and their capacity. Well understanding or not in the activities. Quick and proper responses in communication and decision-making</p>	<ul style="list-style-type: none"> - Four (4) from INTECH, two (2) from EHC, one (1) from CEAN, one (1) from INIDEP, and one (1) from BsAs MAA, in total nine (9) C/Ps have been assigned for the Project at the commencement of the Project and another two (2) specialists in net cage, i.e. one (1) from Buenos Aires provincial government and one (1) from INTECH, have newly joined since December 2004. Besides, a full-time staff has been employed at INTECH for broodstock rearing after obtaining a suggestion from the Project Consultation Team. Thus, the Argentine side can be found supportive and positive in improvement in personnel assignment for the Project. - Both INTECH and EHC, which are the C/P organizations for the Project, can be found highly interested in the Project contents and generally quite positive in the set activities. - Communication and responses have been made quickly and in proper manner among those concerned at Argentine side.
	<p>Has the staff (C/Ps) been assigned in the best or favourable manner to achieve the Project purpose?</p>	<p>Have sufficient C/Ps been assigned both in quantity as well as in quality for carrying out the Project activities effectively?</p>	<p>Staffs are assigned as planned in number, No significant delay /problem due to inappropriate staff assignment</p>	<ul style="list-style-type: none"> - INTECH holds approximately thirty (30) researchers, consisted of fourteen (14) sections specialized as aquaculture, aquatic ecology, biotechnology, molecular biology, vegetable molecular biology (plant ecology), microbiology, immunology and others. Two (2) of them have been assigned as the Project C/Ps from aquaculture section. - EHC has assigned two (2) staffs as the Project C/Ps who are in charge of Pejerrey propagation by stocking. - Besides, two (2) C/Ps have been newly assigned to the Project since December 2004, one (1) researcher in net cage culture from aquatic ecology section, INTECH, and another one (1) staff in charge of net cage tests from Pejerrey Propagation Division, BsAs MAA. - The C/Ps are found quite active in their participation in the Project activities as a whole. Particularly those from EHC have shown significant improvement in its capacity development not only in seed production but in how to develop required technologies in the concerned fields. 	

	<p>Have the concerned organizations/ individuals committed themselves sufficiently to the Project activities?</p>	<p>Do they recognize the Project as a useful support for themselves?</p>	<p>The Project has been widely known with good reputation among them, Active public relation activities such as information exchange or plans of joint researches, Active participation in the Project-related meetings</p>	<ul style="list-style-type: none"> - Not only the national government of Argentina but the concerned government organization of Buenos Aires province, Chascomus municipality, General Bergrano municipality, and El Chocon municipality, all of them have shown strong interest and expectation to the Project. Chascomus city government is now under preparation of the long-term strategies with advises from INTECH and EHC on Pejerrey aquaculture. Those concerned at the national and provincial level imply their intention to further apply the technologies developed by the Project into aquaculture of other species. More than 120 people, many of who represent the government organizations both from Japanese and Argentine sides, participated in the Pejerrey tasting event held by the Project. The event obtained good reputation from the participants. - The Project has received many visits from private sector as well and there could be found many people who are interested in Pejerrey aquaculture and propagation by stocking. - The C/P organizations have provided seminars and training to universities, both in and out of Argentina, provincial institutions, and private companies on the request basis. It can be exemplified as the international seminar on Pejerrey biological studies which was held by INTECH, lectures made in neighbouring countries, technical advices made to private sector, and others. - JCC has been held three (3) times by now, while Argentine Pejerrey Aquaculture and Propagation Council has been done once. - No other obstacle/problem was found than above.
	<p>Is there any other obstacle/problem for the progress of the Project?</p>	<p>If yes, what is it?</p>		

Relevance	Necessity	Consistency with the needs of the target areas/communities in Argentina	<ul style="list-style-type: none"> - The Pampa area surrounding Buenos Aires Province holds rich reservoirs with approximately 5,000 lakes/ponds and rivers, which climate is warm and mild. In those water bodies, there used to be abundant natural resource of Pejerrey, which is indigenous species and very familiar to the citizens in Argentina. - Recently, however, the amount has been drastically decreasing in Chascomus mainly by deterioration of environment, increase in population, water gate building, road access improvement, contamination of water, and increased fishing pressure, especially sport fishing. - Since 1999, the country has been experiencing difficult time with stagnating economy, ban on exporting beef with epidemic of foot and mouth disease, and also flooding of pasture and farms, from which farmers suffer tremendously. Economic downturn has brought unemployment, with the rate of 22 % in 2002. Under this situation, Argentina has been seeking the way to diversification of economy and production, especially for small- and medium-scale farmers and livestock breeders. Aquaculture and propagation by stocking in inland water is, thus, one of the large potentials for entrepreneurship. Small- and medium-scale farmers and livestock breeders, who are targeted as final beneficiaries of the Project, have been found highly interested in Pejerrey aquaculture and propagation by stocking. - It has been required to prepare appropriate laws and regulations for decreasing illegal fishing and facilitate legal economic activities. The fact has, still, been going opposite way till now due to scarcity of natural resource of Pejerrey, that is, there is a vicious circle between decreasing resources and increasing illegal fishing. Illegal actions have been done mostly by the poor, who are one of the target beneficiaries of the Project. Thus, the Project is expected directly and indirectly to provide those poor people with another and more efficient ways of business to earn their living with increasing Pejerrey resources in the area. - The Project has been working closely with INTECH and EHC as the target group. INTECH is the national research institute specialized in basic studies such as genetic analysis. The Project provided INTECH with opportunities to accumulate new data as well as new technologies like nuclear DNA analysis by micro-satellite primers by facilitating genetic analysis of Pejerrey. EHC, on the other hand, is a provincial organization which has been making great effort in Pejerrey propagation by stocking. The Project has helped the organization to increase efficiency of the activities with technical improvement and upgrade. The Project could be found, therefore, consistent with the needs of both institutions.
		Consistency with the needs of the target group	

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		<p>Consistency with the national development policies of Argentina</p>		<ul style="list-style-type: none"> - One of the main target policies of Argentina, declared in February 2002, has been set as an exchange policy, which intends to simplify and improve procedures for trade, promote exports, and recover the confidence of the international society to Argentine economy by further liberalizing exchange control in the fields of trade. Also the policy intends to promote local economies and tourism, increase job opportunities for local people, which the Project aims to as well through Pejerrey aquaculture and propagation by stocking. - At local level, Chascomus municipality is preparing its long-term strategies with reference to promotion of "sport fishing" and "aquaculture and fishery industries". Pejerrey is expected to take crucial part in those two fields in the municipality. - The Project is found consistent with the development policies all at national, provincial, and municipality level.
		<p>Consistency with Japan's ODA policy including JICA's for each target country</p>		<ul style="list-style-type: none"> - JICA has been working mainly in the following five (5) fields in Argentina recently: economic recovery, social development, environmental preservation, promotion of south-south cooperation, and support for Japanese descents in Argentina. The Project is to facilitate economic recovery and regional development in this country, which is said consistent with JICA policies. - As for south-south cooperation, the C/P of the Project visited Paraguay to provide technological guidance in net cage aquaculture, while receiving researchers and students from neighbouring countries such as Chile, Bolivia, Peru, Paraguay and Brazil on the occasions of holding seminar or as internees.
<p>Priority</p>	<p>Relevance in approach/method: Has the Project taken one of the most proper as well as effective approach/method to facilitate execution of model Pejerrey aquaculture in the Chascomus area / surroundings as well as promotion of Pejerrey aquaculture in / around the Province of Buenos Aires?</p>	<p>Appropriate or not in its approach/method and the selections of the target areas in geographical term Proper demarcation, linkage and collaboration with other JICA projects being implemented in the neighbouring areas and the results</p>	<p>Advantaged in disseminating and applying useful technologies. Applicability of the approach/method to other geographical areas. No significant duplication with other JICA projects, Active trials/operation of information exchange and/or collaboration with them</p>	<ul style="list-style-type: none"> - Unemployment rate in BsAs province has risen to approximately 20% with suffering from the recent economic crisis and damages from floods in 2002. The province, thus, needs to create the alternative industries to agriculture and stock aquaculture to offer job opportunities to its citizens. - The province is rich in internal water areas with approximately 5,000 lagoons, while Chascomus municipality is as well with 54 lagoons of 37,800 ha. Apart from them, the area holds the countless ponds made by flooding in pasture and agricultural lands. There is a huge potential to utilize those water bodies for Pejerrey aquaculture and propagation by stocking since most of them are not fully utilized yet. Demand, on the other hand, is also there and can be expected to further expand with upgrading quality and stabilizing supply throughout a year, due to the existing market and people's eating habits of Pejerrey, which is supported recently with awareness towards health among people. - Seed production technologies are the basis and the most crucial step for aquaculture and propagation by stocking. In this line, it can be said that the Project is relevant since it is to tackle the issue of top priority for technological support.
		<p>Potential or actual trials/operation of collaboration with other donors' projects for gaining multiplier effect</p>		<ul style="list-style-type: none"> - No other JICA project is not on-going in the project site and its surrounding areas. - No other donor is implementing project in the project site and its surrounding areas.

			<p>Advantaged in technical and/or physical terms, Proper system for technological transfer and application, Proper scale of organization, Proper administrative and legal status, Sufficient staffs in number</p>	<p>- INTECH is a national research institute which are well equipped and with comparative advantage in genetic identification in Argentina. Also, it is under CONICET and holds wide collaborative network with concerned national and provincial organizations, which facilitates dissemination of the developed technologies to them, nationally and internationally, through lectures at universities, training, seminars, workshops and the like.</p> <p>- EHC, as well, have an advantage in its technologies as well as networking with the concerned organizations/people in the province in producing Pejerrey seed in BsAs province, which have been developed through conducting the related tests as well as providing technical guidance to them.</p> <p>- Both of the C/Ps organizations are found relevant as the target groups of the Project in terms of technology levels as well as of future dissemination of the outputs.</p> <p>- Regarding the personnel assignment, it is found appropriate in number and in quality. Apart from it, INTECH has assigned a staff for broodstock rearing activities which were pointed out by the Project Consultation Study Mission. No delay has been seen due to insufficiency or inappropriateness in personnel assignment.</p>
		<p>Potential of the Project outputs to be further transferred to those in need other than the target group</p>	<p>Mechanism for technologies transfer prepared, Strong interest for the Project activities, High applicability of the technologies to broader areas in Argentina</p>	<p>- As shown above, mechanism for technologies transfer is well prepared and functioning.</p> <p>- The C/Ps have already received requests from various organizations/people for technical guidance/advice. It is exemplified as the international symposium held by INTECH in December 2004, receiving researchers and students from neighbouring countries, and technical support for Paraguay.</p> <p>- Strong interest and expectation have been seen among those concerned both at national and provincial, even citizen, levels toward the Project. Some such as SAGPYA and BsAs MAA have shown the intention to further apply the Project outputs to other species.</p> <p>- Technologies that the Project has been developing can be applied to the same species in other geographical areas in Argentina and in the neighbouring countries as well with paying attention to differences in climate and temperature.</p>
		<p>Relevance in terms of equity: distribution of benefits, cost-sharing, etc.</p>	<p>The technologies and the outputs which the Project has produced are open to all those engaged in the Pejerrey aquaculture, No administrative nor other limitations in application</p>	<p>- The final beneficiaries are set as small- and medium-scale farmers and stockbreeders in BsAs province. The number of farmers and stockbreeders in that size are said as approximately 70,000. 8,000 out of them are labours suffering from low income and high unemployment rate.</p> <p>- It is expected to disseminate the outputs of the Project to all those who need the technologies without any limitation on the recipients working in the fields of aquaculture and propagation by stocking, sport fishing, tourism, and other related industries. The Project can be expected also to facilitate poverty alleviation as well.</p>

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		Superiority of Japan in concerned technologies	Experience in similar support projects, Rich in experience and human resources in the target technologies fields	<ul style="list-style-type: none"> - Japan has obtained amount of experience as well as human resources in the target technologies sufficient to transfer to other countries, while it has been providing technological support in aquaculture in various countries as well. - Pejerrey was introduced to Japan in 1966 from Argentina by Japanese immigrant as a symbol of friendship between the countries and after that the aquaculture technologies has been developed and established mainly by Kanagawa Prefectural Freshwater Fisheries Institute. - The concerned organizations of Argentine side have been paying more and more attention to the Project activities and it is exemplified as BsAs MAA which has increased the amount of inputs in the Pejerrey-related activities. - INTECH and EHC are requested by Chascomus municipality to participate in its preparation of long-term and short-term strategies to clarify needs and tasks ahead in Pejerrey-related activities in the municipality.
	Others	Have we got significant changes in the political, social, economic, and natural environment during the Project term, which have affected, either positively or negatively, the Project?		
Effectiveness	Progress in attaining planned outputs	Is there any factor preventing the Project to attain the Project purpose?		(See Annex II)
	Perspective on achievement of the Project Purpose by the end of the Project period: <i>Development of fundamental techniques for aquaculture and propagation by stocking of Pejerrey</i>	<p>1. Has the Project got sufficient Pejerrey seeds in quantity?</p> <p>2. Has the Project prepared plan of activities for facilitating Pejerrey aquaculture?</p>	<p>Achievement or expected to achieve the target in number</p> <p>Action plan prepared based on the Project results, High feasibility of the plan</p>	<ul style="list-style-type: none"> - The Project has already produced more than 100,000 Pejerrey seeds, which can be generally a target as a starting point for aquaculture and propagation by stocking. - Thus, seed production technologies can be highly expected to be developed within the term. - Various kinds of tests are under way for preparation of plan of activities with sufficient seeds production in the third project year: broodstock rearing tests in six (6) ponds in farms and pasture with participation of farmers and livestock breeders, those for feed development, for fingerlings nurturing in water tanks, and for extensive aquaculture by releasing fingerlings to ponds in pastures - The possible models for aquaculture have been set up and under verification at present. One of the verification tests has just been completed and obtained the data, while others are on-going. The plan of activities can be highly possible prepared within the term with part of the result of verification tests. - No aquaculture and propagation by stocking is developed except trout aquaculture and propagation by stocking in Argentina. That is why human resource is quite limited in developing technologies for aquaculture though there are many researchers and technicians who are capacitated in researches and experiments.

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		Is there any factor facilitating attainment of the Project purpose?		<ul style="list-style-type: none"> - Academic level of the C/Ps is found very high, which has facilitated the implementation of the Project activities. The Project has been well supported by the staffs both of INTECH and EHC, which also helped the progress of the Project. - Before the commencement of the Project, one short-term expert was dispatched and an Argentine C/P was received and trained in Japan. That contributed a lot to smooth launching and implementation of the Project. - Apart from the above, infrastructure such as electricity, telecommunication, road access, and water supply are well built and maintained and there was almost no problem in purchasing or transferring the necessary materials and facilities/equipment. - The following factors have also facilitated the efficient and effective implementation of the Project: friendship and respect existing between Argentina and Japan. - The outputs set in PDM are highly possible produced within the term, which can be said sufficient to attain the project purpose, i.e. seed production, development of appropriate feed, and preparation of plan of activities. - PDM does not mention any important assumption. However, it was anticipated to have damage from flood, negative influence on the C/P organizations from economic crisis, increase of contamination in lagoons, occurrence of deadful fish diseases, no collaboration from farmers and stock breeders to the Project, and others. Fortunately these negative incidences have not seen till now.
	Correlations	Are the outputs properly correlated with the Project purpose? Is the important Assumption set in the PDM still crucial for attaining the Project purpose after attaining all the set Outputs? Is it highly likely to be met?		
Efficiency	Achievement of Outputs	Have the Outputs been achieved up to the target level? Is there any factor preventing the Project to attain the Outputs? Is there any factor facilitating attainment of the Outputs? Have the inputs been sufficient for producing the Outputs as planned?	Achieved to the level originally planned for the period	<p>(See Annex II)</p> <ul style="list-style-type: none"> - No factor could be found preventing the Project from producing the set outputs. - Generally speaking, Argentine people kindly have a lot of respect for Japan, which helped the Project to make progress smoothly, though indirectly. - Inputs made both from Argentina and Japan was found sufficient as well as appropriate to produce the outputs, which helped the Project make sound progress without delay.
	Correlations		No significant delay / obstacle caused by insufficiency / inappropriateness of inputs	

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		Have the inputs been made as scheduled? Have they facilitated the progress of the activities as planned?	Making inputs as scheduled, No significant delay / obstacle caused by improper timing of inputs	<ul style="list-style-type: none"> - Most inputs have been made as scheduled both from Japan and Argentina and in proper quality and quantity. - An exception is the delay of sending artificial feeds for broodstock rearing from Japan, which negatively worked on the progress in verifying technologies for obtaining of high quality eggs and its transfer to the C/Ps. The delay, however, was recovered by alternating it with local feeds not to give crucial damage on other activities. - Argentine side, on the other hand, could not allocate sufficient budget for building new facilities for seed production at the beginning of the Project term. It was compensated with the effort of the Japanese expert and JICA to obtain additional budget, with which dreadful damage could be avoided on its progress. - Input could be found relevant in its scale compared with the volume of the tasks to produce the set outputs and to attain the project purpose.
	Cost	Is the Project relevant in terms of the total cost even in comparison with other similar projects?	Not too large in financial scale even compared with the other similar cases	
Impact	Prospect of Achieving the Overall Goal: <i>Execution of model Pejerrey aquaculture and other related forms of production in the Chascomus area and surroundings</i>	<ol style="list-style-type: none"> 1. Can we see increase in number of those engaged in Pejerrey aquaculture with the outputs of the Project? 2. Can we expect high profit rate as a business? 	<ol style="list-style-type: none"> 1. Comparison between the time of the Project termination and after five (5) years or so 2. Comparison in income of Pejerrey farmers between before and after starting the business 	<ul style="list-style-type: none"> - The Project has already started verification of the possible models for aquaculture and the overall goal "Execution of model Pejerrey aquaculture and other related forms of production in the Chascomus area and surroundings" is expected to be attained. We can also expect the achievement of the super goal in the future with the seeds produced by the Project and abundant water reservoir in the locality to release the seeds and to conduct follow-up studies after releasing. - Before reaching the stage, however, it should be properly carried out to further adjust the developed technologies to the local conditions and make clear the profitability of the aquaculture. - At this stage, it cannot be said exactly how much profit the model Pejerrey aquaculture can gain.
		Is there any factor preventing the Argentine side to attain the Overall Goal?		<ul style="list-style-type: none"> - No specific factor was found disturbing the attainment of the overall goal at this moment.
	Correlations	Does the attainment of the Project Purpose take the main role for attaining the Overall Goal?		<ul style="list-style-type: none"> - The overall goal is to be achieved definitely with attaining the project purpose, that is "Development of fundamental techniques for aquaculture and propagation by stocking of Pejerrey". Thus, they are found closely correlated with each other. - Similarly, the super goal is found correlated with the overall goal, since "Promotion of Pejerrey aquaculture and fisheries activities in and around the Province of Buenos Aires" cannot be attained without "Execution of model Pejerrey aquaculture and other related forms of production in the Chascomus area and surroundings".

		<p>Is the Important Assumption for the Project Purpose still crucial for attaining the Overall Goal? Are those conditions likely to be met?</p> <p>Have we got, or are we going to get, unexpected effect of the Project except the Overall Goal? If yes and it is negative, how is the Project trying to avoid or reduce it?</p>	<p style="text-align: center;">/</p>	<p>- The set important assumption is still crucial to attain the overall goal and expected to be met at this moment.</p>
<p>Unexpected effects</p>			<p>Any changes, positive or negative, when compared between before and after the Project</p>	<ul style="list-style-type: none"> - BsAs MAA has decided to put more inputs to EHC activities to promote Pejerrey aquaculture and disseminate the related technologies, while it also show its intension in applying the technologies for aquaculture of other species. - The Project has established the technical basis which can be widely applied for other species. - Chascomus municipality is preparing its long-term strategic plan, which put focus on promotion of "sport fishing" and "aquaculture and fishery industries". Besides, it is planned to rebuild and improve wastewater treatment plant for the purpose to improve water quality up to the level Pejerrey survive in it. - Technicians and equipment suppliers have been fostered in the field of aquaculture by being engaged in the Project activities. - The network has been established and widened among organizations engaging in the related fields in Latin American countries through hosting the international seminar in December 2004. It has facilitated communication as well as information sharing/exchange on the issue. - There is a scientific concern about potential environmental deterioration due to water wastes and fish diseases, if we would see rapid increase in Pejerrey production. The necessity to avoid those potential negative effects, especially on natural environment, is widely recognized among those concerned, which is exemplified as regulations on aquaculture in lagoon that allow people to start the business only when several conditions are met, i.e. no fishing industries in the lagoon, no public access to the lagoon, no habitation on the shore, and the like. It is also clearly stipulated that aquaculture needs to be conducted under supervision of the concerned research institutes as well as to submit proposals in advance of starting business. - It is also widely recognized among those who are concerned with aquaculture and propagation by stocking that they should utilize fingerlings of local species for preserving bio-diversity in natural environment. As for the Project, therefore, it is crucial to clearly identify genetic characters of the local Pejerrey and its differences with those from Kanagawa before releasing the latter to local lagoons. - No discriminative effect has been found on specific social group.
		<p>Any gaps in degrees of effect by gender, ethnicity, or class, either positive or negative?</p> <p>Negative effect other than the above and the potential ways to avoid or reduce it</p>	<p>Ditto as above</p>	
			<p style="text-align: center;">/</p>	<p>- No negative effect has been found by now, as mentioned above.</p>

Sustainability (future prospect)	Policy and administrative aspects	Will it be likely that the Project obtain policy support even after its termination?		<ul style="list-style-type: none"> - Both CONICET and BsAs MAA have been increasingly interested in promoting Pejerrey aquaculture and propagation by stocking and putting more inputs than before. Chascomus municipality is also considering adopting policies regarding the promotion in its long-term strategic plan which is under preparation. Those facts are enough to assure the sustainability in policy support toward the activities.
		Have the regulations and/or other legal systems concerned been prepared and in operation? Or will they be soon?		<ul style="list-style-type: none"> - There could be found any specific change or adjustment in the concerned laws and regulations that are set as the important assumption to reach the attainment of the overall goal after achieving the project purpose. Legal review and reform if necessary can be expected after stepping up to the stage of their receiving tangible outputs and even requests from those concerned in Pejerrey aquaculture and aquaculture.
	Institutional and financial aspects	Has the Project set up the operational and managerial mechanism which is functional enough to maintain and increase the effectiveness of the activities?		<ul style="list-style-type: none"> - Both INTECH and EHC are well-established organizations with stable staffing, budgeting, and facilities, though they sometimes suffered from the economic crisis in the former half of the Project period. Thus, it is highly possible to see the continuation of the research and development activities for Pejerrey aquaculture and propagation by stocking after the Project termination as well. - Apart from the institutional arrangement of its own, INTECH has been developing collaborative linkages with various research institutions and researchers abroad, which surely guarantee the sustainability of the concerned activities. Regarding EHC, on the other hand, the C/Ps are highly motivated in the activities supported with an increase of staffs and budget as well as reform and expansion of its buildings and facilities that are already decided by BsAs MSS and now under preparation. We can say that the conditions are being prepared to expect high probability and sustainability in maintaining and even further improving the technologies the Project has developed in seed production and broodstock rearing. - Due to the two different lines the C/P organizations belong to, i.e. national and provincial authorities, it is slightly anticipated to have difficulties in maintaining collaborative relationships between INTECH and EHC similar to the present one prepared for the Project. Still, future collaboration could be found possible and probable between those two organizations judged from the strong and smooth linkage of them at present.
		Has the Project set up the mechanism to disseminate useful and applicable outputs in wider scale?		<ul style="list-style-type: none"> - INTECH is a research and educational institution facilitated with mechanism to disseminate the Project outputs to others nationally and internationally through lectures at universities, training, seminars, workshops, and the like. - EHC is an institution for conducting various kinds of tests for aquaculture and propagation by stocking as well as technical assistance to those concerned in the whole province, so it has a mechanism to disseminate the Project outputs.

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<p>Has the implementing bodies prepared its long-term and short-term plans containing the utilization of the Project outputs?</p>	<p>- As for INTECH, the following researches are to be conducted after the Project termination funded by ANPCyT (National Agency for Promotion of Science and Technology). By grant No. PICTR-528 (2005-2008), directed by Dr. G. Somoza the following programs are in progress: > <u>Induced spawning techniques</u>: it is planned to start in 2005 and last to 2007 under supervision of Dr. Gustavo Somoza. > <u>Production of mono-sex and sterile Pejerrey</u>: to compare growth rate with the diploid fishes > <u>Sperm cryo-preservation</u> > <u>Examination of Pejerrey growth rate in net cage</u>: in collaboration with Dr. Dario Colautti and Dr. Claudio Baigun > <u>Determinants and control of sexuality</u>: planned to start in 2004 and last to 2006 under supervision of Dr. Gustavo Somoza. Simultaneously, it is planned to conduct research in <u>Control of sexuality by water temperature changes</u>. > <u>Evaluation of Patagonic Pejerrey (Odontesthes hatchery)</u>: in collaboration with Comahue University By grant No.01-12168 (2004-2007) directed by Dr. G. Somoza the following program is being developed: - EHC has been distributing Pejerrey eggs to private sector in the line of its annual plan of activities set by BsAs MAA, which is originally based on the compilation of requests from private producers. EHC has also annual plan on surveying lagoons in the province. EHC is providing technical advices to other aquaculture centres in BsAs province on regular basis every year. Besides, EHC makes surveys on causes of diseases in emergency case following the orders from BsAs MAA.</p>
<p>Has the Project obtained good ownership of the concerned people?</p>	<p>- The C/Ps of both INTECH and EHC have shown good ownership to the Project activities in their behaviour. Ownership as the organizations as a whole can be expected to increase in near future by making the outputs tangible, that is the profitability of Pejerrey aquaculture.</p>
<p>Has the Project been allocated sufficient budget for the activities?</p>	<p>- There was not found any serious problem in budget allocation for personnel in INTECH and EHC. As for operational cost, both CONICET and BsAs MAA have been increasing the budget for the C/Ps organizations.</p>
<p>Can the Project activities expect further increase in its budget? How can it be?</p>	<p>- As shown above, CONICET and BsAs MAA have increased budget for the activities of INTECH and EHC, which trend can be expected to last after the Project termination as well.</p>

	Technical aspect	Are the technologies developed by the Project highly practical and applicable in Argentina?	/	<ul style="list-style-type: none"> - The technologies for seed production are found applicable to other geographical areas in the province. - The Project has started with a clear idea not to just introduce the aquaculture technologies developed in Japan to Argentina as they are since it is clear that they do not function nor be sustainable. It has then kept the idea in mind to establish technologies applicable under the local natural, technological, and social conditions. The outputs of the Project are, therefore, showing good applicability in the target area. - It is strongly requested to the Argentine side to keep making further improving the feed developed by the Project in order to guarantee sustainability and profitability of the aquaculture activities.
		Has the Project set the mechanism for dissemination during the Project term?	Mechanism to provide training, technologies, and learning materials to those engaged in Pejerrey aquaculture	<ul style="list-style-type: none"> - It can be highly possible for the private sector in Argentina to take initiative in disseminating and applying the developed technologies once they recognize the profitability of Pejerrey aquaculture and propagation by stocking. - INTECH held "Workshop on Pejerrey Biological Studies" that was co-hosted by the Project. Besides, several activities have been conducted for disseminating the Project outputs and for advertising the Project such as setting up the Project homepage, publishing and distributing the pamphlets, and preparing and distributing the Project T-shirts.
		Have the collaborative linkages been developed among the concerned institutions? Has it got favourable prospect on it?	/	<ul style="list-style-type: none"> - The C/Ps both of INTECH and EHC have had collaboration with each other in Pejerrey-related researches and works even before the Project inauguration. It can be highly expected, thus, that they keep the good collaborative relationship in case of need after the Project termination. One good example is the research on aquatic resources that is conducted by INTECH, EHC, Buenos Aires provincial authority, and Chascomus municipality in collaboration.
		Can it be highly expected that the C/Ps will continue to work for the C/P institutions even after the Project termination?	/	<ul style="list-style-type: none"> - Both INTECH and EHC show quite high in their fixation ratio of the staffs and it is highly possible for the C/Ps to continue to work for INTECH and EHC after the Project termination.
		Have the provided equipment been properly treated and utilized for the Project?	Records of maintenance and use kept,	<ul style="list-style-type: none"> - The equipment/facilities provided to the C/P organizations have been well maintained and utilized. - List of equipment/facilities has been made and well kept.
	Social, cultural and environmental aspects	Has the Project been carried out in the sensible manner to the socially vulnerable such as women and the poor?	/	<ul style="list-style-type: none"> - The Project has not paid special attention to the socially vulnerable such as women and the poor, but there could not be seen any possibility to decrease sustainability of the Project by that.

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		<p>Has the Project made well consideration to the environment issues to maintain its sustainability?</p>		<ul style="list-style-type: none"> - The Project has paid much attention to avoid deteriorating water quality in the lagoons and also to well prevent fish diseases from prevailing from the project site to the lagoons. Awareness is quite high in Argentina in natural environmental preservation and provinces and municipalities have set the concerned rules and regulations applied to those who start business in fish aquaculture to avoid deterioration in lagoons. - The Project does not apply formalin and Negbon to edible Pejerrey even when it needs to get rid of parasite gyrodactylus from them. Also, waste water is drained away after running through the sedimentation pond set in the project sites. The project sites are still required to pay much attention and take necessary action to decrease and eliminate the possibility of deteriorating water quality in the surrounding natural environment, i.e. Chascomus Lake. - It is clarified that gyrodactylus is easy to emerge and increase under improper rearing conditions. EHC is required to make continuous effort not to prevail the parasite when it distributes seeds to breeders and release them into lagoons. -No other negative factor was found by now.
	Others	<p>Any other factors which decrease sustainability of the Project</p>		

ANNEX IV: Dispatch of Japanese Expert

Long-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment						
			From	To	Remarks	2002	2003	2004	2005
1	Mr Yoshioki Shirojo	Seed Production Technique/ Chief Advisor	15 Aug. 2002	14 Aug. 2004			←→		
2	Mr Masaru Okamoto	Aquaculture Technique/ Coordinator	11 Sep. 2002	10 Sep. 2005			←→		
3	Mr Motohiro Ohashi	Seed Production Technique/ Chief Advisor	25 Jul. 2004	10 Sep. 2005				←→	

Short-term Japanese Experts

No.	Name	Field	Period of Assignment						
			From	To	Remarks	2002	2003	2004	2005
1	Mr Yoshiaki Kobayashi	Installation of Fish Culture Tanks, Aqueduct and Drainage	29 Jun. 2003	3 Jul. 2003			*		
2	Mr Takashi Sakamoto	Genetic Analysis	6 Nov. 2003	26 Nov. 2003			*		
3	Mr Toru Fujiki	Fish Market Research	10 Jan. 2004	8 Feb. 2004				*	
4	Mr Masumi Shimozaki	Development of Artificial Food	14 Feb. 2004	7 Mar. 2004				*	

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ANNEX V: Allocation of Counterpart Personnel and Acceptance Training in Japan

Note: In case a counterpart's employment is temporary, enter "*" in Remarks

No.	Name of Counterpart	Field	Present Post Post at assignment time	Remarks	Period of Assignment					Training in Japan		
					From	To	2002	2003	2004	2005	Year	Name of Training Course
1	Mr. Leandro Miranda	Instituto Tecnológico de Chascomus (IIB-INTECH)	Subdirector of Ichthyological Lab.		11 Sep. 2002	10 Sep. 2005	←	→		2001	Argentine Pejerrey Aquaculture	9 Oct. 2001 - 16 Nov. 2001
2	Mr. Pablo Strobl	IIB-INTECH	Graduate Student of Ichthyological Lab.		11 Sep. 2002	10 Sep. 2005	←	→		2003	Sustainable Aquaculture Development	4 Mar. 2003 - 13 Jul. 2003
3	Mr. Gustavo Berasain	Estacion Hidrobiologica de Chascomus (EHC)	Chief of EHC		11 Sep. 2002	10 Sep. 2005	←	→		2003	Pejerrey Aquaculture (Observation)	12 Mar. 2003 - 22 Apr. 2003
4	Mr. Gustavo Somoza	IIB-INTECH	Director of Ichthyological Lab.		11 Sep. 2002	10 Sep. 2005	←	→		2003	Pejerrey Aquaculture (Observation and acquire the technique)	12 Mar. 2003 - 27 May 2003
5	Mr. Pablo Hualde	Centro de Ecologia Aplicada de Neuquen (CEAN)	Chief of Plottier Coordination Department		11 Sep. 2002	10 Sep. 2005	←	→		2003	Development of Artificial Food	23 Sep. 2003 - 18 Dec. 2003
6	Mr. Leonardo Guilgur	IIB-INTECH	Graduate Student of Ichthyological Lab.		11 Sep. 2002	10 Sep. 2005	←	→		2003-2004	Genetic Analysis	8 Dec. 2003 - 24 Feb. 2004
7	Ms Claudia Velasco	EHC	Investigator		11 Sep. 2002	10 Sep. 2005	←	→		2004	Rearing Technique and Prevention of Fish Disease	20 Sep. 2004 - 8 de Oct. 2004
8	Ms Laura Sanchez	Direction of Fishing Control (Province Government)	Director		11 Sep. 2002	10 Sep. 2005	←	→		2004	Fisheries and Water Resource Legislation	23 Nov. 2004 - 12 Dec. 2004
9	Mr. Mauricio Remes	Direction of Fishing Activity (Province Government)	Investigator		29 Dec. 2004	10 Sep. 2005	←	→				
10	Mr. Dario Colautti	IIB-INTECH	Director of Fishing Ecology		29 Dec. 2004	10 Sep. 2005	←	→				
11	Lic. Alberto Espinach Ros	INIDEP	Investigator, Inland water department		11 Sep. 2002	31 Dec. 2004	←	→				
12												
13												
14												
15												

ANNEX VI: Provision of Machinery and Equipment by Japanese Side

Note:

R/P: Route of Procurement
 Frequency of Use
 Condition

(J: From Japan, L: Local, E: With Expert)
 (A: Always - B: Often - C: Sometimes)
 (A: Good - B: Fair - C: Bad)

¥: Japanese Yen
 \$: Dollar
 P: Peso

No.	Date of Arrival	Description				R/P	Amount	Unit Price Currency	S-total	Place of Storage	Frequency of Use	Condition
		Item	Manufacture	Model Number								
1	2001/3/31	FRP round tank	INDUSOL	1 X 0.53m	L (E)	12	¥ 19,383	¥ 232,600	INIDEP(8), INTECH(3), EHC(1)	A	A	
2	2001/3/31	FRP cone tank	INDUSOL	0.5 X 1.35m	L (E)	10	¥ 50,260	¥ 502,600	INIDEP(10)	A	A	
3	2001/3/31	Artemia tank	INDUSOL	0.4 X 0.67m	L (E)	6	¥ 22,400	¥ 134,400	INIDEP(3), INTECH(3)	A	A	
4	2001/3/31	FRP round tank	INDUSOL	2 X 0.8m	L (E)	6	¥ 104,833	¥ 629,000	INTECH(4), EHC(2)	A	A	
5	2001/3/31	Square tank	INDUSOL	1.2 X 1 X 0.76m	L (E)	20	¥ 25,130	¥ 502,600	INIDEP(10), INTECH(7), EHC(3)	A	B	
6	2001/3/31	Sheet tank panel	INDUSOL	5 X 1.2m	L (E)	9	¥ 291,504	¥ 2,623,540	INTECH(6), EHC(3)	A	A	
7	2001/3/31	Sheet tank panel	INDUSOL	10 X 1.2m	L (E)	4	¥ 650,500	¥ 2,602,000	EHC(4)	A	A	
8	2001/3/31	Gas chromatograph	JENK	GC-17AAF	L (E)	1	¥ 2,789,800	¥ 2,789,800	CEAN	A	A	
9	2001/3/31	4 X 4 Truck	TOYOTA	HILUX DX3.0	L (E)	1	¥ 2,543,600	¥ 2,543,600	INTECH	A	B	
10	2001/3/31	Truck's accessory	TOYOTA	Power winch etc.	L (E)	1	¥ 359,700	¥ 359,700	INTECH	A	A	
11	2001/3/31	MilliQ machine	BIOPURE	MILLIPURE	L (E)	1	¥ 800,900	¥ 800,900	INTECH	A	A	
12	2001/3/31	Balance	Inst. Cientifica	VI-4800AR	L (E)	2	¥ 92,750	¥ 185,500	INTECH	A	A	
13	2001/3/31	Projector	Tecnograf SA	PLC-XU20	L (E)	1	¥ 700,600	¥ 700,600	INTECH	B	A	
14	2001/3/31	Notebook computer	Hewlett Packard	Omnibook 500	L (E)	1	¥ 394,500	¥ 394,500	INTECH	A	B	
15	2001/3/31	PC, Printer	Hewlett Packard	Vectra, Laserjet	L (E)	1	¥ 248,200	¥ 248,200	INTECH	A	A	
16	2001/3/31	Scanner	Hewlett Packard	HP7450C	L (E)	1	¥ 119,100	¥ 119,100	CEAN	A	A	
17	2001/3/31	PC, Printer	Hewlett Packard	Vectra, Laserjet	L (E)	2	¥ 222,500	¥ 445,000	INTECH	A	A	
18	2001/3/31	Ultra low freezer	Thermo Forma	modelo 925	L (E)	1	¥ 1,067,100	¥ 1,067,100	INTECH	A	A	
19	2001/3/31	Analisis program	Media Cybernetics	Image Pro plus4.1	L (E)	1	¥ 647,600	¥ 647,600	INTECH	B	A	
20	2001/3/31	Image capture system	FOTODYNE	Foto/Analyst	L (E)	1	¥ 1,929,600	¥ 1,929,600	INTECH	B	A	
21	2001/3/31	Thermo cycler	Eppendorf	Master cycler gradiente	L (E)	1	¥ 898,746	¥ 898,746	INTECH	A	A	
22	2001/3/31	Micro centrifuge	Eppendorf	5415R	L (E)	1	¥ 419,296	¥ 419,296	INTECH	A	A	
23	2001/3/31	Fax machine	TOSHIBA	TF478	L (E)	1	¥ 67,600	¥ 67,600	INTECH (P/J office)	A	A	
24	2001/3/31	Osmometer	Fishier	91236	L (E)	1	¥ 1,505,277	¥ 1,505,277	INTECH	B	A	
25	2001/3/31	Portable centrifuge	Precision	Durafuge	L (E)	1	¥ 388,723	¥ 388,723	CEAN	A	A	
26	2001/3/31	Water multi-monitoring system	HORIBA	U-23	L (E)	1	¥ 1,575,650	¥ 1,575,650	INTECH	A	A	
27	2001/3/31	Balance	MITTLER	AB204/SRS	L (E)	2	¥ 444,509	¥ 889,017	INTECH(1), EHC(1)	A	A	
28	2001/3/31	Balance	MITTLER	AG285	L (E)	1	¥ 809,535	¥ 809,535	INTECH	A	A	
29	2001/3/31	Nitrogen thermo bottle	TAYLOR	WHARTON	L (E)	2	¥ 155,357	¥ 310,714	INIDEP(1), INTECH(1)	B	A	
30	2001/3/31	Microtome	LEICA	CM1510	L (E)	1	¥ 1,588,948	¥ 1,588,948	INTECH	A	A	
31	2001/3/31	Feezer	Whirlpool	WHB53	L (E)	3	¥ 78,795	¥ 236,384	INTECH(1), EHC(1), CEAN(1)	A	A	
32	2001/3/31	Refrigerator	ELECTROLUX	430L	L (E)	2	¥ 79,777	¥ 159,553	INTECH(1), EHC(1)	A	A	
33	2001/3/31	Air conditioner	Panasonic	CU-CSA181	L (E)	4	¥ 214,306	¥ 857,224	INTECH(3), EHC(1)	A	A	
34	2001/3/31	Evaporator	YAMATO	RE-210-110A	L (E)	1	¥ 688,252	¥ 688,252	CEAN	A	A	
35	2001/3/31	Generator	Marsiglione	8kva, 6.4kw, 12A	L (E)	1	¥ 348,100	¥ 348,100	INTECH	C	A	
36	2001/3/31	Generator	HONDA	EM2500	L (E)	1	¥ 142,037	¥ 142,037	INIDEP	C	A	
37	2001/3/31	Well pump	motorarg	423/5.5	L (E)	4	¥ 79,113	¥ 316,453	INTECH	A	C	
38	2001/3/31	Pool pump	ESPA	0.25HP	L (E)	12	¥ 14,911	¥ 178,926	INIDEP(6), INTECH(4), EHC(2)	A	B	
39	2001/3/31	Pond pump	ESPA	DRAINEX 1.5HP	L (E)	6	¥ 53,903	¥ 323,419	INIDEP(2), INTECH(2), EHC(2)	A	B	
40	2001/3/31	FRP Boat	Marine Sur	Aquamarine 6.0	L (E)	1	¥ 287,017	¥ 287,017	INTECH	C	A	
41	2001/3/31	Motor	YAMAHA	40HP	L (E)	1	¥ 643,948	¥ 643,948	INTECH	C	A	
42	2001/3/31	Trailer	Marine Sur		L (E)	1	¥ 147,188	¥ 147,188	INTECH	C	A	
43	2001/3/31	Digital Camera	Canon	Power shot G2	L (E)	1	¥ 222,936	¥ 222,936	INTECH	A	A	
44	2001/3/31	Microscope set	Nikon	Eclipse E600	L (E)	1	¥ 2,575,974	¥ 2,575,974	INTECH	A	A	
45	2001/3/31	Binoocular microscope	Nikon	SMZ-645	L (E)	2	¥ 370,547	¥ 741,093	INTECH(1), EHC(1)	A	A	
46	2001/3/31	Microscope	Nikon	Eclipse E200	L (E)	2	¥ 250,220	¥ 500,440	INTECH(1), EHC(1)	A	A	
47	2001/3/31	Photocopier	TOSHIBA	2060	L (E)	1	¥ 647,025	¥ 647,025	INTECH	A	A	
48	2001/3/31	PC, monitor	System Brockers	P4, 1.8Mhz	L (E)	1	¥ 379,746	¥ 379,746	INTECH	A	A	
49	2001/3/31	UPS	APC	Back Pro 650	L (E)	4	¥ 56,094	¥ 224,374	INTECH(3), CEAN(1)	A	A	
50	2001/3/31	Television	SONY	KV-29FS12	L (E)	1	¥ 104,651	¥ 104,651	INTECH	A	A	
51	2001/3/31	Video cassette recorder	SONY	SLV-EX95	L (E)	1	¥ 40,330	¥ 40,330	INTECH	A	A	
52	2000/11/17	Notebook computer	IBM	ThinkPad i1800	E	1	¥ -	¥ -	INTECH (P/J office)	A	C	
53	2000/11/17	Printer	Canon	BJ-M70	E	1	¥ -	¥ -	INTECH (P/J office)	A	A	
54	2003/1/7	Notebook computer	IBM	ThinkPad R32	E	1	¥ 299,800	¥ 299,800	INTECH (P/J office)	A	C	
55	2003/1/7	Printer	Canon	BJ-S700	E	1	¥ 44,800	¥ 44,800	INTECH (P/J office)	A	A	
56	2003/1/28	Furnitures for P/J office	CASA MELAS	desks, chairs, book shelf, table	L	1	P 3,593.00	P 3,593.00	INTECH (P/J office)	A	A	
57	2003/2/2	Artemia tank	EARTH CORP.	SBF-100	J	2	¥ 54,000	¥ 108,000	EHC	B	B	
58	2003/2/2	Titan heater	EARTH CORP.	TH2-05	J	3	¥ 21,000	¥ 63,000	INTECH(1), EHC(2)	B	A	
59	2003/2/2	Thermo stat	EARTH CORP.	RL-200N	J	3	¥ 30,000	¥ 90,000	INTECH(1), EHC(2)	B	A	
60	2003/2/2	Automatic feeder	EARTH CORP.	KA-20	J	3	¥ 170,000	¥ 510,000	EHC	A	A	
61	2003/3/23	Autosystem for Generator	GENAMAX	for 40Kva	L	1	P 7,350.50	P 7,350.50	INTECH	B	A	
62	2003/3/23	Generator system	GENAMAX	50Kva	L	1	P 26,840.00	P 26,840.00	EHC	B	A	
63	2003/3/25	Tank sheet	PILETIN	for 10m	L	4	P 1,586.00	P 6,344.00	EHC	A	A	
64	2003/3/25	Tank sheet	PILETIN	for 5m	L	9	P 671.00	P 6,039.00	INTECH(6), EHC(3)	A	A	
65	2003/3/28	Tank sheet	TEXTIL ROMA	for 6m	L	1	P 2,860.20	P 2,860.20	INTECH	C	A	
66	2003/3/28	Blower	REPICKY	R100	L	3	P 3,075.00	P 9,225.00	INTECH	A	A	
67	2003/7/29	Paddle Wheel Aerator	Aquatic eco-system	PW11	L	9	P 2,250.00	P 20,250.00	INTECH(4), EHC(5)	A	A	
68	2003/12/29	Automatic feeder	EARTH CORP.	KA-20	J	4	¥ 206,000	¥ 824,000	INTECH(3), EHC(1)	A	A	
69	2004/3/7	Video camera recorder	Canon	FV50	E	1	¥ 74,600	¥ 74,600	INTECH	A	B	
70	2004/4/24	Chest hi-wader	Waterdog	neoprene 4mm	L	1	P 675.00	P 675.00	EHC	A	B	
71	2004/4/28	Chest hi-wader	Waterdog	neoprene 4mm	L	1	P 675.00	P 675.00	EHC	A	B	
72	2004/5/26	Pool cleaning system	MAVI	3/4HP	L	1	P 784.20	P 784.20	EHC	A	A	

ANNEX VI: Provision of Machinery and Equipment by Japanese Side

Note:

R/P:Route of Procurement
 Frequency of Use
 Condition

(J: From Japan, L: Local, E: With Expert)
 (A: Always - B: Often - C: Sometimes)
 (A: Good - B: Fair - C: Bad)

¥:Japanese Yen
 \$:Doller
 P:Peso

No.	Date of Arrival	Item	Description			Amount	Unit Price Currency	S-total	Place of Storage	Frequency of Use	Condition
			Manufacture	Model Number	R/P						
73	2004/6/17	Pool cleaning system	MAVI	1/2HP	L	1	P 748.80	P 748.80	INTECH	A	A
74	2004/8/28	Electrophoresis system	SEQUI-GEN	GT/PP3000	L	1	P 8,167.10	P 8,167.10	INTECH	A	A
75	2004/9/10	Water filter	VULCANO	VC-50	L	1	P 865.00	P 865.00	INTECH	C	A
76	2004/10/5	Mixer	FREIRE	Sin Mando INOX	L	1	P 1,310.00	P 1,310.00	EHC	A	A
77	2004/10/5	Meat chopper	FREIRE	No.32	L	1	P 1,640.00	P 1,640.00	EHC	A	A
78	2004/10/27	Balance	Monetti	EM3000	L	1	P 525.00	P 525.00	EHC	A	A
79	2004/12/7	Refrigerator	Saccol	1 door 104L	L	1	P 855.00	P 855.00	INTECH (P/J office)	A	A
80	2005/1/5	FRP round tank	INDUSOL	2 X 0.8m	L	3	P 1,350.00	P 4,050.00	EHC	A	A
81	2005/1/6	Well pump	Rotor Pump	HF11 5HP	L	1	\$ 844.08	\$ 844.08	INTECH	A	A
82	2005/1/21	Well pump	Rotor Pump	HF11 5HP	L	2	\$ 844.08	\$ 1,688.16	INTECH	A	A
	2005/1/26	Crasher	KUTER	16L	L	1	P 1,600.00	P 1,600.00	EHC	A	A
83	2005/3/10	Well pump	Rotor Pump	HF11 3HP	L	2	\$ 518.83	\$ 1,037.65	INTECH(1), EHC(1)		A
84	2005/3/11	Net cage	Moscuzza		L	1	P 2,010.00	P 2,010.00	EHC		A
85	2005/3/31	Balance	OHAUS	ARA-520	L	1	P 2,950.00	P 2,950.00	EHC	A	A
86	2005/3/31	Portable DO meter	Hanna Instruments	HI-9142	L	1	P 2,188.00	P 2,188.00	EHC		A
87	2005/3/31	Micro pipetter	Genex	BETA 1-5ml	L	1	P 785.00	P 785.00	EHC		A
88	2005/3/31	Blower	REPICKY	R100	L	2	P 3,495.00	P 6,990.00	EHC		A
89	2005/3/31	Net material	Moscuzza	Raschel 2.16 X 200m	L	1	P 4,000.00	P 4,000.00	EHC		A

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ANNEX VII: Provision of Local Cost by Japanese Side

Unit: Yen ¥

No.	Category	Budgetary Year				Amount
		FY.2002	FY.2003	FY.2004	FY.2005	
1	Administration (General Affairs)	1,700,000	4,905,000	5,248,000	1,500,000	13,353,000
2						-
3	Technical Extension					-
4	Improvement of Infrastructure		5,495,000	1,014,000		6,509,000
5	Technical Exchange Program					-
6						-
7						
8						
Total		1,700,000	10,400,000	6,262,000	1,500,000	

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ANNEX VIII: Budget Allocated for the Project by Argentine Side

Application of Budget (Lab. of Ichthyophysiology and Aquaculture, IIB-INTECH)

Unit: USD

No.	Description		FY.2002	FY.2003	FY.2004	FY.2005 ^{*1}		Total
1	Technical Equipment for Staff	Received Budget	800	500	1,500	900		3,700
		Expenditure	800	500	1,500	900		3,700
2	Custom Fee for Imported Equipmen	Received Budget	0	0	0	0		0
		Expenditure	0	0	0	0		0
3	Building construction	Received Budget	2000	500	500	1,000		4,000
		Expenditure	2000	500	500	1,000		4,000
5	Power supply, telephone, internet	Received Budget	1000	3000	3,600	1,200		8,800
		Expenditure	1000	3000	3,600	1,200		8,800
Total Received Budget			3800	4000	5600	3100	0	16500
Total Expenditure			3800	4000	5600	3100	0	16500
Balance of Fiscal Year			0	0	0	0		0

*1 Until March

Application of Budget (EHC)

Unit: USD

No.	Description		FY.2002	FY.2003	FY.2004	FY.2005 ^{*1}		Total
1	Technical Equipment for Staff	Received Budget			6,345	1,552		7,897
		Expenditure			6,345	1,552		7,897
2	Custom Fee for Imported Equipmen	Received Budget	0	0	0	0		0
		Expenditure	0	0	0	0		0
3	Building construction	Received Budget		1379				1,379
		Expenditure		1379				1,379
5	Power supply, telephone, fuel	Received Budget	7045	7045	7045	1,761		22,896
		Expenditure	7045	7045	7045	1,761		22,896
Total Received Budget			7045	8424	13390	3313	0	32172
Total Expenditure			7045	8424	13390	3313		32172
Balance of Fiscal Year			0	0	0	0		0

*1 Until March

別添資料5：オリジナルPDM(PDM0)

Project Name: Project of Research and Development of Pejerrey Aquaculture and Propagation

Duration: September 2002 - September 2005

Final Beneficiaries: Small and medium farmers, fishermen, etc.

Project area: Republic of Argentina

Institutions involved: CONICET/INTECH, MAGPPBA/EHC etc.

Date: May 23, 2002

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Super Goal Promotion of Pejerrey farming and fisheries activities in and around the Province of Buenos Aires	1. Number of Pejerrey fish farmers 2. Number of Pejerrey fishermen 3. Number of Pejerrey seed producers 4. Number of employees in the above and other related forms of production	Statistics on Pejerrey farming and other related forms of production to be collected by the INIDEP, Universities etc.	There is no decrease in the demand for Pejerrey.
Overall Goal Execution of model Pejerrey farming and other related forms of production in the Chascomus area and surroundings	1. Number of model Pejerrey farmers 2. Profit of model farming	Reports from CONICET/INTECH	Extension services on Pejerrey farming are provided. Legislation on Pejerrey farming, fisheries and other related forms of production is reviewed and enacted.
Project Purpose Development of fundamental techniques for aquaculture and propagation of Pejerrey	1. Number of seeds produced 2. Existence of a plan of activities	Project reports	Model farming and other related forms of production are carried out.
Output 1. Development of Pejerrey seed production techniques 2. Research on mass seed production techniques for Pejerrey 3. Plannint of farming and other related forms of production 4. Consideration of monitoring/evaluation results for improvement of the project	1-1 Quantity of high quality eggs 1-2 Development of a feeding regime 1-3 Elucidation of genetic traits 2-1 Determination of adequate facilities and tools 2-2 Existence of mass-production techniques for food organisms 2-3 Existence of techniques for prevention and treatment of diseases 2-4 Existence of method for marking of seeds 3-1 Report on the legislation of water resource utilization 3-2 Planning of farming and other related forms of production 3-3 Preliminary survey of candidate sites for model Pejerrey farming and other related forms of production 4-1 Existence of monitoring activities 4-2 Distribution of a manual	Project reports Project reports Project reports Report on monitoring activities etc. Manual	
Activities 1-1 Development of techniques for obtention of high quality eggs 1-1-1 Rearing of broodstock fish 1-1-2 Establishment of induced breeding techniques 1-2 Establishment of suitable feeding regimes 1-2-1 Development of artificial feeds 1-2-2 Research on feeding regimes 1-3 Genetic identification of Japanese and Argentine Pejerrey stocks 2-1 Investigation on suitable facilities and tools 2-2 Development of methods for mass seed production of food organisms 2-3 Establishment of disease prevention and treatment methods 2-4 Research on seed marking techniques 3-1 Survey of legislation on water resource utilization 3-2 Technical and financial evaluation of possible model Pejerrey farming and other related forms of production 3-3 Preliminary evaluation of candidate sites for model Pejerrey farming and other related forms of production 4-1 Periodical monitoring and assessment 4-2 Improvement of activities based on the results of monitoring/evaluation 4-3 Compilation of a manual based on the research and development results	Input		Preconditions Collaboration between all institutions involved
	Japanese side Long-term experts - Seed production - Aquaculture Short-term experts - Artificial feeds - induced breeding - Genetic identification of stocks - Disease prevention and treatment - Fisheries and water resource legislation Provision of equipment Acceptance of trainees in Japan	Argentine Side C/P Institutions and staff Land, office and research facilities Running costs	