

別添 1. 調査日程

エクアドルガラバゴス諸島自然環境保全協力（仮） 短期調査（第2回） 日程表

期間： 2001年3月2日（土）～2001年3月17日（日）（計画分析団員は3月31日（日）まで）

日順	月日	曜日	川村（総括）、中澤（国立公園管理）、阿部（海洋物理/生物）、奥村（協力計画）	宿泊地	フランク・ショパン（計画分析）	宿泊地	鈴木（通訳）	Nestor Vega（ファシリテーター）	
1	3月2日	土	移動（東京11:00→NY09:15, NH10） 国内打合せ	NY	総括他と同日程				
2	3月3日	日		キト			移動（メキシコ・シテイ06:55→サン・ホセ09:50, LR 691, サン・ホセ10:20→キト13:30, LR661）		
3	3月4日	月	9:30 大使館表敬並びに意見交換 10:30 JOCV調整員事務所打合せ 12:00 外務省（国際協力庁）表敬並びに意見交換 14:30 環境省表敬並びに意見交換	キト	総括他と同日程				
4	3月5日	火	移動（キト07:30→バルトラ島9:45, TAME 191便→サンタクルス島） 14:00 国立公園局表敬並びに意見交換 15:00 ダーウィン研究所表敬 16:00 プレ・ワークショップ（関係者分析）	サンタクルス島	総括他と同日程				
5	3月6日	水	9:00-17:00 PCMワークショップ（全体説明、問題分析）	サンタクルス島					
6	3月7日	木	8:00-17:00 PCMワークショップ（問題分析、目的分析）	サンタクルス島					
7	3月8日	金	9:00-17:00 PCMワークショップ（目的分析、プロジェクト計画案の検討） 11:30 専門家・JOCV生活環境調査	サンタクルス島					
8	3月9日	土	移動（サンタ・クルス島6:00→イサベラ島8:00） 11:00 現地調査（イサベラ島における国立公園局による保護活動現場及び海洋研究所の保護活動予定現場の調査） 17:00 イサベラ島関係者とのミニ・ワークショップ（参加者：民芸品グループ代表・メンバー、漁業協同組合の代表、学校の先生等の女性達）	イサベラ島				バルトラ島→キト	
9	3月10日	日	国内打合せ 移動（イサベラ島9:30→サン・クリストバル島10:30） 11:00 サン・クリストバル島関係者とのミニ・ワークショップ（参加者：州知事、港湾局長、漁業協同組合代表、民芸品グループ代表・メンバー、観光会議所代表、陸軍代表等） 15:00 現地調査（サン・クリストバル島における国立公園局による保護活動現場の調査、ビジターセンター調査）	サン・クリストバル島					
10	3月11日	月	移動（サン・クリストバル島6:00→サンタ・クルス島8:00） 国内打合せ 14:00 国立公園局幹部との協議 15:00 国立公園局、ダーウィン研究所、その他関連機関との協議（プロジェクト・フレームワークについて）	サンタクルス島					
11	3月12日	火	8:00 国立公園局、ダーウィン研究所、その他関連機関との協議（海洋部分以外についての協力内容の検討） 14:00 国立公園局との協議（ミニッツ案の検討）	サンタクルス島					
12	3月13日	水	7:00 国立公園局との協議（ミニッツ案の検討） 移動（サンタクルス島→バルトラ島12:30→キト16:45, TAME192便）	キト	国立公園局と共同でプロジェクト・ドキュメント作成のための作業	サンタクルス島			
13	3月14日	木	9:30 環境省との協議（中澤、奥村）、外務省との協議（川村、阿部） 11:30 環境省との協議（ミニッツ案の最終確認） 15:30 ミニッツ署名	キト					
14	3月15日	金	9:30 外務省国際協力庁報告	NY					移動（キト07:30→パナマ・シテイ09:15, CM270, パナマ・シテイ10:20→メキシコ・シテイ12:55, CM210）
15	3月16日	土	移動（キト14:00→NY23:40, LR 660）	NY					
16	3月17日	日	移動（NY11:00→）	機内					
17	3月18日	月	移動（→東京14:50, NH9）						
18	3月19日	火							
19	3月20日	水							
20	3月21日	木							
21	3月22日	金							
22	3月23日	土							
23	3月24日	日							
24	3月25日	月							
25	3月26日	火							
26	3月27日	水							
27	3月28日	木							
28	3月29日	金			移動（サンタクルス島→バルトラ島12:30→キト16:15, 192便）	キト			
29	3月30日	土			移動（キト07:41→NY16:27, AA932）	NY			
30	3月31日	日			移動（NY07:00→ボート・オブ・スペイン12:45, BW425）				

別添 2. 主要面談者

エクアドル側

外務省 国際協力庁	Juan Salazar Sancisi Vladimir Jarrin Jarrin	Director Ejectivo Consejero
環境省	Lourdes Luque de Jaramillo Lucia Villacis M. Pedro Ponce	Minister Director of International Affairs Department Consultant, UCIGAL
ガラパゴス国立公園局	Elicier Cruz Mario Piu Mauricio Velasquez	Director Subdirector Coordinador de Proyectos
ダーウィン研究所	Graham Edgar Alan Tye	Head of Marine Research, Marine Research and Conservation Head of Department of Botany
海軍海洋研究所	Patricio Goyes Arroyo	Capitan de Fragata - EM, Sub -director Tecnico

その他、ワークショップ及びミニ・ワークショップの参加者は、別添ミニッツ
Annex 2 参照

日本側

在エクアドル日本国大使館	中野 雅彦 釜坂 祐子	二等書記官 職員
JOCV 事務所	高田 肇	所長
派遣専門家	田上 実	長期専門家（開発計画）

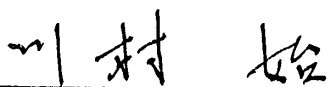
Minutes of Meetings
Between
The Japanese Second Preparatory Work Mission
And
The Authority Concerned of the Government of the Republic of Ecuador
On
The Japanese Technical Cooperation
for the Conservation of Ecosystems of
the Galapagos Islands, Ecuador

The Japanese Second Preparatory Work Mission (hereinafter referred to as "the Mission"), organized by Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Hajime KAWAMURA, visited the Republic of Ecuador from 3rd March to 15th March, 2002, for the purpose of working out the details of the technical cooperation program concerning the Program for conservation of eco-system of the Galapagos Islands, Ecuador.

During its stay in the Republic of Ecuador, the Mission, conducted workshops, field surveys, and exchanged views with the representatives of the Ministry of Environment, the Ecuadorian Institute of International Cooperation (INECI), Ministry of Foreign Affairs, the Galapagos National Park Service (Servicio Parque Nacional Galapagos, hereinafter referred to as "GNPS"), the Charles Darwin Research Station (hereinafter referred to as "CDRS"), and Junta de Manejo Participativo (Participatory Management Council, hereinafter referred to as "JMP"), and other concerned agencies and personnel of Ecuadorian Side.

As the result of discussions, and in accordance with the provisions of the Agreement on Technical Cooperation between the Government of Japan and the Government of the Republic of Ecuador, signed in Quito on June 25th, 1992 (hereinafter referred to as "the Agreement"), the Mission and the Ecuadorian authorities concerned reached common understanding concerning the matters referred to in the attached documents hereafter.

Quito, 14th March, 2002

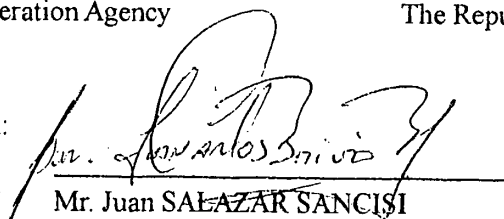


Mr. Hajime KAWAMURA
Leader
The Second Preparatory Work Mission
Japan International Cooperation Agency
Japan



Mrs. Lourdes LUQUE de JARAMILLO
Minister
Ministry of Environment
The Republic of Ecuador

Ad-referendum:



Mr. Juan SALAZAR SANCISI
Executive Director
The Ecuadorian Institute of International Cooperation (INECI)
Ministry of Foreign Affairs
The Republic of Ecuador

THE ATTACHED DOCUMENT

1. Outline of the Program

(1) Name of the Program

Both sides agreed to decide “Program for Integrated Management of Direction of the Protected Areas of Galapagos (DPAG)” as the name of the Program. However, the name may be modified according to future discussions before the signing of the Record of Discussions (hereinafter referred to as “R/D”).

Attention: DPAG consists of Parque Nacional Galapagos (Galapagos National Park, hereinafter referred to as PNG) and Reserva Marina de Galapagos (Marine Reserve of Galapagos, hereinafter referred to as RMG).

(2) Program Area

The program area will be PNG and RMG.

(3) Components of the Program

Both sides agreed that the Program includes the following components:

- i) The Project for Enhancement of Participatory Approach for RMG Conservation
- ii) Long-term experts
- iii) Training courses in Japan
- iv) Japan Overseas Cooperation Volunteer (hereinafter referred to as “JOCV”)

2. Outline of each component

(1) The Project for Enhancement of Participatory Approach for RMG Conservation

i) Name of the Project

Both sides agreed to decide “the Project for Enhancement of Participatory Approach for RMG Conservation” as the name of the Project. However, the name may be modified according to future discussions before the signing of the Record of Discussions (hereinafter referred to as “R/D”).

ii) Project Area and Base Site

The project area will be the Marine Reserve of Galapagos and related areas.

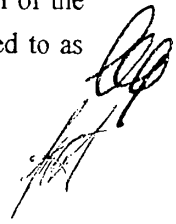
The project base site will be the Galapagos National Park Service (Servicio Parque Nacional Galapagos, hereinafter referred to as “GNPS”) in Puerto Ayora, Santa Cruz Island.

iii) Duration

The duration of the technical cooperation for the Project was decided as 5 years. However, the duration may be subject to modification according to future discussions before signing of the R/D.

iv) Implementing Agency of the Project

GNPS under the Ministry of Environment will bear overall responsibility for the implementation of the Project. GNPS will closely collaborate with Charles Darwin Research Station (hereinafter referred to as “CDRS”) and other related organizations or personnel on the implementation of the Project.



v) Overall Goal

The Overall Goal of the Project will be “Activities carried out in RMG are based on Conservation Principles, Consensus and Awareness”.

vi) Project Purpose

The Purpose of the Project will be “Participatory Approach for RMG Conservation is enhanced”.

vii) Outputs

- vii-1: Pilot project to implement a participatory environmental monitoring and feedback program for the RMG to improve the management plan for responsible use of marine tourism sites and ports
- vii-2: Implementation of cross-sectoral community communication and feedback system to enhance management and decision making in natural resources and conservation
- vii-3: A precautionary resource management and conservation model that takes into account changes in coastal productivity associated with fluctuations in oceanographic factors
- vii-4: An income diversification strategy and professionalization program for the fishing family workforce to reduce dependency and fishing pressure on heavily exploited resources
- vii-5: An enhanced capacity to monitor and manage impacts of tourism activities at selected marine sites

viii) Activities

Please refer to the Draft of the Project Design Matrix (PDM) as shown in Annex 1.

ix) Long-term experts

Both sides agreed the needs of the following long-term experts:

- a. Community Based management / Chief Advisor
- b. Pollution monitoring
- c. Curriculum design in environmental education / Coordinator (first 3 years)
Socio-economics / Coordinator (last 2 years)
- d. Field oceanographer
- e. Marine Park Management

x) Result of the Workshop

The Workshop was held in Puerto Ayora, Santa Cruz Island from 6 March 2002 to 8 March 2002 with participation of GNPS, CDRS, JMP, fishermen’s cooperatives, and others concerned as listed in Annex 2-1. In Isabela Island, a small workshop was held on 9 March 2002 with participation of the representative and members of fishermen’s wives’ association, a teacher and a representative of fishermen’s cooperative as listed in Annex 2-2. In San Cristobal Island, a small workshop was held on 10 March 2002 with participation of the Governor of the Galapagos Province, the representatives of fishermen’s cooperatives, representative of tourism sector, representative and members of fishermen’s wives’ association and others concerned as listed in Annex 2-3.

a) Results of 3-days Workshop

Project Cycle Management (PCM) was introduced to the participants. A Stakeholders Analysis meeting was held in the preparatory workshop with participation of GNPS, CDRS on 5 March. Problem Analysis and

Objective Analysis was held in the 3-days workshop and objective tree was finally structured, as attached as Annex 3.

b) Results of small workshops

The purpose of the Mission and results of the 3-days workshop were explained to the participants. In addition, the participants expressed their own needs.

c) Draft of Project Design Matrix

After a series of discussions including the 3-days workshop and small workshops, both sides agreed to formulate the draft of Project Design Matrix as described in Annex 1.

(2) Long-term expert

Both sides discussed the needs for dispatch of Japanese long-term experts listed in the Annex 4. Both sides will further discuss this matter through mutual communication before the signing of R/ D for implementation.

(3) Training course in Japan

Japanese side mentioned possibilities for offering the following courses

- a. Training Course of Conservation of Wetland Ecosystems and their Biological Diversity
- b. Training Course of Conservation and Sustainable Management of Coral Reefs
- c. Training Course of Biodiversity Information System
- d. Training Course of Integrated Inshore Resource Management in Tropical Island Countries

(4) Japan Overseas Cooperation Volunteers (hereinafter referred to as "JOCV")

Ecuadorian side proposed the needs of dispatch of JOCV who will carry out activities related to the Project mentioned in (1) and the long-term experts mentioned in (2) in the following fields. As JOCV recruit system is based on public application and budget is limited, there is a possibility that JOCV dispatch cannot be ensured. Both sides will further discuss this matter through mutual communication with close relationship to JOCV Office in Quito before the signing of R/ D for implementation. In case JOCV will be dispatched, both sides will take necessary measures for dispatching JOCV.

- a. Community health care specialist
- b. School teacher with skills in developing primary/ junior school education
- c. Qualified dive instructor with experience in underwater photography
- d. Person with skills in home page design
- e. Person with interests in collection of marine biological data
- f. Person with interests in working with fishermen
- g. Person with skills in marketing and promotion of handicrafts
- h. Person with skills in handicraft production
- i. Diver with skills in species identification
- j. Person with skills in integrated coastal zone management

3. Administration of the Program

(1) GNPS will assign one person as the Program Director who will bear overall responsibility for the

administration and implementation of the Program.

(2) GNPS will assign one person as the Program Manager who will be responsible for managerial and technical issues of the Program.

(3) GNPS will appoint one counterpart as the Program Coordinator who will be in charge of supervising technical aspects as well as daily administrative matters pertaining to the implementation of the Program.

(4) For the effective and successful implementation of technical cooperation for the Program, a Steering Committee will be established whose functions and compositions are described in Annex 5.

(5) GNPS in collaboration with concerned organizations, and together with the Japanese personnel assigned to Galapagos, will form the Working Group and implement the activities of the Program.

4. Measures to be taken by Ecuadorian Government

(1) The Government of the Republic of Ecuador will take necessary measures to ensure that the self-reliant operation of the Program will be sustained during and after the period of Japanese technical cooperation, through the full and active involvement in the Program by all related authorities, beneficiary groups and institutions.

(2) In accordance with the provision of Article IV of the Agreement, the Government of the Republic of Ecuador will ensure that the technologies and knowledge acquired by the Ecuadorian nationals as a result of Japanese technical cooperation will contribute to the sustainable development in ecological, economic and social aspects of the Republic of Ecuador.

(3) In accordance with the provisions of article V and VI of the Agreement, the Government of the Republic of Ecuador will grant in the Republic of Ecuador privileges, exemptions and benefits to the Japanese experts referred to 2. (1) and (2) and their families.

(4) In accordance with the provisions of article VIII of the Agreement, the Government of the Republic of Ecuador will take the measures necessary to receive and use the Equipment provided through JICA referred to 2. (1) and (2) and equipment, machinery and materials carried in by the Japanese experts referred to 2. (1) and (2).

(5) The Government of the Republic of Ecuador will take necessary measures to ensure that the knowledge and experience acquired by the Ecuadorian personnel from technical training in Japan will be utilized effectively in the implementation of the Program.

(6) In accordance with the provision of Article V- (b) of the Agreement, the Government of the Republic of Ecuador will provide the services of the Ecuadorian counterpart personnel and administrative personnel.

(7) In accordance with the provision of Article V- (a) of the Agreement, the Government of the Republic of

Ecuador will provide the land, buildings and facilities.

(8) In accordance with the laws and regulations in force in the Republic of Ecuador, the Government of the Republic of Ecuador will take necessary measures to supply or replace at its own expense machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Program other than the Equipment provided through JICA referred to 2. (1) and (2).

(9) In accordance with the laws and regulations in force in the Republic of Ecuador, the Government of the Republic of Ecuador will take necessary measures to meet the running expenses necessary for the implementation of the Program.

5. Measures to be taken by Japanese government

In accordance with the laws and regulations in force in Japan and the provision of Article III of the Agreement, the Government of Japan will take, at its own expense, the following measures through JICA according to the normal procedures of its technical cooperation scheme.

(1) Dispatch of Japanese Experts

The government of Japan will provide the services of the Japanese experts referred to 2. (1) and (2). The provision of Article IX of the Agreement will be applied to the above-mentioned experts.

(2) Provision of Machinery and Equipment

The government of Japan will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Program. Ecuadorian side proposed the request of the Equipment listed in Annex 7. The provision of Article VIII-1 of the Agreement will be applied to the Equipment.

(3) Training of Ecuadorian Personnel in Japan

The Government of Japan will receive the Ecuadorian personnel connected with the Program for technical training in Japan.

6. Claims against Japanese Experts

In accordance with the provision of Article VII of the Agreement, the Government of the Republic of Ecuador undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Program resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Ecuador except for those arising from the willful misconduct or gross negligence of the Japanese experts.

7. General Observations

In the meeting in the Ecuadorian Institute of International Cooperation, INECL, its Executive Director, Ambassador Juan Salazar, stressed the importance that the international cooperation benefits the local

community, through an active participation of local people in the Project.

He also recommended that the missions should be limited to the minimum required to optimize the cooperation resources, so that the Project can count on maximum financial resources.

8. Future Procedures


The schedule until the implementation of the Project is shown as follows:

(1) March

GNPS and Dr. Francis Chopin, a member of the Mission, will continue further discussions on Project Document and rearrange the framework of the Program to be feasible and adjusted to the GNPS's capacity.

(2) Around July

Project Design Team will be dispatched for the purpose of signing of the R/D including Project Document for the commencement of the Project.

- ANNEX 1: The Draft of the Project Design Matrix
- ANNEX 2: List of Participants in the PCM Workshops
- ANNEX 3: Objective Tree
- ANNEX 4: Possible fields for long-term experts
- ANNEX 5: Steering Committee of the Program 



ANNEX 1

The Draft of the Project Design Matrix



Annex 1: The Draft of the Project Design Matrix (PDM)

Prepared on 14th March, 2002

Project Name: The Project for Enhancement of Participatory Approach for RMG Conservation

Duration: 5 years

Project area: Reserva Marina Galapagos (RMG; Marine Reserve of Galapagos) and related areas

Project site: Galapagos National Park Service (GNPS; Servicio Parque Nacional Galapagos) in Puerto Ayora, Santa Cruz Island

Target Group: Staff of GNPS, JMP, fishermen's families and other stakeholders related to RMG

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Super goal Ecosystem health and human activities within Galapagos Marine Reserve is well maintained and harmonized</p>			
<p>Program goal</p>			
<p>Overall Goal Activities carried out in RMG are based on Conservation Principles, Consensus and Awareness</p>			
<p>Project purpose Participatory Approach for RMG Conservation is enhanced</p>			
<p>Outputs</p> <ol style="list-style-type: none"> 1 Pilot project to implement a participatory environmental monitoring and feedback program for the RMG to improve the management plan for responsible use of marine tourism sites and ports 2 Implementation of cross-sectoral community communication and feedback system to enhance management and decision making in natural resources and conservation 3 A precautionary resource management and conservation model that takes into account changes in coastal productivity associated with fluctuations in oceanographic factors 4 An income diversification strategy and professionalization program for the fishing family workforce to reduce dependency and fishing pressure on heavily exploited resources 5 An enhanced capacity to monitor and manage impacts of tourism activities at selected marine sites 			
<p>Activities</p> <ol style="list-style-type: none"> 1.1 Design of participatory environmental monitoring model for marine tourism sites as a pilot project <ol style="list-style-type: none"> 1.11 Training of GNPS staff in water quality testing 1.12 Training of GNPS staff in monitoring the physical, chemical and biological changes occurring around marine sites related to human impacts 1.13 Determine the level and trends of pollution from sewage and oil release and their relationship to human safety and biodiversity 1.14 Training in presentation of results to communities and establishing mechanisms for gathering discussing pollution abatement strategies 1.15 Discussion of results of studies in island communities through community workshops and meetings 1.16 Development of community based countermeasure management plan to reduce the levels of pollution in the marine environment 1.17 Design of participatory monitoring program for pollution in port areas 1.18 Establish community based "clean beach" program for primary and high schools 1.2 Develop community stewardship program for coastal and marine areas <ol style="list-style-type: none"> 1.21 Conduct field trips for high schools to monitor pollution levels in the marine environment 1.22 Establish a citizens group for coordinating and promoting pollution awareness building at the local level 	<p style="text-align: center;">Inputs</p> <p>(Japanese Side)</p> <p>1) Personnel: Long-term experts; a. Community Based management / Chief Advisor b. Pollution monitoring c. Curriculum design in environmental education / Coordinator(former 3 years) Socio-economics / Coordinator (latter 2 years) d. Field oceanographer e. Marine Park Management</p>	<p>(Ecuadorian Side)</p> <p>1) Personnel: Project Director Project manager Counterparts</p> <p>(See Annex 1-3)</p>	

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<p>1.23 Develop a school student research program for pollution monitoring in local high schools 1.24 Develop a Galapagos "Ranger" program in the high schools</p>	<p>Short-term Experts: as required</p>		
<p>1.3 Promote the activities of the community efforts in national and international campaigns</p> <p>2.1 Capacity building within island school system 2.11 Training for school teachers in the concepts of RMG conservation and sustainable development 2.12 Development of Curriculum on sustainable use and practices in RMG and other important sites 2.13 Improved access to global information related to sustainable development and conservation 2.14 "On the job training" programs for High School students in RMG related careers 2.15 Training of teachers in relationship building activities to increase harmony between parents, teachers, GNPS and CDRS 2.16 Training of teachers in use of PCs for information searches 2.17 Raise profile of schools and children conservation activities through school home pages</p> <p>2.2 Regular and timely Information exchange system between GNPS and Island communities on RMG 2.21 Community notice boards set up 2.22 News bulletins prepared and distributed by GNPS to communities via internet</p> <p>2.3 Strengthening the capacity of JMP to improve information flow to members 2.31 Communication skills training 2.32 Information newsletter is distributed to community</p> <p>2.4 Base line survey on socio-economic conditions of Galapagos inhabitants</p>	<p>(See Annex 1-1)</p> <p>2) Equipment Necessary for implement of the Project (see Annex 1-2)</p> <p>3) Counterpart training in Japan</p>	<p>2) Equipment: Necessary equipment (See Annex 1-4)</p> <p>3) Facilities and Services: Necessary facilities and services including office for Japanese experts (See Annex 1-4)</p>	
<p>3.1 Measurement of ocean current system and associated environmental data 3.11 Training in chemical analysis of sea water 3.12 Training in deployment and use of oceanographic data logging systems 3.13 Oceanographic data logging and mapping program</p> <p>3.2 Evaluation of primary productivity at selected sites in RMG 3.21 Training in measuring nutrient levels in sea water 3.22 Training in conducting and analyzing results plankton/chlorophyll surveys 3.23 Training in conducting and analyzing results of larval recruitment of exploited species</p> <p>3.3 Integration of productivity and larval recruitment data into fisheries management plan 3.31 Identification of spawning and nursery areas of heavily exploited species within the coastal areas of RMG 3.32 Establish a meta database of information on fishing effort and recruitment patterns 3.33 Mapping the physical, oceanographic and biological data in GIS</p> <p>3.4 Improve resource management activities of heavily exploited species 3.41 Regular and timely feedback of information to fishers through JMP 3.42 Participatory resource surveys of fishers and GNPS in data collection, monitoring and analysis 3.43 Information distribution at the community level through notice boards</p>	<p>4) Local cost Part of expenses for project activities</p>	<p>4) Local cost: Budget for project activities</p>	
<p>4.1 Organizational strengthening of fishing families 4.11 Leadership training in cooperatives 4.12 Training in interpretation of RMG laws and forward thinking strategies when exploitation pressure is too high 4.13 Training in business management skills and sustainable development activities</p>			<p>Pre-condition</p>

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4.2 Income diversification to reduce pressure during times of resource declines

- 4.21 Professional certification of fishers as Eco-tour guides
- 4.22 Production of training materials
- 4.23 Delivery of community based training courses
- 4.24 Development of tour guide pamphlets
- 4.25 Training in Quality improvement of handicrafts prepared by Fisher wives
- 4.26 Training in product diversification of handicrafts
- 4.27 Design and prototype construction of new handicraft products
- 4.28 Brand labeling of Galapagos handicrafts
- 4.29 Internet Promotion of efforts of island communities to "self regulate" pressures on resources through income diversification
- 4.30 Promotion of professional certification of eco-tourism by fishers to tour companies and tourists through internet home page

5.1 Responsible use and management of marine sites by tour boats

- 5.11 Creation of Diver training programs
- 5.12 Training in survey methodologies
- 5.13 Training in species identification
- 5.14 Training in impact assessment analysis
- 5.15 Monitoring program at selected marine sites
- 5.16 Environmental Impact Assessment
- 5.17 Recommendations on impact reduction strategies
- 5.18 Preparation of code of practice for marine site use
- 5.19 Development of information feedback system to communities and tour companies on results and abatement program
- 5.20 Publication of user guides and tour operator codes of practice

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ANNEX 1-1: List of Long-Term and Short-Term Experts for the Project

GNPS proposed the needs of dispatch of the following experts. However, as Japanese budget is limited, the recruitment of experts can be difficult, and priorities of Ecuadorian side should be considered, this matter should be decided after discussion between both sides.

Long-term experts:

- a. Community Based management / Chief Advisor (5 years)
- b. Pollution monitoring (5 years)
- c. Curriculum design in environmental education / Coordinator (former 3 years)
Socio-economics / Coordinator (latter 2 years)
- d. Field oceanographer (5 years)
- e. Marine Park Management (5 years)

Attention: GNPS would like to have some flexibility. For example, in output 1, the Person*Year allocation is 5. This could be divided between one expert in sub-specialization A staying with the project for three years in years 1,2 and 3 with another expert with sub-specialization B staying two years in years 4 and 5.

Short-term experts:

- a. Training in water quality analysis and use of equipment (4 months)
- b. Policy and legal advisor for strengthening the management plan related to pollution in RMG (4 months)
- c. IT training specialist (6 months)
- d. Vocational training specialist (6 months)
- e. Electronics technician to set up internet and communication hardware (4 months)
- f. Specialist in environmental impact assessment (6 months)
- g. Specialist in using of instruments
- h. Specialist in buoys installation
- i. Specialist in Eco-tourism promotion and development
- j. Specialist in skills development in Artisanal sector
- k. Underwater mapping specialist
- l. Marine Park policy and management specialist

ANNEX 1-2: List of Equipment and Facilities necessary for implement of the Project (Japanese Input)

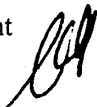
Ecuadorian side proposed the needs of the following equipment. However, as Japanese budget is limited and priorities of Ecuadorian side should be considered, this matter should be decided after discussion between both sides.

- a. Spectrophotometer for analysis of nitrates, phosphates & other nutrients
- b. Colorimeter
- c. Salinity, temperature, ph sensors
- d. Inverted microscope with sedimentation chamber
- e. Stereomicroscope with transmitted light and dark field
- f. Zodiac (1)
- g. Pollution analysis equipment
- h. Laboratory
- i. Heavy metal analysis
- j. Pesticide analysis equipment
- k. Hydrocarbon analysis equipment
- l. Statistics software
- m. Transportable PC based Learning resource center for 10 work stations with air conditioned room, stabilized power supply and back up power supply and internet ready
- n. Internet delivery system to enable island access to internet for information sharing between communities and PNG and access to environmental education
- o. Printers
- p. Community notice boards
- q. Ocean Current meters to measure temporal and spatial variability in currents
- r. M CSTD
- s. Mobile and static Deep water Doppler current equipment
- t. Salinometer
- u. Oceanographic buoys (sensors)
- v. PC equipment and software for data analysis
- w. Phosphate / Nitrate analyzer
- x. Mapping software
- y. Plankton nets and Bottles
- z. Current meters
- aa. Faxes and communication equipment
- bb. Machinery or devices identified to produce handicraft products
- cc. 5 sets of dive equipment
- dd. Compressor and air bank
- ee. Digital Underwater cameras
- ff. Digital Underwater video cameras
- gg. Towed portable diving sled

ANNEX 1-3: List of Counterpart personnel for the Project

Ecuadorian side proposed the dispatch of the following counterpart personnel.

- a. Marine resources unit Staff
- b. Legal Department staff
- c. Environmental Education staff
- d. Technological Management staff
- e. Department of Management
- f. JMP coordinator



ANNEX 1-4: List of Equipment, Facilities and Services necessary for implement of the Project
(Ecuadorian Input)

Ecuadorian side proposed the provision of the following equipment, facilities and services.

- a. Patrol boat (Guadalupe River & Sirenian)
- b. Fluorometer (dissolved hydrocarbons)
- c. Stereomicroscopes (2)
- d. Microscope (1)
- e. Oxygen meter
- f. Basic glass material
- g. Laboratory building
- h. Space in Television and Radio for diffusion.
- i. Preparation of environmental education kits for distribution to island communities
- j. Information kits on rules and regulations related to activities within the RMG
- k. Preparation of CD-ROM material on park careers, activities
- l. Preparation of news media regarding park activities
- m. Preparation of results of participatory management meetings for distribution by internet
- n. Preparation of brochures and information to distribute to the island communities
- o. Service agreements to cover costs of internet access charges
- p. Park staff for support of maintenance of communication system
- q. Hammerhead barge and speed boat in northern islands
- r. Speed boat in remote base in Canal Bolivar
- s. Auditorium for meetings



ANNEX 2

List of Participants in the PCM Workshops *Jals*

ANNEX 2: List of Participants in the PCM Workshops
ANNEX 2-1: List of Participants in the 3-days PCM Workshop
on 6 to 8 March 2002

No.	NAME	ORGANIZATION	POSITION	6		7		8
				am	pm	am	pm	all
1	MARIO PIU	SPNG	SUBDIRECTOR	○		○		
2	FABIAN OVIEDO	SPNG	JEFE DE COMUNICACIONES	○		○		○
3	JOSE BORJA	SPNG	JEFE DESARROLLO INSTITUCIONAL	○	○	○	○	○
4	PABLO GUERRERO	SPNG	JEFE RECURSOS MARINOS	○	○		○	○
5	PATRICIA PUEBLA	SPNG	JEFE GESTION TECNOLOGICA	○	○	○	○	○
6	SAUL ROBALINO	SPNG	JEFE OFICINA FLOREANA		○	○	○	○
7	MAURICIO VELASQUEZ	SPNG	COORDINADOR DE PROYECTOS			○	○	
8	EDWIN ARMIJOS	SPNG	PLANIFICADOR	○	○	○	○	○
9	FRANCISCO MARTINEZ	SPNG	WEBMASTER	○	○	○	○	○
10	TANIA VILLEGAS	SPNG	COORDINADORA EDUCACION AMBIENTAL	○	○	○		○
11	GRAHAM EDGAR	CDRS	JEFE DE INVESTIGACIONES MARINAS	○	○	○		○
12	STUART BANKS	CDRS	OCEANOGRAFO	○		○	○	
13	EDUARDO ESPINOZA	CDRS	INVESTIGADOR BIOMAR	○	○	○	○	○
14	MANFRED ALTAMIRANO	CDRS	BIOLOGO BIOMAR	○	○	○		○
15	MONICA CALVOPINA	CDRS		○		○		○
16	FERNANDO ARCOS	ESPOL	BIOLOGO	○	○	○		
17	MARIUXI BONILLA	ESPOL	BIOLOGA	○	○	○		
18	MANUEL BRAVO	JMP	FACILITADOR JMP	○	○		○	○
19	CARLOS MONCAYO	COOPERATIVA HORIZONTES DE ISABELA	SOCIO	○	○			○
20	FELIX MERCHAN	COOPROPAG	PESCADOR	○	○	○	○	○
21	RODOLFO GARCIA	COOPROPAG	PESCADOR	○	○	○	○	
22	CARLOS MONTALVO	Fisheries Sector	PESCADOR	○	○	○	○	○
23	POLO HERRERA	Fisheries Sector	PESCADOR	○				
24	KLEBER LOPEZ	PRODEIN	COMUNICADOR	○	○	○	○	○
25	ALFREDO ORTIZ	MUNICIPIO	ALCALDE			○		
26	PATRICIO GOYES	INOCAR	CAPITAN	○	○		○	
27	MANOLO ALAVA	CAPITANIA	CAPITAN DE PUERTO	○				
28	CARLOS FCO. MACIEL	CAPTURGAL			○			
29	MARIA LUISA MUÑOZ	D.P.A.	INGENIERA AGRICOLA	○			○	

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ANNEX 2-1': List of Participants in the Meeting with SPNG, CDRS and JMP
on 11 March 2002

No.	NAME	ORGANIZATION	POSITION
1	ELIECER CRUZ	SPNG	DIRECTOR
2	MARIO PIU	SPNG	SUBDIRECTOR
3	PABLO GUERRERO	SPNG	JEFE RECURSOS HUMANOS
4	PATRICIA PUEBLA	SPNG	JEFE GESTION TECNOLOGICA
5	EDGAR MUÑOZ HEREDIA	SPNG	JEFE DE TURISMO
6	VICTOR CARRION	SPNG	JEFE CONTROL Y HERRADICACION
7	JUAN VIZCAINO	SPNG	OFICIAL DE RECURSOS MARINOS
8	MAURICIO VELASQUEZ	SPNG	COORDINADOR DE PROYECTOS
9	TANIA VILLEGAS	SPNG	COORDINADORA EDUCACION AMBIENTAL
10	EDGAR GRAHAM	CDRS	JEFE INVESTIGACIONES MARINAS
11	ALAN TYE	CDRS	JEFE BIOBOTANICA
12	STUART BANKS	CDRS	OCEANOGRAFO
13	MANUEL BRAVO	JUNTA DE MANEJO PARTICIPATIVO	FACILITADCR JMP

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ANNEX 2-2: List of Participants in the small Workshop in Isabela island
on 9 March 2002

No.	NAME	ORGANIZATION	POSITION
1	ENNMA FLOR DE TEJADA	COOPERATIVA DE PEZCA HORIZONTES DE ISABELA	GERENTE
2	CECILIA VERA CORONADO	GRUPO ARTESANAL LAS RAMADAS	SOCIA
3	MIRIAM GIL SALAZAR	GRUPO ARTESANAL LAS RAMADAS	SOCIA
4	RITA VERA CORONADO	GRUPO ARTESANAL LAS RAMADAS	SOCIA
5	ROSA ZAMBRANO VERA	GRUPO ARTESANAL LAS RAMADAS	SOCIA
6	MARIA BUSTAMENTE	ORGANIZACIÓN DE MUJERES ACTIVAS ISABELEÑAS	SOCIA
7	MIREYA ROGEL J.	ORGANIZACIÓN DE MUJERES ACTIVAS ISABELEÑAS	SOCIA
8	SUSANA VILLAGOMEZ	ORGANIZACIÓN DE MUJERES ACTIVAS ISABELEÑAS	SOCIA
9	RUBEN CARRIÓN GONZALEZ	PARQUE NACIONAL GALAPAGOS	OFICIAL DE CONSERVACION
10	FRANCISCO MARTINEZ	PARQUE NACIONAL GALAPAGOS	WEBMASTER

ANNEX 2-3: List of Participants in the small Workshop in San Cristobal island
on 10 March 2002

No.	NAME	ORGANIZATION	POSITION
1	FABIAN PARRA	GOBERNACION	GOBERNADOR
2	ABDON GUERRERO	CAPTURGAL	DELEGADO
3	ALGEL VALENCIA	ARMADA DEL ECUADOR	COMANDANTE DE OPERACIONES NAVALES INSULAR
4	BERNARDO GORDÓN	ARMADA DEL ECUADOR	TENIENTE
5	ALFONSO LOZADA	COOPERATIVA PROMAR	PRESIDENTE
6	JONH ZAVALA VILEMA	SECTOR PESQUERO	REPRESENTANTE
7	ALEXANDRA RAMON	MARSEPGAL (MUJERES ARTESANALES SECTOR PESQUERO)	PRESIDENTA
8	LINA BALLESTEROS	OMCA	SOCIA
9	NUBIA RICAUTE	OMCA	PRESIDENTA
10	TANIA COBOS	OMCA	VICEPRESIDENTA
11	MARIO VILLALTA	PARQUE NACIONAL GALAPAGOS	

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ANNEX 3

Objective Tree *Ad*

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ANNEX 3: Objective Tree

Achieve a better quality of

Communication		Education				Excellent health system is es		
Community is aware of resource management	Sequence, organize and directed training for teachers		Technical courses (specialities) available at any level		University education is available for glapagos perons		Hospital with modern equipment	More general medical doctors (with experience)
Strengthened communication process to the community at grass roots	Courses in ecology and educational psycology psycology of development and planning	Continuous follow up and evaluation to the application of learning	Courses of mechanics in outboard engines and ship mechanics	Carpentry, underwater welding, agriculture extension	Virtual classrooms and constant access to internet and online courses		Doinations of new or second hand equipment from international institutions through rotary club, cfoundations, JICA etc	INGALA should ask ministry of health to send more doctors to the Galapagos Is
Stakeholders of each sectors are represented directed and participate in social cooperative activities	Neutral (non political) educational system				Remote teaching through telecommunication technology	Adapt facilities to the university of Guaycil or construct more buildings at the plice		
Promotion campaigns educational; workshops in elemental schools, junior high schools in radio and tv programs								
Creative use of marine reserves								
Educational materials which refer to the marine species living in the area								
Strengthen the project of local journalists								
Subscribe agreements with national and international communication media to have better programs								

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Established	Number of Population controlled	Organic and Inorganic waste should be controlled in Bay areas
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Coonstant training (internal and external) for doctors living in the Galapagos Islands	Immigration control should be strictly implemented	Establishment of provincial family planning program	Environmental administration system should be organized nad implemented
---	--	---	---

Exchange of information and doctors between hospitals in Galapagos, hospitals in Ecuador and foreign countries. Training of doctors	Regional plan formulated and implemented	To revise migration laws to be observed strictly. Fines for persons not observing the law	Concerned sectoers shold have real representatives in immgration control	Effective programs for sex education at school levels and programs on family planning through school visits andhospital visits	The municipity should give each area a garbage collector and broadcast radio programs to prevent the garbage being disposed on the beach
			Careful and conscientous selection of representative		Application of fines to those who do not abide the law and apply

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Incomes from tourism are shared among local people														
Training in tourism industry				Financial mechanism, for local persons to enable them to participate in the tourism sector	Alternative employment for the fishing sector				Efficient management of fishery as a business					
Local tour guides are trained / competitive	Trained personnel is available for the tourism sector			Obtain credit lines for local tourism sector	Participation in the tourist sector	People are trained to get another job			Fishers cooperatives are well organized			General assistance for the fishery sector	Fishery sector trained in processing and sale	
Training programs in different languages	Training in refrigeration systems	Training in mechanics	Professional training programs for seamen triplants		Training programs to enable participants to obtain finance	Training on outboard engine	Programs to develop farm techniques	training of middle level technicians: electricity, refrigeration and mechanics	Implementation of a support system for administrative follow up for government audit	Training programs in business administration	Legal consulting management of cooperatives	Training of administrators for fishery cooperatives		Training programs in fishing sector: production, processing and sales and distributions
Implementation of a fair system to share training opportunities														

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increased									
Better incomes for the fishermen families									
Proceeds are shared by appropriate number of fishers			Exploited fish have enough market				To catch whitefish in the high seas by local fishers		
or should be production, distribution of les	Decrease the number of fishing boats	Growth of the fishing sector is controlled	Control of illegal fishing should be controlled for some species	Other markets are made accessible to the fishing sector				Fishery sector capacity is enhanced to target fish in high seas	Adequate infrastructure / boat
				To open a channel of commercial interaction between fishing sectors and tourist sectors		To promote products of fishing sector			
Establishment of a training school in fishing									
				To set up a quality and quantity control system		Market research of fishing products		To make national and international contacts on fisheries products	
				To assure the payment of the fishing sector		Certification program for fishing products		Environmental awareness program for fisheries species	
				Guidance (orientation) to the fishing sector		Establishment of a distribution centre for fishing products		Quality control of fishing products	
				Construction of a distribution centre of fishing products and equipment		Certification of fishing products			

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Minimal impact of tourism upon ecosystems										
Carrying capacity is defined					Sustainable lobster and sea cucumber fisheries					
Assment of the carrying capacity of tourist sites		Project to regyulate and control wastre disposal	Introduction of exotic marine species is prevented	Commercial species stocks are properly assessed			Good understanding of recruitment processes	Study of the impacts of zoning		Improved capacity to measure fishing efforts
Carrying capacity of marine dive sites is studied		Risk assessment of the introduction of exotic marine species	Local staff are well trained in resource monitoring		Continuous time series data collection			Regular sampling program is established	Larval development study program is implemented	
Study of biological impact of (diseases) and behaviour of dive tourism on ecosystems	Impact assessment for physical and chemical effects upon benthic habitats		Training program	Adequate staff are available for monitoring	Improve fund raising skills to ensure programs run continously	Priority is given to commercial species research	Implement study program for larval disposal related to oceanographic currents			

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Firm understanding of factors affecting ecosystem health

Fisheries production is sustainable

Information is st

			Adequately controlled industrial fisheries			Artisanal sector comply with rules and regulations of the GMR			Development of GISmet database plus protocols	
Understanding of the appropriate levels of fishing effort for sustainable resources	Identify alternative species resources		Exploration of alternative work opportunities		Political decision making is made accountable	Enforce control against industrial fishing	Respect from industrial sector for the law	Adequate control mechanism for self management		
Strengthen the program of observers on fishing boats	Pilot study to assess the impact of extraction of alternative species					Implementation of a surveillance program (boat patrol and radar satellite)	Implement an awareness program	Project to improve fishery cooperative self management		
Life cycle studies of marine resources	Program of offshore fishing is implemented	Cost benefit of alternative fisheries are studied						Education and administrative program	Program of professionalism / qualification for association with cooperatives	Fisher participation with fisheries research
		Environmental awareness for non exploited species for fisheries								

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Shared between		??? Make new card						Minimized levels of contamination in port and bays			
Development of data sharing between organizations and islands	Knowledge of lower trophic levels is collected		Galapagos oceanography and climatology is understood		Study to determine the range of endangered species	Endangered species and degree of threat is known	Understanding of the biology of key species		Monitoring of inorganic contamination in ports	Monitoring of organic contamination in ports	Monitoring of hydrocarbon contamination in ports
	Taxonomic and systematic studies on lower trophic levels		Program of applied oceanographic research	Influence of currents and upwelling on fishery resources	Study to determine the range of endangered species and their biology	Threat abatement plans for endangered species	Understanding of the ecological ecosystem state / health indicator species	Understanding of biology of species with tourist values			
	implementation of applied research and oceanography to live resources	Program of training on marine flora and invertebrates		Research program on larval dispersion and settlement for lobsters and sea cucumbers							

Stronger institutions		The system deals with all sectors			
The organizations of the members of the JMP are strengthened		Existence of evaluation and follow up systems for institutional objectives	Existence of evaluation and follow up systems for staff	Keep the politicians informed fo the decisions of the end users	All human activits affecting RMG are governed by JMP
Mechanisms to capitalize (provide capital) to the Coops. Monthly fees, fishing taxes, and project developments		Financial priority is given to allow Participation of members is made a priority			
Mechanisms and strategies for communiation between the representative and the organizations	Representatives are trained in negotiation techniques	Institutions of the fishery sector are made stronger			
		Resources are obtained to buy out fishing rights			
		Rules of particiation and representation are created	Coops are provided with communication equipment	Coops are provided with appropriate infrastructure	Fishers are trained in businmess practices

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Greater institutional capacity to apply the law		Better understanding of the management system		High observance of the agreements			
Improved organizations of the fishing sector	Design regulations based on consensus and trustworthy information - Diffusion of information by radio and TV	The majority of the galapagos population know the JMP	Implement stratgies to inform about the JMP	Greater degree of trust because of the compliance of the agereemnts	There is an efficient communication between the representatives and the grass roots of the organization	Stronger representation of the fishing sector	Repreentatives are recognized and accepted by the grass roots organization
				The participation of the managemewnt system is handled in an efficient manner			



ANNEX 4

Possible fields for long-term experts *all*

all


all

Annex 4: Possible fields for long-term experts

No.	Title	C/P	Relating Org.	Lack of	Other Donation	JICA Project Possibility & Input	Priority
1	Extermination of introduced species	SPNG/CDRS	CABI	Money & Technology Transfer	GEF/ UNF	Extermination works can be conducted by JOCV. Because of experts exist in CABI, there is no need for JICA experts.	6
2	Study of bloodsucker fly	SPNG/CDRS		Money		Does not fit the JICA scheme.	
3	Development of the introduced species monitoring system	SPNG/CDRS/SESA		Technology Transfer		A long-term expert of entomology (ecosystem) is required. Short-term experts can be considered.	1
4	Countermeasures for uncared agriculture lands	SPNG/CDRS/DPA		Technology Transfer	TNC/ SACHA F	Guidance on management of uncared for agriculture lands can be conducted by a long-term expert and/or JOCV.	4
5	Restoration of potential natural vegetation and application to environmental education programme	SPNG/CDRS/DPA		Technology Transfer		(Basic) Restoration of vegetation and environment education can be conducted by JOCV. (advanced) Biotope construction in uncared agriculture lands can be conducted by long & short-term experts and JOCV. Strong scientific supports from SPNG and CDRS are necessary.	5
6	Vegetation mapping	SPNG/CDRS	MILITARY (IGM)	Money (Equipment) & Technology Transfer	NGOs	Technology transfer on vegetation mapping by drafting of a specific area of the park. A team of JICA long and short-term experts such as mapping, field research and aerial photography is necessary. Geographical survey does not fit the JICA scheme.	3
7	Introduction of GIS and access to map data via Internet	SPNG/CDRS		Money (Equipment) & Technology Transfer		Technology transfer on GIS mapping by drafting of a specific area of the park. A team of JICA long and short-term experts such as GIS and information technology and provision of computer facility is necessary. Geographical and basic information survey does not fit the JICA scheme.	2

DPA: Provincial Direction of Agriculture, Ministry of Agriculture

ANNEX 5

Steering Committee of the Program 



ANNEX 5: Steering Committee of the Program

1. Function

The Steering Committee will be held at least once in every six (6) months and whenever necessity arises.

Steering Committee shall:

- (1) Discuss and decide overall management and coordination of the Program,
- (2) Review, advise and endorse the plan of implementation submitted by the Working Group,
- (3) Review, advise and endorse the progress of the Program submitted by the Working Group, and
- (4) Discuss and decide any other matters related to the Program

2. Provisional Composition

(1) Chair person: Program Director - Director of GNPS

(2) Committee members

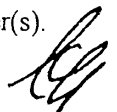
(Ecuadorian Side)

- a. Program Director
- b. Program Manager
- c. C/P designated by the Program Director
- d. Executive Director of UCIGAL
- e. General Manager of INGALA
- f. CDRS
- g. Representatives of Fisheries Cooperatives
- h. Representatives of Tourism sector
- i. Representatives of Agricultural sector
- j. Other personnel concerned with the Program decided by the Ecuadorian side, if necessary.

(Japanese side)

- a. Chief Advisor
- b. Coordinator
- c. Japanese Experts designated by the Chief Advisor
- d. JOCV
- e. Representatives of the JOCV Office in Ecuador
- f. Other personnel concerned with the Program decided by JICA, if necessary.

Note: Official(s) of Embassy of Japan in the Republic of Ecuador may attend the Committee as observer(s).



Annex 5-1: The structure of Steering Committee

Steering Committee

Every 6 months

Program Director

Program Manager	-	Chief Advisor
Program Coordinator	-	Coordinator
C/Ps		Experts
		JOCV

Executive Director of
UCIGAL

JOCV Office
(Embassy of Japan)

General Manager of
INGALA

CDRS

Representatives of Fisheries Sector

Tourism Sector

Agricultural Sector

Etc

別添 1: プロジェクト・デザイン・マトリックス (PDM) (案)

プロジェクト名: ガラパゴス海洋保護区保全のための参加型アプローチ促進プロジェクト

期間: 5年間

対象地域: ガラパゴス海洋保護区 (RMG: Reserva Marina Galapagos) 及び関連エリア

プロジェクト・サイト: ガラパゴス国立公園局 (GNPS: Galapagos National Park Service) (サンタ・クルス郡 プエルトアヨラ教区)

Ver. No: 1

作成日: 2002年3月14日

ターゲット・グループ: GNPSのスタッフ、JMP、漁業者の家族、並びにその他の海洋保護区関係者

プロジェクトの要約 Narrative Summary	指標 Objectively Verifiable Indicators	入手手段 Means of Verification	外部条件 Important Assumptions
<p>スーパー・ゴール Super goal ガラパゴス海洋保護区における健全な生態系及び人間活動が良く維持され調和する。 Ecosystem health and human activities within Galapagos Marine Reserve is well maintained and harmonized</p>			
<p>上位目標 Overall Goal ガラパゴス海洋保護区における活動が、保全の原則、コンセンサス並びに意識に則って行われる。 Activities carried out in RMG are based on Conservation Principles, Consensus and Awareness</p>			
<p>プロジェクト・目標 Project purpose ガラパゴス海洋保護区保全のための参加型アプローチが促進される。 Participatory Approach for RMG Conservation is enhanced</p>			
<p>成果 Outputs 1. ガラパゴス海洋保護区内海洋観光地、及び港湾部の責任ある利用計画推進のための、参加型環境モニタリングとフィードバック・プログラム実施のためのパイロット・プロジェクトが実施される。 Pilot project to implement a participatory environmental monitoring and feedback program for the RMG to improve the management plan for responsible use of marine tourism sites and ports 2. 自然資源保全に関する管理・意志決定システムを強化するための、地域社会セクター間の意志疎通とフィードバック・システムが構築される。 Implementation of cross-sectoral community communication and feedback system to enhance management and decision making in natural resources and conservation 3. 海洋学的要素の変動に起因する沿岸生産性の変化を考慮した予防的な資源管理と保全モデルが作成される。 A precautionary resource management and conservation model that takes into account changes in coastal productivity associated with fluctuations in oceanographic factors 4. 高度利用資源への依存性・漁獲圧を軽減するための、漁家労働力収入多様化戦略と職業訓練プログラムが実施される。 An income diversification strategy and professionalization program for the fishing family workforce to reduce dependency and fishing pressure on heavily exploited resources 5. 特定の海洋観光地における観光活動による影響のモニタリングと管理のための能力が向上する。 An enhanced capacity to monitor and manage impacts of tourism activities at selected marine sites</p>			
<p>活動 Activities 1.1 パイロット・プロジェクトとしての海洋観光地のための参加型環境モニタリング・モデルを創出する。 Design of participatory environmental monitoring model for marine tourism sites as a pilot project 1.11 GNPS スタッフへ水質検査技術を訓練する。 Training of GNPS staff in water quality testing 1.12 GNPS スタッフへ、人間活動によるインパクトに関連した海洋観光地周辺の物理的・化学的・生物学</p>	<p>(日本側) 1) 人員: 長期専門家; a. Community</p>	<p>投入 Inputs (エクアドル側) 1) 人員: Project Director Project manager</p>	

<p>的变化のモニタリングを訓練する。 Training of GNPS staff in monitoring the physical, chemical and biological changes occurring around marine sites related to human impacts</p> <p>1.13 汚水・燃油による汚染水準と傾向、並びに人間にとっての安全性・生物多様性との関係を測定する。 Determine the level and trends of pollution from sewage and oil release and their relationship to human safety and biodiversity</p> <p>1.14 結果を地域社会へ公表する方法を訓練し、汚染軽減戦略の議論・集約メカニズムを設立する。 Training in presentation of results to communities and establishing mechanisms for gathering discussing pollution abatement strategies</p> <p>1.15 ワークショップやミーティングを通して島同士のコミュニティで討議する。 Discussion of results of studies in island communities through community workshops and meetings</p> <p>1.16 海洋環境における汚染水準軽減のためのコミュニティ主体の問題解決方法管理計画を開発する。 Development of community based countermeasure management plan to reduce the levels of pollution in the marine environment</p> <p>1.17 港湾部での汚染のための地域住民参加型モニタリングプログラムを計画する。 Design of participatory monitoring program for pollution in port areas</p> <p>1.18 コミュニティ主体の小・高校生の海岸清掃プログラムを立ち上げる。 Establish community based clean beach program for primary and high schools</p> <p>1.2 沿岸・海洋域のコミュニティによる管理プログラムを策定する。 Develop community stewardship program for coastal and marine areas</p> <p>1.21 高校生のための海洋環境汚染水準モニタリング実習を実施する。 Conduct field trips for high schools to monitor pollution levels in the marine environment</p> <p>1.22 地域レベルでの汚染認知形成推進のための市民グループを設立する。 Establish a citizens group for coordinating and promoting pollution awareness building at the local level</p> <p>1.23 地域の高校での高校生による海洋汚染モニタリング研究プログラムへと発展を促す。 Develop a school student research program for pollution monitoring in local high schools</p> <p>1.24 高校においてガラパゴス・レンジャー・プログラムを設立する。 Develop a Galapagos Ranger program in the high schools</p> <p>1.3 これら成果を国内及び国際キャンペーン活動へと発展させ、コミュニティ努力のさらなる推進を促す。 Promote the activities of the community efforts in national and international campaigns</p>	<p>management / Chief Advisor</p> <p>b. Pollution monitoring</p> <p>c. Curriculum design in environmental education / Coordinator(former 3 years) / Socio-economics / Coordinator (latter 2 years)</p> <p>d. Field oceanographer</p> <p>e. Marine Park Management</p> <p>Short-term Experts: as required</p> <p>(See Annex 1-1)</p> <p>2) Equipment Necessary for implement of the Project</p> <p>(see Annex 1-2)</p> <p>3) Counterpart training in Japan</p>	<p>Counterparts</p> <p>(See Annex 1-3)</p> <p>2) Equipment: Necessary equipment</p> <p>(See Annex 1-4)</p> <p>3) Facilities and Services: Necessary facilities and</p>
<p>2.1 学校制度における教師及び子供たちの能力を開発する。 Capacity building within island school system</p> <p>2.11 海洋保全地域の保全と持続的開発の概念について、学校教師への研修を実施する。 Training for school teachers in the concepts of RMG conservation and sustainable development</p> <p>2.12 海洋保護区内・その他の重要な地点の持続的利用・活動についてのカリキュラムを開発する。 Development of Curriculum on sustainable use and practices in RMG and other important sites</p> <p>2.13 持続的開発・保全に関するインターネットの利用による情報へのアクセスを向上させる。 Improved access to global information related to sustainable development and conservation</p> <p>2.14 高校生に対して、海洋保護区に関連する職業訓練プログラムを実施する。 On the job training programs for High School students in RMG related careers</p>		

<p>2.15 学校教師に対して、両親・教師・GNPS・CDRS間の調和的関係を構築するための活動に関する研修を実施する。 Training of teachers in relationship building activities to increase harmony between parents, teachers, GNPS and CDRS</p> <p>2.16 学校教師に対して、PCを利用した情報収集技術の研修を実施する。 Training of teachers in use of PCs for information searches</p> <p>2.17 ホームページを通じて学校や子供たちの保全活動の概要を紹介する。 Raise profile of schools and children conservation activities through school home pages</p> <p>2.2 GNPSと島内コミュニティ間の定期・不定期な情報交換システムを構築する。 Regular and timely Information exchange system between GNPS and Island communities on RMG</p> <p>2.21 掲示板を設置する。 Community notice boards set up</p> <p>2.22 新しい情報誌を作成し、インターネットを介してGNPSからコミュニティへ配布する。 News bulletins prepared and distributed by GNPS to communities via internet</p> <p>2.3 メンバーへの情報流通のためのJMPの能力を強化する。 Strengthening the capacity of JMP to improve information flow to members</p> <p>2.31 コミュニケーション技術の研修を実施する。 Communication skills training</p> <p>2.32 情報誌をコミュニティへ配布する。 Information newsletter is distributed to community</p> <p>2.4 島民の社会経済的状況に関する基礎調査を実施する。 Base line survey on socio-economic conditions of Galapagos inhabitants</p>		<p>services including office for Japanese experts</p> <p>(See Annex 1-4)</p>
<p>3.1 海流システムと関連する環境データを測定する。 Measurement of ocean current system and associated environmental data</p> <p>3.11 カウンターパートに対して、海水中の化学成分分析に関する訓練を行う。 Training in chemical analysis of sea water</p> <p>3.12 海洋データロギングシステムの使用と設置に関する訓練を行う。 Training in deployment and use of oceanographic data logging systems</p> <p>3.13 収集された海洋環境・流行・流速データをGIS上にマッピングする。 Oceanographic data logging and mapping program</p> <p>3.2 特定モデル海域を設定して、基礎データ収集、及び一次生産力の推定を行う。 Evaluation of primary productivity at selected sites in RMG</p> <p>3.21 カウンターパートに対して海水中の栄養塩類の測定についての訓練を行う。 Training in measuring nutrient levels in sea water</p> <p>3.22 プランクトン・クロロフィル調査の実施と分析のための研修を行う。 Training in conducting and analyzing results plankton/chlorophyll surveys</p> <p>3.23 ナマコ・イセエビなどの高度利用種の幼生加入の調査の実施と分析のための研修を行う。 Training in conducting and analyzing results of larval recruitment of exploited species</p> <p>3.3 一次生産力と幼生加入データの統合による漁業管理計画を策定する。 Integration of productivity and larval recruitment data into fisheries management plan</p> <p>3.31 海流データと幼生成長速度の対比から、高度利用種の産卵域と成長域の特定を行う。 Identification of spawning and nursery areas of heavily exploited species within the coastal areas of RMG</p> <p>3.32 漁獲努力量と加入量の情報を併せて統合型データベースを作成する。 Establish a meta database of information on fishing effort and recruitment patterns</p>	<p>4) Local cost Part of expenses for project activities</p>	<p>4) Local cost: Budget for project activities</p>

<p>3.33 物理・海洋・生物データを GIS 上にマッピングする。 Mapping the physical, oceanographic and biological data in GIS</p> <p>3.4 高度利用種の資源管理活動の質的向上（資源管理計画の合意形成が透明に、スムーズに行われる）を図る。 Improve resource management activities of heavily exploited species</p> <p>3.41 以上の調査研究を通じて得られた成果は、定期・不定期に JMP を通して漁業者へ情報フィードバックをおこなう。 Regular and timely feedback of information to fishers through JMP</p> <p>3.42 その後のデータ収集、モニタリング、分析の際には、漁業者と GNPS との参加型資源調査を行う。 Participatory resource surveys of fishers and GNPS in data collection, monitoring and analysis</p> <p>3.43 コミュニティレベルへは掲示板を通して広報を行う。 Information distribution at the community level through notice boards</p>			
<p>4.1 漁家の組織力を強化する。Organizational strengthening of fishing families</p> <p>4.11 漁協組織の指導者研修を行う。 Leadership training in cooperatives</p> <p>4.12 海洋保護区の法律の解釈及び漁獲圧が高すぎる場合のフォーワード・シンキング戦略について研修を行う。 Training in interpretation of RMG laws and forward thinking strategies when exploitation pressure is too high</p> <p>4.13 経営技術と持続的開発活動に関する研修を行う。 Training in business management skills and sustainable development activities</p> <p>4.2 特定資源への漁獲圧集中を軽減するために、漁業者の収入の多様化を図る。Income diversification to reduce pressure during times of resource declines</p> <p>4.21 漁業者をエコ・ツアーガイドとして認可する。Professional certification of fishers as Eco-tour guides</p> <p>4.22 研修資料を作成する。Production of training materials</p> <p>4.23 コミュニティにおいて研修コースを提供する。Delivery of community based training courses</p> <p>4.24 ツアーガイドパンフレットを作成する。Development of tour guide pamphlets</p> <p>4.25 漁業者の婦人によって生産・販売されている手工芸品の質的向上のための研修を行う。 Training in Quality improvement of handicrafts prepared by Fisher wives</p> <p>4.26 手工芸品の多様化のための研修を行う。Training in product diversification of handicrafts</p> <p>4.27 手工芸品の新作のデザインと試作品を作成する。 Design and prototype construction of new handicraft products</p> <p>4.28 ガラパゴス手工芸品としての商標登録を行う。Brand labeling of Galapagos handicrafts</p> <p>4.29 これらの活動が、収入源の多様化を通じて漁獲圧を自主管理するために漁業者自らの手によって行われていることをインターネットを通じて公表・宣伝する。 Internet Promotion of efforts of island communities to self regulate pressures on resources through income diversification</p> <p>4.30 インターネット・ホームページを通じて、観光業者や観光客に対して、漁業者によるエコ・ツアーの認可を公表・宣伝する。 Promotion of professional certification of eco-tourism by fishers to tour companies and tourists through internet home page</p>			Pre-condition
<p>5.1 Responsible use and management of marine sites by tour boats 観光船による海域ポイントの責任ある利用と管理を行う。</p>			

<p>5.11 ダイバーに対する研修プログラムを作成する。Creation of Diver training programs</p> <p>5.12 生態系調査の基礎的手法についての研修を行う。Training in survey methodologies</p> <p>5.13 種同定についての研修を行う。Training in species identification</p> <p>5.14 影響評価分析についての研修を行う。Training in impact assessment analysis</p> <p>5.15 モデルに指定した特定海洋観光ポイントでの観光収容力推定のためのモニタリングを実施する。 Monitoring program at selected marine sites</p> <p>5.16 観光ツアーの環境への影響評価を行う。Environmental Impact Assessment</p> <p>5.17 影響低減戦略の提言をまとめる。Recommendations on impact reduction strategies</p> <p>5.18 海洋観光ポイントでのツアー業務の作業標準を用意する。 Preparation of code of practice for marine site use</p> <p>5.19 調査結果と影響軽減プログラムを地域コミュニティと観光業者へと還元するシステムを構築する。 Development of information feedback system to communities and tour companies on results and abatement program</p> <p>5.20 ユーザーガイドとツアーオペレーター作業標準を出版する。 Publication of user guides and tour operator codes of practice</p>			
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