2) Important assumptions of the outputs for the project purpose

Policy, structure and budget of CONANP are not changed largely

CONANP was established lately as a decentralized organization in line with the overall environmental conservation policy of the federal government. CONANP has published its five-year work program from 2001 to 2006, and the actual budget was increased by 22% in 2002. These information support stability of its policy, structure and budget.

Regulation of user's fee is implemented

At the time of the Preparatory Study II, progressive ANPs of Yucatan Peninsula such as Sian Ka'an coral reef, Cancun National Park and Isla Contoy of Quintana Roo State have initiated imposing user's fee. The implementation of this system for RBRC is expecting within this year. However, it is necessary to monitor whether refunding process from the Ministry of Finance (SHCP) to each ANP is managed properly or not.

3) Important assumptions of the project purpose for the overall goal

Large-scale natural disaster does not occur

Latest large-scale disaster that affected RBRC was Hurricane Gilberto in 1988. Thereafter no serious hurricane attack has occurred, although minor damages were seen when medium-scale hurricane hit such as Hurricanes Roxana and Opal in 1996.

Fishing efforts for coastal resources are not increased largely

Although illegal fishing is found inside the RBRC, absolute fishing efforts seem not to be increasing largely, because intrusion of migrants to Celestun is not conspicuous now and the fishing gear used is mainly traditional and small-scale.

Environmental pollution is not expanded largely

Environmental pollution generated by community is already at serious stage. However, this situation would not be more serious as far as number of residents and their living standard keep still.

4) Important assumptions of the overall goal for the super goal

Wetland ecosystem of other areas does not get worse

This would be attained since other international cooperation projects for environmental conservation will be implemented in Yucatan Peninsula as shown in Section 2.4 of this documents.

5) Important assumptions for maintaining the super goal

National environmental conservation policy continues

Necessity of environmental conservation is general understanding among educated persons in Mexico, indicating consistent direction of natural environment conservation

policy.

5.8 Administration and Implementing Structure of the Project

The President of CONANP will be the Project Director and bear overall responsibility for the administration and implementation of the Project. The Director of the RBRC office will be the Project Manager and the chief counterpart of the Project. He/she is responsible for managerial and technical matters of the Project. The Project Director will appoint one Mexican counterpart as the Project Coordinator who will be in charge of supervising technical aspects as well as daily administrative matters pertaining to the implementation of the Project.

Other relevant local organizations will coordinate planning, implementation, monitoring and other necessary matters to bring the best results of the Project. For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established whose function and composition are described in Annex 10.

5.9 Pre-conditions

Following two subjects, which are committed by Mexican side, are remarked as pre-conditions of the Project.

Necessary number of counterparts is available
Office for Japanese experts is prepared

Chapter6 Justification of the Project

6.1 Relevancy

6.1.1 Consistency with the policy of Mexican Government

As a country having mega-biodiversity, the Government of Mexico has been given high priority to environmental conservation. A Ministry responsible specifically for environmental sector (SEMARNAP at the time) was established in December 1994. Thereafter, its organizational structure was improved strategically and overall management of ANPs has been mandated to CONANP, a decentralized task-force organization of present SEMARNAT since 2000. This Project was created and proposed by CONANP after detailed examination on the comparative needs for technical cooperation among ANPs.

Considering those backgrounds, the Project is justified to contain sufficient consistency with the policy of Mexican Government.

This Project will take into account the principles established in the Agreement on Technical Cooperation between the Government of Japan and the United Mexican States, signed in Tokyo on December 2nd, 1986.

6.1.2 Consistency with Japanese cooperation policy

JICA had carried out a joint evaluation study for about one year from September 1999 to September 2000 together with the Mexican Institute of International Cooperation (IMEXCI). Based on the study, JICA has identified following four important cooperation subjects for Mexico from such aspect as maximum use of limited cooperation resources.

1) Correction of the gap among regions and wealth distribution
2) Industrial development and promotion of the undeveloped regions
3) Environmental measures and conservation of natural environment
4) South – south cooperation

Regarding the above 3) Environmental measures and conservation of natural environment, the JICA's implementing plan by country indicates that it is important to establish proper management system for conservation of valuable ecosystems such as coastal wetland and tropical forests, and to cooperate with USAID and other donors which have experiences in this sector. The scheme of the Project is agreed well with those cooperation policies of the Japanese government.

6.1.3 Environmental initiative of the USA - Japan Common Agenda

Within the framework of the "Common Agenda" launched by the United States of America and Japan in 1993, a joint project formulation mission visited Mexico on March 2001 to explore with the Mexican Government represented by IMEXCI and SEMARNAT, the possibilities of developing bilateral and trilateral cooperation on environmental matters. As the result, "Yucatan Park Management Program" was identified as one of possible activities to be conducted jointly.

From this aspect, USAID welcomes this Project as it could entail joint or parallel cooperation between JICA and PRONATURA, a long-time NGO partner of the Parks in Peril Program of USAID, which has been supporting conservation activities in many ANPs including Ria Celestun and Ria Lagartos.

6.1.4 Participatory project formulation

Throughout discussions between Mexican side and Japanese side, project site was decided to focus on RBRC. Thereafter, the scope of project was developed by applying participatory PCM method. Various stakeholders participated in workshops, which were organized during the period of both Preparatory Study I and II, by which direction

of the Project was created. The results were consolidated into this project document especially on PDM and PO.

Over the workshops, social problems of Celestun municipality were stressed as fundamental to be solved urgently. The Project was designed to cope with this problem as much as possible under the extent that the responsibility of the RBRC office covers. The relevancy of the Project was enhanced through these participatory examinations

On the other hand, it was difficult to realize direct participation of local residents. It is understood commonly among the above stakeholders participated in the workshops that more than 50% of the residents of Celestun municipality are immigrants having different opinions and lacking conscious about environmental conservation and sustainable use of natural resources.

6.2 Effectiveness

6.2.1 Logical aspects of planning

The Project pursues capacity building and institutional strengthening of the RBRC office by accomplishment of the four outputs which will be realized as the results of practical activities of Mexican staff and Japanese experts.

During the course of the activities and achievement of output, practical knowledge and technology of Mexican counterparts shall be improved largely. Technical training in Japan will provide them with opportunity of visiting learning sites as well as improvement of the specific knowledge. Provision of necessary equipment will help not only for activities but also for institutional strengthening of the RBRC office.

Through the activity of Japanese experts in Mexico and technical training of counterparts in Japan, the Project will evolve close relationship between researchers in Mexico and Japan particularly on the field of wetland ecosystem management. By disclosure of information obtained, not only domestic but also international relationship in the said field is strengthened.

When the project purpose is attained, the office will be able to take leadership in the overall reserve management functioning as a platform organization that can coordinate activities of NGOs and academic institutions. Since the important assumptions concerning fishing effort and environmental pollution will be accomplished as examined in Section 5.7, the overall goal "Conservation of wetland ecosystem of RBRC is improved", will readily be achieved by continuation of activity of the RBRC office.

Considering RBRC contains one of the largest coastal wetland in Yucatan Peninsula, its conservation shall contribute to improvement of overall environmental conservation of

the Peninsula, which is set as the super goal of the Project.

6.2.2 Verification of the level of project purpose

In order to evaluate appropriateness of the level of project purpose, the experiences of Ria Lagartos shall be referred. Since RBRL is known as significant breeding area of flamingo, several donors have been supporting the activity of the RBRL office. It was helped particularly by the Parks in Peril Program of USAID/TNC/PRONATURA since 1991 and by World Bank-GEF fund since 1996. According to the former director of the RBRL office, it took about 10 years to establish a sophisticated management system of the reserve under such cooperation.

Therefore, the project purpose of this Project is a little ambitious one in terms of the project period of five years, but should be reachable under necessary support and collaboration of the RBRL office.

6.3 Efficiency

6.3.1 Relationship between input and output

This Project is planned to carry out basically by the staff of the RBRC office (presently 4 technical staff) and two Japanese long-term experts. The scale of input of human resources seems to be small to achieve all the outputs, even though some staff of the RBRL office work in part time and a series of Japanese short-term experts are dispatched. It shall be noted that there are 35 staff working for reserve management of RBRL which is a little smaller in area than RBRC.

In order to cope with the above situation, the Project is designed to strengthen collaborative activities with relevant government organizations and NGOs. Most of such organizations welcome to participate in or collaborate with the Project. Moreover, sub-contract scheme with local resource persons and consultants will also be encouraged due to the necessity. The efficiency from input to output shall be secured by adopting these countermeasures.

However, basically it is expected and required to increase number of full-time counterpart staff to the RBRC office in early stage of the Project period.

6.3.2 Adoption of the contract-type technical cooperation scheme

This Project is going to carry out by adopting a new scheme of JICA namely contract-type technical cooperation. In this scheme, most parts of project implementation such as assignment of experts, procurement of basic equipment and coordination of counterpart training in Japan will be contracted-out to private organ(s) which is/are evaluated and selected by JICA. By adoption of the contract-type technical cooperation scheme, quick decision and flexible actions against day-to-day

modification of project activities will be possible so that efficiency of the Project is expected to improve accordingly.

6.4 Impact

6.4.1 Prospect of achievement of overall goal and super goal

When the project purpose is attained, the RBRC office will obtain effective lobbying and bargaining power for implementation or cancellation of public works from the aspect of environmental conservation. By carrying out practical activities with local people, their reliance on the RBRC office will be increased. Local residents particularly those in Celestun municipality will be benefited by encouragement of alternative livelihood programs and improvement of social infrastructure which will be initiated by the Project. Considering the foregoing experience such as RBRL, the overall goal of the Project will be achieved in 4-5 years after completion of the Project.

The achievements of the Project such as establishment of a database network system, various UMAs, guideline for environmental friendly facility design, etc., can be used as common knowledge of CONANP and other ANPs. This means the Project will create positive impact to conservation activities of other ANPs and nature conservation units in Yucatan Peninsula. It is plausible to achieve super goal in about 10 years after completion of the Project.

6.4.2 Socio-economic impacts

1) Impact for policy making

The results of activities of this Project will provide significant knowledge and tools to be able to use as basis of political decisions about environmental subjects. Baseline information about socio-economic profiles of Celestun and natural habitat is certainly useful for the policy making of the RBRC.

The Project is designed to examine sustainable or wise-use of natural resources such as eco-tourism, UMA and other alternative livelihood without damage to the environment. Those project achievements will elaborate the options of political decision for environmental management.

2) Institutional impact

The environmental GIS database to be established in the Project will affect improvement of land use regulation, namely the Ecological Land Use Planning (OET). OET is a spatial land use program for designated unit area considering environmental issues, in which federal and local governments participate in the planning and implementation.

At present, law enforcement system relating to illegal activities inside the RBRC is

complicated and difficult to understand by local people. The collaborative surveillance activities to be introduced in this Project will give an idea to improve future institutional framework from the aspect of practical implementation.

3) Social impact

The Project activities such as participatory implementation of mangrove reforestation, pilot program of UMAs and environmental educational program will develop close human relationship between indigenous residents and immigrant populations in Celestun municipality.

Introduction of new technologies regarding sanitary infrastructure must prevent outbreak or expansion of infectious disease as well as reduce environmental load to the reserve.

4) Technical impact

Technologies on environmental conservation to be introduced in the Project are directly transferred to Mexican counterparts, namely staff of the RBRC office and the RBRL office. In addition, since the Project is implemented in close collaboration with other relevant organizations, the technology is disseminated to all those persons participated in the Project. The number of technical persons benefited directly in the course of the project activity will be more than 50 persons. Trained counterparts will be lecturers or facilitators in future training course for new staff and other ANP staff.

Technologies on sustainable use of natural resources will be transferred directly to local people through counterparts and Japanese experts. The number of those beneficiaries will be more than 200 during the Project.

5) Economic Impact

When local participants of livelihood-related programs of this Project start practical production or services, their income will increase accordingly. Promotion of eco-tourism will increase the time that tourists stay in RBRC from current 3 hours to one day. This implies not only promotion of alternative source of income such as guides for wildlife watching, trails, diving etc, but also promotion of associated economic activities such as restaurants, hotel, souvenir shop, etc. Although most of the tourists will stay at hotels in Melida city located about 1.5 hours distance by car, increase of overnight tourists are expected at small hotels in RBRC, which are operating in the sub-zone of human settlement.

Further more, when the RBRC office conducts comprehensive environmental management activities properly, it will be possible to invite investment from private sector.

6.5 Sustainability

6.5.1 Capacity of organization

Although CONANP is relatively new organization, most of the staff are those having experiences on management of ANPs since the time of UCANP of SEMARNAP. CONANP is now able to execute their conservation policy with normative power. In addition it is strengthening human resources by appointing resource persons from NGO and private sector

Since CONANP is a decentralized task force organization, effect of political intervention can be minimized. For instance, at the change of ruling political parties in December 2000, only few staff were resigned and no significant change of organization occurs in CONANP.

It is concluded that CONANP has sufficient capacity to implementing the Project continuously.

6.5.2 Financial conditions

Expense of CONANP for ANPs has been increasing as shown in the following table. Unit expense was increased from 1.95 peso/ha in 1995 to 8.62 pesos/ha in 2000. This budgeting tendency will secure sustainability of this Project.

Increase of ANP areas and expense

Year	Area (x 1000ha)	Expense in 2000 price (x1000 peso)	Unit expense (peso/ha)
1995	13,526	26,383	1.95
1996	13,990	30,345	2.17
1997	14,374	44,396	3.09
1998	15,087	52,328	3.47
1999	15,490	59,111	3.82
2000	17,056	147,000	8.62

Source: Work Program of CONANP (2001-2006)

On March 2002, municipalities of Celestun and Maxcanu of Yucatan State were designated as the site of PRODERS in addition to Calkini municipality of Campeche State, meaning that all the area of RBRC is now covered by the scheme of PRODERS. As of June 2002, the SEMARNAT-Yucatan State office and the Government of Yucatan State have allocated 700,000 pesos respectively for implementation of PRODERS in Celestun municipality. The PRODERS scheme will continue several years.

In addition, scheduled implementation of user's fee system will contribute largely for financial sustainability of the Project.

6.6 Overall Project Justification

As discussed in this Chapter, the Project contains sufficient relevancy to be implemented by applying technical cooperation scheme of the Japanese Government. The effectiveness of the Project is evaluated well despite some discrepancy in understanding between the stakeholders participated in the workshop and a part of residents in Celestun. The knowledge of the latter will be improved through implementation of the Project, i.e., encouragement of sustainable utilization of natural resources and environmental education. The efficiency will be secured when necessary counterparts are assigned. The project purpose is expected to contribute largely for overall goal and elaborate a series of positive socio-economic impacts. The project sustainability is secured by organizational stability and financial capacity of implementing organization, CONANP.