PROJECT EVALUATION SERIES

Final Evaluation of the project "Integrated Management of the Ilha Grande Bay Ecosystem" (BIG Project)

GCP/BRA/078/GFF
GEF ID: 3848

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Acronyms and abbreviations

BH	Budget holder
CONABIO	National Commission on Biodiversity
CU	Conservation Unit
EM	Evaluation Manager
EQ	Evaluation Question
ET	Evaluation team
FAO	Food and Agriculture Organization of the United Nations
FAOR	FAO Representative
FE	Final Evaluation
GEF	Global Environmental Fund
IEM	Integrated ecosystem management
INEA	State Environmental Institute
LTO	Lead technical officer
LTU	Lead technical unit
MTR	Mid-term review
OED	FAO Office of Evaluation
OR	Organizational Results
PA	Protected Area
PIR	Project Implementation Review
PMU	Project Management Unit
PPP	Private Public Partnership
PRODOC	Project Document
PRONABIO	National Biodiversity Programme
SEA	Rio de Janeiro State Environment Secretariat
SO	Strategic Objective
SP	Strategic Program
SUPBIG	Regional office for the Bay of Ilha Grande
TCI	Investment Center Division of the FAO
ToC	Theory of Change
ToR	Terms of Reference

Executive Summary

Introduction

This report presents the final evaluation results regarding the project "Integrated Management of the Ilha Grande Bay Ecosystem" (GCP/BRA/078/GFF). Originally a five-year project financed in Brazil by the GEF, the FAO and national institutions, it started in August 2011, and will reach its expected closure in March 2019 after several approved extensions. The approved budget of the project was USD 28,350,700 of which USD 2,300,000 (8%) comprises a Full-Sized project (FSP) grant from GEF

The Baia de Ilha Grande (BIG) ecosystem has extremely high biodiversity levels. It is a semi-enclosed coastal embayment covering an area of 1,120km2 located in the southern part of the State of Rio de Janeiro, Brazil. The Bay includes: 1) a coastline of about 365km (in the state of the State of Rio de Janeiro); 2) the island of Ilha Grande (190 km2); and 3) approximately 189 smaller islands (data of the Coastal Economic Ecological Zoning – ZEEC). The Bay's catchment area (2,350 km2) drains small watersheds originating mainly in the municipalities of Angra dos Reis and Paraty. The area is economically important for fisheries, aquaculture, mariculture and tourism.

The project is a joint effort between the State Environmental Institute (INEA) of the Rio de Janeiro State Environment Secretariat (SEA), the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF), and was conceived as the first phase of a multiple-phase approach extending over an estimated period of 15-25 years. It envisioned to support the creation of an enabling environment, institutional arrangements and public support directed at two critical threats to the system (organic pollution from urban waste water and solid wastes associated with recreational marinas) through the development and implementation of a pilot Integrated Ecosystem Management (IEM) approach in the Bay and biodiversity conservation mosaic.

Important other stakeholders include the general population of the area (243,000), traditional populations (caiçara, quilombolas/maroons, indigenous), professional and artisanal fisher folks, marinas, tourists, academia, and the Protected Area administrators

The **project's goal** is 'to achieve, over the long-term, conservation and sustainable use of the BIG Ecosystem and its associated terrestrial and marine biodiversity which is of global relevance", and its **specific objectives** are:

(i) To develop and implement a pilot IEM approach to the Bay;

(ii) To prepare and implement a financially-sustainable biodiversity and conservation mosaic strategy and action plan to promote greater coordination and coherency among the Bay's existing conservation units (UCs);

(iii) To strengthen management of selected UCs in BIG;

(iv) To mitigate selected threats affecting the BIG Ecosystem and its ability to provide critical environmental "goods and services" including the conservation of biodiversity; To increase public awareness and support for efforts to conserve the BIG Ecosystem; and

(v) To increase institutional capacity at State and municipal level.

To achieve these objectives, the project's activities have been organized into **five components**.

1. "Planning, Policy and Institutional Strengthening"
2. "Biodiversity Conservation and Protected Areas"
3. "Threat Analysis and Mitigation and Monitoring and Enforcement"
4. "Public Environmental Awareness and Communications"
5. "Monitoring and Evaluation and Knowledge Management"

For the proper understanding of the context of this evaluation it is important to mention that by 2016 the project suffered impacting changes. Component 2 was largely abandoned – due to serious difficulties to produce the expected results – and the BIG 2050 Initiative was launched and became a very important pillar of the project – perhaps the most important one. The BIG 2050 Initiative[1] is composed of two components. The first component, RADAR, is a robust environmental monitoring system with over 40 environmental indicators, capable of providing a good picture of the health of the BIG ecosystem. The second component is called the BIG 2050 Challenge. This Initiative entails calls for proposals open to any individual, institution or organization for ideas, initiatives or projects benefiting the environment of the Ilha Grande Bay. The results of the RADAR monitoring system are used to determine the scope of each call, so that priorities can be set for action.

The main objective of the Final Evaluation was to provide a comprehensive and systematic account of the performance of the project by assessing its design, implementation and achievement of objectives and project results (short and longer-term). This FE assessed the value of project results to the stakeholders at different levels (public/ministerial and community level), and also identified the impacts (intended and unintended) and the likelihood of the sustainability of the project's results. The focus was on the five OECD criteria: relevance, effectiveness, efficiency, impacts and sustainability, covering all activities undertaken during this period under the original logical framework from the approved Project Document (ProDoc), and further activities that arose after changes made to the project in 2016. The final evaluation also assesses the project's sustainability and specific GEF criteria. The ET has mainstreamed the following GEF evaluation criteria through the evaluation questions: relevance, effectiveness, efficiency, country ownership, stakeholder's involvement, partnership, financial management including brief analysis of data on the project's co-financing, sustainability, socio/environmental risks management, catalytic role and contribution to long term impacts.

[1] www.big2050.org

In order to obtain the necessary information the FE used the following tools:

a. A desk-review of existing project documents and output and monitoring reports.

b. Semi-structured interviews with key stakeholders

c. Field visits to technically assess and analyse project implementation and results

Final meeting with the Project Coordination Unit

Main findings

Addressing a wide range of issues, including Protected Area management, Integrated Ecosystem Management, watershed management, spatial planning, marine pollution, sanitation, among others, the project is clearly relevant to the health of the BIG area by dealing with the problems identified in the PIF and PRODOC.

The project is in line with FAO and GEF objectives, as well as local and federal policies and international commitments.

The project had a high relevance for the ecosystems, population and institutions in the Baía da Ilha Grande, and is aligned with major policies and treaties.

The main flaws to be considered are the lack of a thorough previous stakeholder analysis and the lack of consideration of gender issues

A substantial part of component 2 of the project was towards the strengthening of the "Mosaico Bocaina" or Bocaina Mosaic, which is composed of several Conservation Units. The mosaic is established by law, and is meant for the CUs to deal with management issues in a more integrated manner. However, at project conception it was wrongly considered that the mosaic was to have an executive character, where in reality it is merely consultative. Ultimately, activities related to the mosaic came to a standstill and were eventually abandoned. Instead, the BIG2050 Initiative was developed. A thorough stakeholder analysis might have prevented these problems.

With exception of component 2 the project managed to implement its activities more or less according to planning.

The project was adequately monitored in accordance with the M&E plan, which was developed during the first year of the project. The Logical Framework and M&E plan, however, were never adapted to the new activities of the BIG2050 Initiative.

This Initiative did, though, enable the achievement of a series of objectives related to component 2. Component 2 activities related to the Bocaina Mosaic came to a standstill around 2016, due to a misinterpretation of its attributions during project formulation.

These activities were substituted by the BIG2050 Initiative (a robust monitoring system linked to calls for sustainable development initiatives), resulting of very

adequate adaptive management. Arguing that project outcomes were not altered by this significant change, no formal GEF approval was sought for it.

Changes in FAO regulations and procedures over the course of the project caused some implementation problems, due to the required adaptation.

Under component 1, a watershed committee was effectively established; the watershed plan, integrated with the Coastal Ecological Economic Zoning, a novum, is expected for 2019. Several regulations and legislation were developed and decentralization processes were implemented. This will lead to improved management of the BIG area and reduction of negative impacts. Results obtained under component 1 were considered to be satisfactory

Under component 2, Bocaina Mosaic activities came to a standstill, due to lack of interest among its members. Nevertheless, CUs received considerable strengthening, but as a whole this component was seriously affected. UC Management has nevertheless been strengthened, which will improve future conservation of natural resources and biodiversity. The remaining activities of the component were brought to an end more satisfactorily, including management pans, training and investments in CUs. All together the results of the component are considered moderately unsatisfactory.

Under component 3, municipal sanitation plans were produced, but their implementation is far from complete, and contamination levels of the water bodies continue high. The considerable investments made by the municipalities were to be considered co-financing, but did not, sofar, contribute to the project achieving the foreseen results. The RADAR monitoring system is a very robust system, which can be used to priorities action and policy. As a result, future policies and interventions can be based on a lot of real data, to the benefit of the health of the BIG Ecosystems. Due to the lack of improvement in water quality the rating of component 3 is only moderately satisfactory.

Component 4 has been successfully implemented, and received a big impulse from the BIG2050 initiative. Awareness is being proactively promoted and will definitely have positive impacts in the future. The component is considered to be satisfactory.

The BIG 2050 initiative has, so far, been very effective towards achieve on its main, the long-term conservation and sustainable use of the Ilha Grande Bay ecosystem. The Initiative is a highly effective mechanism to address priority issues (determined with the aid of the RADAR monitoring system) in an integrated manner, involving institutional as well as community and individual actors and stakeholders, permitting initiatives in the realms of policy and legislation, Protected Areas and Natural Resource Management, capacity building, awareness raising, sustainable development, as well as any other relevant to the long-term conservation and sustainable use of the bay's ecosystem, promoting its healthy state. Moreover, the Initiative is highly adaptive, democratic and inclusive.

25. Component 5 has delivered the required outputs and the relatively small PMU has demonstrated capacity for adapted management, maximizing the

achievement of outputs within reach and adapting others in order to continue to contribute to the expected outcomes of the project. Delivery of outputs may therefore be considered **highly satisfactory.**

The local population was actively involved from the formulation stage onwards. They are represented in the watershed committee. Although gender was not considered during formulation, this matter was given attention to during implementation. The BIG2050 Initiative is highly democratic and its calls for proposals are easily accessible for people with low levels of formal education.

The level of buy-in and ownership of the stakeholders involved in the project is quite high. Local community members depending on the BIG ecosystem are motivated to continue to be involved in the watershed committee and other activities promoted by the project. The BIG2050 initiative was very well received and offers huge opportunities for stakeholders to continue to be involved. The main institutional partners, INEA, UERJ and the BIG municipalities have internalized the project results well, proactively contributing to the project activities and making them part of their routines, and since these results are linked to their institutional mandates (conservation, health of the environment, sustainable development, sanitation, research/monitoring), there is a high potential for continuity.

The BIG2050 Initiative is searching for Public Private Partnerships in order to guarantee financial sustainability. The last project extension was in fact given to allow for the Initiative to become sustainable.

Conclusions

Based on the evidence collected throughout the evaluation process, the Final Evaluation drew several conclusions, which have been organized around the evaluation questions.

Conclusion 1. The project's objectives, strategies and actions were relevant to the needs and priorities of all beneficiaries and stakeholders

The project is relevant to the objectives of GEF and FAO, and is aligned with the priorities, policies and international obligations of both the federal government of Brazil and the government of the State of Rio de Janeiro. Also, the needs of the involved municipalities (Angra dos Reis and Paraty) are adequately addressed. The project is also highly relevant to the local population, including the traditional population, which includes caiçara, maroon and indigenous communities, through offering a healthy natural environment as well as opportunities for sustainable development and maintenance of livelihoods.

Conclusion 2. The project was not able to deliver significantly on its outputs related to the Bocaina Mosaic, which had serious consequences for achieving improved integrated management of ecosystems of global importance in the Bocaina Mosaic

The activities related to the strengthening of the Bocaina Mosaic, including the establishment of a permanent executive structure, were largely based on a

misconception at the time the project was conceived. This was the failure to recognize the essence of the Mosaic concept, which is consultative, rather than executive. Eventually due to the nature of the mosaic, the many stakeholders involved, political interests and other issues, more conflicts arose and by 2016 the Bocaina Mosaic activities came to a standstill. Since component 2 of the project leaned considerably on the Mosaic to obtain its results, some of the project's intended outcomes were jeopardized and did not materialize.

Conclusion 3. Through adaptive management the project was able to adapt itself after the setback of the Bocaina Mosaic in order to develop and pursue an alternative strategy

When confronted with Bocaina Mosaic situation, the PMU went into retreat, together with the Technical Lead from FAO HQ to come up with an alternative strategy. This process lasted over a week. It was then that the BIG2050 Initiative was conceived and developed. The BIG2050 Initiatives had two pillars, the first one being a very robust monitoring system, the information of which is used to describe the environmental situation at a specific moment and determine intervention priorities. The second pillar is called the Desafio (*Challenge*). Based on the indications of the results provided by RADAR, calls for proposals are published and the best proposals are awarded financing. The calls are open to the general public, but also to private and public institutions, so that any urgent need can be addressed. Currently, the project, as a last activity, is working on the establishment of a sustainable executive structure for the Initiative, including the institutional/management component and a financial component, by means of a fund to be established by means of Public Private Partnerships.

Conclusion 4. The project suffered some delays from time consuming and at times unclear authorization processes at FAO

The project was affected by slow decision making at FAO on whether or not certain activities or expenditures would be allowed, as well as contracting procedures. The use of the FAO logo was also complicated, which often led to omission of the logo and consequently reduction of FAO visibility. Many regulations have changed in FAO Manual over the last 2-3 years, and a failure of HQ to concede longer transition periods and/or lack in proper prior training of FAO staff at the Representation Office may well be pointed as a cause of "slow decision making"

Conclusion 5. The project failed to deliver on the reduction of the BOD values

BOD (Biological Oxygen Demand) values have not been reduced. It was foreseen that the considerable investments in sanitation by the municipalities of Angra dos Reis and Paraty would include sewage water treatment, expectation that did not materialize. This can be attributed to the fact that during formulation, the contribution of the municipalities was not made sufficiently specific. As a result, the municipalities set priorities within the scope of sanitation, but which did not contribute to the achievement of the objectives of the project.

Conclusion 6. In terms of social participation, the project has generated significant results

Communications of civil society and community representatives confirmed that the project promoted social participation from the formulation stage onwards. An effective Watershed Committee was established, with considerable community participation. Another important aspect is that the BIG2050 Challenge (see conclusion 3) is of a very inclusive, democratic and accessible nature. The Challenge is open to anyone, be it individually or as part of any organization, and procedures are kept as simple as possible, as to permit access even for people with relatively low levels of formal schooling. The "Challenge" itself attracts much attention of the press and general public which has considerable impacts on awareness levels.

Conclusion 7. The Project created a good basis for the achievement of the general objective

The project generated a fair amount of relevant results for the achievement of the project's general objective. A Watershed Committee was established, institutions and some conservation units were strengthened. Relevant policies, legislation, regulations and management plans were produced, public awareness has been raised, and serious efforts are still being made to institutionalize the BIG2050 Initiative and to guarantee its sustainable financing. Hopefully through the Challenge it will be possible to tackle current future issues affecting the health of the BIG ecosystem. This will be highly dependent on political wiliness from government institutions at different levels and the Challenge should continuously evaluate if it is reaching is vision and the projects it is supporting. In particular, it should try to rollout specific or thematic calls for new projects to be supported, especially based on results of monitoring being done by RADAR towards the ultimate goal of conservation and sustainable use of the Baia de Ilha Grande Ecosystem and its associated terrestrial and marine biodiversity.

Recommendations

Recommendation 1 – To FAO: Difficulties encountered by the evaluation team in evaluating co-financing and project expenditure suggest that future projects would benefit from a real time financial monitoring system, as far as possible.

Recommendation 2 – To FAO: When significant changes are made to project outputs over the course of implementation, these should be documented in a structured way (e.g. through inclusion in the logical framework) and adequate new indicators and outputs should be developed and obsolete ones abandoned, in order to maintain project logic. This will facilitate posterior monitoring and evaluation activities.

Recommendation 3 – To FAO: All project documents for evaluation should be made available in an organised manner at the beginning of evaluation process, before field mission and in accordance to the project logical framework.

Recommendation 4 – To FAO/GEF: Ensure as much as possible in future projects that co-financing is directly linked to specific project outcomes and that its activities and expected outcomes are under the control of the project.

Recommendation 5 – To State Government: to apply the successful model of the BIG2050 Initiative for other areas in Rio de Janeiro State, preferably as a whole, or parts of it (RADAR, "Challenge", the use of PPPs)

Recommendation 6 – To FAO and GEF: Future projects aimed at biodiversity conservation and/or supporting protected areas would benefit from a thorough analysis of what can be effectively accomplished with available funds and the onsite reality of the threats and issues being addressed. They should have a deep understanding not only of the relevant policies and laws but also of the many stakeholders involved.

Recommendation 7 – To FAO and GEF: Analysis of METT scores should not be limited to the overall as a proxy to project success and impact. Analysis should consider the different elements of the Tool and be associated, when possible, to further evidence as a means to be verified. Casual correlations should not be made as a way to increase project impacts.

Recommendation 8 – To FAO and GEF: Gender and other cross-cutting issues should always be considered in new projects. Not considering should be specifically justified.

1 Introduction

1. The Project "Integrated Management of the Ilha Grande Bay Ecosystem" henceforth referred to as the BIG Project, originally was a five-year project in Brazil that started implementation in September 2011, and, after several extensions, will reach closure in March 2019. The project is a joint effort between the State Environmental Institute (INEA) of the Rio de Janeiro State Environment Secretariat (SEA), the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF).

Box 1. Basic project information

A. GEF Project ID Number: 3848
B. Implementing Agency: FAO
C. Executing Agency: FAO. (INEA/SEA being key executing partner)
D. Focal Area: Biodiversity
E. GEF Strategy/operational program: SO1; SP -2; SP -3. SP - 4
F. Date of work program approval: 24 June 2009
G. Date of CEO endorsement: 15 March 2011
H. Date of project start: 31 August 2011
I. Date of project completion: 29 July 2016 (original NTE)
J. Revised project implementation end date: 31 March 2019
K. Date of mid-term review/evaluation: November 2014

1.1 Purpose of the evaluation

2. This Final Evaluation (FE) serves a double purpose of accountability and learning. It assesses the project design and implementation process; the program's results and their value relevant to target beneficiaries, national needs and priorities as well as the factors contributing to the sustainability of the results. It is a requirement of the GEF funding and for FAO project monitoring and reporting purposes, and is identified in the PRODOC.

3. The FE documents important lessons to indicate future actions for potential up-scaling, replication or follow-on projects in Brazil or from the FAO or GEF that may use similar approaches, target beneficiaries, tools and program design elements. It presents strategic recommendations in order to, among other purposes, maximize the institutionalization and appropriation of the project's results by stakeholders and disseminate information to management authorities responsible for the management of other projects.

1.1.1 Intended users

4. The primary users of the FE are the GEF, the national counterparts in Brazil including the Protected Areas (which include Conservation Areas and Indigenous Land), maroon communities, and entities involved in biodiversity and eco-system management, the Project Task Force, the FAO itself, and other concerned local organizations and government bodies, including research centres specialized in biodiversity and eco-systems as well as other development agencies.

1.2 Scope and objective of the evaluation

5. **Scope:** The Final Evaluation was carried out between November and December 2018, prior to the terminal review meeting of the project partners, which was still to be decided as the project received an extension (until March 2019) during the evaluation period. The FE reviewed the entire project execution period (September 2011-December 2018) and covered the geographical areas of the project implementation. It focused in particular on the period following the mid-term review (MTR) of the project (from January 2015 to November 2018). The MTR made an assessment of the progress towards expected results and made recommendations to improve project implementation. Annex 4 presents the main recommendations of the MTR for FAO and government.

6. **Objectives**: The main objective of the Final Evaluation was to provide a comprehensive and systematic account of the performance of the project by assessing its design, implementation and achievement of objectives and project results (short and longer-term). This FE assessed the value of project results to the stakeholders at different levels (public/ministerial and community level), and also identified the impacts (intended and unintended) and the likelihood of the sustainability of the project's results.

7. **Evaluation Questions:**

   The main evaluation questions were the following[2]

   Relevance

   EQ 1. Were the project's strategy and actions relevant and adequate to meet the needs of all beneficiaries and stakeholders?

   Efficiency

   EQ2. How did the modalities of intervention, the institutional and partnership structure, the resources, and the financial, technical and operational procedures, contribute to or impede the achievement of the project's results and objectives?

   Effectiveness/Impact

   EQ3. How effective has the project been in reaching the global, development and environmental objectives and expected results? What results, intended and unintended, did the project achieve across its components?

   Normative values (Community participation and Gender approach)

   EQ4. To what extent did the project approach in working with local communities regarding ecosystem management ensure stakeholders participation in the decision-making process related to project activities? To what extent has the project addressed gender equality issues in its design and contributed to women empowerment throughout its implementation?

   Sustainability

[2] Annex 2 presents the detail of the evaluation sub-questions for each evaluation criterion.

EQ5. How sustainable are the project's achieved results at the environmental, technical, social, financial and institutional level?

Lessons learnt

EQ6. What are the key lessons that can be learned from the project's design, implementation and sustainability?

1.3 Methodology

8. The FE adhered to the United Nations Evaluation Group (UNEG) Norms and Standards and is aligned with OED Manual, procedures and methodological guidelines.

9. In order to facilitate comparison with other GEF implementing Agencies and to contribute to the GEF program learning process, the FE rates the project in accordance to existing GEF rating scheme, policies and guidance. The ET has mainstreamed the following GEF evaluation criteria through the evaluation questions: relevance, effectiveness, efficiency, country ownership, stakeholder's involvement, partnership, financial management including brief analysis of data on the project's co-financing, sustainability, socio/environmental risks management, catalytic role and contribution to long term impacts.

10. The FE adopted a consultative, participative and transparent approach with internal and external stakeholders throughout the evaluation process. Triangulation of evidence and information gathered underpinned its validation and analysis and supported the conclusions and recommendations.

11. The Terms of Reference (ToRs) suggested an overall approach for conducting the evaluation and potential tools that would likely yield the most valid answers to the main and secondary evaluation questions within the limits of resources. Final decisions about the specific design and methods for the FE were made during consultations among the project team, the evaluators, and key stakeholders.

12. The evaluation matrix was developed by the ET in consultation with the Evaluation Manager (EM), and guided the overall assessment. It lists the main and sub-questions that were addressed by the evaluation, associated methods and the qualitative and quantitative tools selected to collect data/evidence to answer them.

13. To answer the evaluation questions, the following tools to collect primary data and evidence were used:

    a. A desk-review of existing project documents and output and monitoring reports (e.g. annual work plans, project inception report, and reports from other relevant meetings; annual project implementation review (PIR) reports; the MTR report; FAO six-monthly progress reports, backstopping missions' reports from the LTO (Lead Technical Officer), and other internal documents including technical and financial reports) to better understand the context and structure of the project and assess results achievement. Also, relevant external documentation was used in order to enhance understanding of the project context, as well as the perception of the

project by different actors/stakeholders. Including independent observations enhanced the possibilities for triangulation of the information.

b. Semi-structured interviews with key stakeholders (e.g. members of staff and partner institutions involved in project implementation, including consultants, LTO, the Budget Holder) and project participants and other informants.

c. Field visits to technically assess and analyse project implementation and results, the views and opinions as well as capacities of the local stakeholders on the project and its target groups and the local support given by governmental institutions.

d. Finally, a meeting was held at the end of the field mission with the Project Coordination Unit to share initial findings and conclusions and discuss proposed recommendations.

2 Background and context of the project

14. The Project "Integrated Management of the Ilha Grande Bay Ecosystem" henceforth referred to as the BIG Project, was originally a five-year project financed in Brazil that started implementation in September 2011, and, after several extensions, will reach closure in March 2019.

15. The project is a joint effort between the State Environmental Institute (INEA) of the Rio de Janeiro State Environment Secretariat (SEA), the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF). Apart from these, many other stakeholders can be identified: the general population of the area (243,000), traditional populations (caiçara, quilombolas/maroons, indigenous), professional and artisanal fisher folks, marinas, tourists, academia, and the Protected Area administrators.

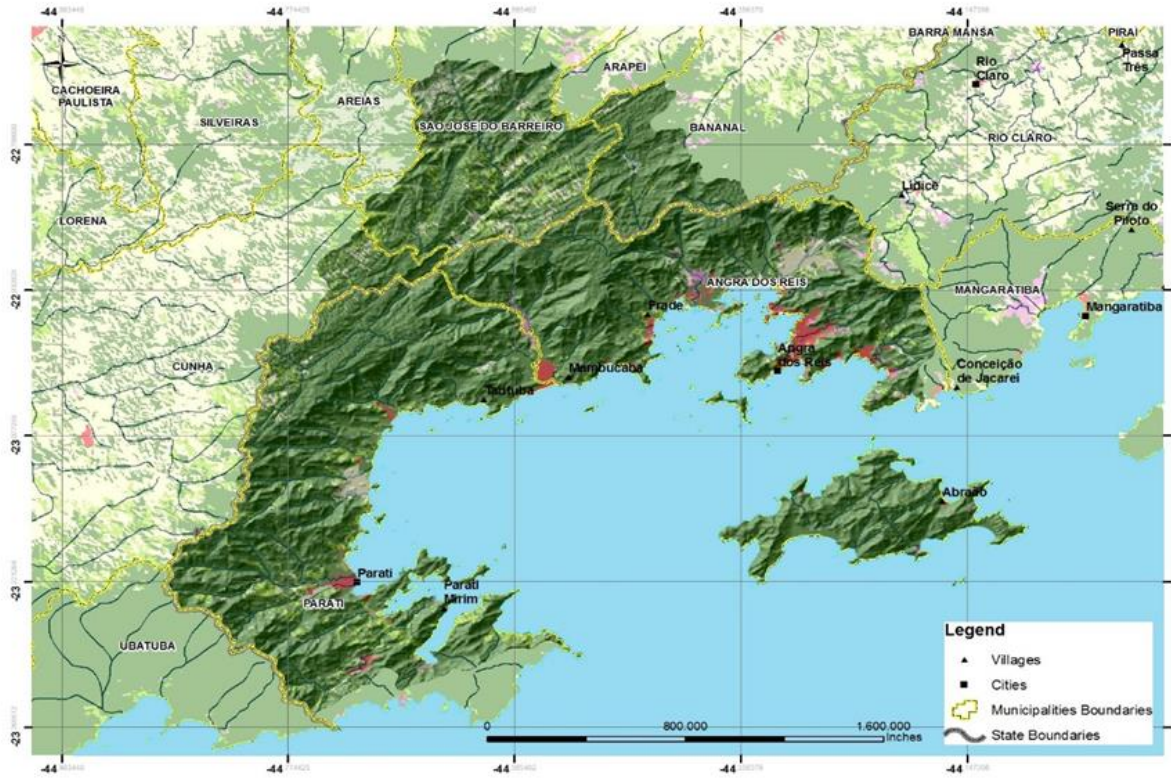
16. The total approved budget of the project was USD 28,350,700 of which USD 2,300,000 (8%) comprises a Full-Sized project (FSP) grant from GEF. The planned co-financing amounted USD 25,050,700 and was to be committed by the following Brazilian institutions: USD 11 million from the National Government; USD 10 million from the Municipality of Paraty; USD 4 million from Municipality of Angra along with USD 50,700 from the FAO.

2.1 Context of the project

17. The Baia de Ilha Grande (BIG) ecosystem is a semi-enclosed coastal embayment covering an area of 1,120km2 located in the southern part of the State of Rio de Janeiro, Brazil. The Bay includes: 1) a coastline of about 365km (in the state of the State of Rio de Janeiro); 2) the island of Ilha Grande (190 km2); and 3) approximately 189 smaller islands (data of the Coastal Economic Ecological Zoning – ZEEC). The Bay's catchment area (2,350 km2) drains small watersheds originating in the State of Rio de Janeiro (in the municipalities of Angra dos Reis and Paraty) and in the State of Sao Paulo (in the municipalities of Bananal, Arapei, Sao Jose do Barreiro, and Cunha) (Fig. 1).

18. The terrestrial and coastal/maritime ecosystems are dominated by a rich biodiversity, which includes the Atlantic Forest and the contiguous areas of the Serra do Mar mountain range. The area also includes rich biodiversity habitats such as lakes, mangroves, beaches, rocky shores and coral reefs, among others. Figure 1 presents the limits of the BIG ecosystem.

Figure 1. Baía de Ilha Grande area of interest



Source: PRODOC

19. The Bay's coastal and maritime ecosystems are also highly productive and of socio-economic importance. Currently, about 243,000 people live in the BIG's catchment area and the islands (IBGE estimate 2018). Economic activities in the bay include, among others, two commercial ports, the country's only nuclear plant, more than 16 marinas, numerous commercial boats, beach recreation facilities and residential developments. The current population is more than 50% higher than the 160,000 mentioned in the PRODOC (over 240,000), which means that locally pressure will have increased, with the inherent negative consequences. At the same time, data from the website www.mapbiomas.org suggest that forest cover has remained largely the same over this period.

20. A wide range of stakeholders is directly or indirectly involved in the project. Institutional stakeholders include INEA, the Federal and State Universities of Rio de Janeiro, FIPERJ (Rio de Janeiro Fisheries Foundation), ICMBio, the administrations of the federal, state and municipal Conservation Units, the municipal governments of Angra dos Reis and Paraty. The general population is also an important stakeholder, as are tourists and local business people. Specifically, important and relevant to the project are local fisher folk, and traditional populations (caiçara, quilombola/maroon, indigenous). NGOs involved in the project include CODIG (Committee for the Defence of the Ilha Grande), IPEMAR (Institute for Marine Research, Architecture and Renewable Resources) among others.

21. In January 2007, under the overall coordination of PRONABIO, MMA published an updated list of national priority areas for biodiversity conservation. This list, approved in December 2006 by NATIONAL COMMISSION ON BIODIVERSITY - CONABIO, included the BIG project area (called "Angra dos Reis" – Ma230) and assigned it an extremely high priority ranking for biodiversity conservation and its sustainable use. Under the aforementioned PRONABIO, biodiversity conservation priorities were also identified in Brazil's coastal and marine ecosystems. In this context, the BIG Ecosystem was considered an extremely high priority based on existing biodiversity, natural resources and the need to create conservation units (UC). In this same analysis, BIG was highlighted both for the presence of the *Mata Atlântica* and coastal marine biomes and the importance of maintaining the connectivity between the two biomes. The national biodiversity targets established by Brazil in 2010 following the framework of the Conference of the Parties to the Convention on Biological Diversity (Aichi Targets) also included the conservation of 10% of Brazil's non-Amazonian biomes and coastal and maritime zones. [3]

22. Although the Ilha Grande State Park was created in 1971 and despite the presence of several conservation units – such as the Serra da Bocaina National Park which drains a considerable part of the BIG ecosystem - the BIG ecosystem continues to be affected by externalities from economic growth, the absence of sound planning, and inefficiencies in applying existing management tools.

23. The main threats affecting the BIG eco-system (Figure 1) listed in the PRODOC, and to be addressed by the project were:

    i) Sedimentation (associated with poorly planned and implemented coastal development and deforestation further up in the watershed): The BIG area, with its rugged landscape and steep slopes, has limited space that is suited to urban development. Coastal areas are also vulnerable. Development activities may lead to reduced soil cover as well as excessive concentration of drainage water, and, through the associated erosion processes to increased sedimentation levels, which, on their turn, seriously affect the water quality and associated ecosystems.

    ii) Conversion of critical habitat such as mangroves which are not protected; Mangroves are a highly important habitat, to protect the shores from erosion, as a sediment trap, and as an incubator for marine life. Its removal, consequently, has serious impacts on the environment and biodiversity.

    iii) Decline in water quality due to non or under-treatment of urban waste water, industrial wastes, recreational boating, oil spillage etc.; Like in many Brazilian municipalities, sewage water in the BIG is largely disposed of untreated. Equally, few measures exist to combat other forms of contamination. This has negative impacts on marine life as well as on the swimming water quality in places frequented by tourists.

    iv) River canalization; This leads to concentration of run off and reduction of drainage capacity, causing floods and locally severe erosion.

[3] To comply with this national and international targets, protected areas (formal biodiversity conservation units and recognized indigenous lands) have to be included in the Ministry of Environment's National Conservation Unit Registry and in UNEP – WCMC - World Database on Protected Areas.

v) Dumping of solid waste; Solid waste is often not disposed of adequately, which leads to a series of environmental impacts, such as smell and ground water pollution.

vi) Non-sustainable fishing practices; Fisheries occur mostly without management, and stocks are not sufficiently monitored.

vii) Accelerated storm runoff due to expansion of impermeable surfaces associated with urban and residential growth; This is further aggravated by the often-uncontrolled nature of the urbanization process.

viii) Rapid growth in tourism without proper land use, tourist services and infrastructure planning; and

ix) Introduction of exotic species. Shipping has caused exotic coral species from Asia to be introduced in the BIG.

Not mentioned in the project document, but certainly relevant are the threats associated to the major oil infrastructure in the area (pipelines, ship-to-ship crude oil transfers etc.).

24. At present, the above list is still valid, and no significant other new threats have been identified. As this evaluation will demonstrate, the project did contribute to the solutions to these problems.

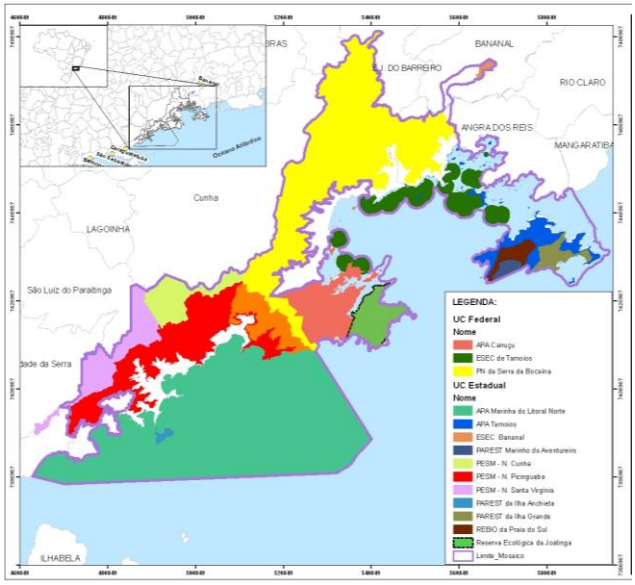
25. A substantial part of component 2 of the project was towards the strengthening of the "Mosaico Bocaina" or Bocaina Mosaic. Mosaics of protected areas are embodied in article 26 of the law which established Brazil's National System of Conservation Units which states that "when there is a set of conservation units of the same or different categories, juxtaposed or overlapping, and other public or private protected area, constituting a mosaic, the management of the whole will be done in an integrated and participatory manner, taking into account their different conservation objectives so that the presence of biodiversity, socio-diversity valorisation and sustainable development at a regional level should be compatible. Mosaics are officially recognized by the Ministry of Environment by an ordinance and governed by a council of representatives which act as a consultative body. Thus, the council (or the mosaic) does not have an executive role but members work together to enhance the management of the mosaic as whole (Federal Law 9985/2000). The Bocaina Mosaic was recognized in 2006 originally composed of 10 protected areas with a further 4 being incorporated later on (fig. 2).

26. While the initial Project Information Form (PIF) seems to focus more on the issue of integrated ecosystem management of the BIG area, the final Project Document (particularly its component 2) focuses more on the Bocaina Mosaic, possibly to address the GEF Sec PIF review in 2008 as it requests that the project should be more strongly linked to GEF SO 1 SP 2 and SP 3 (see § 38).

27. Possibly as a result of the above, Outcome 2.1 for example states the project will procure the "Improved integrated management of ecosystems of global importance in the Bocaina Mosaic" while Outcomes 2.2 and 2.3 are also further related to selected protected areas in the mosaic, dealing with increased management effectiveness and increased biodiversity protection and health and

the final PRODOC constantly mentions the Bocaina Mosaic and indeed towards Component 2, 36% of GEF funds is allocated, more than any other component.

Figure 2. Protected areas in the Bocaina Mosaic



Source: Mosaico Bocaina archives

2.2 Project components and objectives

28. According to the PRODOC, the **project's goal** is to achieve, over the long-term, conservation and sustainable use of the BIG Ecosystem and its associated terrestrial and marine biodiversity which is of global relevance.

29. The project was conceived as the first phase of a multiple-phase approach extending over an estimated period of 15-25 years. It envisioned to support the creation of an enabling environment, institutional arrangements and public support directed at two critical threats to the system (organic pollution from urban waste water and solid wastes associated with recreational marinas) through the development and implementation of a pilot Integrated Ecosystem Management (IEM) approach in the Bay and biodiversity conservation mosaic.

30. The key global benefits to be generated by the project include

(i) The conservation of biodiversity through direct support to the existing conservation units (UCs), the promotion of increased connectivity between the

existing UCs, increase in cost-efficiency for the conservation and management of biodiversity through collaborative approaches among different levels of governance and the reduction of habitat and landscape fragmentation and;

(ii) The partial restoration of the BIG ecosystem integrity and recovery of its underlying functions and services.

31. In this respect, the **project's specific objectives** are:

(vi) To develop and implement a pilot IEM approach to the Bay;

(vii) To prepare and implement a financially-sustainable biodiversity and conservation mosaic strategy and action plan to promote greater coordination and coherency among the Bay's existing conservation units (UCs);

(viii) To strengthen management of selected UCs in BIG;

(ix) To mitigate selected threats affecting the BIG Ecosystem and its ability to provide critical environmental "goods and services" including the conservation of biodiversity; To increase public awareness and support for efforts to conserve the BIG Ecosystem; and

(x) To increase institutional capacity at State and municipal level.

32. The project has been structured into nine outcomes towards the achievement of the mentioned specific objectives:

- **Outcome 1:** Inter-agency coordination in support of Ecosystem-based Management of the BIG Ecosystem is improved;
- **Outcome 2**: The Policy Framework in support of Ecosystem Management principles is improved;
- **Outcome 3**: There is evidence of increased mainstreaming of the Ecosystem-based management principles in the Regional Office for the Bay of Ilha Grande (SUPBIG) and relevant private and public sector institutions;
- **Outcome 4**: Integrated management of ecosystems of global importance in the Bocaina Mosaic has improved;
- **Outcome 5**: Management effectiveness of existing, participating conservation units in BIG ecosystem;
- **Outcome 6**: The abundance of indicator species and diversity of global importance has increased has improved;
- **Outcome 7**: Pollution loading in BIG ecosystem has decreased;
- **Outcome 8**: Environmental quality in BIG Marinas has improved; and
- **Outcome 9**: Public awareness and support for the protection and restoration of the BIG ecosystem has increased.

33. Finally, to achieve these objectives, the project's activities have been organized into five components.

Component 1: "Planning, Policy and Institutional Strengthening" supports improvement in inter-agency coordination for the BIG Ecosystem management and the policy framework in support of ecosystem-based management principles, as well as the mainstreaming of ecosystem-based management principles in SUPBIG4 and relevant public and private sector institutions.

Component 2: "Biodiversity Conservation and Protected Areas" supports improved integrated management of ecosystems of global importance in the Bocaina Mosaic; improved management effectiveness of the existing participating conservation units (UCs) in BIG and increased species and diversity of global importance (fig 2).

Component 3: "Threat Analysis and Mitigation and Monitoring and Enforcement" aims to reduce the pollution load in the BIG ecosystems and to improve environmental quality in BIG marinas.

Component 4: "Public Environmental Awareness and Communications" consists of increasing public awareness and support for the protection and restoration of the BIG Ecosystem.

Component 5: "Monitoring and Evaluation and Knowledge Management" to ensure that lessons learnt from the ecosystem-based approach in BIG are being taken up and replicated in the State of Rio de Janeiro, in Brazil and in the Latin American and Caribbean Region (LAC).

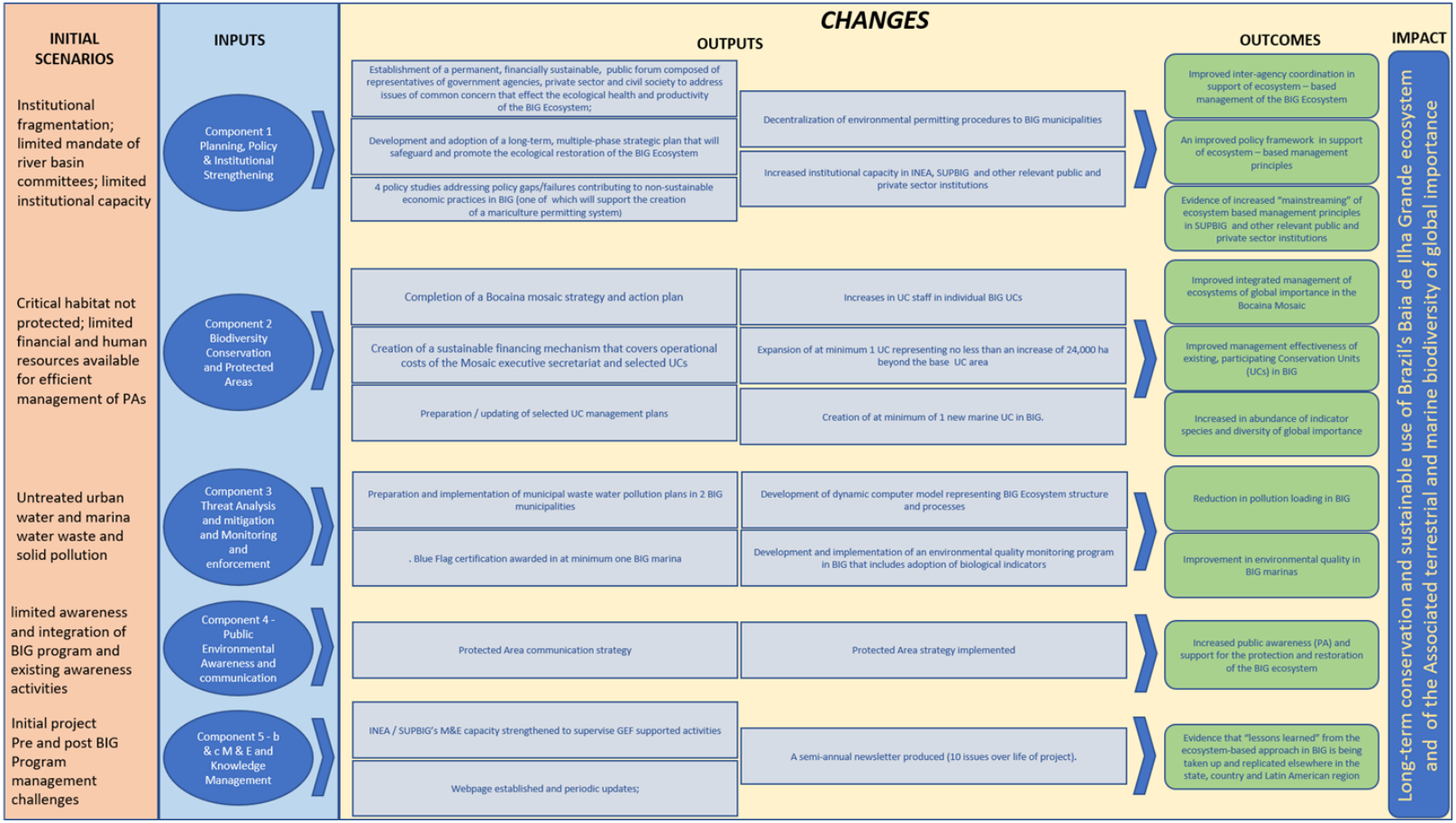
34. For the proper understanding of the context of this evaluation it is important to mention that by 2016 the project suffered impacting changes. Component 2 was largely abandoned – due to serious difficulties to produce the expected results – and the BIG 2050 Initiative was launched and became a very important pillar of the project – perhaps the most important one. The BIG 2050 Initiative[5] is composed of two components. The first component, RADAR, is a robust environmental monitoring system with over 40 environmental indicators, capable of providing a good picture of the health of the BIG ecosystem. The second component is called the BIG 2050 Challenge. This Initiative entails calls for proposals open to any individual, institution or organization for ideas, initiatives or projects benefiting the environment of the Ilha Grande Bay. The results of the RADAR monitoring system are used to determine the scope of each call, so that priorities can be set for action.

2.3 The theory of change

The Theory of Change for the Project, as conceived at appraisal, was constructed by the Evaluation Team (Figure 3). Due to unsatisfactory results in progress of Component 2, a new outcome was decided by the PMU and INEA, the BIG 2050 Initiative, with new outputs towards it; a new theory of change was developed which changed substantially the original.

[4] The Regional Office for the Bay of Ilha Grande.
[5] www.big2050.org

Figure 3; Theory of Change for "Integrated Management of the Ilha Grande Bay Ecosystem" Project based on PRODOC



Source: Evaluation Team

3 Evaluation questions: key findings

3.1 Evaluation question 1 *Were the project's strategy and actions relevant and adequate to meet the needs of all beneficiaries and stakeholders?*

Main findings:

- **Addressing a wide range of issues, including Protected Area management, Integrated Ecosystem Management, watershed management, spatial planning, marine pollution, sanitation, among others, the project is clearly relevant to the health of the BIG area by dealing with the problems identified in the PIF and PRODOC.**

- **The project had a high relevance for the ecosystems, population and institutions in the Baía da Ilha Grande, and is aligned with major policies and treaties.**

- **The main flaws to be considered are the lack of a thorough previous stakeholder analysis and the lack of consideration of gender issues**

35. The project was aligned with the following FAO Strategic Objectives (SO) at the time of project preparation, as mentioned in the Project Document:

    • SO-E Sustainable Management of Forests and Trees: through support to the Protected Areas in the BIG.

    • SO-F Sustainable Management and Utilization of Natural Resources, including Land, Water, Air, Climate and Genetic Resources, for the Benefit of Present and Future Generations: through the introduction of Integrated Ecosystem Management, support to the Watershed Committee, the Coastal Economic Ecological Zoning and municipal sanitation.

    • SO-C Sustainable Management and Use of Fisheries and Aquaculture Resources: through support to the marine Protected Areas, legislation on water quality, and, more recently through the activities supported by the BIG 2050 Challenge.

36. Considering FAO's current Strategic Objectives, for the same reasons as mentioned above, the project would now be aligned with the second Strategic Objective[6]: "Make agriculture, forestry and fisheries more productive and sustainable", which aims at promoting evidence-based policies and practices to support highly productive agricultural sectors (crops, livestock, forestry and fisheries), while ensuring that the natural resource base does not suffer in the process.

37. Although being from an earlier date, promoting the Integrated Ecosystem Management, the project also coincides with the fourth pillar of the 2013-2016 Country Programming Framework (CPF) for Brazil (Sustainable Natural Resource Management and Climate Change and Desertification Adaptation), and with the second result of the 2012-2015 United Nations Development Assistance Framework (UNDAF) for Brazil (Green Economy and Decent Work in the Context of Sustainable

[6] http://www.fao.org/docrep/018/mg994e/mg994e.pdf

Development and Poverty Eradication), also through its focus on Integrated Ecosystem Management.

38. The project also attended to two specific GEF 4 long-term Strategic Biodiversity objectives and Strategic Programs (SP):

    • Strategic Biodiversity Objective 1 "to catalyse sustainability of protected area systems" and the related strategic programs SP 2-Increasing representation of effectively managed marine protected areas in protected systems and SP3 - Strengthening terrestrial protected areas networks.

    • Strategic Biodiversity Objective 2 "to mainstream biodiversity in production landscapes/seascapes and sectors" and the related strategic program 4 - Strengthening the policy and regulatory framework for mainstreaming biodiversity

39. Although this is a GEF 4 project, it would still be aligned with GEF 5 and GEF 6 objectives, as these still have even a stronger emphasis on "improving the sustainability of protected areas systems", GEF 5 incorporating COP 9 suggestions and GEF 6 COP 10, especially Aichi Targets. It is important to point out though that in the current modified output of the BIG Initiative 2050, which does not deal with protected areas directly, the project would therefore not be completely in line with neither GEF 4, 5 or 6 objectives, as with regards to the part concerning protected areas. It does, however, anticipate GEF 7 (Program: "Wildlife for Sustainable Development": *Engagement with the private sector to assist governments and local communities with the development, management and marketing operations through the appropriate modalities (i.e. Public-Private partnerships, Private-Community partnerships, or Public-Private-Community partnerships*).

40. The project was aligned as well with specific Brazilian policies and plans such as Brazil's National Biodiversity Strategy (NBSAP) developed by the National Ministry of Environment and completed in 2002 which highlights the importance of conserving existing forests and conserving biodiversity; with various components of the National Biodiversity Policy (2002 Decree); with the National Coastal Management Plan ; the National Program for Biological Diversity (2003 Decree) and with the 2007 National Commission on Biodiversity (CONABIO)'s list of priority areas for biodiversity conservation units which included the BIG project area (i.e. Atlantic Forest) as a high priority ranking area for biodiversity conservation and sustainable use. It also aligns with further NBSAP reporting to CBD especially towards the 2010 Aichi Targets.

41. During the project formulation the municipalities expressed a need for support in spatial planning and related tools, as well as sanitation, in which they were supported by the project. For instance, legal deadlines exist for the elaboration of sanitation plans by municipalities, which, in fact, are being met by a minority of municipalities, due to lack of capacity. The project helped the municipalities to overcome these difficulties

42. The project also addressed the needs of the local population, indigenous, traditional and non-traditional, through their active involvement in forums (Bocaina Mosaic, Watershed Committee), and participation in training events and workshops. Particular needs of these populations included conflict resolution with Protected Areas, as the latter often impose limits on the areas traditionally used by the population.

43. Neither the project document, nor other available documentation, makes mention of either gender or women.

44. Most of the implementation arrangements were adequate for the project implementation, where each actor was given responsibilities in accordance with their respective legal attributions. Where during the project formulation judgement was perhaps not adequately passed, was with regards to the role to be played by the Bocaina Mosaic. Whereas the Mosaic formally has only a consultative role, the intention of the project was to establish an executive structure for the Mosaic, thus exceeding, in a way, its mandate and attributions. Eventually this led to considerable problems during the project implementation.

45. The Project Document mentions the following four main risks and their respective mitigation strategies:

    1. lack of close inter-institutional project coordination: extensive consultations with all stakeholders, awareness raising, adequate resources made available;

    2. lack of close cooperation among participating INEA departments: coordination through PMU and the establishment of CONDIR (Council of Directors);

    3. slow uptake of policy recommendations: institutional strengthening and awareness raising activities in support of relevant policy reforms directed at both key decision makers as well as the public at large; and

    4. climate change: integration of *inter-alia* climate risks and climate proofing measures in the Integrated Ecosystem Management – IEM planning process to promote adaptation of communities to climatic variability

46. These risks did not seriously affect the project, and the mitigation strategies contributed to this. Again, as the Bocaina Mosaic activities coming to a standstill had not been considered as a risk, when it did occur it posed a big challenge for the project in order to minimize the impact. After intense reprogramming, activities involving the Mosaic were suspended in 2016, and the BIG2050 initiative was conceived.

47. Neither the Project Identification Form, nor the Project Document contain a thorough and systematic stakeholder analysis. As far as a stakeholder analysis was conducted, it was not documented and not sufficiently mainstreamed. This resulted in a patchwork of many fragmented and disorganic outputs within a weakly prioritized logical framework. Nevertheless, there are clear signs that most of the relevant stakeholders were addressed adequately by the project and actively involved, and a good view on effective needs prevailed. Where a more substantial stakeholder analysis could have made a significant difference is, once again, in relation to the Bocaina Mosaic. Should the Mosaic have been adequately characterized beforehand, specifically regarding its attributions and structure, it would probably have had quite a different role in the project, and the problems with the implementation of component 2 could have been avoided.

48. The original design of the project seems to have been adequate. The time for implementation was ambitious, but adequate: most activities have been completed as far as their success was within control of the project. The project

being extended considerably, was basically due to the changes made to the project with the introduction of the BIG2050 Initiative, which needed extra time, in order to become operative and produce results. It was also wise to consider a timespan of about 25 years after implementation for the objectives to be fully achieved, since many of the envisioned changes require considerable time. Staffing of the project and resources made available were sufficient. Not included in the design were gender issues. This does not necessarily need to be considered a very serious shortcoming.

3.2 Evaluation question 2 *How did the modalities of intervention, the institutional and partnership structure, the resources, and the financial, technical and operational procedures, contribute to or impede the achievement of the project's results and objectives?*

Main findings:

- **With exception of component 2 the project managed to implement its activities more or less according to planning.**
- **The project was adequately monitored in accordance with the M&E plan. The ToR and M&E plan, however, were never adapted to the new activities of the BIG2050 Initiative.**
- **This Initiative did, though, enable the achievement of a series of objectives related to component 2. Component 2 activities related to the Bocaina Mosaic came to a standstill around 2016, due to a misinterpretation of its attributions during project formulation.**
- **These activities were substituted by the BIG2050 Initiative (a robust monitoring system linked to calls for sustainable development initiatives), resulting of very adequate adaptive management.**
- **Changes in FAO regulations and procedures over the course of the project caused some implementation problems, due to the required adaptation.**

49. Components 1, 3, 4 and 5 of the projects were implemented more or less according to planning, with the occasional (minor) delays, which were usually compensated for after some time, which occurs in the implementation of most projects. Specifically, at the beginning of the project, the initial processes of establishing partnerships, acquisition etcetera took quite some time, which led to some delays in implementation. These are processes that need to be completed, no matter how much time it takes. As a result, the first year showed a low level of implementation, however these delays were eventually all caught up with. By the last year of the project, additional staff was hired, due to the needs generated by the adaptations made to the project (BIG2050).

50. At the beginning of the project, in accordance with the work plan, a consultant was hired to develop a M&E system for the project, which complied with specific GEF requirements for such a system. This system was adopted by the PMU in an adapted shape. The monitoring system as such permitted the documentation of the implementation status of the project at each moment, allowing for the necessary adaptive management. The indicators in the plan are generally SMART. They are Specific, Measurable, Achievable Relevant, and sufficiently Time-bound, leaving little

space for undue interpretation. Most of them show gradual advance over the course of the project, and are met by the end of the project. The indicators are not, at any moment, gender specific, but the plan does include indicators with regards to civil society and community participation. Also included were indicators for the longer-term impacts of the project. A shortcoming in the monitoring of the project is that in 2016 the project was strongly modified from its original logical framework, with the abandonment of the support to the Bocaina Mosaic and the establishment of the BIG2050 initiative. Within FAO and its counterparts this change was considered a change in project strategy, the expected outcomes remaining largely the same. For this reason, outcomes not being affected, **it was not deemed necessary to seek GEF approval**. No revised log frame was produced accordingly, and indicators used to measure the project's progress continue the same as before. The RADAR monitoring system of the BIG2050 initiative contains many indicators directly related to the "health" of the BIG ecosystems, related to the desired long-term impact of the project.

51. For GEF 4's Strategic Objective 1, the Management Effectiveness Tracking Tool was used in order to "measure progress in achieving the impacts and outcomes established at the portfolio level under the biodiversity focal area ". The GEF tracking tools should be applied three times i.e. at CEO endorsement, at project mid-term, and at project completion[7]. For this project the METT was applied in 2010, 2014 and 2018. In general, the METT was applied satisfactorily until now with the participation of managers, other staff and local stakeholders in the majority of cases many cases.

52. The changes in the project – the closure of the activities related to the Bocaina Mosaic and the introduction of the BIG2050 Initiative – deviated the project from its original logical framework. The project monitoring system was based on this log frame, and therefore not ideal to monitor those aspects of the project that underwent these changes. Nevertheless, the BIG2050 activities are quite well documented. Although some adjustments could have been made to the logical framework to better specify the new approach, it is important to mention that:

    (i) the change in approach enabled the project to continue to address the objectives related to component 2 (improved integrated management of ecosystems of global importance, improvement of biodiversity and pollution indicators, more effective management of CU), but perhaps, as it is not directed as specifically at this, not to the level envisaged by the original activities with the Mosaic. There is however no doubt that the BIG2050 Initiative considerably strengthens the other components of the project. The Initiative is a policy tool (component 1), contains a robust monitoring system (component 3) and the Challenge is an excellent means of mobilisation and awareness raising (component 4).

    (ii) work on the inputs, outputs and outcomes of component 2 as foreseen in the log frame has been done and needs to be assessed. In fact, had the log frame been changed to reflect just the strategy of the new initiative, the analysis made in the paragraphs below might not have happened.

[7] Stolton S, Hockings M, Dudley N, MacKinnon K, Whitten T. 2007 Reporting progress in protected areas. A site-level management effectiveness tracking tool: second edition. Gland, Switzerland: World Bank/WWF Forest Alliance.

(iii) Although the initiative was not explicitly incorporated in the project log frame, its success can be assessed against the objectives set in the Letter of agreement with CERTI.

53. Concerning the problems encountered in relation to component 2, the following can be said. The concept of "protected areas mosaics" has been a controversial issue for many years in Brazil. Interviews with high level government officials of the Environment Ministry have corroborated this, as a variety of opinions exists on how a mosaic should function, or even whether or not it is a useful concept at all. For example, there are different views regarding the participation of indigenous, maroon and fishermen community representatives as well as on the inclusion of their territories in the mosaic itself. Federal, state and municipal environmental agencies also shift their positions on the mosaic concept according to whoever is in charge and which government is in place, as well as do the different conservation unit managers which also constantly change.

54. On the other hand, according to some involved in the implementation of component 2, this type of external support towards an executive secretariat structure was not actually an issue and has been successful in other mosaics. It seems that the issue was more related to the variable support given towards the mosaic by higher government bodies and regarding the participation of indigenous and traditional[8] communities. It's worth mentioning though that not all protected areas mosaics in Brazil have this level of engagement with indigenous and traditional communities. For example, the "Carioca Mosaic", also in Rio de Janeiro, has a more biodiversity conservation focus and has less dealing with local communities.

55. During the first years of the project the Bocaina Mosaic was supported in order to generate synergy between the various protected areas, which effectively led to a serious of joint actions, primarily related to enforcement activities. One of the aims of the project was also to establish an executive body for the Mosaic. An executive secretariat structure is not foreseen in the bylaws concerning the mosaic as it is normally composed only of a consulting council. There have been other mosaics which were supported by an executive secretariat but perhaps, due to the fragile institutional alignment and sensitive political issues, this was not the best intervention as designed (see Section 3.3).

56. The consultancy contracted to establish the executive body took on the executive secretariat by itself. Instead of delivering a consulting product it took on a role that should have been played by participating institutions, which constitutes an unsustainable solution, and may have masked the problems that surged in the Mosaic later on, delaying adequate action on behalf of the PMU. At the same time the Mosaic was already an arena for arguments between actors with conflicting interests, sometimes political ones, not within the collaborative framework of the Mosaic as a whole. Being led by a body (newly created by the project) not foreseen in the regulatory framework of the Mosaic, a smaller collegiate with one representative per state of each group of stakeholders, working closely with a new executive secretary, was not fully recognized by some park managers at the Federal level or by ICMBIO. As a

[8] In Brazil, in addition to the Amerindians, several other groups are considered as traditional populations. In the project area these consist of quilombola (descendants of runaway slaves – maroons) and caiçara (of mixed descent)

consequence, many protected areas managers considered they might as well solve their specific problems themselves whereas indigenous and traditional community representatives felt left out of some of the project's activities (e.g. biodiversity monitoring was not implemented although planned in meetings with FAO representatives).

57. The products that were delivered regarding financial sustainability of the Bocaina Mosaic were also deemed by many stakeholders not of any particular interest, especially due to the already mentioned idiosyncrasies of the mosaic. Despite the project's planned interventions being carried out, and due to reasons outside its control, a rebound effect might have occurred and, as a result, by 2016 the Mosaic's activities came to a standstill, and the participants notified the project that there was no interest in continuation of the project's efforts. This can be considered a very serious setback for the project, given the relative importance of component 2, and the Bocaina Mosaic in particular in the whole project set-up.

58. Four management plans were produced for selected protected areas, all inside the Rio de Janeiro State. The project catalysed considerable investment especially in training of Protected Area staff. Selected protected areas were strengthened mainly at the Planning and Process level as can be verified with Management Effectiveness Tracking Tools scores (see Annex 5). This is probably a consequence of the development of these management plans.

59. The PMU staff and the Lead Technical Officer (LTO) from FAO Rome went into retreat for several days, and conceived the BIG2050 initiative as a means to circumvent the serious issues mentioned above. Support of the LTO should be considered crucial in this. As a result, the BIG2050 initiative may certainly be considered to be an unexpected, but highly relevant result, in that it combines a robust monitoring system (RADAR) with a mechanism to feed the monitoring results into effective actions through the so-called "challenge" (see paragraph 34). These actions may concern policy, sustainable development, awareness raising, UC management as well as many other issues, and proposals are welcomed from all stakeholders involved, including government, civil society, local populations and individuals[9].

60. In 2016, order to develop the BIG 2050 Initiative, a letter of agreement was signed with the CERTI Foundation from Florianópolis, who was already supporting the project with the development of the monitoring system. CERTIs contribution has been fundamental in: (i) setting up the radar (describing indicators, treating information and producing a friendly online platform), (ii) producing the calls for proposals, (iii) designing and setting up the training and selection programme for participants in the "challenge" called "funil", (iv) creating an effective visual identity for the initiative, (v) producing draft communication material. However, CERTI failed to contribute to the establishment of a sustainable governance and resource mobilisation strategy for the initiative, and FAO and INEA assessed that the institution had not made significant efforts to pursue the strategy that had been agreed in the contract on this matter. In particular, FAO and CERTI agreed that the original foreseen set up of a management unit (the "hub") with two senior staff that would work in establishing a wider governance system and in resource mobilisation could not happen in a timely and effective fashion and therefore

[9] Its noteworthy that these changes were not made to original logical framework in PRODOC although it altered substantially Outcome 2.

this output was eliminated from the contract. This output was abandoned altogether when the activities with the Mosaic came to a standstill. The project's expectations were for the collaboration to be a lasting partnership, in which both parties would be involved beyond the mere technical aspects, including social impacts. In the end, the CERTI Foundation did not meet the expectations. It operated mainly from Florianópolis (almost 1,000 kms away), rather than establishing a base in the project area, which was a strongly felt need of the project. The level of seniority of allocated staff was also not as was expected, and the quality of the monitoring system set up by CERTI did not meet the expectations. The partnership did not offer sufficient perspectives for post project continuation, and by the end of 2017 the partnership was ended by the project.

61. After terminating with CERTI a partnership was set up with the Rio de Janeiro State University (UERJ), which has a campus on the Ilha Grande. UERJ and INEA now run the BIG2050 Initiative, including the RADAR monitoring system and the BIG2050 Initiative Challenge, and will continue to do so together after the end of the project. This was also a good example of adaptive management, involving a new partner that has vested interests in the project area and shares the vision of the project. Given the converging interests this new partnership should be seen as a win-win situation.

62. As with regards to institutional partnerships, success has varied. The partnerships involving the Bocaina Mosaic were not successful, in spite of the fact that many of the participating PAs were under direct INEA (and municipal) administration, the rest being under federal (ICMBio) or neighbouring São Paulo state administration (Instituto Florestal – IF). The characteristics and attributions were not adequately judged while the project was conceived.

63. Overall technical and operational support by FAO, FAO-GEF coordination unit, LTO and BUDGET HOLDER (BH) have been adequate, and in the case of the development of the BIG2050 Initiative the support of the LTO has been crucial. However, at times the PMU experienced problems due to slow decision making, being unclear whether or not certain activities, expenditures or contracting were allowed, which caused delays. Even contradictory signals were received occasionally. An important explanation for this lies in changes in regulations and procedures that occurred at FAO during the implementation of the project, adaptation to which took its due time.

64. Similarly, most of project publications do not carry the FAO logo. What has been discouraging the use of FAO symbol was the time required to get the centralized clearance by the FAO Logo unit and the time to be spent in joining the documentation and drafting the justification to be attached to the request. This seems to have been a missed chance to enhance the visibility of the organization and promote recognition of its valuable efforts.

65. Local capacity has been adequate to guarantee project implementation. There was a high level of "buy-in" by the local partners, and wherever there was a lack of capacity this was addressed by training efforts by the project. Municipal staff was trained in GIS, UC staff in management of spatial planning databases, members of various institutions (including the watershed committee) received training in Integrated Ecosystem Management – IEM at various moments. Also, teachers and environmental managers were trained.

66. Policies, as they have not changed so far, and institutional priorities (particularly of INEA) have remained in favour of the project objectives over the course of project implementation. It remains to be seen what will happen as off 2019, since the attitudes regarding the project's objectives of the new state government are not yet known.

3.3 Evaluation question 3

How effective has the project been in reaching the global, development and environmental objectives and expected results? What results, intended and unintended, did the project achieve across its components?

Main findings:

- **Under component 1, a watershed committee was effectively established; the watershed plan integrated with the Coastal Ecological Economic Zoning is expected for 2019. Several regulations and legislation were developed and decentralization processes were implemented. This will lead to improved management of the BIG area and reduction of negative impacts.**

- **Under component 2, Bocaina Mosaic activities came to a standstill, due to lack of interest among its members. Nevertheless, CUs received considerable strengthening, but as a whole this component was seriously affe cted. UC Management has nevertheless been strengthened, which will improve future conservation of natural resources and biodiversity.**

- **Under component 3, municipal sanitation plans were produced, but their implementation is far from complete. The RADAR monitoring system is a very robust system, which can be used to priorities action and policy. As a result, future policies and interventions can be based on a lot of real data, to the benefit of the health of the BIG Ecosystems.**

- **Component 4 has been successfully implemented, and received a big impulse from the BIG2050 initiative. Awareness is being proactively promoted and will definitely have positive impacts in the future.**

67. According to the "Logical Framework and Monitoring" in Annex 2 of PRODOC, the main goal of the project being evaluated is: To achieve the long-term conservation and sustainable use of the Ilha Grande Bay Ecosystem (BIG) and the associated terrestrial and marine biodiversity of global importance characteristic of the south coast of Brazil's Rio de Janeiro State, to be achieved by means of the specific objectives as pointed out in paragraph 31. To achieve these objectives the project was divided in 5 components (see Annex 5 for original logical framework).

68. The BIG 2050 initiative has, so far, been very effective towards achieve on its main, the long-term conservation and sustainable use of the Ilha Grande Bay ecosystem. The Initiative is a highly effective mechanism to address priority issues (determined with the aid of the RADAR monitoring system) in an integrated manner, involving institutional as well as community and individual actors and stakeholders, permitting initiatives in the realms of policy and legislation, Protected Areas and Natural Resource Management, capacity building, awareness raising, sustainable development, as well as any other relevant to the long-term conservation and sustainable use of the bay's

ecosystem, promoting its healthy state. Moreover, the Initiative is highly adaptive, democratic and inclusive.

69. Another important result of the project has been the establishment and consecutive strengthening of the watershed committee, which constitutes an important forum for all stakeholders, allowing them to involve in the sustainable management of the BIG, its watersheds and ecosystems. Part of the activities originally intended for the council of the Mosaic, can also be dealt with by the committee.

70. Regarding the combat of water pollution, the marinas are in the process of being licensed, and adjusting themselves to the environmental standards and the regulation produced under the project. Similarly, municipal legislation regarding bilge water separators for vessels up to 500 tons has been implemented in Angra dos Reis and will be adopted by Paraty as well, thus reducing oil contamination of the water in the bay.

71. On the contrary, BOD values have not diminished at all. Municipal sanitation projects were elaborated with support of the project, but the more than considerable counterpart contribution of fourteen million USD provided by the two municipalities (Angra and Paraty) was spent on potable drinking water rather than sewage infrastructure and treatment, and many residences continue to depend on sceptic tanks, for which not even regulation exists. Swimming water quality at several beaches is still of poor quality due to high levels of coliform contamination.

Component 1. Planning, Policy & Institutional Strengthening	**Status**
Outputs (Sub-Component Purposes)	
1.A Planning	
Output 1.1. Establishment of a permanent, financially sustainable, public forum composed of representatives of government agencies, private sector and civil society to address issues of common concern that effect the ecological health and productivity of the BIG Ecosystem.	Complete
Output 1.2. Development and adoption of long-term, multiple-phase strategic plan that will safeguard and promote the ecological restoration of the BIG Ecosystem.	**80%**
1.B Policy	
Output 1.3. 4 policy studies addressing policy gaps/failures contributing to non-sustainable production/economic practices in BIG (one of which will support the creation of a mariculture permitting system).	Complete
Output 1.4. Decentralization of environmental permitting procedures to BIG municipalities	Complete
1.C. Institutional Strengthening	
Output 1.5. Increased institutional capacity in INEA, SUPBIG and other relevant public and private sector institutions.	Complete

72. The Watershed Committee has been established and gained technical consistency and social participation over the years. The existence of the Watershed Committee perhaps compensates for the failure of the project delivering the expected outputs related to the Bocaina Mosaic. At times the delays in the elaboration of the Watershed Management Plan did, however, affect the motivation of the participants. Originally scheduled for 2015, finalization of the plan is now foreseen for the second half of 2019,

after the closure of the project. Work to integrate the plan with the Coastal Economical Ecological Zoning (ZEEC) is progressing well. The Committee will be an important mechanism to guarantee sustainable use and conservation of the area in the future

73. Legislation was developed and adopted to address policy gaps, e.g. regulations regarding marinas, mariculture, bilge water separation and others. The latter surged as municipal legislation in Angra dos Reis, from a proposal made under the BIG2050 Challenge. This demonstrates the value of this mechanism also for policy development and legislation. The legislation constitutes a lasting way to guarantee sustainability and conservation in the region.

74. Due to the change in the project's strategy (the development of the BIG 2050 initiative) policy development is now better linked to factual information on the pressures on ecosystem services, through the indicators of the RADAR monitoring system. These indicators will be further improved in future RADAR cycles. Likewise, in the BIG Challenge, gaps in the legislation and public policies for the proposals presented were identified, as described, and initiatives developed through the BIG2050 challenge are expected to contribute to maintenance of ecosystem services.

75. Both Angra dos Reis and Paraty have taken on the environmental licensing, making the decentralization a success. The quality of the environment is now being guaranteed at a more local level.

76. All planned training activities for institutional strengthening were implemented and public and private sector institutions, including INEA, SUPBIG, municipalities and others, are now better prepared for their tasks. Whereas part of the acquired capacity is likely to be internalized by the institutions involved and passed on within them, the need for capacity development is usually continuous. As it was not foreseen at the time of project formulation, the project did not establish a specific mechanism for more systematic capacity development. However, the BIG2050 Initiative offers opportunities to invest in continued training.

77. Considering that all outputs have been produced, or are still under implementation and are likely to be produced within the foreseeable future, the rating for this component is **Satisfactory**.

Component 2: Biodiversity Conservation and Protected Areas

78. Component 2 activities related to the Bocaina Mosaic struggled to deliver all of their outputs, the project was successful in its remaining activities (although the degrees of success vary according to the activity). State and municipal PAs came out of the process considerably strengthened. Capacity building in Integrated Ecosystem Management was provided, PA Management Plans were produced and are starting to be implemented, PA infrastructure was improved, equipment was purchased and considerable numbers of much needed staff were contracted. It could be questioned whether the latter can be contributed exclusively to the project's interventions or if it was part of a process that was happening anyway, but it is highly likely that it was catalysed by the project at the least. In any occasion, with all these outputs, it is to be expected that the various Protected Areas will contribute in an improved manner to conservation and protection of the natural resources and biodiversity.

79. According to latest Project Implementation Review available (PIR 6 2017 -2018 draft document) output delivery has been moderately satisfactory. The evaluation team concluded that this was mainly because of issues with initial design of project that possibly did not foresee risks regarding political and instructional sensitivities and working with a string human component as well. Overall, this jeopardized the full delivery of this component which was central to overall project success and received a major part of GEF funding, some 50% of which was further allocated to an alternative solution in 2016.

Component 2: Biodiversity Conservation and Protected Areas	**Status**
Outputs (Sub-Component Purposes)	
2.A. Strengthening Bocaina Mosaic	
Output 2.1. Completion of a Bocaina. mosaic strategy and action plan	**Complete (not being implemented)**
Output 2.2. Creation of a sustainable financing mechanism that covers operational costs of mosaic executive secretariat and selected UCs.	**Complete (abandoned)**
2.B. Strengthening of Existing UCs	
Output 2.3. Preparation/updating of UC management plans.	Ongoing
Output 2.4. Increases in UC staff in individual BIG UCs.	Complete
2.C. Creation of New and/or Expansion of Existing CUs in BIG	
Output 2. 5. Expansion of at minimum 1 UC representing no less than 24,000 ha beyond the base UC area.	Ongoing
Output 2.6. Creation of a minimum of 1 new marine UC in BIG.	50%

80. This component had activities and outputs meant to work towards the strengthening of a series of protected areas that were very relevant to the maintenance of the health of the Baia de Ilha Grande ecosystem, the projects end goal. As mentioned in Section 2.1, most of the protected areas[10] in the region were already inside a legally recognized mosaic of protected areas – the "Mosaico da Bocaina", or Bocaina Mosaic[11] so it made sense to focus on these (fig. 2).

81. Sub-component 2.A was fully directed towards "Strengthening Bocaina Mosaic" being supported by Output 2.1 "Completion of a Bocaina mosaic strategy and action plan" and Output 2.2 "Creation of a sustainable financing mechanism that covers operational costs of mosaic executive secretariat and selected UCs".. Sub-component 2.B the "Strengthening of existing UCs (sic)" support was mainly towards a smaller group of

[10] Kknown as "conservation units" in Brazil to differentiate them from Indigenous Lands while also including private conservation areas, the Reserva Natural de Patrimônio Natural - RPPN" or Private Natural Heritage Reserves in English.

[11] http://www.mma.gov.br/estruturas/240/_arquivos/portaria_mosaico_bocaina_240.pdf

protected areas, managed by INEA and the Paraty municipality, a couple of which were not in the original Bocaina Mosaic 2006 decree[12].

82. Subcomponent 2.B which was more dependent on INEA and State government commitments such as the increase of protected areas staff and the development and finalization of 4 management plans. There was a huge increase in staff already in year 1 of project, which was already planned to be done by the State government and the project provided support towards some capacity building for them. Three management plans have also been approved so far and along with staff increase these seem to have helped improve the management effectiveness of the seven protected areas where were assessed using GEF Management Effectiveness Tracking Tools – METT. However, although METT scores increased especially due to increases in processes and planning, it is not possible to evaluate if this translates in effective biodiversity conservation which is a major criticism towards the application of said tools without analysing biodiversity monitoring data (Table xx, Figure XX and Annex XX for changes in processes. Maximum score is 99).

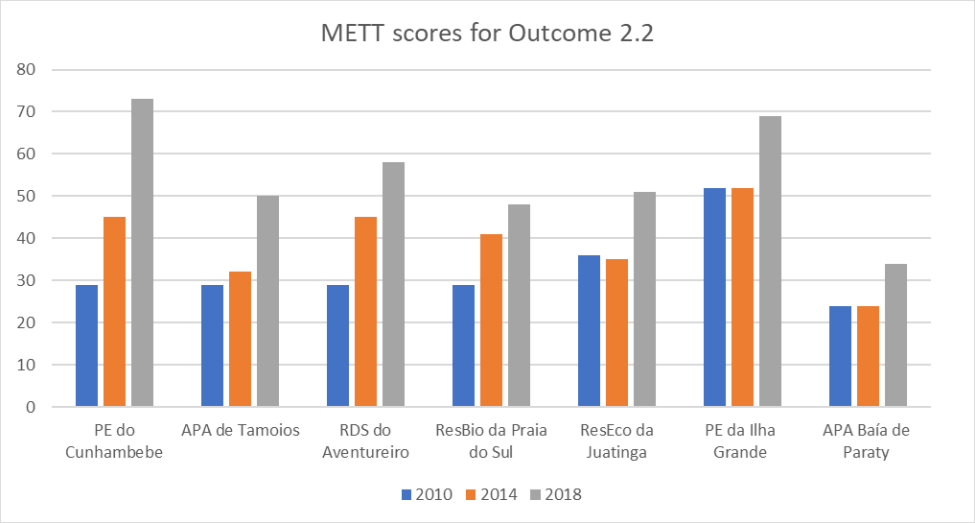
Table 1. METT scores of selected protected areas supported by project.

PA name	Type	METT score			
		2010	2014	2018	Increase
PE do Cunhambebe	State Park	29	45	74	44
APA de Tamoios	Environmental Protection Area	29	32	51	21
RDS do Aventureiro	State Sustainable Development Reserve (originally 1990 State Marine Reserve)	29	45	59	29
ResBio da Praia do Sul	Biological Reserve	29	41	48	19
ResEco da Juatinga	Ecological Reserve	36	35	52	15
PE da Ilha Grande	State Park	53	53	70	17
APA Baía de Paraty	Municipal Park	24	24	34	10
				Average increase	22

Source: Evaluation Team

Figure 4. Management Effectiveness Tracking Tools scores for selected protected areas.

[12] Parque Estadual de Ilha Grande, Parque Estadual do Cunhambebe and Reserva Ecological da Juatinga



83. Sub-component 2.C overall has not achieved its outputs as of yet as it is very dependent of factors outside the control of the project vis-à-vis the political will of state and municipal governance.

84. Overall the stated outcomes for Component 2, even in the long term, seem quite difficult to be achieved. The project did not take into account a series of risks regarding the creation of an executive secretariat for the Bocaina Mosaic, mosaics having been conceptualised in essence as being consultative rather than executive bodies. Coupled with this, there were already complex relations between different stakeholders and shifting government support for mosaics at different levels. Although it took some time for the project monitoring system to capture these issues, these were finally addressed accordingly and an alternative put into place. However, for the evaluation team to fully understand the changes made, took quite a lot of time and consistent request for information had to be undertaken. Although the newly introduced BIG2050 Initiative did not imply in changes of the expected outcomes of the project, and therefore still in-line with GEF objectives, the amount of outputs specifically favouring Protected Areas and biodiversity was reduced. The BIG2050 Initiative has no specific focus on these issues. Because of the level of outcomes achieved was substantially lower than expected due to major design shortcomings an overall rating for this component is considered **moderately unsatisfactory.**

Component 3: Threat Analysis, Mitigation and Monitoring and Enforcement

85. According to information contained in the last PIR the desired outputs of component 3 were partially delivered. Main reason for this is the large investment needed for the implementation of the municipal sanitation plans, and priorities on the implementation of parts of the plans other than sewage treatment, the latter being of primary interest for the achievement of the project goals. Therefore, in spite of the considerable merits and value of the other outputs, delivery against outputs is considered **moderately satisfactory.**

Component 3: Threat Analysis, Mitigation and Monitoring and Enforcement	**Status**
Outputs (Sub-Component Purposes)	

3A. Threat Analysis and Mitigation	
Output 3.1 Preparation and implementation of municipal waste water pollution plans in 2 BIG municipalities (one that includes Ilha Grande)	Ongoing
Output 3.2 20% of Marinas licensed (output was changed)	**50%**
3B Monitoring and Enforcement	
Output 3.3 Development of dynamic computer model representing BIG Ecosystem structure and processes	
Output 3.4 Development and implementation of an environmental quality monitoring program in BIG that includes adoption of biological indicators	Near completion (RADAR)

86. The municipal waste water pollution plans were produced by the project. However, the implementation of the plans as far as they concern sewage treatment (the part particularly relevant for improvement of the water quality), is as yet very low. The reason for this is that municipalities often give priority to supply of potable drinking water (also part of the plan), rather than sewage treatment. As a result, much untreated water is still being discharged in water courses and the bay itself, and pollution levels as such (BOD values as monitored by the RADAR monitoring system) have not yet diminished (In fact, a slight increase was measured). This situation will only change for the better once the sewage treatment is implemented. It is difficult to foresee how much time will still be needed for this.

87. Regarding other aspects on the combat of water pollution, the marinas are in the process of being licensed, and adjusting themselves to the environmental standards and the regulation produced under the project. Similarly, municipal legislation regarding bilge water separators for vessels up to 500 tons has been implemented in Angra dos Reis and will be adopted by Paraty as well, thus reducing oil contamination of the water in the bay. Licensing of marinas is ongoing, but slightly behind schedule.

88. Related to outputs 3.3 and 3.4, in addition to the cartographic base developed by INEA (including ZEEC), the BIG RADAR has been designed to aggregate new physical, chemical, biological and social parameters, that provide strong elements for decision making. The RADAR monitoring system is being improved considerably, and monitoring operations are being carried out, often already on a routine basis. A very strong aspect of the RADAR monitoring system is that it allows, through its direct link to the BIG2050 Challenge, for monitoring results to feed directly into definition of policies and the prioritization of environmental issues to be solved.

Component 4: Public Awareness and Communication.

89. Being on schedule and having generated and distributed a considerable amount of materials for awareness raising and public participation, progress towards outputs can be considered **satisfactory**.

Component 4: Public Awareness and Communication	**Status**
Outputs (Sub-Component Purposes)	
4A. Public Awareness strategy	
Output 4.1 PA & Communication Strategy	Complete

4B. Implementation of PA Strategy	
Output 4.2 Strategy implemented	Complete

90. The Public Awareness and Communication Strategy was delivered during the first year of the project and has been under implementation since. Besides informing the target population on the project the communication is certainly also meant to stimulate active participation. Much material was produced, including leaflets, books, documentary films. Also, quite a number of press releases were produced. The website of BIG2050 is of good quality and highly informative, even allowing for access to the RADAR monitoring information. Interviews with some of the local stakeholders revealed that awareness has increased.

91. Although not foreseen when the Public Awareness and Communication Strategy was first developed, the BIG2050 Initiative contributes to the improvement of the ecosystem services provided by the bay much more than just by providing small incentives. The processes it involves generate awareness, momentum and a sense of responsibility next to decision makers. Every time a challenge is run, based on real data provided by a sound monitoring system, there is an impact on local awareness and media attention that would be difficult to generate otherwise. Community involvement and effective participation are capable of generating lasting raised awareness.

Component 5: Project Management, M&E and Knowledge Management.

92. Component 5 has delivered the required outputs and the relatively small PMU has demonstrated capacity for adapted management, maximizing the achievement of outputs within reach and adapting others in order to continue to contribute to the expected outcomes of the project. Delivery of outputs may therefore be considered **highly satisfactory.**

Component 5: Project Management, M&E and Knowledge Management	**Status**
Outputs (Sub-Component Purposes)	
Outputs (Sub-Component Purposes)	
5A. Project Management	Ongoing
Output 5.1. Project Coordination Unit (PMU) created to manage and coordinate GEF supported activities	Ongoing
5.B Monitoring and Evaluation	
Output 5.2. INEA/SUPBIG's M&E capacity strengthened to supervise GEF supported activities	Complete
5.C Knowledge Management	
Output 5.3. Knowledge management system established and implemented	Complete

93. Management over the course of project implementation has been adequate, and wherever outputs were not delivered (most notably in the case of the Bocaina Mosaic) this was usually due to factors that could not be directly controlled by the project, and delays were caught up with. The monitoring system was in place and adequate. Adequate monitoring activity allowed for the identification of bottlenecks and adaptation in a number of outputs. This was the case with the activities related to the Bocaina Mosaic. With growing evidence that continued support to the Mosaic would not significantly contribute to the achievement of the outcomes, support was interrupted, and an alternative strategy was adopted by means of the BIG2050 Initiative The development of the BIG2050 Initiative can be considered an adaptation beyond expectations. Equally, the shortcomings of the partnership with the CERTI Foundation were adequately identified, and acted upon, which ultimately led to the new partnership with UERJ, and, recently, with the philanthropical fund SITAWI.

94. Results of the project have been documented and published. Also, a large amount of information is available on the BIG2050 website.

3.4 Evaluation question 4

To what extent did the project approach in working with local communities regarding ecosystem management ensure stakeholders participation in the decision-making process related to project activities? To what extent has the project addressed gender equality issues in its design and contributed to women empowerment throughout its implementation?

Main findings:

- **The local population was actively involved from the formulation stage onwards. They are represented in the watershed committee.**

- **Although gender was not considered during formulation, this matter was given attention to during implementation.**

- **The BIG2050 Initiative is highly democratic and its calls for proposals are easily accessible for people with low levels of formal education.**

95. After approval of the PIF, a GEF Project Preparation Grant (PPG) was made available in order to facilitate the preparation of the project. Among the many workshops, on a wide array of topics, organized for this purpose were two general stakeholder workshops, designed to solicit inputs from members of civil society and associations that depend on the BIG ecosystem. This included environmental and socio-economic NGOs, user associations (e.g. fishermen's colonies and tourism associations) and representatives of religious groups. The main objective of the latter was to increase participation and consult with other stakeholders who depend on the long-term sustainability of the BIG Ecosystem and whose support would be critical to the Project's success. During the final evaluation mission representatives of the local communities and populations not only confirmed the community and civil society's involvement from early on in the process, but also acknowledged the great importance of this. Without mentioning specific examples they felt their concerns were considered by the project and the involvement certainly contributed to a collaborative attitude of many. Buy-in by the stakeholders was good (with exception of some of the partners in the

Bocaina Mosaic, as mentioned earlier on in this report) and attitudes have generally been constructive.

96. The general attitude of the project has been to actively involve all relevant stakeholders in its processes towards reaching a consensus. The Watershed Committee for example, supported by the project, which has the decision-making authority on issues related to the management of the water resources, is composed by all major interested sectors, including local community representatives. Also, the structure originally foreseen to support the Bocaina Mosaic was also thought of as being inclusive and democratic in character.

97. The partnership between INEA and UERJ regarding the BIG2050 Initiative also shows good perspectives. Both partners have converging interests in the Bay and potential for a lasting partnership seems high. Apart from being quite effective in steering investment the Initiative's "Challenge" (Desafio) is very democratic and inclusive in permitting the participation of any stakeholder with a valid proposal. Also, very positive in this sense are the simple procedures applied in the selection process which also facilitates the participation also of those without any scholarly/academic background. This was actually acknowledged to the evaluation team by several successful participants of the challenge.

98. Although it is usually a requirement of both GEF and FAO, there is no evidence that gender issues were considered either during project conception and formulation; nor were they addressed in the monitoring system. At the same time, it should be considered that the majority of project results can be considered gender neutral (E.g. Legislation on reduction of pollution, CU management, Zoning), with low potential to affect women specifically, either positively or negatively. Since the project was not directly responsible for hiring of staff or appointment of representatives of counterpart organisation, these could not be influenced by the project. The evaluation team did not find any evidence of gender disadvantage or neglection. During the implementation project management did pay attention to gender issues, and the very participatory and inclusive character of the project has been very favourable in this sense. Proof of this is that a five out of thirteen, or 38% of the ideas/proposals presented to the BIG2050 Challenge and were approved, were submitted by women.

3.5 Evaluation question 5 *How sustainable are the project's achieved results at the environmental, technical, social, financial and institutional level?*

Main findings:

- **The project produced plans, regulations and legislation which will have lasting impacts in the future.**

- **The BIG2050 Initiative shows excellent perspectives for sustainability, through the use of PPPs to reduce vulnerability to government funding and policy changes.**

99. The level of buy-in and ownership of the stakeholders involved in the project is quite high. Local community members depending on the BIG ecosystem are motivated to continue to be involved in the watershed committee and other activities promoted by the project. The BIG2050 initiative was very well received and offers huge opportunities for stakeholders to continue to be involved. The main institutional partners, INEA, UERJ and the BIG municipalities have internalized the project results well, proactively contributing to the project activities and making them part of their routines, and since these results are linked to their institutional mandates (conservation, health of the environment, sustainable development, sanitation, research/monitoring), there is a high potential for continuity. This should also guarantee at least a minimum level of financing. The BIG2050 website has good potential to serve as a platform to maintain the partners as well as the general public informed on new developments, and of course to continue the BIG2050 Challenge. Also, legislation and regulations elaborated with support of the project have already been adopted at State level, beyond the project area. These include regulation of mariculture, marinas, among others.

100. After the 2016 Olympic Games, the State of Rio de Janeiro entered in an unprecedented recession, which eventually led to a State Government default regarding payment of salaries and pensions, and even schools and hospitals ceased to operate. Over the course of 2018, with aid of the federal government, the situation is slowly normalizing, but is still far away from what it used to be. This means that in the near future, financial resources may continue to be scarce, but there are alternative sources of funding. Part of the Rio de Janeiro State counterpart contribution was financed through BID loans, which would also be an option for specific cases in the future. Also, environmental compensation in the context of environmental licensing, as well as Terms of Adjustment of Conduct, will continue to be an option.

101. In the end, the enabling environment for continuation of the project activities will, for an important part, depend on government support. Due to recent shifts in Federal Government, the environment seems to be less of a priority at this level, quite on the contrary, is already showing a tendency to ease on command and control as well as environmental licensing, in favour of economic development, and is transferring certain responsibilities regarding state forests, indigenous and traditional populations to the Ministry of Agriculture. At the level of Rio the Janeiro State the attitudes of the new government towards issues related to the project are, as yet, not clear. However, a number of environmental priorities were mentioned during the campaign. These include decontamination of the Baía de Guanabara and the Paraíba do Sul River. This might constitute an opportunity for replication of the experience of the project. On the other hand, it was also said that licensing procedures should be sped up, which could mean government would be heading in another direction, favouring development over environment. Given the high level of political uncertainty at this moment, the efforts of the BIG2050 Initiative to gain financial independence should be considered highly opportune.

102. Regarding the sustainability of the BIG2050 Initiative, perhaps the most visible and effective result of the project, there is still work to be done in order to guarantee its continuation. End of November 2018, the project was conceded a three months extension, until 31 March 2019, to establish an adequate structure and financing for

the initiative. A non-profit organization will be contracted to establish a fund for this purpose, and is to start work still in December 2018. Also, a Technical Cooperation Agreement between INEA, UERJ and FAO were signed with the intention to maintain the BIG2050 Initiative for the medium and long term. The resources for the fund are expected to become available through Public Private Partnerships, which would drastically reduce dependency on government and vulnerability to sometimes volatile politics.

103. During the closure event of the project contacts were made with various institutions interested in participation in the Initiative, such as SEBRAE (an institution for the support of micro and small enterprises, with a large nation-wide experience in capacity building), the Municipalities of Angra dos Reis and Paraty and the Fundação Boticário. The latter is a foundation linked to one of the largest cosmetics producers and retailers in Brazil, and is dedicated to nature conservation. The Foundation has demonstrated considerable interest in financing the BIG2050 Fund. Other private foundations are also being contacted for further funding. It can be said that the BIG2050 Initiative has received much attention from all sorts of State and non-State actors and has considerable potential for replication elsewhere.

104. The legacy of the project consists of a series of results that will contribute to a healthy BIG on the long term. A number of CUs have been strengthened, and management plans were produced, which will definitely enhance their implementation and management for a considerable period in the future. Equally, the watershed committee is functioning adequately, and the watershed plan (integrated with the ZEEC) will be finalised during the current year, providing conditions for improved management and increased conservation and sustainability of the BIG area as a whole. Municipal sanitation plans are also in place, which is an important step towards sewage treatment. Legislation and regulations have been adopted with support from the project, which will have lasting impacts on the quality of the environment and sustainable development. The BIG2050 Initiative consists of a very robust monitoring system of the environment (RADAR), combined with a very inclusive incentive scheme (the "Challenge"). The initiative has already led to new legislation and a series of sustainable development initiatives, but just as important, it is a very effective mechanism to raise public awareness.

105. Although it is likely that the RADAR monitoring system will require continued government involvement (INEA and UERJ are the implementers), it has, at the same time, generated a relative financial independency through Public Private Partnerships. This all said, for all this to materialize, continued political support will remain necessary, and signs regarding this vary. Federal government shows clear signs that it may cut down on environmental issues, which would affect the CUs under administration of ICMBio, as well as occasional support from e.g. the Ministry of Agriculture (Fisheries). Most of the results, however, are dependent on the Rio de Janeiro State Government and the municipalities involved, which are likely to give more importance to continuity of the project's results.

106. In terms of replication of the experience, so far, no other donors or projects have engaged in similar activities. However, legislation adopted by Angra dos Reis (bilge water treatment) has attracted attention of Paraty. A number of results of the project

are may very well serve as a reference for other initiatives, such as the integration of the watershed plan with the coastal zoning (ZEEC), and the RADAR monitoring system, particularly in combination with the Challenge of the BIG2050 Initiative.

4 Crosscutting issues

4.1 Intended impacts

107. The objectives and desired outcomes of the BIG project aim at the conservation of the Bay's terrestrial and marine ecosystems and biodiversity, as well as the provision of ecosystem services. Means of achieving this include support to conservation units, increased connectivity between UCs, collaboration among federal, state and local conservation agencies; reducing habitat and landscape fragmentation, and restoration of ecosystem integrity and recovery of its underlying functions and services. In this sense, and based on information available from the Project Document, the evaluation team defined the following Global Environmental Benefits (GEB) of the project:

1. The conservation of important Atlantic Rainforest (hotspot) biodiversity (one of the most threatened forest ecosystems on earth).
2. Conservation of unique coastal and marine ecosystems.
3. Maintenance of ecosystem services made available by BIG ecosystems.
4. Management of water resources and other natural resources in the BIG area in ways that are sustainable, environmentally sound and productive in terms of environmental services.

108. These GEBs can be considered as the project's intended impacts. Since they are all four very much related, in the sense that conservation (GEBs 1 and 2) is a necessary condition for the maintenance and sustainability of environmental services (GEBs 3 and 4), they are well summarized in the overall goal of the project: *To achieve the long term conservation and sustainable use of the Ilha Grande Bay (BIG) Ecosystem and the associated terrestrial and marine biodiversity of global importance characteristic of the south coast of Brazil's Rio de Janeiro State*.

4.1.1 Verification of the Project Logic

109. Taking the desired impact as a starting point, this section evaluates whether sufficient and adequate project outcomes exist for the impacts to be achieved. Long term conservation and maintenance/restauration of biodiversity and environmental services depend on eliminating the threats that are posed to the area.

110. In the context of the problems to be addressed and the logical framework/ToC as described above, the desired impact would require, according to the project document, a set of measures regarding:

1. implementation/management of the network of protected areas and conservation activities;
2. conciliation of conservationist interests and other interests of society (population, industries), including spatial planning;
3. direct measures to reduce pollution/contamination;
4. measures to reduce the anthropic pressure on the ecosystems through sustainable development activities;

5. Awareness of stakeholders who have a potential impact; and
6. Monitoring of the current state of the area.

111. Regarding point 1, this is being addressed by component 2, and its outcomes 2.1 and 2.2 (see table 2) contributes directly to better ecosystem management and improved functioning of the protected areas. About outcome 2.3 can be said that increased abundance of indicator species, rather than an outcome, would already be part of the desired impact being reached. Also, the outcomes under component one is relevant for conservation and protected areas through promotion of intel-agency cooperation and policy development

112. As far as point 2 is concerned, the outcomes under component 1 aim at resolving conflicts, and improve coordination efforts. Important in this is the establishment of the Watershed Committee, the elaboration of the watershed plan, which is to be integrated with the Coastal Economic Ecological Zoning and the support to municipal GIS systems.

113. Point 3 is being addressed by outcomes 3.1 and 3.2, which deal with improving sanitation and reducing pollution from marinas. Outcome 1.2 is meant to support legislation/regulations which reduce negative impacts.

114. Point 4: This was actually not directly targeted by any of the original outcomes of the project. The development of the Challenge under the BIG2050 initiative (which was never included in an adapted logical framework), does address this issue very well.

115. Point 5 is addressed by outcomes 4.1 and 4.2, the development and implementation of a Public Awareness Plan

116. Again, for point 6, which is quite important for the achievement of the desired impact, there is no specific outcome mentioned in the original log frame. It only appears as outputs 3.3 and 3.4, not related to the two outcomes of component 3. In fact, what would be the outcome is the RADAR monitoring system, the other component of the BIG2050 Initiative.

117. Should the BIG2050 Initiative and its specific objectives be included in the project's logical framework it would probably work out as follows:

118. All this means that the outcomes in the original logical framework, but not without the two components (Challenge and RADAR), offer good perspectives for the project to reach its desired impact. It must be noted that a time horizon for this to happen was at the conception of the project put at around 25 years.

4.1.2 Analysis of Outcome to Impact Pathways

Table 2: Outcomes to Impacts Theory of Change

STRATEGIES	OUTCOMES	DRIVERS & ASSUMPTIONS	INTERMEDIATE STATES	IMPACT

Planning, Policy and Institutional Strengthening	1.1 Improved Inter-agency coordination in support of ecosystem-based management of the BIG ecosystem	D: Common objectives between agencies exist A: Continued political support	Agencies creating synergies and being more effective in supporting ecosystem-based management of the BIG ecosystem	Long term conservation and sustainable use of the Ilha Grande Bay (BIG) Ecosystem and the associated terrestrial and marine biodiversity
	1.2 Improved policy framework in support of ecosystem-based management principles	A: Continued political support D: Implementation capacity is sufficient	Policies being implemented	
	1.3 Evidence of increased "mainstreaming" of Ecosystem Based Management principles in SUPBIG and other relevant public and private sector institutions	D: Comparative advantages of ecosystem-based management exist and materialize A: Sufficient institutional capacity	Widespread adoption of ecosystem-based management	
Biodiversity Conservation and Protected Areas	2.1 Improved Integrated Management of ecosystems of global importance in the Bocaina Mosaic	A: Partners in the Mosaic have a shared vision and a will to collaborate	Improving quality of ecosystems and sustainable management of their resources and environmental services	
	2.2 Improved management effectiveness of existing Participating CUs in BIG	D: CUs continue to receive adequate support.	Management plans being implemented and adapted when necessary	
	2.3 Increased abundance of indicator species and diversity of global importance	A: Indicator species are representative of the respective ecosystem "health"	General Biodiversity is increasing	
Threat Analysis, Mitigation and Monitoring and Enforcement	3.1 Reduction in pollution loading in BIG	A: Municipal sanitation plans effectively implemented	Strongly reduced influx of polluted water	
	3.2 Improvement in environmental quality in BIG marinas	D: Compliance with regulatory framework	Marinas minimize the amount of pollution they cause	
Public Environmental Awareness and Communication	4.1 Increased Public Awareness and support for the protection and restauration of the BIG ecosystem	D: Public interest in environmental issues	People's attitudes change for the better regarding sustainable use and conservation of the BIG ecosystem	

Project Management, M&E and Information Dissemination	5.3 Evidence that lessons learned from the ecosystem-based approach in BIG is being Taken up and replicated elsewhere in the state, country and Latin American Region	A: The project is able to make a convincing case D: Successful implementation of the project and significant achievement of objectives	Best practices are being replicated for the benefit of other vulnerable and globally important ecosystems	

4.2 Materialization of co-financing

119. The latest available data concerning co-financing were made available by the PMU in January 2019 and are depicted in table 3. They reflect the situation up to December 2018. Since some of the activities are still under implementation, expenditure at the end of project may turn out to be slightly higher.

120. By the end of 2018 total co-financing amounted to US$ 40.6 million, against an originally committed US$ 25 million, meaning an increase of almost 62%. The ratio Co-financing/GEF is thus over 17:1, which is more than double the current GEF target of 7:1 (GEF 6).

121. More than half the co-financing is by the Rio de Janeiro State Government. The amount more than doubled from originally 10.7 million to 22.3 million. More than half of the increase is due to several IDB and World Bank loans for support to protected areas and natural disaster warning systems.

122. Considerable co-financing commitments were also made by the municipalities of Paraty and Angra dos Reis. Paraty spent very little of what it committed originally, allegedly due to the fact it did not receive funds that were promised as environmental compensation. In compensation, Angra dos Reis spent over four times its original commitment (from 4.2 to 17.6 million). According to the failure to invest seriously in sewage treatment (as mentioned in paragraph 72), it could be questioned to what extent the municipal expenditure would in fact qualify as co-financing.

123. The high level of co-financing that materialised may be indicative of the commitment of the involved institutions, even more so when considered State Government taking loans.

Table 3: Co-financing situation at 30 June 2017

Sources of Co-financing[13]	Name of Co-financer	Type of Co-financing[14]	Amount Confirmed at CEO endorsement / approval	Amount Materialized at 31 December 2018
State Government RJ	INEA and State Secretary of the Environment	Grant	10,000,000.00	14,165,970.28
State Government RJ	INEA	In kind	700,000.00	480,252.64
State Government RJ	IABD/ State Government	Loan	0	7,532,201.04
State Government RJ	INEA	Other	0	68,400.00
Federal Government	Ministry of Fisheries and Aquaculture	Grant	0	550,000.00
Municipality Paraty	Municipality Paraty	Grant	10,140,700.00	150,000.00
Municipality Angra	Municipality Angra	Grant	4,210,000.00	17,628,205.13
GEF Agency	FAO	In kind	50,700	50,000
		TOTAL	25,050,700.00	40,625,029.08

[13] Sources of Co-financing may include: Bilateral Aid Agency(ies), Foundation, GEF Agency, Local Government, National Government, Civil Society Organization, Other Multi-lateral Agency(ies), Private Sector, Other.

[14] Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other.

5 Conclusions and recommendations

5.1 Conclusions

124. Based on the evidence collected throughout the evaluation process, the Final Evaluation drew several conclusions, which have been organized around the evaluation questions.

Conclusion 1. The project's objectives, strategies and actions were relevant to the needs and priorities of all beneficiaries and stakeholders

125. The project is relevant to the objectives of GEF and FAO, and is aligned with the priorities, policies and international obligations of both the federal government of Brazil and the government of the State of Rio de Janeiro. Also, the needs of the involved municipalities (Angra dos Reis and Paraty) are adequately addressed. The project is also highly relevant to the local population, including the traditional population, which includes caiçara, maroon and indigenous communities, through offering a healthy natural environment as well as opportunities for sustainable development and maintenance of livelihoods.

Conclusion 2. The project was not able to deliver significantly on its outputs related to the Bocaina Mosaic, which had serious consequences for achieving improved integrated management of ecosystems of global importance in the Bocaina Mosaic

126. The activities related to the strengthening of the Bocaina Mosaic, including the establishment of a permanent executive structure, were largely based on a misconception at the time the project was conceived. This was the failure to recognize the essence of the Mosaic concept, which is consultative, rather than executive. Eventually due to the nature of the mosaic, the many stakeholders involved, political interests and other issues, more conflicts arose and by 2016 the Bocaina Mosaic activities came to a standstill. Since component 2 of the project leaned considerably on the Mosaic to obtain its results, some of the project's intended outcomes were jeopardized and did not materialize.

Conclusion 3. Through adaptive management the project was able to adapt itself after the setback of the Bocaina Mosaic in order to develop and pursue an alternative strategy

127. When confronted with Bocaina Mosaic situation, the PMU went into retreat, together with the Technical Lead from FAO HQ to come up with an alternative strategy. This process lasted over a week. It was then that the BIG2050 Initiative was conceived and developed. The BIG2050 Initiatives had two pillars, the first one being a very robust monitoring system, the information of which is used to describe the environmental situation at a specific moment and determine intervention priorities. The second pillar is called the Desafio (*Challenge*). Based on the indications of the results provided by RADAR, calls for proposals are published and the best proposals are awarded financing. The calls are open to the general public, but also to private and public institutions, so that any urgent need can be addressed. Currently, the project, as a last activity, is working on the

establishment of a sustainable executive structure for the Initiative, including the institutional/management component and a financial component, by means of a fund to be established by means of Public Private Partnerships.

Conclusion 4. The project suffered some delays from time consuming and at times unclear authorization processes at FAO

The project was affected by slow decision making at FAO on whether or not certain activities or expenditures would be allowed, as well as contracting procedures. The use of the FAO logo was also complicated, which often led to omission of the logo and consequently reduction of FAO visibility. Many regulations have changed in FAO Manual over the last 2-3 years, and a failure of HQ to concede longer transition periods and/or lack in proper prior training of FAO staff at the Representation Office may well be pointed as a cause of "slow decision making"

Conclusion 5. The project failed to deliver on the reduction of the BOD values

128. BOD (Biological Oxygen Demand) values have not been reduced. It was foreseen that the considerable investments in sanitation by the municipalities of Angra dos Reis and Paraty would include sewage water treatment, expectation that did not materialize. This can be attributed to the fact that during formulation, the contribution of the municipalities was not made sufficiently specific. As a result, the municipalities set priorities within the scope of sanitation, but which did not contribute to the achievement of the objectives of the project.

Conclusion 6. In terms of social participation, the project has generated significant results

129. Communications of civil society and community representatives confirmed that the project promoted social participation from the formulation stage onwards. An effective Watershed Committee was established, with considerable community participation. Another important aspect is that the BIG2050 Challenge (see conclusion 3) is of a very inclusive, democratic and accessible nature. The Challenge is open to anyone, be it individually or as part of any organization, and procedures are kept as simple as possible, as to permit access even for people with relatively low levels of formal schooling. The "Challenge" itself attracts much attention of the press and general public which has considerable impacts on awareness levels.

Conclusion 7. The Project created a good basis for the achievement of the general objective

130. The project generated a fair amount of relevant results for the achievement of the project's general objective. A Watershed Committee was established, institutions and some conservation units were strengthened. Relevant policies, legislation, regulations and management plans were produced, public awareness has been raised, and serious efforts are still being made to institutionalize the BIG2050 Initiative and to guarantee its sustainable financing. Hopefully through the Challenge it will be possible to tackle current future issues affecting the health

of the BIG ecosystem. This will be highly dependent on political wiliness from government institutions at different levels and the Challenge should continuously evaluate if it is reaching is vision and the projects it is supporting. In particular, it should try to rollout specific or thematic calls for new projects to be supported, especially based on results of monitoring being done by RADAR towards the ultimate goal of conservation and sustainable use of the Baia de Ilha Grande Ecosystem and its associated terrestrial and marine biodiversity.

5.2 Recommendations

Recommendation 1 – To FAO: Difficulties encountered by the evaluation team in evaluating co-financing and project expenditure suggest that future projects would benefit from a real time financial monitoring system, as far as possible.

Recommendation 2 – To FAO: When significant changes are made to project outputs over the course of implementation, these should be documented in a structured way (e.g. through inclusion in the logical framework) and adequate new indicators and outputs should be developed and obsolete ones abandoned, in order to maintain project logic. This will facilitate posterior monitoring and evaluation activities.

Recommendation 3 – To FAO: All project documents for evaluation should be made available in an organised manner at the beginning of evaluation process, before field mission and in accordance to the project logical framework.

Recommendation 4 – To FAO/GEF: Ensure as much as possible in future projects that co-financing is directly linked to specific project outcomes and that its activities and expected outcomes are under the control of the project.

Recommendation 5 – To State Government: to apply the successful model of the BIG2050 Initiative for other areas in Rio de Janeiro State, preferably as a whole, or parts of it (RADAR, "Challenge", the use of PPPs)

Recommendation 6 – To FAO and GEF: Future projects aimed at biodiversity conservation and/or supporting protected areas would benefit from a thorough analysis of what can be effectively accomplished with available funds and the onsite reality of the threats and issues being addressed. They should have a deep understanding not only of the relevant policies and laws but also of the many stakeholders involved.

Recommendation 7 – To FAO and GEF: Analysis of METT scores should not be limited to the overall as a proxy to project success and impact. Analysis should consider the different elements of the Tool and be associated, when possible, to further evidence as a means to be verified. Casual correlations should not be made as a way to increase project impacts.

Recommendation 8 – To FAO and GEF: Gender and other cross-cutting issues should always be considered in new projects. Not considering should be specifically justified.

5.3 Lessons Learned

131. The experience with the Bocaina Mosaic demonstrates the importance of a better understanding of policies, legislations involved and of a thorough stakeholder analysis, where the potential role of each stakeholder is made explicit, based on its essential characteristics and attributions, avoiding implicit assumptions.

132. Projects should not take on roles belonging to institutional mandates of project partners, as happened with the executive secretariat of the Bocaina Mosaic being presided by consultants contracted by the project.

133. The Bocaina Mosaic problems also demonstrate that interinstitutional cooperation should have a clear added value for it to succeed. Conservation Unit managers did not see the need for cooperation with other CUs or other types of protected areas and maroon communities.

134. Expenditure by co-financing should be sufficiently specified. Municipal co-financing was spent on sanitation, but not on the kind of sanitation (sewage treatment implementation) that was relevant to the achievement of the project results and outcomes. Unlike in IFI financed projects, in GEF financed projects (i) projects should not depend on high levels of co-financing for the achievement of important results and (ii) outcomes which are 100% financed though co-financing are out of project control. While IFIs have strong control on the use of co-financing (IFI disbursement is conditional to co-financing and project supervision, safeguards and financial management rules compliance apply to co-financing), GEF projects do not benefit from the same management instruments and therefore the project could never influence neither the achievement of targets or the quality/efficiency of the works.

135. Public Private Partnerships, such as the ones sought by the BIG2050 Initiative to establish its fund, can effectively reduce the vulnerability of projects and their results to uncertain politics and availability of public funding.

Appendices

The appendices form part of the report and should include any material that is essential in understanding the main report and directly referred to in the report (e.g. an evaluation matrix, a list of projects, a short summary of field research):

1. Appendix 1: FAO - GEF Evaluation Criteria Rating Table
2. Appendix 2: List of people consulted
3. Appendix 3: List of documents consulted

Appendix 1. FAO - GEF Evaluation Criteria Rating Table and Rating Scheme

1.1 FAO-GEF Evaluation Criteria Rating Table

Each criterion receives a rating derived from the evaluative assessment in the main document.

GEF - FAO criteria/sub criteria	Rating[15]	Summary Comments[16]
A. ASSESSMENT OF PROJECT RESULTS		
1. Overall quality of project outcomes[17]	MS	There were moderate shortcomings, most outside project control
1.1. Relevance	MS	There were some issues regarding needs of stakeholders (e.g. 3.2 § 45- 47).
1.2. Effectiveness	MS	There moderate shortcomings in achieving some of the environmental objectives and results, mainly related to Component 2 (Section 3.3, § 69-76). New strategy i.e. BIG 2050 Initiative, is yet to deliver its results.
1.3. Efficiency	S	Project was satisfactory here as carried out the planned engagement with stakeholders.
B. PROJECT IMPLEMENTATION AND EXECUTION RATING		
2. Quality of project implementation	MS	
3. Quality of project execution	S	
C. MONITORING AND EVALUATION (M&E) RATING		
4. Overall quality of M&E	MS	
4.1. M&E Design	MS	
4.2. M&E Plan Implementation	MS	

[15] See rating scheme at the end of the document.
[16] Include reference to the relevant sections in the report.
[17]Assessment and ratings by outcome may be undertaken if there is added value. A composite scoring of all outcome ratings, however, is not advised.

D. SUSTAINABILITY OF PROJECT OUTCOMES		
5. Overall likelihood of risks to sustainability	ML	
5.1. Financial risk	ML	
5.2. Socio-political risk	ML	
5.3. Institutional risk	MU	
5.4. Environmental risk	MU	

1.2 Rating Scheme

A. Overall Outcome ratings[18]

Terminal evaluations take into account the project's results, logical framework, ToC and work plan. Mid-term evaluations can base outcome ratings on work plans and mid-term targets (if available).

Rating	Description
Highly Satisfactory (HS)	"Level of outcomes achieved clearly exceeds expectations and/or there were no short comings."
Satisfactory (S)	"Level of outcomes achieved was as expected and/or there were no or minor short comings."
Moderately Satisfactory (MS)	"Level of outcomes achieved more or less as expected and/or there were moderate short comings."
Moderately Unsatisfactory (MU)	"Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings."
Unsatisfactory (U)	"Level of outcomes achieved substantially lower than expected and/or there were major short comings."
Highly Unsatisfactory (HU)	"Only a negligible level of outcomes achieved and/or there were severe short comings."
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements.

B. Project Implementation ratings (Assess Implementation and Execution separately)

Rating	Description
Highly Satisfactory (HS)	There were no shortcomings and quality of **implementation / execution** exceeded expectations.
Satisfactory (S)	There were no or minor shortcomings and quality of **implementation / execution** meets expectations.
Moderately Satisfactory (MS)	There were some shortcomings and quality of **implementation / execution** more or less meets expectations.
Moderately Unsatisfactory (MU)	There were significant shortcomings and quality of **implementation / execution** somewhat lower than expected.
Unsatisfactory (U)	There were major shortcomings and quality of implementation substantially lower than expected.

[18] See instructions provided in annex 2: Rating Scales in the "Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized Project", April 2017.

Highly Unsatisfactory (HU)	There were severe shortcomings in quality of **implementation / execution**.
Unable to Assess (UA)	The available information does not allow an assessment of the quality of **implementation / execution**.

C. Monitoring and Evaluation Design or Implementation Ratings (Overall M&E design, Assess Design and Implementation separately)

Rating	**Description**
Highly Satisfactory (HS)	There were no shortcomings and quality of **M&E design / M&E implementation** exceeded expectations.
Satisfactory (S)	There were no or minor shortcomings and quality of **M&E design / M&E implementation** meets expectations.
Moderately Satisfactory (MS)	There were some shortcomings and quality of **M&E design / M&E implementation** more or less meets expectations.
Moderately Unsatisfactory (MU)	There were significant shortcomings and quality of **M&E design / M&E implementation** somewhat lower than expected.
Unsatisfactory (U)	There were major shortcomings and quality of **M&E design / M&E implementation** substantially lower than expected.
Highly Unsatisfactory (HU)	There were severe short comings in **M&E design or M&E implementation.**
Unable to Assess (UA)	The available information does not allow an assessment of the quality of **M&E design / M&E implementation**

D. Sustainability

Rating	**Description**
Likely (L)	There is little or no risk to sustainability.
Moderately Likely (ML)	There are moderate risks to sustainability.
Moderately Unlikely (MU)	There are significant risks to sustainability.
Unlikely (U)	There are severe risks to sustainability.
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability.

Appendix 2: People Interviewed

Presential:

Name	Institution	Position
Tiago de Carvalho Franco Rocha	FAO	PMU - Project co-ordinator
Monique Diaz	FAO	PMU - Project administrator
Rodrigo Campos	FAO	PMU - Oceanographer
Ciro Lotfi	FAO	PMU – Geographer
Carolina Miczak	FAO	PMU – information management
Paulo Schiavo	INEA	Focal point, director DIBAPE
Julia Bochner	INEA	Vice-director DIBAPE
Marie Ikimoto	INEA	Territorial Management and geo-spatial information Coordinator
Débora Rocha	INEA	Conservation Units Officer
Luiz Eduardo Moraes	INEA	RADAR Operator
Moema Versiani Acselrad	COAGUA/SUBSEGH	Water Governance Coordinator
Samuel Muylaert	INEA	Water Ressource Plans Officer
André Leone	INEA	Water Quality Manager
Leonardo Fidalgo	INEA	Water quality monitoring chief
Ana Lúcia Vendramini	UFRJ	Algiculture Project, BIG Challenge
Lívia Suzarte	UFRJ	Algiculture Project, BIG Challenge
Alexandre Oliveira	CODIG (Comitê de Defesa da Ilha Grande/Ilha Grande Defense Committee)	President
Marcos Bastos Pereira	UERJ	Director Department of Oceanography/RADAR
Mônica	UERJ	Department of Oceanography/RADAR
Ana Cecilia Cortines	OTIS	Traditional populations worker
Julio Avelar	IPEMAR	President
Ronaldo de Sousa Viana	FIPERJ/AMBIG/IPEMAR	Maricultor
André Luiz de Araujo	FIPERJ/AMBIG/IPEMAR	Maricultor
Mônica de Mesquita Nemer	Paraty Municipality	Sub-secretariate for the environment and "APA da Baía de Paraty" Manager
Luis Paulo Nascimento	Paraty Municipality	Secretario do Ambiente e Secretário Executivo da Diretoria Colegiada do CBH BIG

André Trindade	Saco do Céu – Ilha Grande	Apicultor
Sr. Kazou	Matariz/Bananal – Ilha Grande	Maricultor and fish farmer
Amanda Hamada	Matariz/Bananal – Ilha Grande	Marine ecoturismo
Patricia Merlin	Praia Vermelha – Ilha Grande	Fry production Laboratory

By Skype/telephone/e-mail:

Marcello Broggio	FAO	FAO-R/BH
Margareth Celse l'Hoste	FAO	
Geneviève Braun	FAO	
Nigel Varty	FAO	TCID
Luis Dias Pereira	FAO	LTO
Sergio Henrique Collaço de Carvalho	Ministry of Environment	former director Protected Areas Department
João Paulo Sotero	Ministry of Environment	former director Protected Areas Department
Felipe Spina Avino	FAO Consultant	Former Executive Secretary of the Bocaina Mosaic Protected Areas

Appendix 3: Documents consulted

Project Document "Integrated Management of the Ilha Grande Bay Ecosystem", GCP/BRA/078/GEF.

GEF Annual Project Implementation Reports – PIR, 2012 – 2017

Project Progress Reports – PPR, January 2013 – June 2017.

Guidelines on the project and program cycle - GEF/C.52/Inf.06, 2017.

Focal area strategies and strategic programmes for GEF 4 - GEF Policy Paper, 2007.

Avaliação de Meio Termo do Projeto "Gestão Integrada do Ecossistema da Baía da Ilha Grande (BIG)", 2015

GCP/BRA/078/GFF, 2015.

Mosaicos do Corredor da Serra do Mar – Mosaico da Bocaina - Portaria Nº 349, de 11 de dezembro de 2006.

Regimento interno do Conselho Consultivo do Mosaico Bocaina, 2007.

Stolton, S., Hockings, M., Dudley, N., MacKinnon, K., Whitten, T. and F. Leverington. 2007. Reporting progress in protected areas: a site-level Management Effectiveness Tracking Tool, 2nd ed. WWF and World Bank.

Updated Co-financing Policy, GEF, 2018

Guidelines on Co-financing, GEF, 2018

Budget Revision, 2017

Project Work Plans, 2011 – 2017

Technical Project Supervision Mission Reports, 2011 – 2014

RADAR BIG 2050 - Documento Descritivo e Resultados do 1º Ciclo, CERTI, January 2018

Annexes

- Annex 1: Terms of reference for the evaluation
- Annex 2: Evaluation matrix
- Annex 3: Individual METT scores for selected protected areas
- Annex 4: Mid Term Review Recommendations
- Annex 5: Original logical framework