

Developing the potential of *Thalassia testudinum* in the health sector in Cuba in accordance with the Nagoya Protocol and Biodiversity Conservation

Review CEO Endorsement and Make a recommendation

Basic project information

GEF ID

11037

Countries

Cuba

Project Name

Developing the potential of *Thalassia testudinum* in the health sector in Cuba in accordance with the Nagoya Protocol and Biodiversity Conservation

Agencies

UNDP

Date received by PM

5/19/2022

Review completed by PM

6/23/2022

Program Manager

Sarah Wyatt

Focal Area

Biodiversity

Project Type

MSP

CEO Approval Request

Part I ? Project Information

1. Focal area elements. Is the project aligned with the relevant GEF focal area elements as indicated in Table A and as defined by the GEF 7 Programming Directions?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes, we welcome projects on the Nagoya Protocol.

Agency Response

2. Project description summary. Is the project structure/design appropriate to achieve the expected outcomes and outputs as in Table B and described in the project document?

Secretariat comment at CEO Endorsement Request

6/22/2022

Yes.

5/25/2022

No, however these issues are addressed in the second question 3 below.

Agency Response

3. If this is a non-grant instrument, has a reflow calendar been presented in Annex D?

Secretariat comment at CEO Endorsement Request NA

Agency Response

4. Co-financing. Are the confirmed amounts, sources and types of co-financing adequately documented, with supporting evidence and a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized, consistent with the requirements of the Co-Financing Policy and Guidelines?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

5. GEF resource availability. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

STAR allocation?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

Focal Area allocation?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response
LDCF under the principle of equitable access?

Secretariat comment at CEO Endorsement Request NA

Agency Response
SCCF (Adaptation or Tech Transfer)?

Secretariat comment at CEO Endorsement Request NA

Agency Response
Focal Area Set Aside?

Secretariat comment at CEO Endorsement Request NA

Agency Response
Impact Program Incentive?

Secretariat comment at CEO Endorsement Request NA

Agency Response
6. Project Preparation Grant. If PPG is requested in Table E.1, has its advanced programming and utilized been accounted for in Annex C of the document?

Secretariat comment at CEO Endorsement Request
5/25/2022

Yes, this is a one-step MSP.

Agency Response
7. Non-Grant Instrument. If this an NGI, are the expected reflows indicated in Annex D?

Secretariat comment at CEO Endorsement Request NA

Agency Response
8. Core Indicators. Are the targeted core indicators in Table E calculated using the methodology in the prescribed guidelines? (GEF/C.54/Infxxx)

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes. During implementation it would be good to track carbon benefits and if there are broader seascape level impacts as the values are quite low.

Agency Response

6/1/2022

Reference: Please, see output 3.1.1, ProDoc, paragraph 75, page 19, and CEO ER, paragraph 72, page 20

Thank you for your comment. A new indicator was included in the Results Framework to track carbon sequestered in the seagrass biomass and sediments during project implementation in the three pilot sites of the project.

9. Project taxonomy. Is the project properly tagged with the appropriate keywords as in Table G?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

Part II ? Project Justification

1. Project Description. Is there sufficient elaboration on how the global environmental/adaptation problems, including the root causes and barriers, are going to be addressed?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

2. Project Description. Is there an elaboration on how the baseline scenario or any associated baseline projects were derived?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

3. Project Description. Is there an elaboration on the proposed alternative scenario as described in PIF/PFD sound and adequate? Is there more clarity on the expected outcomes and components of the project and a description on the project is aiming to achieve them?

Secretariat comment at CEO Endorsement Request

5/25/2022

No, please address the following:

- Case study, general research and/or targeted program? - The writing of the components of this project are a bit confusing as there are often references to "marine angiosperms" as though the work being done will be broadly applicable to a general group (e.g. 3.1.4). However, there is only ever reference to working with one species. Please be clear the writing and consider how, while the project may be highly targeted, it can inform and have larger impacts.

- Sea grass ecosystem research and characterization - In a phone call with GEF Sec, project proponents discussed how the work of this project would result in increased knowledge and understanding of the ecosystem and other species. This is not clear from the text as written. Including the description of this work would help strengthen the case for this project.

- 1.1.4 - Who will be responsible for maintaining and updating this after the project? Will there be coordination with other projects on this?

- Output 2.1.1 and 2.1.2 - These activities are broadly not eligible for GEF support. We would like to see the GEF supporting less equipment and more capacity building. It would also be good to consider how capacity building could be done virtually or through other means that do not require expensive travel.

- Output 3.2.3 - This is quite broad. Given that this species is widely distributed in the Caribbean Sea and this is not part of TK, what is the ownership of these materials?

- Output 3 - It is unclear how this project will really tie back to conservation or sustainable management of seagrasses more broadly. The project mentions a number of threats to seagrasses but it is unclear how this project will truly address them.

- Output 4.1.1 - For these activities, it will be important to consider who needs to or should know what and how those activities will relate back to the goals of this project. There is often an assumption inherent in environmental communications campaigns that if people just knew more, they would change behavior (ex. climate change); however,

we can see that it often doesn't work out the way the proponents might hope. It seems unlikely that just telling hotel owners about possible cancer fighting benefits would change their perspective. When it comes to ABS, it's also important to remember that not everyone can know everything and while it broadly sounds like a nice thing to have people generally be "aware" - it often doesn't translate into action for numerous reasons. During inception, the project should carefully consider how communications activities can directly serve the activities of the project, the type of behavior change and from whom will have and impact, and consider the messages and medium that will be most effective.

Agency Response

6/1/2022

1) Reference: Please, see ProDoc, section V Results and Partnerships, Component 3, paragraphs 75-81 pages 19-21, and CEO ER, section Expected Results, Component 3, paragraphs 72-77, pages 20-22. Please, also see ProDoc, section X Total Budget and Workplan, Budget Notes 9 and 15, pages 51-52.

Case study, general research and/or targeted program?

Outputs were reorganized under component 3 to clarify the project's contribution (general research) to the conservation of biodiversity in seagrass ecosystems. The revised outputs identify appropriate management measures for biodiversity conservation in seagrass ecosystems (see output 3.1.1). At the same time, project targets the species *T. testudinum* as a biological resource that contains the genetic resource which will be accessed for the development of a pharmaceutical product.

The outputs were adjusted as follows:

- Under output 3.1.1 the project will carry out activities related to the evaluation of the environmental quality of the seagrass ecosystem at the three intervention sites including an Ecological Evaluation Index, a biodiversity assessment, and an estimation on organic carbon sequestered in the sediments and seagrass biomass. The EX-Ante Carbon-balance Tool (EX-ACT) has a seagrass and mangrove module that could be used for this exercise.

- Under output 3.1.2 the project aims to generate data to improve a seagrass management plan within the protected area PNP Rinc?n de Guanabo and in non-protected areas.

- Under output 3.1.3 the project will carry out a population analysis of the *T. testudinum* angiosperm.

2) Seagrass ecosystem research and characterization: As described above Outputs under Component 3 were adjusted to increase the knowledge and understanding of the seagrass ecosystem and to facilitate its conservation and management in accordance with best practices.

In this context, activities related to studies on biodiversity conservation were included in the ProDoc (studies on environmental quality of seagrass ecosystem and populations analysis) (See outputs 3.1.1 and 3.1.3).

3) Reference: Please see output 1.1.4, ProDoc, paragraph 63, page 17 and CEO ER, Table B ?Project Description Summary?, page 1-2 and sections Expected Results, paragraph 61, page 21.

Dialogue platform (Output 1.1.4): Following the project conclusion the platform will be maintained by ORSA and AMA/IGT as suggested under Output 1.1.4.

4) Reference: Please see output 2.1.1 and 2.1.2, ProDoc, paragraphs 68-71, pages 18-19 and CEO ER, Table B ?Project Description Summary?, page 2 and sections Expected Results, paragraphs 66-70, pages 21-22.

Outputs 2.1.1 and 2.1.2. Thank you for your comment. Please note that GEF funding is now supporting less equipment under Component 2 as suggested by the GEF reviewer. GEF funding under Component 2 was reduced from US\$ 537,900 to US\$269,903 and the difference was moved to Component 3 to support the purchase of equipment and capacity building needed for field and lab studies on biodiversity conservation, population analysis, etc (See output 3.1.1 and 3.1.3). GEF funding will also be used to purchase equipment needed to conduct pharmaco-toxicology analysis as required by the Cuban regulatory agency (CECMED).

Similarly, GEF funding is no longer supporting one of the two vehicles initially budgeted by the project. Nonetheless, the project will need one vehicle to collect biological samples and carry out presentational on-the-job training to ensure the uptake of new technologies and training by the project?s targeted agencies in the three intervention areas. The project will also carry out virtual capacity-building activities as needed.

Reference: Please see output 1.1.1, ProDoc, paragraph 58, pages 16-17 and CEO ER, Table B ?Project Description Summary?, page 1 and sections Expected Results, paragraph 56, pages 20-21.

Please see output 3.1.1 and 3.1.2, ProDoc, paragraphs 75-76, page 19 and CEO ER, Table B ?Project Description Summary?, page 2 and sections Expected Results, paragraphs 72-73, pages 20-21.

5) Output 3.2.3. Thanks for your comment. This output was eliminated.

6) Output 3. The project will collect information about the health of the seagrass ecosystem and its capacity to respond to the pressures (Outputs 3.1.1 and 3.1.3). This information will be used to propose appropriate management measures for biodiversity conservation (Output 3.1.2). In the specific case of Rinc?n de Guabano, this data will be used to update the Protected Area Management Plan.

7) Reference: Please see output 4.1.1, ProDoc, paragraph 82, page 21 and CEO ER, Table B ?Project Description Summary?, page 2 and sections Expected Results, paragraph 79, page 22.

Output 4.1.1. Thank you and noted. This recommendation will be taken into account during the inception phase as noted in the revised output.

4. Project Description. Is there an elaboration on how the project is aligned with focal area/impact program strategies?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

5. Project Description. Is the incremental reasoning, contribution from the baseline, and co-financing clearly elaborated?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

6. Project Description. Is there a better elaboration on the project's expected contribution to global environmental benefits or adaptation benefits?

Secretariat comment at CEO Endorsement Request

6/22/2022

Yes.

Agency Response

7. Project Description. Is there a better elaboration to show that the project is innovative and sustainable including the potential for scaling up?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

8. Project Map and Coordinates. Is there an accurate and confirmed geo-referenced information where the project intervention will take place?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

9. Child Project. If this is a child project, an adequate reflection of how it contributes to the overall program impact?

Secretariat comment at CEO Endorsement Request NA

Agency Response

10. Stakeholders. Does the project include detailed report on stakeholders engaged during the design phase? Is there an adequate stakeholder engagement plan or equivalent documentation for the implementation phase, with information on Stakeholders who will be engaged, the means of engagement, and dissemination of information?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

11. Gender equality and women's empowerment. Has the gender analysis been completed? Did the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities? If so, does the project/program include gender-responsive activities, gender-sensitive indicators and expected results?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

12. Private sector engagement. If there is a private sector engagement, is there an elaboration of its role as a financier and/or as a stakeholder?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

13. Risk. Has the project elaborated on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved? Were there proposed measures that address these risks at the time of project implementation?

Secretariat comment at CEO Endorsement Request

6/22/2022

Yes.

5/25/2022

No, please provide more consideration of the potential changes should the phytochemicals fail to produce anticancer benefits, causes negative impacts that mean it can not be used as a medicine, or otherwise doesn't result in the proposed product. This could be a place to emphasize the other benefits and capacities built by the project.

Agency Response

6/1/2022

Reference: Please see output 3.1.3, ProDoc, paragraph 77, page 20 and CEO ER, paragraph 74, page 21. Also see ProDoc, Annex 6 ?UNDP Risk Register?. Risk 9.

Thank you. Under Output 3.1.3 the project will assess the variability of bioactive metabolites during project implementation which will provide information on the potential impacts of climate change and anthropogenic factors. Also, this point has been included in the UNDP Risk Register.

In addition, it is important to consider the following points:

- A study on seasonality and variability can reveal the moment when *T. testudinum* produces the highest amount and concentration of active compounds. It cannot be ruled out that climate change could cause changes in the pattern of metabolites in the species which may have an impact on antitumor activity. In this case, the project would analyze concentrations of Thalasiolin B, which has antitumor properties. Studies have shown that the greatest efficacy is observed around 40% of Thalasiolin B in the extract, but even at 15%, the extract shows activity.

- Other compounds (apigenin, luteolin, chrysoeriol, benzoic acid) also show antitumor activity. This could allow the antitumor capacity to be maintained despite changes in the concentration patterns, given the possibility that this action does not fall on a single compound.

- The metabolites of natural phenolics are stable compounds, present in numerous plant species that have adapted to evolutionary changes. *T. testudinum* produces metabolites in response to stress and changes in the marine environment in which it lives, therefore, it is considered that the plant could continue to produce them regardless of impacts associated with climate change.

- On the other hand, for the aforementioned compounds and others, also identified in the extract, antioxidant and anti-inflammatory activity has been demonstrated, which would allow other potential uses for the species to be considered. In addition, *T. testudinum* is rich in vegetable fiber, micro and macro-elements which could be used to

produce nutraceuticals, cosmetics, and ecological fertilizers. These uses have already been considered.

- Nonetheless, in a worst-case scenario where climate change causes a significant reduction of metabolites, the extract could be subjected to a purification process and a fraction rich in biological activity could be the starting point for obtaining the active ingredient to develop the bioproduct.

14. Coordination. Is the institutional arrangement for project implementation fully described? Is there an elaboration on possible coordination with relevant GEF-financed projects and other bilateral/multilateral initiatives in the project area?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

15. Consistency with national priorities. Has the project described the consistency of the project with identified national strategies and plans or reports and assessments under the relevant conventions?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

16. Knowledge management. Is the proposed Knowledge Management Approach for the project adequately elaborated with a timeline and a set of deliverables?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes, however, this is rather weak. It would be good to consider how knowledge learned about the process from this project could be collected and shared.

Agency Response

6/1/2022

Reference: Please see output 4.1.3, ProDoc, paragraph 84, page 21 and CEO ER, Table B Project Description Summary, page 3-4 and sections Expected Results, paragraph 81, page 22.

Thank you. Please note that a new output (4.1.3) was included under Outcome 4.1. This output aims to strengthen knowledge management for this project.

The project will support increased knowledge of marine biodiversity found on the island platform. In particular, the project will provide new evidence on the biodiversity associated with *T. testudinum*, to support biodiversity conservation practices and models for this important ecosystem along the coasts of Cuba and other Caribbean islands. The project will redefine/update scientific knowledge on seagrass beds through publications of scientific findings, best management practices, and technical reports. Under this output the project will also publish methodological guidelines to identify monetary and non-monetary benefits derived from genetic material.

Socialization will be carried out through publications and participation in scientific training, exchanges, workshops, courses, seminars, and events. Participation in these events will contribute to strengthening capacity building of scientists and local stakeholders. The project will also support the participation of project staff in workshops, seminars, and national and international events to facilitate the socialization and dissemination of outcomes and lessons learned.

17. Monitoring and Evaluation. Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

18. Benefits. Are the socioeconomic benefits at the national and local levels sufficiently described resulting from the project? Is there an elaboration on how these benefits translate in supporting the achievement of GEBs or adaptation benefits?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

19. Annexes:

Are all the required annexes attached and adequately responded to?

Secretariat comment at CEO Endorsement Request

6/22/2022

Yes.

Agency Response

20. Environmental and Social Safeguard (ESS):

Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

Project Results Framework

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

GEF Secretariat comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

Council comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

STAP comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

Convention Secretariat comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

Other Agencies comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

CSOs comments

Secretariat comment at CEO Endorsement Request NA

Agency Response

Status of PPG utilization

Secretariat comment at CEO Endorsement Request NA

Agency Response

Project maps and coordinates

Secretariat comment at CEO Endorsement Request

5/25/2022

Yes.

Agency Response

Part III ? Country and Agency Endorsements

1. Country endorsements. Has the project/program been endorsed by the country?s GEF Operational Focal Point and has the name and position been checked against the GEF data base?

Secretariat comment at CEO Endorsement Request

6/23/2022

Yes.

6/23/2022

No,

1. Letter of Endorsement: after opening *all* files in the documents? section, it was not possible to find the Letter of Endorsement, which is a requirement. Hence, it is not possible to assess whether the project?s information is consistent with the endorsement.

2. Co-financing:

? Office for environmental regulation, ORSA, Ministry for science, technology and environment: grant ? change ?Recurrent expenditures? to ?Investment mobilized?

? Environmental agency AMA, Ministry for science, technology and environment: grant ? change ?Recurrent expenditures? to ?Investment mobilized?

? Financial fund for science and innovation and national environment fund: grant ? change ?Recurrent expenditures? to ?Investment mobilized?

? Pharmaceutical laboratories ?Oriente?: grant ? change ?Recurrent expenditures? to ?Investment mobilized?

Budget: while charged to different components and to PMC, the number of Laptops (12) Personal computers (10), Monitors (12), backups (12) and Printers (8) seems excessive. Compared with other projects, these numbers are not proportionate with the size and scope of this one ? it looks like the equipment goes beyond this project. Please ask the Agency to review.

6/22/2022

Yes.

The PM notes the OFP's request for a small amount of execution support related to procurement from UNDP and approve this request. Also, the PM approves the purchase of a vehicle for this project.

5/25/2022

Yes.

Agency Response

06/23/2022

1. LOE is now posted in the portal

<https://gefportal.worldbank.org/App/#/roadmap/9836afa5-02d6-ec11-a7b5-000d3a35e8f4?~:text=PIMS%206311%20Cuba%20ABS%20LOE%2017th%20May%202022>

2. Reference: CEO ER, Table C

Co-financing categorization has been adjusted, comments on additional investments mobilized inserted below the Table C

3. Thank you for your comment. We respectfully request the GEF to allow the purchase of computers as they are part of the key equipment to ensure the project's activities related to assessments, systematization, analysis, and other activities of the project studies at the laboratory level and ecosystems level, and, also, as part of the strengthening of the national capacities on the political and regulatory framework. While the project is a medium-sized project for the GEF, key project activities will take place in at least five different locations and therefore require computers and associated equipment for each of them. In addition, the achievement of specific activities by each component depends on computers:

- Component 1: Computers are needed equipment to ensure the strengthening of the national capacities of the regulatory authority including the establishment of an online dialogue platform to exchange information on ABS and knowledge associated with biodiversity conservation, which needs to be hosted and supported.
- Component 2: Computers are fundamental equipment to support genetic research and manage and analyze the database of genetic information collected. These computer-based analyses are required to request the permits as part of the project and a key step in realizing potential benefits (of access and benefits sharing).
- Component 3: Computers are required equipment to establish the database to systematize the result of the monitoring of the ecosystems in the three different intervention sites of the project in the field. This information is very important to evaluate the environmental sustainability of the proposed productive practice (harvesting of *Thalassia testudinum*) and for the potential scaling of this experience.

Does the termsheet in Annex F provide finalized financial terms and conditions? Does the termsheet and financial structure address concerns raised at PIF stage and that were pending to be resolved ahead of CEO endorsement? (For NGI Only)

Secretariat comment at CEO Endorsement Request

NA

Agency Response

Do the Reflow Table Annex G and the Trustee Excel Sheet for reflows provide accurate reflow expectations of the project submitted? Assumptions for Reflows can be submitted to explain expected reflows. (For NGI Only)

Secretariat comment at CEO Endorsement Request NA

Agency Response

Did the agency Annex H provided with information to assess the Agency Capacity to generate and manage reflows? (For NGI Only)

Secretariat Comment at CEO Endorsement Request NA

Agency Response

GEFSEC DECISION

1. RECOMMENDATION.

Is CEO endorsement/approval recommended?

Secretariat comment at CEO Endorsement Request

6/23/2022

Yes.

6/22/2022

No, please address the comments under the endorsement question.

5/25/2022

No, please revise and resubmit based on the comments here and the phone conversation about the project. GEF Sec remains available for discussion.

Review Dates

	1SMSP CEO Approval	Response to Secretariat comments
First Review	5/25/2022	
Additional Review (as necessary)	6/22/2022	

**1SMSP CEO
Approval**

**Response to Secretariat
comments**

**Additional Review (as
necessary)**

**Additional Review (as
necessary)**

**Additional Review (as
necessary)**

CEO Recommendation

Brief reasoning for CEO Recommendations