



**PROJECT IDENTIFICATION FORM (PIF)**

**PROJECT TYPE: Full-sized Project**

**TYPE OF TRUST FUND: GEF Trust Fund**

**PART**

**I: PROJECT IDENTIFICATION**

<b>Project Title:</b>	Discovering nature-based products and building capacities for the application of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Fiji		
<b>Country(ies):</b>	Fiji	<b>GEF Project ID:</b>	
<b>GEF Agency(ies):</b>	UNDP	<b>GEF Agency Project ID:</b>	
<b>Other Executing Partner(s):</b>	Centre for Drug Discovery and Conservation, University of South Pacific and Department of Environment, Ministry of Local Government, Urban Development, Housing and Environment	<b>Submission Date:</b>	August 2012
<b>GEF Focal Area (s):</b>	Biodiversity	<b>Project Duration (months):</b>	36
<b>Name of parent program:</b> <b>For SFM/REDD+ <input checked="" type="checkbox"/></b>	N/A	<b>Agency Fee (\$):</b>	97,000

**A. FOCAL AREA STRATEGY FRAMEWORK:**

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative grant amount (\$)	Indicative co-financing (\$)
BD-4	National ABS frameworks operational score as recorded by the GEF Tracking Tool (to be developed)	Access and benefit-sharing agreements (number) that recognize the core ABS principles of Prior Informed Consent (PIC) and Mutually Agreed Terms	NPIF	881818	2200000
Sub-total				881818	2200000
Project management cost				88182	22000
<b>Total project cost</b>				<b>970,000</b>	<b>2420000</b>

**B. PROJECT FRAMEWORK**

<b>Project Objective:</b> To discover nature-based products and build national capacities <i>that facilitate technology transfer on mutually agreed terms, private sector engagement, and investments in the conservation and sustainable use of genetic resources</i>						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
1. Discovering active compounds for pharmaceutical and agrochemical uses from organisms in marine areas	TA	Bioprospecting in Fiji strengthened through 1. State of the art technology (hardware, software, and know how) transferred for bioprospecting to Fiji with assistance of the private	Scientific surveys undertaken on bio-chemicals from marine areas of Fiji: 1. Screening facility for active compounds against dengue fever established and, 30 active compounds	NPIF	631818	1190000

		<p>sector partners</p> <p>2. At least 30 highly active compounds identified and form the basis for the identification of the lead compound (s) from seaweeds and deep water marine microbes, leading to identification of at least 1 lead compound that is considered for the development process of agrochemical and pharmaceutical products</p>	<p>purified and their structure elucidated</p> <p>2. At least one lead compound identified for commercial purposes</p> <p>3. Capacities for state of the art analytical chemical techniques, disease bioassays, data handling and collection, culture and long-term storage of samples installed in Fijian institutions.</p>			
2. Operationalization of ABS Agreements and Benefit Sharing	1.	<p>2. National benefits achieved from ABS agreements through enhanced national research capacities and potential commercial development through private sector involvement</p> <p>a. At least 10 scientists (including female scientists) from relevant national institutions trained</p> <p>3. Local benefits enhanced through bio prospecting work by linking to marine conservation actions strengthening through local communities</p> <p>a. At least 25% of net income derived from the sale of bioprospecting products contributed to the Fiji Locally Managed Marine Area (FLMMA) Trust Fund for conservation and development</p> <p>b. Capacity increased of Hotels Association to maintain, enhance and utilize the web based marine conservation fund raising (adopt a reef programme)</p> <p>c. Project partners to support conservation actions in at least 15 locally managed marine area sites around the country</p>	<p>1. Training programme developed and institutionalized on biodiscovery techniques in national laboratories</p> <p>2. Benefit sharing mechanism for ABS strengthened by the FLMMA Trust Fund</p> <p>3. Strengthened local actions to sustainably manage locally managed marine areas for effective conservation, linking to bio-prospecting</p>	NPIF	150,000	730,000

3. Increased national capacity to operationalize Nagoya Protocol Obligations	TA	<p>Nagoya Protocol obligations institutionalized under the leadership of relevant agencies</p> <ul style="list-style-type: none"> <li>Administrative systems such as permits for access clarified and streamlined for relevant government agencies</li> <li>Increased understanding and actions of the national ABS Committee on access and benefit sharing promotion in Fiji</li> </ul>	<p>1.1 Administrative systems / Procedures for ABS agreement negotiations between the government and relevant institutions strengthened= including clear roles and responsibilities and business standards for screening and approval processes</p> <p>1.2 Electronic database on biodiversity, natural products, ABS agreements, and projects installed in relevant national institutions , including data handling system among national and international institutions for harmonized sharing of information on samples collected and scientific results</p> <p>1.3 Awareness programme for national stakeholders on Nagoya Protocol obligations</p>	NPIF	100,000	280,000
Subtotal					881818	2200000
Project management cost					88182	220000
Total project costs					970,000	2420000

**C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Department of Environment	In-kind	60,000
GEF Agency	UNDP	Cash	60,000
USA Government	International Cooperative Biodiversity Group, Fogarty Centre (Fogarty Centre is NIH)	Grant	1,200,000
Others	University of South Pacific	Grant	300,000
Others	Georgia Tech	Grant	200,000
Others	Scripps Institute of Oceanography, University of California, San Diego	Grant	50,000

Others	University of North Carolina, UC Riverside, BMS	Grant	100,000
Bilateral agency	GIZ	Grant	50,000
Foundation	Packard/MacArthur Foundation	Grant	400,000
Private Sector	Bristol Myers Squibb	Grant	XXXX
Total Co-financing			XXX

#### D. GEF RESOURCES REQUESTED BY AGENCY, FOCAL AREAS AND COUNTRY

GEF AGENCY	TYPE OF TRUST FUND	FOCAL AREA	Country name/Global	Project amount (a)	Agency Fee (b)	Total c=a+b
UNDP	NPIF	Biodiversity	Fiji	970,000	97,000	1,067,000
<b>Total GEF Resources</b>				970,000	97,000	1,067,000

## PART II: PROJECT JUSTIFICATION

### A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

#### A.1.1 THE GEF FOCAL AREA/LDCF/SCCF STRATEGIES: N/A

#### A.1.2. FOR PROJECTS FUNDED FROM LDCF/SCCF: THE LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES: N/A

#### A.1.3 FOR PROJECTS FUNDED FROM NPIF, RELEVANT ELIGIBILITY CRITERIA AND PRIORITIES OF THE FUND:

This project builds on activities implemented by a biodiversity initiative known as the International Cooperative Biodiversity Group (ICBG)<sup>1</sup> in Fiji. In 1997 Fiji drafted an ABS policy, which meets CBD requirements but has not yet been formally enacted. It has recently been agreed that this will be the basis of the formal ABS legislation in the country, especially since Fiji has ratified the Nagoya Protocol. A legally binding agreement in place among the collaborating universities (GIT, SIO, USP – collectively called ICBG), the Fiji Ministry of Agriculture, Fisheries, and Forests, Department of Fisheries, and the industrial partner (BM) to grant access to the ICBG to Fiji's genetic resources. The objective of the ICBG was to investigate the country's plant, freshwater and marine coral reef organisms in order to discover new therapeutic agents and promote biodiversity conservation. The GEF investment will support national efforts to expand biological collections, strengthen scientific research and development efforts, facilitate benefit-sharing and streamline administrative procedures for the national ABS framework. The project is consistent with the eligibility criteria and priorities of the fund as it will support the government of Fiji to implement the above objectives, including drug discovery and technology transfer on mutually agreed terms. In addition the project will facilitate private sector engagement and projects targeting investments in the conservation and sustainable use of genetic resources in-situ. Lessons from this project will be used to update ABS laws and regulations and to improve the capacities in Fiji to facilitate ABS agreements and handling issues under the Nagoya Protocol.

In doing so, it is consistent with the following objectives of the NPIF: a) Support Parties in reviewing their own capacities and needs on ABS with a focus on the provisions of existing national policies, laws, and regulations and to strengthen the enabling environment at national level through the development of appropriate policy and institutional measures to promote the fair and equitable sharing of benefits arising

<sup>1</sup> The ICBG is an international partnership composed of the Georgia Institute of Technology, Scripps Institution of Oceanography, the University of the South Pacific and the South Pacific Applied Geoscience Commission of Fiji to examine plant, freshwater and marine coral reef organisms of Fiji to assess conservation priorities and discover new therapeutic agents.

from the utilization of genetic resources, including by appropriate access to genetic resources; b) Support Parties to implement national and regional projects to promote technology transfer on mutually agreed terms, private sector engagement, and projects targeting investments in the conservation and sustainable use of genetic resources in-situ to accelerate the ratification and implementation of the Protocol; c) Support Parties to undertake activities to increase public awareness regarding the implications of the Nagoya Protocol; and d) Support Parties to further the knowledge and scientific-base for the implementation of the Nagoya Protocol.

## **A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS:**

Fiji's NBSAP has a Guiding Principle stating that "The intellectual property rights to biodiversity, genetic resources, bio-derivatives and knowledge about biodiversity be recognised and that appropriate mechanisms adopted to ensure, henceforth, fair remuneration, credit or other benefits are received by local communities, the discoverer or developer, and the nation." This project's two components will be relevant to several of the recommended actions under the two Focus programmes identified:

1. Under "FOCUS 1: COMMUNITY SUPPORT – AWARENESS, INVOLVEMENT AND OWNERSHIP", the NBSAP has identified "Objective 1.2 Ensure that the nation and, in particular, Fiji's natural resource-owning communities receive fair, just and economic remuneration from the use of genetic material and products." It calls for the development and adoption guidelines or legislation for bioprospecting and economic use of genetic material and products which incorporate fair provision for traditional knowledge and ownership; Encouraging collaborative research and exploration for economic uses of genetic material and products; Development and adoption of guidelines for all research activities which, amongst other requirements, ensure that the community owners have an understanding of and approve of the research; and the institution of joint collaboration between the business community, government resource owners and researchers to establish economic values of the resources used by the business community.
2. These are further stressed under FOCUS 2: IMPROVING OUR KNOWLEDGE, under "Objective 2.5 Establish mechanisms which encourage and facilitate biodiversity research and enable Fiji to access relevant international findings and developments." The actions recommended under this include a review of Government's and USP's role in biodiversity research; Encouraging international and private sector collaborative research on Fiji's biodiversity; Identifying priority research requirements for biodiversity management and opportunities for developing national expertise; Adoption of a National Protocol drawing on the current USP Guidelines for Biodiversity Research and Bioprospecting regarding conduct and publication of research, and the export, buying and selling of biodiversity materials and findings; and the establishment a central professionally administered facility to house and manage the various existing biodiversity collections and to actively encourage the collection and deposition of new materials.

## **B. PROJECT OVERVIEW:**

### **B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:**

Fiji consists of more than 300 islands and about 100 are inhabited, covering a total land area of 18,376 square kilometres. The two largest islands of Viti Levu and Vanua Levu comprise of more than 85% of the total area. Most of the islands are volcanic. In 2008, the Fiji population stood at 837,271 with annual growth rate of -0.5% in 2007 and -0.1%. Around 51% of the population lives in urban areas. Fiji has a mild tropical climate with plentiful rain. It is however subject to potentially catastrophic climatic events such as cyclones and flooding. During El Nino years droughts can be severe on the western parts of the larger islands especially during the May to October dry season. Diverse ecosystems exist in Fiji including

significant areas of natural forest and a range of coastal and marine ecosystem including extensive systems of mangrove and coral reefs. These resources form the basis of Fijian culture, employment and food supply, thus the need to be well maintained for future generations. The remaining area of natural forest is approximately 860,000 ha and the current rate of deforestation is moderate. Fiji's EEZ covers 1.3 million square kilometres and contains rich marine resources. Reef systems include barrier, fringing and platform reefs. Some are under pressure from pollution, coral mining and hurricane damage. A significant portion of Fiji's economy is dependent on exploitation of Fiji's natural resource base. This includes agriculture, forestry, fisheries, mining and tourism.

Several threats to Fiji's global biodiversity significance arise from the fact that they are not considered economically important by local communities and development sectors; and economic actions that degrade or cause a loss of biodiversity are more profitable in the short term. For example, habitat loss and modification for "development" include loss of mangroves, which have been cleared and reclaimed for farming, for tourism and for urban development. Dredging of silt from estuaries for construction materials have also created silting on nearby reefs. Dredging for coral sand to be used in the manufacture of cement has been done in the Suva lagoon. Similarly, over exploitation of fish and other species (such as turtles, giant clams and coconut crabs) are threatening their survival. Many species in heavily populated areas are grossly overfished and the stock severely depleted. Destructive fishing practices are a serious problem in certain parts of Fiji. Dynamiting is a practice that destroys and kills marine organisms indiscriminately. Traditional fish poisons such as duva is a common practice. Sometimes modern pesticides and bleach are also used. Mining, shipyards and slipways, moorings, tourist developments, sugar mills, timber mills, cement factories, municipal waste disposal sites, sewage, agricultural pesticides and herbicides, changing land use and various industries are causing pollution of ecosystems. A review of pollution in the Suva Harbour found elevated biochemical oxygen demand, elevated amounts of nutrients (nitrates and phosphates), high suspended solids, pH and high coliform bacterial levels in discharges from a large number of light and medium industries in the city. Levels of heavy metals in Suva Harbour are also high and are equal to the most polluted harbours in Australia. Lagoonal sediments and shellfish from the Lami area have high levels of mercury, zinc and lead. Litter is fast becoming a problem in marine and aquatic environments in Fiji. Solid wastes such as plastic bags, metal cans, glass etc are often discarded and indiscriminately dumped on beaches, in mangrove areas and in the sea. Dumps located close to mangrove areas, rivers and the sea elevate the problem. Sedimentation following large scale clearing of land for agricultural purposes poses an agricultural problem in the wet tropics and a major problem for coral reefs. The problem of high nutrient level may not just be confined to urban areas of Fiji since large amounts of fertilizer applied to sugar cane and rice may increase in adjacent waters. Trade and planned/accidental import of organisms have also caused a spread of invasive alien species- at least 21 species of fish (brown trout, bass, mollies, guppies, carps, tilapia etc), four species of prawns, six species of bivalves and one species of seaweed (*Eucheuma spp.*) have been introduced into Fiji.

**The long term solution** to this problem, which will be pursued by this project, is the realization of the potential of genetic resources in Fiji to generate tangible economic benefits to the country, in the form of business, employment and capacity building opportunities, through the discovery and development of new medicines or agrochemicals, thereby providing a rationale for the preservation of the biological resources that contain the genetic material. This will represent a paradigm shift from the situation described above, to one in which biodiversity-rich nations such as Fiji are fully and equitably involved in this lucrative research process. Through collaborations between Fijian partners and academic and private sector actors abroad, the project will focus on the biodiscovery process, the enhancement of human and institutional capabilities in the country, and the transfer of equipment and expertise from the United States to Fiji, in order to establish a state-of-the-art drug discovery program.

The achievement of the solution proposed above has to date been impeded by a number of **barriers**.

1. Limited scientific *Research and Development* capacity prevents national stakeholders from adding value to Fiji's genetic resources

The overall focus of investment in Fiji for conservation has been through the promotion of aesthetic values (tourism), and through the utilization of natural resources (such as export of nature-based products, including medicinal plants and cosmetics). The vast opportunities offered by Fiji's diversity of genetic resources have not been a focus of the government in practice, although it has been stressed in its policies as noted earlier in the PIF. Consequently, there have been limited investments and efforts by the government in exploring and exploiting the genetic resources in the country. This has led to overall low capacities nationally to undertake such research and development. Outside of the government, too, the local private sector has not been able to generate resources to invest in such ventures on its own, given the uncertainties in the likely successes of such investments.

2. Limited institutional and staff capacities at national level to negotiate ABS agreements and strengthen the national ABS framework

Linked to the barrier 1, although many international companies and organizations are interested in exploring Fiji's genetic resources for research and development, the limited clarity in process and procedures to obtain such permissions, coupled with the current ad-hoc policy on ABS have deterred or hindered prospective collaborators from working in Fiji. There are also extremely limited capacities within the government agencies to negotiate ABS agreements and to ensure that the organizations/companies that are undertaking research and development of products through the utilization of genetic resources and other biological chemicals are abiding by the terms of the agreements.

#### **Baseline investments:**

The Government of Fiji is spending approximately around 3 million dollars per year on conservation actions in Fiji. However, very little amount goes in direct work on direct research on the market potential of genetic resources. The International Cooperative Biodiversity Groups (ICBG) work has been operating in Fiji since 2000 (I thought it was 2004?, please double check) through a collaborating consortium between national and international organizations, and in-place, base agreements have allowed efficient export, study, and collaboration on investigations of bioactive metabolites from Fiji's marine biodiversity. These efforts have resulted in the founding of the "University of the South Pacific (USP) Centre for Drug Discovery and Conservation (CDDC)." This Centre provides capacity building within the south Pacific, and provides a "go-to" infrastructure for biodiversity conservation and natural products discovery for the 12 island nations represented by USP. The current baseline investment by this partnership includes US\$600,000 per year dollars per year through this partnership through 2014. Under this partnership, activities that are undertaken include the exploration of natural products from overlooked coral reef organisms such as marine algae and sea weed that grow in light limited marine environments. The partnership is using ecological assays to guide the discovery of novel bioactive natural products. Many coral reef organisms are chemically defended against predators, competitors, pathogens, and parasites. These natural defences constitute a source of novel pharmaceuticals. Under this, antimicrobial assays using marine pathogens, allelopathic assays testing coral-algal competition are being conducted, and the assays are being used to provide leads for natural product discovery. Under this sampling efforts have been focused on areas heavily impacted by predators, pathogens, and competitors where plants and invertebrates are most likely to have evolved or up-regulated chemical defences. Furthermore, screening of all extracts and natural products for drug potential against diseases is being undertaken, such as 1) malaria; 2) tuberculosis; 3) cancer; 4) HIV-AIDS; 5) other infectious disease-causing microorganisms including drug-resistant *S. aureus*, *E. faecium*, and *C. albicans*; and 6) neurological/mental health disorders. The ICBG will apply a chemical-genetic approach to study mechanisms-of-action of novel bioactive natural products. The ICBG partnership is also providing training of South Pacific and American scientists and development of scientific infrastructure in Fiji.

**B.2. Incremental/Additional cost reasoning: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) AND THE ASSOCIATED Global environmental benefits TO BE DELIVERED BY THE PROJECT:**

This NPIF project will build on and expand the International Cooperative Biodiversity Groups (ICBG) project “Exploration, conservation, and development of marine biodiversity in Fiji”. This NPIF project will build additional support, which will aid the government of Fiji in its development of additional ABS (and help monitor the effectiveness of the ABS policy), in order to allow conservation and drug discovery efforts to be expanded to additional coastal communities, and help build community support for conservation.

The objective of the project is to build national capacities to implement a biodiscovery initiative that promotes technology transfer on mutually agreed terms, private sector engagement, and projects targeting investments in the conservation and sustainable use of in-situ genetic resources to accelerate the ratification and implementation of the Protocol. Key incremental actions that this project will implement are described below.

The Ministry of Local Government, Urban Development, Housing and Environment will execute Component 3. The Centre for Drug Discovery and Conservation, University of South Pacific and Department of Environment will execute Components 1 and 2. The Government of Fiji will manage all aspects of development of ABS policy and its implementation.

### **Component 1: Discovering active compounds for pharmaceutical and agrochemical uses from organisms in marine areas**

Under this Component, the project will support describing, preserving, and exploring marine biodiversity for pharmaceuticals and screening of compounds that are active against dengue, cancer, TB, drug-resistant microbes, or that show promise in psychoactive screening from marine areas throughout Fiji. The project will use existing agreements with the Government of Fiji, USP<sup>2</sup> along with Scripps Institution of Oceanography (SIO) and the Georgia Institute of Technology (GIT), and an industrial partner (*Bristol-Myers Squibb -BMS*). BMS is already a formal partner bio-prospecting investigation, who has been undertaking screening compounds for anti-cancer properties in Fiji.

The USP will overall manage the project and set up the database with Department of Environment on all organisms tested to date by all stakeholders. They will organize collections and do extraction and initial screening of bioactivity for both marine invertebrates and bacteria and fungi. Active extract results will be then discussed with Georgia Tech (for marine invertebrates) and Scripps (for microorganisms). Based on this, a decision will be made on which samples will be further studied by the partner institutions and which will be studied by USP. Each of the three institutions will perform isolation and identification of the active chemicals. At USP this will be initially done by Liquid Chromatography/Mass Spectrometry which will indicate which compounds are already known. For potentially new compounds the structural information will be obtained from GIT or Scripps. GIT and Scripps also perform more advanced bioactivity tests and liaise with other project partners including The University of California at Riverside for anti-malarial testing and anti-cancer testing at BMS. The GEF project will add psychoactivity testing with University of North Carolina. BMS will analyse further anything that has an attractive cancer screen profile. Biological samples showing other type of activity will be tested by partners that have the relevant expertise. The focus of the project will be to build on the baseline work being done by the partnership but with focus on new collections and some additional bioactivity tests which are not currently covered under the ICBG. These will be further detailed in the full project document.

The primary focus of the project will remain on less explored seaweeds and deep-water marine microbes, and will use ecological and evolutionary insights to increase the production of bioactive metabolites that are missed by traditional approaches –such as chemicals that are activated or induced as defensive metabolites when first challenged with damage, consumer attack, or microbial attack. The biological resources will be obtained from areas that currently have locally-managed marine areas or have expressed

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<sup>2</sup> This university serves Fiji and 11 other Pacific Island nations - Cook Islands, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu



an interest in establishing one. Sites include locations on Viti Levu, Taveuni, Kadavu, and the Mamanuca, Yasawa, and Lau Island groups. The project will also support the establishment of up of a screening facility for dengue fever under the project and enhancing the efficiency of the extraction and purification processes. The project will aid the transfer of state of the art technology (hardware, software, and know how) for bioprospecting to Fiji with assistance of the private sector partners and in-country capacities will be developed on state of the art analytical chemical techniques, disease bioassays, data handling and collection, culture and long-term storage of samples installed in Fijian institutions. It is expected that this will lead to at least 30 highly active compounds being identified and form the basis for the identification of at least one lead compound to be considered for the development process of agrochemical and pharmaceutical products for commercial purposes.

### **Component 2: Operationalization of ABS Agreements and Benefit Sharing**

Under this component, the project will focus on ensuring the operationalization of the ABS agreements such that some benefit sharing occurs during the course of the project. Two key benefits are envisioned - the first on building capacities of at least 10 scientists from Fiji on applying chemical-genetic approach to study mechanisms-of-action of novel bioactive natural products from marine organisms. The people trained under this will be additional to those that have already been trained in the past by the ICBG. **The possibilities of commercial development of some chemicals for potential anti-cancer use will also be explored, and benefit sharing for such development will be worked out.**

The bioprospecting work will be linked strongly to biodiversity conservation through Locally-managed marine areas. It is expected that the project will support about 15 such sites. During bio-prospecting, the project will also further conservation awareness and education in communities and training will be provided to selected students from collection areas to develop appropriate skills in drug discovery and/or conservation. During the collection trips researchers will also discuss the importance of sustainable resource management and will assist in resource management planning with local communities. The taxonomy of the collections is also determined and information and annual screening results returned to government and communities. The project will institutionalize a fund raising mechanism through a web based “Adopt-A-Coral/Mangrove/Reef Foundation” through the Fiji Hotels Association, so that they can promote philanthropy to link with conservation at sites where biopropecting is being undertaken. The current ad-hoc agreement with the Fiji government is that any income from bioprospecting is shared between the prospector and the country in a 50:50 ratio and the 50% Fiji’s share is deposited into the Locally Managed Marine Area Network Trust Fund, where the bio-prospecting is done from marine areas. The project will also ensure that a national mechanism is in place to channel at least 25% of net income derived from the sale of bioprospecting products to the Fiji Locally Managed Marine Area (FLMMA) Trust Fund for conservation and development, for those biological products derived from organisms found in marine areas.

### **Component 3: Increased national capacity to operationalize Nagoya Protocol Obligations**

In 1997, Fiji developed an ad-hoc ABS policy which is consistent with the Convention on Biological Diversity. This ad-hoc policy was used to facilitate access to the ICBG to Fiji’s genetic resources and it is expected that this policy is be the foundation for a future formal ABS legislation in the country. Consistent with this ad-hoc ABS policy, the project will strengthen the overall national capacities on negotiations and monitoring of benefit-sharing and bio-prospecting projects. As the focal environmental institution, a primary target for capacity building will be the Environment Department under the Ministry of Local Government, Housing and the Environment which plays the key coordinating role on ABS and is the secretariat for the National ABS Committee, which includes other relevant government agencies such as the Ministry of Foreign Affairs, National Planning, Solicitor General, Fisheries and Forests and Agriculture as well as the private sector, NGOs and academic institutions. The establishment of this Committee was endorsed by the Cabinet of Ministers. The project will support an awareness building programme for both the Environment Department and the members of the national ABS Committee on

relevant international guidance on ABS. The project will aid the government to develop and clarify relevant procedures / administrative systems for ABS agreement negotiations between the government and relevant institutions, including roles and responsibilities of government institutions. This will also include the development business standards for screening and approval processes (duration to be taken, steps to be followed etc.). This will further clarify the benefit-sharing mechanism within the country. The government also checks to ensure that there is Prior Informed Consent from local communities before allowing any bio-prospecting and export of samples for study. A certificate of origin is also prepared to accompany the export permit. Such arrangements will be codified and agreed upon by the national ABS committee and institutionalized. The project will support the establishment of an electronic database on biodiversity and natural products, as well as on ABS agreements and projects, including data handling system among national/ regional/ global institutions for harmonized transfer of information on samples collected and scientific results between national and international institutions. This will be harmonized with the Clearing House Mechanism within the government.

**B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS. AS BACKGROUND INFORMATION, READ [Mainstreaming Gender at the GEF](#).**

The project has the potential to develop new drugs that will improve the health especially of people from developing countries – including men, women and children. A major focus of the project will be to ensure that, in accordance with the Nagoya Protocol; a large proportion of the benefits will remain in Fiji and be used for further drug discovery, capacity building, related income generation and conservation of biodiversity, which will generate employment for Fijians at national level and also at local level. The project will contribute to the professional development of young Fijian scientists and also encourage nascent efforts in Fiji by the private sector in developing commercial products based on active compounds. The project will include, as far as possible, equal numbers of female and male scientists for capacity building actions, and any future benefit sharing agreements drawn will also give strong emphasis on equity issues between genders. The project will link research with conservation efforts in cooperation with at least 15 local communities, as outlined in Component 2 and will also ensure that there is long-term benefit sharing with some funds being allocated to the FLMMA Trust Fund from benefit sharing.

**B.4. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVES FROM BEING ACHIEVED, AND IF POSSIBLE, PROPOSE MEASURES THAT ADDRESS THESE RISKS**

Risk	Level	Mitigation
Uncertainty due to government and policy changes. An election is planned for 2014 and it is the hope of the current government of Fiji to have an ABS policy in place by that time. Under the current ad hoc system government personnel changes can also cause changes in policy approaches.	Medium	The project will strengthen the political commitment by raising awareness of the national ABS committee on the opportunities ABS projects offer to the country to generate resources, aid further conservation actions in-country, build international cooperation and coordination, as well as to contribute to global knowledge and well being. This is planned under component 3.
For invertebrate species, advanced drug discovery requires recollection of the organism. Environment conditions can affect the chemistry of an organism, especially if the active principal compound is produced by a symbiont. In addition, identification of the organism to recollect	Medium	Project scientists have been collecting in Fiji waters for over 20 years and developed a reasonable knowledge of the ecology at common collection sites. In addition a number of training efforts have been held in invertebrate taxonomy. There are also facilities at USP to culture invertebrates. The project will build on the existing expertise and

can also sometimes be a problem.		experience to mitigate this risk.
Assumption that ABS and bioprospecting will lead to conservation benefits. There are many threats to coral reef ecosystems which may run counter to the benefits of a successfully implemented ABS policy.	Low	USP has conservation planning as one of its commitments at all collection sites so that internal threats due to economic drivers are well-managed. The climate change threat in the longer term may have serious consequences to coral reefs. . However, by supporting local communities to plan and implement conservation actions, the project is expected to mitigate this risk with the majority of the communities it will work with.

**B.5. IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES, AS APPLICABLE:**

<b>Key STAKEHOLDER</b>	<b>RELEVANT ROLES</b>
Department of Environment	This is the lead government agency for this project and will be the key responsible party for Component 3 of this project. The Department will coordinate ABS policy strengthening and will also act as the coordination agency for the national ABS Committee
Fiji ABS Committee	This Committee includes several government agencies, non-governmental agencies, the private sector and the academia. This provides multi-stakeholder input into ABS policy development and can provide advice on strengthening actions under Component 3 specifically, and can also guide overall policy work that will guide the implementation of Components 1 and 2 of this project
National Environment Council	This is one of the highest policy making bodies. They will be most relevant for Outcome 3 as they will oversee and endorse ABS policy strengthening measures to Cabinet for executive action.
University of the South Pacific (USP) Center of Drug Discovery and Conservation	USP is a member of the ICBG. This will be the primary responsible party for the overall project management, sample collection and study, database of samples, advice on ABS, and will lead Components 1 and 2 of this project, as well as overall project management.
International Cooperative Biodiversity Group	This international consortium will be the lead international partner and will provide input through consortium partners. .
Georgia Tech University	The University is a member of the ICBG and will be one of the key agencies for Component 1- particularly in collection and screening and compound identification.
Scripps Institute of Oceanographic	The Institute is a member of the ICBG and will be one of the key agencies for Component 1- particularly in collection and screening and compound identification from Actinomycetes bacteria
<b>Bristol Myers Squibb</b>	This private sector company will also contribute to Component 1 through advanced anti-cancer testing, possible commercial development.
Local communities	At least 15 local communities that are managing their local marine areas will be the primary local beneficiaries of this project as noted earlier in the PIF

**B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:**

The project will coordinate with other relevant projects working to support community conservation actions in Fiji such as the Asian Development Bank's Coral Triangle Pacific Program, which is working in Ra Province to apply the Fiji Locally Managed Marine Area community-based management model as well as the FAO-GEF PAS Forestry and Protected Area Management project. Relevant coordination and lessons learnt will also be promoted with UNDP-GEF Small Grants Projects.

**C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:**

The approach adopted by the project is in line with UNDP comparative advantage, as it addresses multiple productive sectors and the environment sector, with a landscape-wide perspective. This project is fully aligned with UNDP's new Global Strategic Response Framework for Biodiversity "Signature Programme 1: Integrating biodiversity and ecosystem management into development planning and production sector activities to safeguard biodiversity and maintain ecosystem services that sustain human wellbeing." Promoting sustainable use of biodiversity and facilitating agreements on Access and Benefit-Sharing (ABS) for genetic resources and traditional knowledge has been noted as a key activity under this Framework. In Fiji, UNDP has a very strong partnership with the government to support to design and implement biodiversity projects with GEF support. It implemented UNDP-GEF projects that supported the development of the National Biodiversity Strategy, Action Plan and Country Report to the COP; National Capacity Self-Assessment for Global Environmental Management (NCSA); and an enabling activity for Clearing House Mechanism development. The Fiji Multi-Country Country Office has also been the lead office for the regional "South Pacific Biodiversity Conservation Programme" funded by the GEF. Thus it has significant project implementation actions that include several government agencies and even the participation of the private sector.

**C.1. INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY IS BRINGING TO THE PROJECT:**

UNDP Fiji Multi-country office will provide co finance worth 60000 dollars.

**C.2. HOW DOES THE PROJECT FIT INTO THE GEF AGENCY'S PROGRAM (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:**

The current United National Development Assistance Framework (UNDAF) and its accompanying Action Plan (CPAP) for Fiji covers the period 2008-2012. Supporting effective environmental management and the fight against poverty are important themes within these programming documents. In particular, the CPAP aims to ensure that the country has effective policies for environmental and energy sustainability. The UNDAF also aims to improve environmental management skills to reverse environmental degradation processes; strengthen biodiversity and sustainable use of natural resources and improve business opportunities compatible with sustainable development.

UNDP is the lead agency for the strategic area on promoting, environmental protection and management and contributing to the sustainable management of natural resources (water, soil, forests) and to increase in forest area and land management throughout the country. As for the current CPAP, a key outcome defined in it is the support the government to lift barriers to the sustainable management of natural resources and the improvement of rural and urban people's livelihoods. More specifically, this project will contribute to establishing and operationalising the institutional and legal framework necessary for biodiversity conservation and the sustainable use of natural resources as a contribution to the CPAP.

UNDP MCO Fiji's Environment Unit is comprised of 6 technical staff, with qualifications ranging from undergraduate Bachelors, Masters and PhD in Environmental Science/Studies & Conservation, Biology, Chemistry and Geography. At least one senior professional, with expertise on biodiversity conservation and environmental management, will be assigned to manage this project, along with support and

administrative staff under the overall supervision of Assistant Resident Representative from UNDP Fiji MCO.

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE</b> <i>(MM/DD/YYYY)</i>

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.

<b>Agency Coordinator, Agency name</b>	<b>Signature</b>	<b>Date</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email Address</b>
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