Kiribati 6th National Report to CBD

Ngkoa, Ngkai ao n Taai Nako
ENVIRONMENT AND CONSERVATION DIVISION

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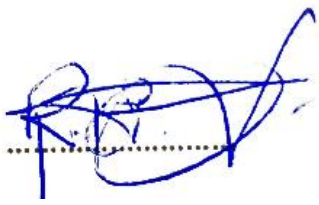
FOREWORD

As Minister for Environment, Lands and Agricultural Development, I am privileged and honoured to write on behalf of the Government of Kiribati to endorse the Sixth National Report for Kiribati. The Sixth National report provides and identifies updates and progress of the Fifth National report. It is a final review of progress in the implementation of the Strategic Plan for Biodiversity 2011-2020, towards the Aichi Biodiversity Targets including relevant national targets, based on information concerning the implementation of national biodiversity strategies and action plans and other actions taken to implement the Convention.

The outputs of the 6NR contribute significantly to the Kiribati Integrated Environment Policy with a sustainable Environment vision, "the people of Kiribati continue to enjoy their natural biodiversity that is resilient to the impacts of climate change and supports the socio-economic livelihoods.'

The Government of Kiribati is looking forward for the collaborative work between relevant stakeholders from government ministries, non-government organizations, church groups, local communities and state-owned enterprises to implement actions and ensure efficient and effective use of biodiversity conservation for the benefit of current and future generations.



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Minister for Environment, Lands and Agricultural Development

ACKNOWLEDGEMENT

The Government of Kiribati would like to acknowledge with gratitude the support of the United Nations Environment Program (UNEP) in making this project successful through its financial assistance. This has also permitted Kiribati to conform to the objectives and achieve the expected requirements of this report. The compiling team also likes to acknowledge the underlying abetment of the Ministry of Environment, Lands and Agricultural Development in its' imminent role as the national focal point for this project in monitoring and coordinating the projects at the national level to accomplish this obligation in developing and submitting the 6NR report to the CBD.

Special thanks to the 6NR steering committee for their time; contribution and collaborative support in providing relevant and focused information in the accomplishment of this report.

A huge amount of work and research went into this project. The implementation of the 6NR report would not have been accomplished without the massive support and dedication of many individuals and organizations. Therefore, the compiling team would like to extend its sincere gratitude to all national key stakeholders from various government ministries, faith-based organizations and non-government organizations (NGOs) who have been involved during the consultation, drafting and completion of this report.

ACRONYMS

6NR	Sixth National Report
ALD	Agriculture and Livestock Division
ASP	Agriculture Strategic Plan
AFS	Agro-forestry system
ABT	Aichi Biodiversity Targets
BCU	Biodiversity and Conservation Unit
CFD	Coastal Fisheries Division
CBAFS	Community-based Agroforestry system
CBFM	Community-Based Fisheries Management
CEU	Compliance Enforcement Unit
CFMP	Coastal Fisheries Management Plan
CBMMP	Community-Based Mangrove Management Plan
CCU	Climate Change Unit
CBD	Convention on Biological Diversity
DLUP	Detail Land Use Plan
DCC	Development Control Committee
ECD	Environment and Conservation Division
ELU	Environment Licensing Unit
GLUP	General Land Use Plan
GOK	Government of Kiribati
IAS	Invasive Alien Species
IDP	Island Development Plans
IEC	Information for Education Communication
KPA	Key Priority Areas
KV20	Kiribati 20-year Vision
KDP	Kiribati Development Plan
KFHA	Kiribati Family Health Association
KFL	Kiribati Fish Limited
KIEP	Kiribati Integrated Environment Plan
KJIP	Kiribati Joint Implementation Plan
KMS	Kiribati Meteorological Service
KNBSAP	Kiribati- National Biodiversity Strategies and Action Plan
KNFP	Kiribati National Fisheries Policy
KNISSAP	Kiribati National Invasive Species Strategies & Action Plan
KNTDS	Kiribati National Tourism Development Strategy 2016-2019
KNTO	Kiribati National Tourism Office
KiriWatSan	Kiribati Water and Sanitation
LMD	Land Management Division
LB	Language Board
LAH	Livestock and Animal Health
LLPB	Local Land Planning Board
MPA	Marine Protected Areas
MSP	Marine Spatial Planning
MCIC	Ministry of Commerce and Industry Cooperation
MOE	Ministry of Education
MELAD	Ministry of Environment, Lands and Agricultural Development
MFMRD	Ministry of Fisheries and Marine Resources Development
MHMS	Ministry of Health and Medical Services
MICTTD	Ministry of Information, Communication, Transport & Tourism Development
MISE	Ministry of Infrastructure and Sustainable Energy
MWYSSA	Ministry of Women, Youth, Sport & Social Affairs
MSP	Ministry Strategic Plan
MEA	Multilateral Environment Agreements
NGOs	Non- Government Organizations
PNA	Parties to the Nauru Agreement
PIPA	Phoenix Island Protected Areas
SPTO	South Pacific Tourism Organisation
SPC	Secretariat of the Pacific Community
SDG	Sustainable and Development Goals
TTM	Taiwan Technical Mission
TUC	Teinainano Urban Council
TAK	Tourism Authority of Kiribati
VCO	Virgin Coconut Oil
WMPPU	Waste Management Pollution Prevention Unit
WSEU	Water & Sanitation Engineering Unit
WCU	Wildlife Conservation Unit

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EXECUTIVE SUMMARY

The Sixth National Report (NR) was developed with the main purpose to provide the updates on biodiversity related aspects on both marine and terrestrial biodiversity. As a party to the Convention on Biological Diversity, Kiribati is obliged to complete and submit her Sixth National report to CBD. The report is constructed and compiled by the Environment and Conservation Division of MELAD as the leading agency in Kiribati to meet the international report obligations under the CBD.

This report also provides updates on the progress of the Fifth National Report, which was submitted in 2014, and drawing specifically on the fundamental aspects of biodiversity, its trends, status and threats existing at the national level from 2015 to 2019. The Sixth National Report to CBD also provides key sources of information from which final progress towards the implementation of the Strategic Plan for Biodiversity 2011-2020 can be reviewed.

National targets set against the global Aichi Biodiversity Targets are mainly taken from different strategic plans used by each respective stakeholder that are in line with the KDP and KV20 to show the national progress pertaining to all biodiversity related aspects. These National targets are set to address the direct and underlying causes of biodiversity loss, conserve biodiversity and promote the awareness of biodiversity in the country, so people are aware of the important value of biodiversity. The progress towards achieving these national targets and Aichi Biodiversity targets were assessed through data collected from each respective stakeholder in which their collective data from 2015 to latest 2019 is also included in the assessment.

However, there are underlying factors on the conservation of biodiversity that have hindered the country's effort to protect and conserve biodiversity effectively. These factors have occurred due to limited financial and human resources, inadequate technical capacity, insufficient scientific based data and poor monitoring and evaluation of the progress of the national biodiversity action plans. Climate Change and sea level rise is another problem affecting the conservation of biodiversity and this is addressed in the Sixth National report to show how Kiribati is vulnerable to climate change and sea level rise.

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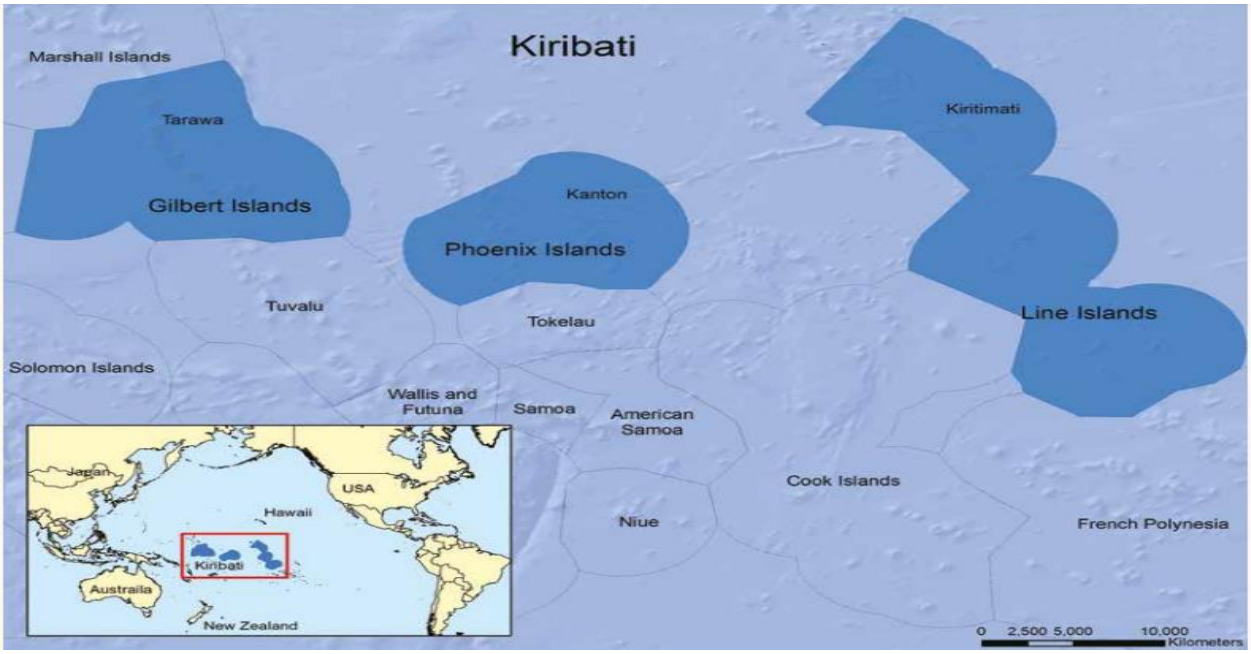
BACKGROUND

Map of Kiribati Island groups.



Kiribati comprises of 3 groups of islands, the Gilberts, Phoenix and the Line Islands. Although the total land area is only 811km2, these groups of islands encompass a large EEZ totalling 3,506,400 km2 with the distribution of 1,098,300 km2 (Gilberts), 758,600km2 (Phoenix) and 1,649,500 (Line Islands). This large EEZ implies the islands' heavy dependence on their marine resources especially the tuna not only to sustain livelihood but also for economic development. In fact, the contribution from tuna licensing alone to the national budget could reach as high as 70% (Walker, 2019).

The people of Kiribati (I-Kiribati) are culturally and ethnically consistent with a shared inherited history, cultural traditions, values, historical experience and language. Traditional knowledge and cultural skills are rich resources in Kiribati; each island has its own unique history and rich stories. Embedded in these stories were taboos, which existed in pre-European era. Believed to be the key focus of cultural development and marine management, these taboos should be revitalised.

As party to the Convention on Biological Diversity (CBD), Kiribati is obligated to compile and submit a national report, which will focus on the status, trends and progress of Kiribati's biodiversity. The report is instrumental in reviewing the progress of the Strategic Plan for Biodiversity in the 2011-2020 period, and how it has been implemented at a national level. The progress of implementing this Strategic Plan will be reported in this Sixth National report indicating how the Biodiversity Aichi targets are achieved.

Compilation of this national report is inclusive, involving different sectors (through Steering Committee, Working Drafting Committee and Project Planning Team) that are instrumental in reporting the status of the national biodiversity in Kiribati. Information which are reflected in this national report provides updates on new and ongoing actions and efforts, the recent changes and

trend of biodiversity and the pressures experienced since the last submitted national report, the Fifth National Report to the Convention on Biological Diversity.

INTRODUCTION

Kiribati Sixth National Report addresses and assesses the progress of the fifth national reports (5NR) which specifically highlighted the importance of biodiversity, its trends and status drawing on several case studies relevant to Kiribati. Since Kiribati is a member of the Convention of Biological Diversity (CBD), its main obligation is to develop her sixth national report. The Government of Kiribati recognizes the importance of biodiversity conservation and has identified the environment, including biodiversity as one of its national priorities.

The 6NR report is also a final review of the progress in the implementation of the Strategic Plan for Biodiversity 2011-2020 and towards the Aichi Biodiversity Targets, including relevant national targets, based on information concerning the implementation of national biodiversity strategies and action plans and other actions taken to provide updates on progress since the last national report - 5NR that was submitted on the 30th September 2014. This will include new or recently completed actions and efforts as well as updates on ongoing actions or efforts and recent status and trends of biodiversity and barriers encountered.

This report is for Kiribati to foresee its status on both marine and terrestrial biodiversity. It is prepared by the Environment and Conservation Division with the help of steering committee members and Working Drafting Committee, including staff of the Environment and Conservation Division.

Furthermore, this report will be based on seven focal areas starting from information on the targets being pursued at the National Level; implementation measures taken, assessment of their effectiveness, associated obstacles, scientific and technical needs to achieve national targets in Kiribati; Assessment of progress towards each national target; Description of country's contribution towards the achievement of each global Aichi Target; Additional information to the contribution of local communities; Priority problems, issues and challenges affecting the status of island biodiversity at the national, island and village levels. Each focal area has subsections which will be elaborated on throughout the report.

SECTION 1 - INFORMATION ON THE TARGETS BEING PURSUED THE NATIONAL LEVEL

Kiribati has developed its own national targets, which are aligned to the 20 biodiversity Aichi Targets, by adopting various strategic plans used by each respective stakeholder. This is to support the national policy drivers of the KDP 2016-2019 and KV20.

1.1 Rationale for the National Targets (NTs)

National Targets for Kiribati are mostly affiliated with the Strategic Plan for biodiversity and with the 20 Aichi Biodiversity Targets. Kiribati National Biodiversity Strategies and Action Plans (NBSAP 2016-2020) has been developed after the completion of the 5NR aiming at how Kiribati will classify its Biodiversity priority action plans for 2016-2020.

1.2. How National Targets are selected & formulated from the Global Aichi Biodiversity Targets.

The National Targets are relevant at the regional and multilateral levels related to international conventions concerned with biodiversity that Kiribati has sanctioned. Implementation of the national targets will also contribute to supporting its international and regional obligations.

1.3. Level of Governance

Environment and Conservation Division is the lead sector in the Government level in assisting Secretariat to carry out the activities with sector ministries, communities, councils and Non-Governments Organization to achieve national and Aichi Biodiversity Targets in order to acquire data for updating the progress and status of the Kiribati Biodiversity.

1.3.1 Regional/International/Multilateral

Kiribati is a member of several biodiversity related Conventions like the World Heritage Convention (WHC), Ramsar Convention, as well as a member of regional and international organizations such as Forum Fisheries Agency (FFA), the Secretariat of the Pacific Communities (SPC), the Parties to the Nauru Agreement and the Western Central Pacific Fisheries Commission. Kiribati also participates in meetings of Inter American Tropical Tuna Commission, which manages and controls the tuna fisheries in the eastern Pacific (MFMRD, 2013).

1.3.2 National Level

The implementation of the Kiribati NBSAP Action Plan 2016-2020 activities at the national, island and village and community levels which contributes to achieving the Kiribati National Targets.

1.4. Relevance of the National Targets to the Global Aichi Biodiversity Targets

National targets serve similar purposes with Global Aichi Biodiversity targets but specifically, at the country and local contexts of Kiribati, as an atoll island nation in the Pacific region. The main purpose

of the Kiribati's national targets is to address the direct and underlying drivers of biodiversity loss, conserve biodiversity and promote the awareness of biodiversity in the country, so people are aware of the value of biodiversity. Generally, these are clearly connected to the context of the Global Aichi Biodiversity targets which adopted by the Convention on Biological Diversity (CBD) at its Nagoya conference. (https://iasscore.in/upsc-prelims/aichi-target). Annex 2 illustrates how the national targets are connected to the Global Aichi Biodiversity targets.

1.4.1. Linkage of the National Targets to the Global Aichi Biodiversity Targets - Sustainable Development Goals (SDGs).

Kiribati has focused on its national policies and goals such as Kiribati Vision for 20 years (KV20), Kiribati Development Plan (KDP), Ministry, Kiribati Integrated Environment Policy (KIEP) and Kiribati Joint Implementation Plan (KJIP) as a guidance to develop her national targets, and also align to the Global Aichi Biodiversity Targets; Sustainable Development Goals.

1.4.1.1. Kiribati Vision for 20 years (2016 – 2036)

Kiribati Vision for twenty years (KV20) was developed for Kiribati to become wealthy, healthy and peaceful. The Vision recognizes that Kiribati's vulnerability to climate change is a key constraint in achieving the desired outcomes. The Vision therefore identifies the need to further mainstream climate change adaptation and mitigation into various programmes to ensure that the working environment is sensitive to environment conservation, climate change and sustainable development. The environment conservation adaptation and mitigation measures will reduce risks and ensure that the development programmes implemented creates sustainable development for all.

1.4.1.2. Kiribati Development Plan (2016 – 2019)

Kiribati Development Plan comprises of six key priority areas. Key Priority Area number four focuses on environment. There are five key environmental policy areas identified by the Government under the Kiribati Development Plan and these are: climate change, biodiversity conservation and management, waste management and pollution control, resource management and environmental governance. KPA number four is aligned to SDG 11 which is sustainable Cities and Communities, SDG 12: Responsible Consumption and Production, SDG 13: Climate Action, SDG 14: Life Below Water and SDG 15 which is Life on Land (KDPMR, 2018).

There are new environmental threats that have emerged such as lagoon pollutions, accumulation of solid waste, water depletion, water pollution, salinity and waste products, deforestation, inshore fisheries depletion, coastal erosion, plastic wastes, waste oils and chemicals, spread of invasive species and agricultural pests and diseases, hazardous e-wastes and bulk waste of old vehicles and littering could have a significant impact on the environment.

1.4.1.3. Kiribati Integrated Environment Policy (2016-2020)

The environment has been recognized by the government of Kiribati as one of her key policy areas since 2008. This is a huge 'break through success for the environment sector. The Ministry of Environment, Lands and Agricultural Development has taken this as an opportunity to develop the mainstreaming of the environment into the national development agenda through the development of the Kiribati Integrated Environment Policy (KIEP). The KIEP is a bridge that connects a gap in fulfilling and enhancing the objectives of the Kiribati National Environment Management Strategy (NEMS) which was developed in 1993.

The KIEP is aimed at strengthening the coordination, collaboration, and coherent implementation of the existing thematic environmental area plans and activities. It also serves as the framework live document whereby, activities carried out under the Environment KPA will be guided. This plan has contributed to the Aichi biodiversity targets in terms of biodiversity conservation in the country such as Targets 1, 3, 5, and 9 of the Aichi targets. The KIEP supports the implementation of various numbers of projects that contribute to the achievement of the national targets and Aichi biodiversity targets such as climate change projects, solid waste management projects and the 6th National Report project itself.

1.4.1.4. Kiribati Joint Implementation Plan (2014 – 2023)

The Kiribati Joint implementation plan for climate change and disaster risk management set out a holistic approach to integrate climate change and disaster risks into all sectors. The plan aims to reduce the vulnerability of the country to the impacts of climate change and disaster risks and to coordinate priorities for action.

1.4.1.5. Sustainable Goals

Sustainable Development Goals are the global agenda adopted by countries with a vision to end poverty, protect the planet and to ensure that all people enjoy peace and prosperity. Kiribati is also one of the countries practicing and using sustainable development goals as part of her targets.

Under environment and conservation context, Key Priority 4 (four) which is the environment is aligned to Sustainable Development Goals 11, 12, 13 14 &15.

1.5. Stakeholder Engagement Process

The consultation process for the 6NR includes all Ministries and NGOs at the national level that took place prior to the actual target workshops and meeting for the 6NR. The collection of information and data contributed to the assessment of progress in the implementation of the Kiribati National Targets in the Kiribati - National Biodiversity Strategy Action Plan 2016-2020. The meeting involved all stakeholders such as the Steering Committee, Project Planning Team and Working Drafting Committee. Workshops and meetings were held at the Conference Special School room and Environment and Conservation Division Board room. The main purpose of the workshops was to explain the summary

background of the 6 National Report to Conversion on Biodiversity and why it was important to Kiribati, describing the six important focal areas of the report, the current status and trend of the biodiversity, and the Aichi Biodiversity Targets. Additionally, Pre – Inception workshop meeting was undertaken to update the 6NR, National Targets, Aichi Biodiversity Targets and K- NBSAP 2016 – 2020. Moreover, the information and data were obtained from relevant stakeholders for this report. Doing the one-to-one consultation basis in Ministries and NGOs is another way of approaching them by distributing templates to ease collection of information from their perspective and context in relation to biodiversity.

1.6. Development of the Sixth National Report and Dates of Assessments

The 6NR project team was recruited on early 1st February 2019 and the following are event that took place with stakeholder consultations for the preparation of Kiribati 6NR report. For ease of reference, please refer to the table below in chronological order in Annex 1.

1.7. Relevant Websites, web links and files

The websites, links and files given below for more information and data to update the Biodiversity status and progress.

Links and website for data of Biodiversity

(a) https://www.cbd.int/doc/world/ki/ki-nbsap-v2-en.pdf
(b) http://www.mfed.gov.ki/sites/default/files/INFORMAL%20DRAFT%20-%20KDP%20Mid-Term%20Review%20and%20VNR%202018%20%281%29.pdf
(c) file:///C:/Users/ECD/Desktop/Documents%20to%20read/Fifth%20National%20Report.pdf
(d) Kiribati National Biodiversity Strategies and Action Plan 2016-2020
(e) Kiribati National Invasive Species Strategy and Action Plan 2015-2020
(f) Kiribati Integrated Environment Policy

SECTION 2: IMPLEMENTATION MEASURES TAKEN, ASSESSMENT OF THEIR EFFECTIVENESS, ASSOCIATED OBSTACLES AND SCIENTIFIC AND TECHNICAL NEEDS TO ACHIEVE NATIONAL TARGETS IN KIRIBATI

This section will talk briefly about the implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets in Kiribati. The activities and approaches were carried out through the work and inputs of the MELAD which contribute to the report to show the trend of biodiversity and conservation in Kiribati.

2.1. MELAD - Environment Portfolio

The Ministry has three divisions, working collaboratively in accomplishing its goals and objectives set in its Strategic plan. One of those divisions is the Environment and Conservation Division (ECD). Environment Portfolio operational work programs are implemented by different Units within the Division. These Units are known as the Biodiversity and Conservation Unit (BCU), Climate Change Unit (CCU), Compliance and Enforcement Unit (CEU), Environment Licensing Unit (ELU), Waste Management Pollution Prevention Unit (WMPPU), Environment Outreach Unit (EOU) and the Wildlife Conservation Unit (WCU) which is based in Kiritimati Island. The operation administrative matters of ECD are guided and supervised by the ECD management team comprising of the Director and the Deputy Director who report directly to the Secretary of MELAD. Additionally, each Unit have their own roles and responsibilities within this Division. Their roles and responsibilities are very crucial to the Environment for enforcing the law and the conservation of Biodiversity for both Marine and Terrestrial areas and resources.

The Biodiversity and Conservation Unit is responsible for implementing biodiversity and conservation programmes at the village, island, national, regional and international levels. The Unit is also handling the Convention on Biological Diversity (CBD) and its Protocols, World Heritage Convention, and the Ramsar Convention on Wetlands in which Kiribati is party to. The Compliance and Enforcement Unit (CEU) is an enforcement arm of the Division which deals mainly with the implementation or enforcement of the Kiribati Environment Amendment Act (2007) on the ground. The Wildlife Conservation Unit (WCU) is mainly responsible for protecting and safeguarding the natural wildlife on Kiritimati, including other Islands in Line group and Phoenix groups. The Climate Change Unit (CCU) is a technical unit through which the Ministry (MELAD) has been implementing local climate change initiatives and programmes as well as externally funded projects. The aim of the CCU is to strengthen national capacity for effective response and adaptation to climate change, with a particular focus on environmental protection and management. The Environment Licensing Unit (ELU) is the Unit within the Environment and Conservation Division that is responsible for overseeing the EIA process including its procedures and requirements under the environment legislation. The Waste Management Pollution Prevention Unit (WMPPU) aims to ensure a safe and healthy living environment for the residents of Kiribati. The WMPPU is responsible for monitoring pollution and improving solid and hazardous waste management. Although, operating the country-wide most of their efforts are focused on South Tarawa, where the bulk of the population reside. The Environment Outreach Unit (EOU) is instrumental in leading public consultations, including formal and informal outreach on environment programmes

(climate change, biodiversity and conservation, development control, wastes and pollution control, enforcement of the Environment Act 1999 (as amended 2007), with assistance from the various key technical staff from the different units within ECD.

2.1.1. Biodiversity related Multilateral Environmental Agreement (MEA) that GOK is State Party to

Kiribati is party to a number of regional and global conventions or MEAs including the United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD), United Nations Convention on Biological Diversity (UNCBD), Cartagena Protocol on Bio-Safety to the Convention on Biological Diversity, Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, World Heritage Convention (WHC) and Convention on Biological Diversity. These conventions have a great significant role to Kiribati, because the livelihood of local people depends on both marine and terrestrial. Also, the convention supports the implementation of the national commitment and obligations for Biodiversity Multilateral Environmental Agreement, including joint planning, implementation, monitoring and reporting.

2.1.2. Environment & Conservation Division

The Environment and Conservation Division (ECD) forms part of the Kiribati Government's Ministry of Environment, Lands and Agricultural Development. Its mandate is to safeguard the natural environment upon which life depends and to protect human health. The Environment and Conservation Division has its version that is; the people of Kiribati continue to enjoy a safe and healthy environment that is resilient to the impacts of global climate change and one that supports livelihoods, human health, and sustainable development.

2.1.3. Institutional Set-Up and Programs Implementation

In 2018 and 2019, there were a number of national campaigns conducted to mark the commemoration of International Biodiversity Day. The campaigns were focussed on a number of awareness activities such as school programs, mangrove replanting with primary school students as well as promotional events through mass media. Six schools were visited where an awareness program was conducted on the importance of proper waste management and its contribution in preserving our islands biodiversity. This targeted, primary level students to enhance their knowledge on how important biodiversity conservation is to our livelihood.

Additionally, ongoing mass media programs on biodiversity related issues and events have also been one of the most effective means of campaign in disseminating key messages on biodiversity related issues. Each year, there are a number of campaigns that the Environment and Conservation Division implement through mass media such as press release, radio programs as well as social media programs. A press release is shared to media outlets on a monthly basis to inform and provide awareness to the general public on events related to biodiversity.

Besides that, community consultation on biodiversity has also been conducted mainly as part of the Integrated Community based and Natural Resources co-management plan which were implemented

on targeted outer islands such as Makin, Butaritari, Maiana, Aranuka, Abemama and North Tarawa. Consultation was focussed mainly on the development of Integrated Community-based and Natural Resources Co-management plan to help preserve each island's biodiversity. In 2018 there were also community consultations conducted on Tarawa which related to the promotion of biodiversity conservation which was part of the Environment Week celebrations in 2018.

The Development of the awareness resources is still ongoing, and within the past two years there are ten newly developed Information for Education Communication (IEC) materials on biodiversity, such as poster on mangrove and turtle conservation as well four pamphlets on biodiversity related topics (turtle, mangrove, community-based mangrove management plan, Biodiversity conservation). The development of IEC materials depends on new emerging issues and topics related with biodiversity that need to be shared to the general public particularly school students. Each year a large number of materials on Information for Education Communication are distributed to different targeted audiences such as students, communities, churches groups and the general public during display and promotional events conducted in Tarawa. Promotion through Environment Facebook and website is also an effective means of sharing updates on biodiversity related issues to the general public.

The Environment and Conservation Division also provides regular updates on these issues by posting stories on the Environment and Conservation Division Facebook and website for public attention and support. Promoting mangrove replanting to different organizations is also another ongoing activity coordinated annually with different groups of people from various organizations. This is one of the successful initiatives that promote participation of local communities in conserving marine biodiversity through the participation and support of Non-Government Organizations by their youths, church groups and etc.

2.2. Measures undertaken at the national level that contribute to the Kiribati NBSAP 2016 – 2020 Implementation

Table 1: Summary on measures undertaken at the country level that contribute to the implementation of the Kiribati NBSAP 2016 – 2020

Thematic Areas	Measures Taken at a national level	Progress Updates	Impacts
Protected and Conservation Areas	Identify potential protected areas in Kiribati community & stakeholder consultation for prior consent Mapping biodiversity areas such as terrestrial plant species, marine habitats and substrate distribution seek Cabinet endorsement	The management plans have developed through community based, village level and at an island level. These management plans have integrated both issues from land and at sea and particularly on mangroves.	The local people in the outer island are not aware about the importance of establishing marine protected areas.
Ecosystem management	Engaging the TA to develop the Coastal Plan and Policy Conduct consultation with stakeholders and communities on coastal policy Seek Cabinet endorsement on the coastal policy	Communities are actively engaged with clean ups in their own areas and at coastal sites. Improvement is seen on South Tarawa. Not only clean ups but recycling of wastes and also reusing of organic waste for different purposes.	The communities should be aware first about the importance of the wastes and what the 4Rs represent and why it is important to do the cleaning in their areas.

Species Conservation and Sustainable use	Creating and updating the list of endangered, threatened extinct and protected species in line with Regional and international identification Conducting National consultation for species conservation and sustainable use.	These have been implemented on the project pilot islands of LDCF housed with MELAD -ECD project sites which are Abemama, Maiana and Nonouti apart from where ALD have conduct this.	This is due to the lack of awareness, which cause people to conduct destructive activities because they are not fully aware the consequences of their actions.
Communication and Education	Conduct national and community trainings and awareness workshops on agro-biodiversity and biodiversity Incorporate agro-biodiversity in education system Incorporate marine science topic in school curriculum for upper classes Conduct community consultations and awareness workshops on Bonefish Game Fishing Conduct awareness programs with JSS and Primary Schools	Campaign materials such as pamphlets, clips etc. have been developed for biodiversity campaigns. Also, national biodiversity days were also part of MELAD-ECD annual celebration where it involves activities like mangrove planting, clean ups and awareness through media.	Posters and other promotional learning materials on biodiversity information should be provided. These activities are very important to schools in outer islands, as it highlights the importance and benefits of biodiversity to the young generations such as; • to know the solution for these key problems • to know the importance of marine and terrestrial resources on their lives especially in the future. Apart from that, the MOE conducted a three days' workshop to review the existing school curriculum on environmental education program and also the environmental education syllabus.

Capacity Building	Establish a List for existing datasets of biodiversity for food and agriculture Identify information and knowledge gaps and training needs for capacity building on baseline data collection Identify key or appropriate personnel (technical working group) to be trained Engage international/regional expert to conduct training	Workshops on Environment Safeguard System have been conducted in a number of outer islands. This ESS has broadened and enhanced the capacity of local people in managing and protecting their environment/ biodiversity from the adverse impacts of development projects and also human activities.	This is an important activity that should be carried out in all island communities through workshops and training. Communities should be aware of their resources and identify the best ways or strategies to protect them from being exploited.
Invasive alien species/ biosecurity	Develop Cabinet paper and seek Cabinet's endorsement on the KNISSAP Identification of pest and disease problems Development of control methods on pest and disease Development and review of Emergency response plan for pest incursion and disease outbreak Establishing and refurbishing of laboratories at main ports of entries (Betio wharf, Bonriki airport, and Christmas ports)	Previously, eradication and control of IAS have been implemented with the assistance of the TA. These have been done in Onotoa, Xmas island and South Tarawa/Betio where YCA and mynahs were eradicated.	The ALD visited these islands and did a consultation with local people to conduct awareness of invasive species such as rats, and also to eradicate these invading species before it worsens.

Traditional Knowledge (TK) and Practices	MELAD prepare draft submissions to LB for agreed vernacular Acquisition of necessary equipment and tools, state-of art techniques in recording, preserving and presentation Participation in NBSAP visits to outer islands Identify biodiversity related traditional systems (e.g. cultivation, traditional medicine, fishing, local food preservation method) Create a list of biodiversity related traditional knowledge system Create a list of uses of traditional knowledge systems	TCET (Translation ad hoc Committee for Environmental Terminology) is a committee which develops glossary, and this has incorporated biodiversity terms.	The people in the outer islands use their traditional Knowledge for economic purpose and every day practice. Through training and workshops it enabled them to understand and accept the importance of their traditional knowledge in relation with the land and the sea. They used to keep their TK as their own for the benefit for their next generation.
Environmental Governance	Produce synergies of environmental and biodiversity related programs at the national level Focal points of all biodiversity related conventions harmonized their reporting obligations under the different conventions Programs of different biodiversity related conventions are harmonized and coordinated by the National biodiversity Planning committee	No evaluation of biodiversity related policy has been conducted yet.	Should have a policy and regulations about the environment problems so that the people should be follow that rules related with biodiversity and never goes beyond.

Research and Information	- Improve the information and database facilities (ALD) - Updating and validating data - Capacity building to train staffs on areas require expertise on (FD) and (MET) - Support capacity in analyzing fisheries data - Set up a centralized database for biodiversity Designing the database to serve the national need	Kiribati Metrological Services contribute on this in terms of early warning system already been set up and products issued for planning and decision making.	The local people have limited capacity building on tools used for early warning for activities that can affect the lives of the biodiversity in land and sea, but through workshops and training were carry out in communities, schools and mostly on the radio, the people can make their selves ready for that or they know 21 what are the best way to solve it before it too late.

2.3. Other Cross-cutting Themes - Relevant Sector Plans, Policies and Strategies that contribute, support, and/or enhance the implementation measures undertaken to achieve national targets

Each Government organizations have relevant sector plans, policies and strategies that contribute to the enhancement of the implementation measures which are undertaken to achieve national targets and Aichi Biodiversity Targets.

2.3.1. Tourism Strategic Plan

With the growth of the tourism industry around the Pacific region, the KV20 looks to capitalize on this and position Kiribati as an alternative tourism destination for the adventurous as well as the high-end traveller. The MICTTD Strategic Plan 2016-2019 has redirected Kiribati's tourism objectives towards sustainable niche products such as game fishing, dive, surf, war relics, wildlife and culture tourism focusing on the development and promotion of the outer islands. With the correct strategies and policies in place, this should result in wildlife and environmental conservation as the backbone to the development of these niche products (MICTTD 2019).

The KNTO's MOP 2019 breaks down the MSP 2016-2019 objectives further with the development of game Bone fishing in the Gilbert group; agro-tourism development and promotion to the local communities in the outer islands; working with the Coastal Fisheries Division's project on Community Based Fisheries Management on the promotion of tourism activities in and around MPAs; and the development of community based ecotourism businesses that adhere to the biodiversity conservation rules such as sustainable fishing regulations, sustainable use of local building materials and the sourcing of organic, locally grown produce (both land and marine).

2.3.2. Land Management Division Strategic plan

Land Management Division Strategic Plan 2016-2019 looks at both land development control and foreshore management. The actions taken were also contributing to the NT and ABT such as conservation at the foreshore and land management. The National Seawall Guideline Policy was developed prior 2015 and recently endorsed by Cabinet in 2018 to regulate activities within the foreshore. It was a joint effort of the Foreshore Management Committee represented by the MELAD- LMD, ECD, Mineral Division of MFMRD, OAG, Civil Engineering Division of MISE, BTC and TUC which was controlling the foreshore development activities within the shorelines of South Tarawa and Betio. With an effort to regulate the variation of seawall and land reclamation size, the committee set up a limit to extend outward to the lagoon where only 10m permitted to developers. This is the new guideline being used at the local level to reduce impacts on lagoon resources (MELAD 2019).

2.3.2.1. National Urban Policy

Urbanization in Kiribati is an urgent challenge, impacting on government service delivery, access to services and infrastructure, environmental resources, economic opportunities and ultimately people's standard of living. Clearly, with a doubling of Kiribati's urban population expected by 2030

(Office of Te Beretitenti, 2012), the future of the nation, like many Pacific states and countries around the world, is undoubtedly an urban one. Action is needed now to ensure that urban areas do not deteriorate and impact negatively on social, environmental and national economic outcomes. Well managed and well-planned urban areas can create enormous opportunities as it helps to allocate finite resources more effectively and efficiently, with positive externalities/spill-over effects that will invariably flow to outer islands.

According to UN Habitat, the development of a national urban policy is a key step towards reasserting urban space and territoriality. It is vital in providing the needed direction and course of action to support urban development. The policy provides an overarching coordinating framework to deal with the most pressing issues related to rapid urban development, including slum prevention and regularization, access to land, basic services and infrastructure, urban legislation, delegation of authority to sub-national and local governments, financial flows, urban planning regulations, urban mobility and urban energy requirements as well as job creation. The national urban policy provides the general framework to orient public interventions in urban areas and serves as a reference for sectoral ministries and service providers. It also serves as a key reference for legislative institutional reform. The Policy is an instrument for public and political awareness on the gains of sustainable urban development, provide an opportunity to promote consultation with urban stakeholders and involve multiple stakeholders such as citizens, NGOs and the private sector. The national urban policy sets a national vision for socio-economic advancement, cultural development and improved quality of life of the nation's population over the next 10 years.

The National Urban Policy (NUP) has been developed to fulfil the task assigned to the Ministry of Internal Affairs under the Kiribati Development Plan 2016-2019 (KDP). The KDP is four-year government strategic plan identifying key priority areas, to advance inclusive economic development in Kiribati. It is the guiding government strategy designed to drive Ministry Strategic Plans and Ministry Operating Plans, which together feed into the budget process for the Kiribati Government. The relevant objective, outcome and action of the KDP for this policy are detailed in Figure 1.

Figure 1: Link between the KDP and the National Urban Policy

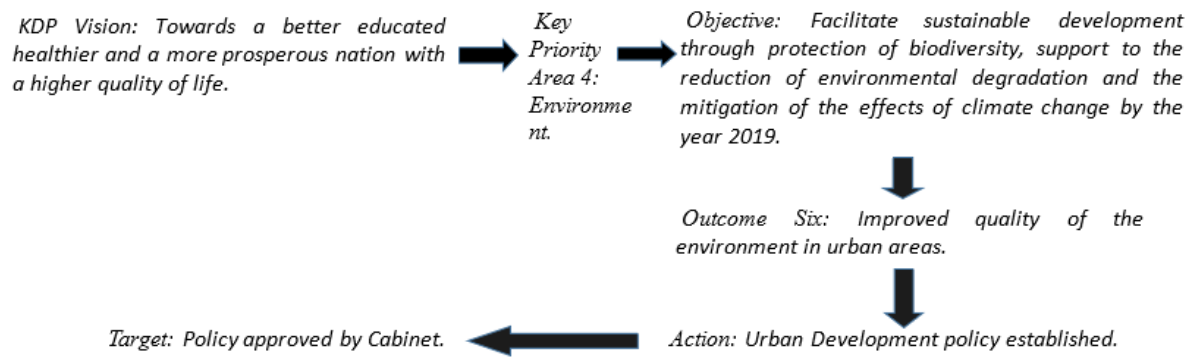


Table 2: Link between the KV20, Government Manifesto and the National Urban Policy (NUP)

KV20	NUP Comment		Government Manifesto Party 'Our Promise'	NUP Comment
Pillar 1: Wealth	Will support greater economic activity through sustainable development, improved economic growth and poverty reduction.		Economy	Will support greater economic activity through sustainable development and access to employment opportunities.
			Health	Improve health outcomes.
Pillar 3: Infrastructure Development	Will assist in improving infrastructure provision in urban environments.		Resettlement in Line and Phoenix Islands.	Supporting Kiritimati as it continues to pursue an urban future.
KV20	NUP Comment		Tobwaan Kiribati Party 'Our Promise'	NUP Comment

Pillar 4: Governance	Will improve coordination.	Agriculture	Support urban space for agriculture.
		Infrastructure	Improving infrastructure.
		Private Sector	Help private sector development.
		Local Government Empowerment	Improve coordination in local government delivery.
		Sports	Improve sporting opportunities.

Source: Kiribati Vision 20 (KV20) & Government Manifesto

2.3.2.2. Ministry of Internal Affairs (Rural Development (Urban/Land Planning) Unit)

The MIA through Rural Development (Urban/Land Planning Unit) is interrelated to Pillar 3 as shown above in table 3. The RDP Unit provide a technical support to all island Councils in order to achieve their development needs through government and donor assistance. The Division's various activities are centred on the planning and management of development projects of island councils. However, it will take a long process to secure a funding.

The RDP main responsibilities include the coordination and facilitation of rural development activities as well as policies and legislation to ensure sustainable rural development that leads to improved living conditions and shelter, poverty reduction and in turn leads to the easing of rural urban drift.

2.3.3. Agriculture Sector Plan

The ALD strategic plan specific for this KDP period (2016 – 2019) emphasises the development goal of achieving a food and nutrition secured nation through the following key outputs;

- Improving production systems, boarder control services, and community mobilisation. As food security is a cross cutting issue, partnership with relevant stakeholders in agricultural value chain has been recognised to promote synergy and collaboration

The goal of ALD is that "Household of Kiribati has food, income and nutrition security and the balance of agricultural and forestry environment is sustained and maintained. The key performance indicators:

- Contribution to local food to the diet increased
- Contribution of agriculture to household's' income increased
- Incidence of dietary diseases reduced
- Crop and livestock diversity increased

The ALD will focus on four key objectives for the period 2016 -2019:

- Objective 1: Sustainable atoll/ crop production systems developed and promoted
- Objective 2: Sustainable animal livestock systems developed and promoted
- Objective 3: Improved biosecurity
- Objective 4: Capacity building for stakeholders and agricultural staff

2.3.4. Water and Sanitation Sector Plan

The Ministry of Infrastructure and Sustainable Energy - Water and Sanitation Engineering Unit (MISE-WSEU) is in charge for ensuring that the people of Kiribati have sufficient access to reliable and safe water supplies as well as safe sanitation facilities and practices. MISE's Strategic Plan is aligned with the Kiribati Development Plan (KDP) 2016-19 and KV20 under Pillar 3 of Infrastructure Development to enable the achievement of national aspirations related to infrastructure, water and utilities (Water and Sanitation Department, 2017).

In collaboration with the Kiribati Climate Change Policy, the five objectives on water security include strengthening national water governance, providing efficient harvesting systems and innovative solutions to water availability, quantity, and quality issues, enhancing support and enforcement of regulations for water security and safety, strengthening community engagement in safeguarding water sources, and ensuring access to improved sanitation facilities (Kiribati Climate Change Policy, 2019).

Under KPA 6 of the KDP 2016-19, the objective concerns on Climate Change Resilience for infrastructure aiming for preliminary studies on climate change impact to coastal areas and water reserves. To better enhance dependable water sources, WSEU plan includes installing reliable desalination plant and water galleries in all inhabited islands and communities that are mostly affected by saltwater intrusion (Kiribati Development Plan (2016-19), 2016).

In urban areas like Tarawa and Kiritimati, PUB and WSU are mandated as services provider on freshwater reticulation and de-slug ding. Nevertheless, ongoing water project such as KiriWatSan increases access to safe, reliable, and sustainable water and sanitation resources. Improving water quality and safe sanitation would also diminish pollution and incidence of water-borne diseases, enhance living standards in outer islands, and support biodiversity.

Currently WSEU is overseeing a number of ongoing water and sanitation-related projects that are funded and organized by various donor countries and agencies. Below is a list of pasts, current, and on-going major projects that are implemented and conducted by MISE for enhancing water and sanitation on Tarawa and outer islands.

Table 3: Summary of Water related Projects that contributes to the implementation measures undertaken to achieve national targets.

	Focus Island/Village	Start Date	End Date
KiriWatSan I	The Gilbert Island Group. All villages	April 2011	April 2016
South Tarawa Sanitation Improvement Sector Project	South Tarawa	October 2011	June 2017
KAP III	North Tarawa	December 2011	December 2018
US AID Climate Change Adaptation Project	Abaiang (Takarano, Taburao,Tebero,Tanimaiaki and Tabontebike	November 2012	September 2015
IFAD Project, Component 3	Abemama, Nonouti, Tabiteuea North, Beru	January 2014	December 2018
Strengthening Water Security Project	No target islands, but has covered Onotoa, Maiana, Marakei, Abaiang, Makin,Banaba, Teraina, Tabuaeran, Aranuka, Kuria, Tabiteuea South,Beru and Tamana	July 2015	December 2019
South Tarawa Water Supply Project	South Tarawa	October 2018	March 2027
Improved Drinking Water Supply for Kiritimati Island	Kiritimati	January2014	December 2018

Source: MISE-WSEU, 2019

2.4. Relevant National Policies and Strategies Contributing to the Implementation of the Kiribati NBSAP 2016 – 2020.

The Government of Kiribati will fulfil its national commitments to site conservation through the implementation of relevant provisions of the Kiribati's Biodiversity Strategy and Action Plan (K-NBSAP) 2016 - 2020. MELAD ECD takes the lead to coordinate and implement the Kiribati NBSAP 2016 – 2020 and works closely with the National Biodiversity Planning Committee members at the

national level, for relevant technical support and assistance. Similarly, MELAD ECD uses this Kiribati NBSAP 2016 – 2020, to form the basis of relevant interventions at the Biodiversity Conservation Program and Projects levels at the national, island, and village levels.

Table 4: Relevant National Policies (in chronological order) that contribute to the implementation of the Kiribati NBSAP 2016 – 2020

National policy	Contribution
KV20	The Kiribati Vision for 20 years provides guidelines for the development of a wealthy, healthy and peaceful nation. The Kiribati vision 20 is designed around the enabling environment and social benefits from the key economic sectors of tourism and fisheries
Kiribati Development Plan (KDP) 2016- 2019	The KDP 2016- 19 is the guideline for formulating policies and programs to advance inclusive economic development in Kiribati. The KDP provides a framework for development so all projects that are proposed by Ministries, agencies, NGOs and Island Council are aligned with the principles of the KDP Key Priority Area 4 of the KDP supports the conservation of environment and biodiversity in Kiribati. The KDP supports tourism growth through the development and promotion of ecotourism opportunities and strengthening wildlife conservation
Kiribati Integrated Environment Policy (KIEP)	This policy provides guidance and direction for government and local communities in protecting, managing and utilizing the natural resources and enhances environment protection
Kiribati National Fisheries Policy 2013 – 2023	The policy provides guidelines on the protection, conservation and management of Kiribati fisheries resources through sustainable practices. The Policy will enhance food security, sustainable livelihood and build climate resilience fisheries
Kiribati National Water Resource Policy	This policy provides a framework for leadership and coordinated action in the supply of safe, adequate, and environmentally sustainable water services as well as the protection, conservation, sustainable use, and efficient management of Kiribati's water resources
Kiribati Climate Change Policy	This policy strategically guides and supports decision-making processes and sets the direction for enhanced coordination and scaled-up implementation of climate change adaptation, mitigation and disaster risk reduction

Ministry Strategic Plan (MSP) 2016 – 2019 MELAD	The Ministry Strategic Plan provides a roadmap to achieving the vision and the related development outcomes in the KDP 2016- 2019. The Ministry of Environment, Lands and Agricultural Development Strategic Plan is a guideline for the broad priorities of the KDP in both a top- down and bottom- up approach.
Kiribati National Invasive Species Strategy & Action Plan, 2015- 2020	The K-NISSAP is aiming at reduction of impacts from invasive alien species. This plan promotes effective management of IAS in Kiribati to reduce its impact to the biodiversity.
Kiribati Joint Implementation Plan (KJIP)	It is a policy aimed at increasing resilience through sustainable climate change adaptation and disaster risk reduction using a whole of island approach. It also addresses plans for mitigation. Under the strategy 4 of the KJIP, it stresses the need for local communities to preserve and promote local food, sustainability of marine and water resources management.
Agriculture Strategic Plan	The plan aimed at developing and promoting sustainable crop production and livestock system, improved biosecurity and enhancing capacity building for stakeholders.
Line and Phoenix Islands Sustainable, Integrated Development Strategy 2016- 2036 Kiribati National Tourism Development Strategy 2016-2019	This strategy was recently developed with three main objectives; sustainable Development of the LPI's economy, Sustainable Inclusive Social Development and Sustainable Environmental Conservation and Management. The KNTDS vision supports environmental conservation especially land and marine areas that have positive impacts on tourism development. The strategy was developed to complement the Pacific Regional Tourism Strategy 2015-2019 set up by the SPTO, to be implemented at the national level.
Kiribati National Tourism Action Plan	The plan is aiming at promoting the eco-tourism to align with climate change, and resilient economy schemes for sustainable development
PIPA Management Plan 2015 – 2020	With a vision: "to conserve the natural and cultural heritage of the Phoenix Islands Protected Area for the sustained benefit of the peoples of the Republic of Kiribati and the world.

2.4.1. Biodiversity related policy under the Kiribati Integrated Environment Policy

Kiribati Integrated Environment Policy (KIEP) is managing the Environment and Conservation Division's implementation plan. The policy provides frameworks of the key thematic areas known

as Biodiversity Conservation and management, Climate Change, waste management and pollution control, resource management and environmental governance. The Environment and Conservation Division is responsible for overseeing all environmental programs implemented at the Division level to ensure that the environment is well protected and managed over the long period of time. These environmental programs are well linked to the thematic areas of the KIEP and the Kiribati Development Plan and therefore contribute to achieving targets set out in those policies and plans.

2.4.2. Fisheries Policy

Fisheries related policies support Biodiversity Conservation Management and Sustainable Utilization at National, Island and Village level.

The Kiribati National Fisheries Policy 2013-2025 was the first policy developed by MFMRD and endorsed by cabinet in 2012. The development of this policy was conducted through a government consultative process where views from all government ministries, stakeholders and communities on South Tarawa including outer islands were all considered.

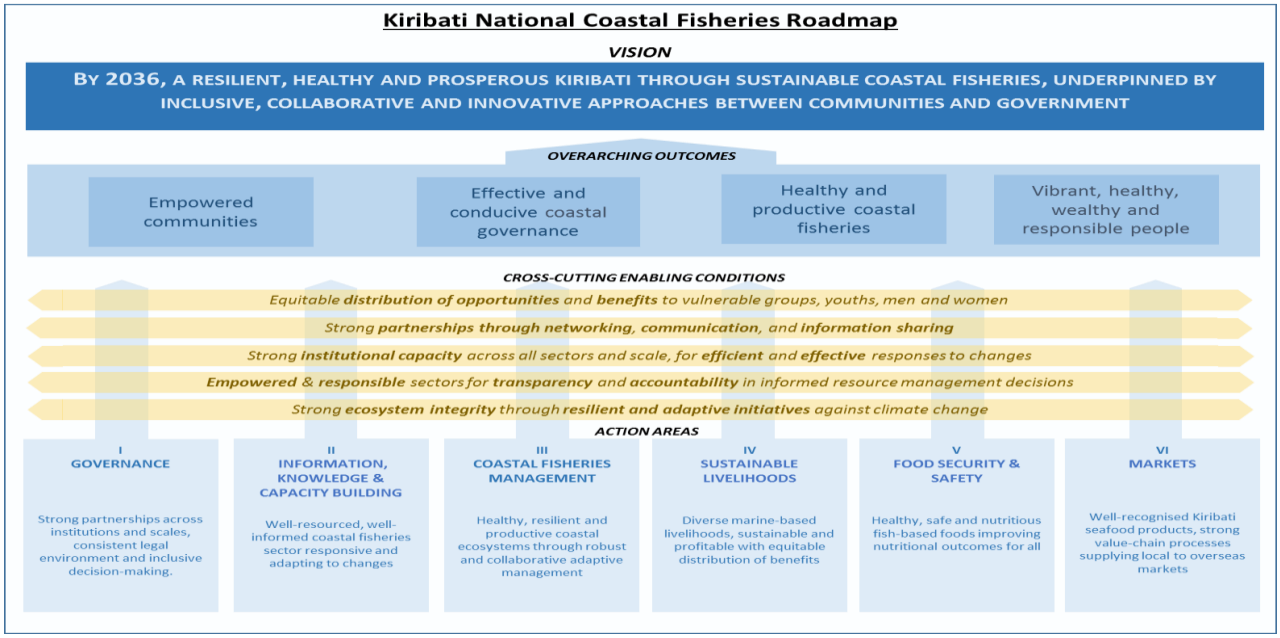
The policy was designed to ensure that integrated fisheries management and strategic planning could be developed in a more coordinated and collaborated way between stakeholders and a planning tool to mainstream implement and monitor national development priorities reflected in the Kiribati Development Plan 2016-2019.

The legal basis for this policy was largely provided by an Act for the Conservation, Management and Development of Kiribati Fisheries and Control of Foreign Fishing and for Connection purposes (2010), the Local Government Act (1984) due to involvement of Island Councils in managing their coastal resources and the Environment Act (1999) provided significant provisions for the conservation and protection of marine biodiversity.

MFRMD through Coastal Fisheries Division recently developed a blueprint in late 2018 to early 2019 to guide sustainable management and development of coastal fisheries for the benefit of all I-Kiribati. The roadmap addresses immediate, intermediate and long-term goals.

The strategy supports the objectives of the Kiribati Vision 20 and Kiribati National Fisheries Policy 2013-2025 and, stresses the importance of coordination and collaboration among stakeholders and programs in the sector and among Ministries. The national roadmap also provides a framework for Kiribati's implementation of the principles and commitments set out in the 'New Song' policy on coastal fisheries in the Pacific region and in the Voluntary Guidelines for Small-Scale Fisheries, including commitments and support for community-based coastal resource management. (MFMRD, 2019) Below is the concept map that summarizes the Coastal Fisheries Roadmap.

Figure 2: Kiribati National Coastal Fisheries Roadmap (2019 - 2036).



2.5. Legislative Framework and International/Regional Agreements

The development of the Fisheries Regulations was another tool that Kiribati applied and utilised for managing its coastal resources, for instance Bonefish Regulation for Christmas Island for the protection and conservation of Bonefish in relation to eco-tourism activities such as game fishing. Shark Sanctuary Regulation 2015 which targeted shark resources and Fisheries (Conservation and Management of Coastal Marine Resource) Regulation 2019 which was recently endorsed within this year (2019) for the protection and conservation of certain coastal resources.

Island Councils have a jurisdiction in managing their resources within their 3 nautical miles (Local Government Act.) in which Island Bye law was formulated at the island level purposely for managing both terrestrial and marine resources. Management plans developed at the community level must compliment the Fisheries (Conservation and Management of Coastal Marine Resources) Regulations 2019 and can form part of the Bye laws.

Table 5: Biodiversity Related Legislations in Kiribati that relate to the AICHI Biodiversity Targets

Legislation/ Act	ABT
Biosecurity Act 2011	9
Fisheries (Amendment) Act 2017	6
Phoenix Island Protected Area Conservation Trust Act 2009	11,17
Environment (Amendment) Act 2007	3,6,9
Land Planning Ordinance 1977 (Revise 2000)	5, 6 & 7
Foreshore and Land Reclamation Ordinance 1977 (Amendment 2009)	10,11,14 & 17
State Land Act 2004	4
Wildlife Conservation Ordinance	10, 11, 12
National Disaster Act 1993	3, 5, 8
Squatters Act 2005	14, 18
Tourism Act 2018	1, 2, 4, 6, 11, 12, 14, 18

2.6. Conservation and Biodiversity Information. (BCU, CCU, WCU) (NT 1, 2, 4, 11, 12, 16,17,18,19 and 20).

As per information from PIPA, there are a number of endangered, threatened, extinct and protected species identified. Conservation and protection of the endangered species is ongoing. The endangered species ranged from terrestrial, marine to avifauna of the PIPA islands and the species involved all turtle species etc., phoenix petrel etc. So far, numerous recorded and unrecorded transplantation achievements have been done in the past by the ALD and some members of the local community on local food crops and vegetation, but has not been successful. The latest transplant was in February of this year by Tuake (the PIPA Kanton Coordinator), on varieties of seeds of crops and vegetation trees together with ornamental plants. These were all obtained from the gene bank at Tanaea ALD to help enlarge the Gene bank at Kanton. The planting scheme on Kanton is still ongoing, which involves cleaning of bushes and replanting and replenishing of traditional food plants to expand the growth of plant crops for the benefits of local communities.

The Kanton community consists of 8 households with the population of 40 local people. However, the awareness has been conducted at Kanton Island on conservation of marine and terrestrial resources with the Kanton community as participants. Mapping and surveying of Kanton will enable closure of areas involved with the breeding of certain avifauna or terrestrial species. Numerous

awareness programs have been conducted via media radio, publications and at primary and secondary schools on South Tarawa featuring topics such as conservation of marine and terrestrial resources. It also included the transplantation of mangrove seeds to enlarge mangrove swamps, where local communities were involved, including school children who participated in the planting activity.

Moreover, other islands of the Phoenix Islands; Rawaki, Birnie and Mckean islands are now free of rats and rabbits after the eradication was carried out between 2008 and 2011 by Dr. Ray Pierce of the Eco Pacific from Australia.

The verification visits to the treated islands has been long outstanding due to lack of funding so currently PIO has normally made use of Observer accompanying tourists or research vessels to collect whatever terrestrial data will be required from those PIPA islands visited. Seeking advice from our overseas partners/scientist to conduct studies to determine the removal or retaining of ship wrecks that have historical and cultural value e.g., President Taylor wreck etc.

Managing all cruises in the lagoon, guiding them to a safe route to prevent the destruction of marine habitats or the coral gardens. Also, net fishing was totally banned, as it caused the disturbance of marine habitats, merely hook fishing was operational and only a permissible amount of fish consumption of 2 kg p/p day.

There have been Restrictions on the number of fishes being taken on outgoings and this must not exceed 10 kg fresh or dried only on/as accompaniment and the sending of fresh or dried product for any purpose is not permitted at all times. The restoration, of marine and terrestrial habitats will eventually be recovered sooner, once the natural process is completed.

2.6.1. Vision for Lagoon conservation in Kiritimati

2.6.1.1. Lagoon

The lagoon zoning (see Figure 3 below) is described so that it maintains its flexibility for multipurpose activity. Currently, Kiritimati does not make maximum use of this resource and it is often seen as a barrier to some activities. The following recommendations are made to realize its potential.

Continued management of the exclusive wildlife zones (sub zones 15_2, 15_5, 14_2, 16_3, 16_2, 16_4) is essential to protect the biodiversity of the atoll which in turns enriches the tourist experience. Most of these sites permanently prohibit entry or activity, but others are temporal. Clarity on where and when other activities are permitted that needs careful communication with the public.

Continued protection to the Fish No Take zone (in parts of subzone 16_1, 16_3 and 16_4) is essential to maintain the high quality of the bonefish and other fish, again both for intrinsic biodiversity enrichment and to meet the demands of the sports fishing tourism.

Currently the Sports fishing tourism use a large number of fishing locations, mainly sand flats, and consider them their exclusive right. With increased activity, the areas where sports fishing should have priority will have to be consolidated (to 15_1 and 15_2), but this gives an opportunity for communicating clearly on how other activities can operate in these consolidated locations. Sports Fishing will not be banned from other areas, but then again there will have to understand that other activities may affect the quality of the fly fishing

The area around the Paris Peninsula (12_2 and 12_3) should be primarily for the tourism industry, extended to a recreation zone for the local population. Enhancement of facilities to allow kite surfing, surfing, kayaking will increase the attractiveness and provide activities for tourists accommodated on the Paris Peninsula. The dive sites picked out by the MACBIO project should be better geo-located, named, described and publicized.

The area around Boating and Bathing Lagoon (15_3) should be given special consideration as a recreation site of benefit to both local and tourist populations. The aesthetic beauty of the area and it being one of the few places where one can swim easily from the shore makes it an attractive destination. Minimal and sensitive development of facilities here will enhance the destination offer. Some extra activities could be enhanced here, for example it would make an interesting kayaking area.

Protection of the key archaeological sites around the edge of the lagoon should be given, to ensure that more detailed study can take place in the future and reserve the possibility that it could contribute as tourism destinations around the atoll.

Improved transport links between the north and south of the island could be provided by ferries. A car ferry can be considered between Ronton Wharf and a ramp in Stanislas Bay. The location near Poland is advisable to allow the option for larger vehicles to be carried without disturbing the tourism and recreation facilities on the Paris Peninsula. A passenger ferry is proposed primarily to connect tourist destinations including Bathing and Boating Lagoon, but they could allow transport for local populations. A more efficient passenger ferry for locals directly between Poland and Ronton could be considered if there was enough demand.

A proposal for a new commercial port inside the lagoon (at Stanislas Bay) should not be considered as it would disrupt both the biodiversity and other activity within the lagoon. Improvements to the Ronton Wharf should be considered to cope with proposed internal transport links.

The Manueba Lagoon is located in the Eastern Planning Zone but is included here as its link to the main lagoon allows it to nurse fish stocks and improve overall biodiversity. The expansion of the solar salt industry here would cause no conflicts for other proposed activities.

Similarly, the connection between the lagoons in the South East Peninsula and the rest of the lagoon means they should be considered here. These lagoons, some of which are already protected as wildlife protection zones, would now come under the auspices of the Kiritimati

National Park with biodiversity conservation its top priority. This ensures that this can be a protected refuge which feeds fish and other fauna back into the wider lagoon.

The proposed fish no take zone around Cook Island and Benson Point (14_4) should be implemented. Milkfish mature in the lagoon and exit through the two channels either side of Cook Island but are currently susceptible to non-sustainable off take by fisher folk. Protecting one of these channels will allow a certain proportion of milkfish to migrate, while allowing continued off take from the other channel. Other activities such as use for transport and watersports have no impact on this zone.

The open water in the Outer Lagoon (14_1) should be considered as a mixed-use area, primarily as it is essential for different end users to access other parts of the lagoon.

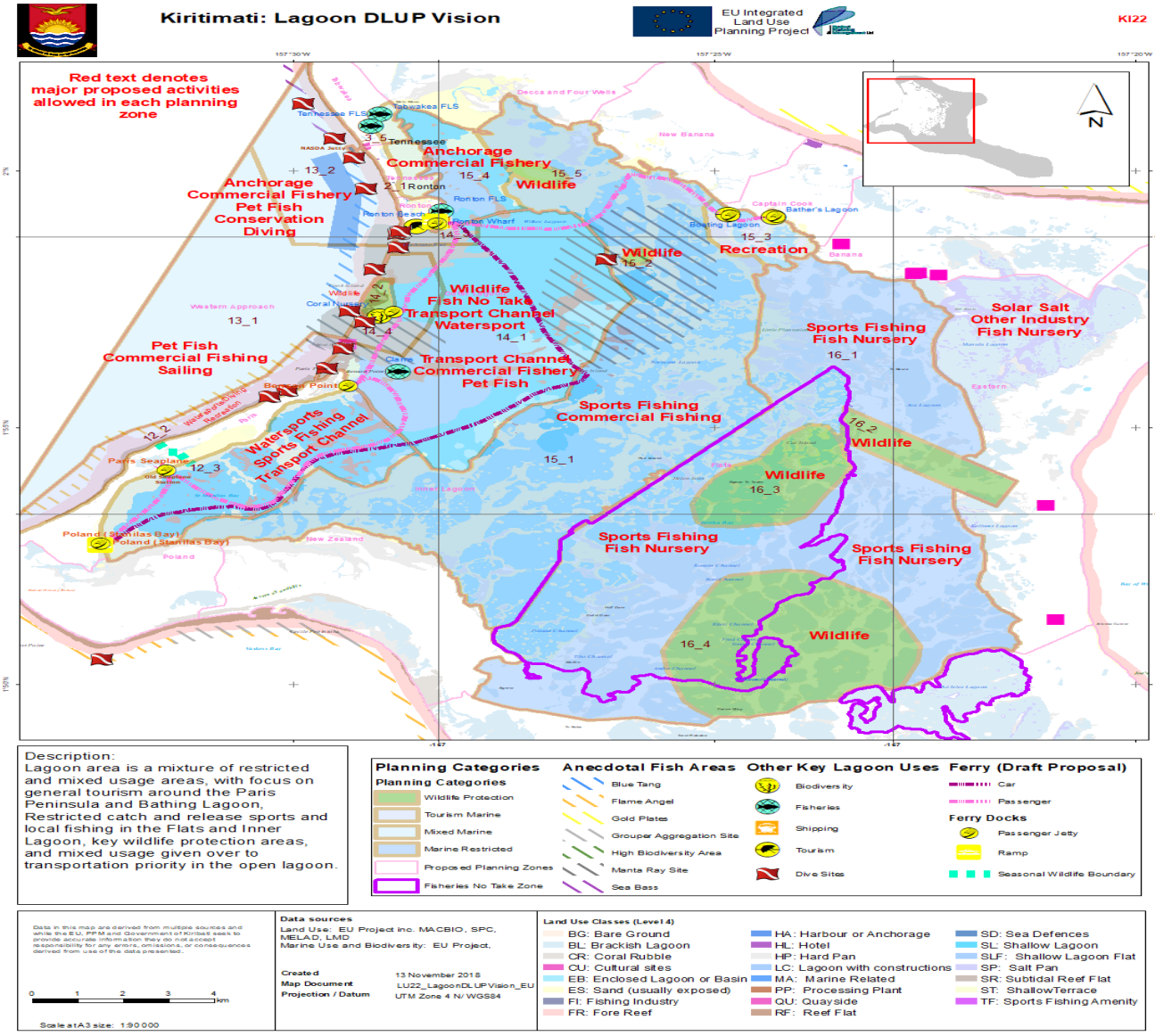
Outside of the lagoon (13_1 and 13_2) mixed activities can continue. Careful management of the coastline between Ronton and Tabwakea will be essential as this is both an intensively used area (biodiversity conservation through turtle nesting sites, recreational, commercial and pet fishing, port facilities, industrial activity) and vulnerable to erosion. Setback on the coast of 25m to protect the berm and its vegetation is essential, both in disallowing new development and relocating existing facility.

The proposed increase in tourism activity, improved transport links, increased landward development around the lagoon, and consolidation of the sports fishing locations should not compromise the environmental considerations to sustain the biodiversity within the lagoon and maintain good water quality. Ensuring the healthy sustainable fishery, not just of sports fish but off take of vertebrate and invertebrate (clams, crayfish) species is essential.

In relation to this better water quality monitoring will be necessary focusing on the new tourism locations in the Paris Peninsula but also close to the settlements in the north and spot locations around the rest of the lagoon.

Enhancement of biodiversity tourism in the lagoon would be one of Kiritimati's jewels in its tourist crown. The rich biota allows for watching of species such as manta ray, dolphin, shark, turtles, and development of some reefs to allow tourist snorkeling from boats, glass bottom boat tours could be tapped into. A bold consideration could be to model on Sting Ray City in the Cayman Islands, and develop an area of reef to encourage manta rays in so people can get closer to these magnificent creatures. This may take time since manta rays that are currently fished are naturally cautious about being close to humans. Careful management of the resource and training of any operators will be essential, but this could be a high-end revenue source for the tourism industry.

Figure 3: DLUP Vision for the Lagoon



2.6.1.2. Island Governance and Community Conservation Programs (CBMMP, CBFM, IDPs)

Strengthening island councils with establishment of the Local Land Planning Board (LLPB) to effectively undertake the roles and responsibility to approve and monitor land development in their respective areas of authority. The gap in this area is that only 4 islands have LLPB, while the rest have not yet established for example Butaritari to North Tarawa and Maiana to Arorae. Some of the benefits of having LLPB established on outer islands include improving and organizing villages houses, business and designate protected areas for environment, cultural and historical purposes etc.

2.6.1.3. Case Study 1: Community Based Fisheries Management (CBFM)

The Community Based Fisheries Management was recently initiated in Kiribati to empower communities in managing their adjacent coastal marine resources. Marine resources are very important to I- Kiribati communities, and coastal fisheries in particular, are the main support for subsistence and livelihoods, and are vital for the maintenance of cultural values. As such, these coastal fisheries need to be managed to ensure their sustainable use for future generations of I-Kiribati.

This CBFM project was initially implemented in May 2014 and is funded by the Australian Center for International Agricultural Research and is a component of a larger initiative being jointly conducted in the Solomon Islands and Vanuatu. The pilot phase of this project is initially for three years during which time the project aims to work with three island communities. Two of the communities, Butaritari is in the northern Gilbert Islands, and North Tarawa is in the central Gilbert Islands, have already been involved in this project.

This is a regional project that Kiribati is benefiting from, with $3.8 million shared between 3 countries – Kiribati holding $1.2 million. The objective of the project is to develop and nurture the structures, processes and the capacity to implement and sustain the national programs of CBFM. (http://www.mfed.gov.ki/sites/default/files/Kiribati%20VNR%202018.pdf).

Phase 2 of the CBFM focuses on scaling the program on the first three pilot islands, and on these 3 islands that were approved by Cabinet in 2018 are; Marakei, Aranuka and North Tabiteuea. The project also assists related programs in delivering CBFM component to islands funded by Global Environment Fund project and Tobwaan Waara NZ funded program. There are a number of trainings and practical field work done with extension officers on CBFM techniques and principles and facilitation skills to increase the support of Fisheries officers towards communities implementing CFMP. The table below shows communities and islands that the CBFM has engaged with.

Table 6: Communities and islands engaged with CBFM.

Island	Communities that have been consulted	Villages with finalized management plans	Villages with draft management plans
Makin	North, South, Central and Kiebu		Whole island draft management plan consolidated in early October 2019, awaits finalization and endorsement at the island level in 2020
Butaritari	Kuma, Keeuea Tanimainuku, Tanimaiaki, Tabonuea, Antekana, Tabukin Meang, Temwanokunuea, Onomaru, Ukiangang Bikati	Kuma, Tanimaiaki, Bikati, Ukiangang, Onomwaru,	Keeuea, Tanimainuku, Tabonuea, Antekana, Tabukin Meang, Temwanokunuea, Onomwaru.
Marakei	Takaunga, Raaweai, Norauea, Rawan Awi	Tekaunga,	Raweai, Norauea, Rawan Awi
Abaiang	Nuotaea, Ribono and Tabontebike	Nuotaea, Ribono and Tabontebike	
North Tarawa	Buariki, Tearinibai, Nuatabu, Taratai, Nooto, Abaokoro, Marenanuka, Tabonibara, Kainaba, Nabeina, Tabiteuea, Abatao, Buota	Buariki, Tabonibara, Tabiteuea, Abatao, Nabeina, Kainaba	Tearinibai, Nuatabu, Taratai, Abaokoro, Marenannuka
Maiana	Tekaranga and Bubutei Full Council		Tekaranga and Bubutei

Aranuka	Baurua and Takaeang		Draft management plans have been developed with these villages and are to be finalized and endorsed in 2020
Abemama	Abatiku, Reina, Tabontebike, Baretoa, North Tebwanga, South Tebwanga, Tabiang	Abatiku: Assisted by CBFM through GEF project. Reina, Tabontebike, Baretoa developed under Community based mangrove management plan program. From Environment &Conservation Division	Tabiang and Tebwanga have also expressed interest in managing the coastal fisheries resources.
Nonouti	Autukia, Teuabu, Temotu, Abamakoro	Autukia	Teuabu, Temotu and Abamakoro.
North Tabiteuea	Kabuna, Tekaman, Buota, Tanaeang, Terikiai	Kabuna and Tekaman	Buota, Tanaeang and Terikiai
South Tarawa	Naanikaai		A draft management plan was developed as part of Ocean Acidification Program

Source: MFMRD-CBFM, 2019.

CBFM provide the communities with the opportunity to engage in tourism activities and provide tourism services (Secretariat of the Convention on Biological Diversity, 2015). With the creation of MPAs, these can be a source of income for the local communities if they are managed and operated sustainably (Spenceley, Snyman, & Eagles, 2017). Tourism activities such as scuba diving guide tours, game fly fishing and non-motorized water activities like kayaking and snorkeling generate income for the communities close to the MPA.

The Fisheries Division of the MFMRD teamed up with the Tourism Authority of Kiribati (TAK) to empower the local communities on the island of Abemama to maintain and monitor their MPAs as well as promote income-generating ideas through tourism. Abemama is one of the islands being groomed to be a game fly-fishing spot to provide alternative fishing grounds to Kiribati's renowned game fly-fishing destination - Kiritimati.

This visit was conducted in August 2019 where nine communities were visited as well as an islet – Abatiku islet. The intention of the visit was to enhance the communities' biodiversity through protecting certain marine areas in order to replenish fish stocks and also educate them on the benefits of community-based tourism activities such as organic farming, traditional harvesting techniques, and cultural preservation. Tourism services such as tour packaging and provision of accommodation and serving authentic, traditional meals were also discussed.

With the game fly-fishing activity still in its exploratory phase and the island being a potential cruise stop-over destination, there is time for the communities to plan their activities and prepare their services for the upcoming demand.

CBFM and tourism need to go hand in hand if the communities are to benefit from their protected areas and at the same time, promote their unique culture and island way of life.

SOME ACHIEVEMENTS (https://www.mfmrd.gov.ki/?page_id=681)

Table 7: Achievements of CBFM

Phase	Achievements
Phase 1	All 5 communities are implementing some of the major actions in their management plan (https://www.mfmrd.gov.ki/?page_id=681) CBFM has brought some villages and islands together, for instance, Kuma South and North in Butaritari or Makin supporting Butaritari CBFM pilot sites with their plans. Each village has set up CBFM or Nei Tengarengare committees to be the voice of the program in the villages. In Butaritari, they have also set up an island- wide CBRM committee that involves the Unimane, Island Council, and representatives from all the villages. The committee members also attend the CBFM stakeholder meetings.
Phase 2	In 2018, the management plans for Kainaba, Nabeina, Tabiteuea and Abatao were developed. Proposals for marine protected areas were developed by the islets of Kainaba, Nabeina, Tabiteuea and Abatao. Establishment of the NCBRM Taskforce. The objective of the taskforce is to ensure that all community-based projects or initiatives conducted by various Ministries and NGOs are centralized and all well- coordinated, there is no duplications and resources are used effectively and efficiently. Assisting the Least Developed Countries Fund (LDCF) project from ECD in the development of management plans for communities on Abemama. (https://www.mfmrd.gov.ki/?page_id=681)
	Finalized management plan for Abatao,Tabiteuea, Nabeina and Tabiteuea of North Tarawa North Tarawa is divided up in 3 zones: zone 1 Buariki to Taratai villages, zone 2 Nooto to Tabonibara, zone 3 Kainaba to Abatao. Zone 3 is completed, zone1 and zone 2 have been visited, need to be revisited in order to finalize zonal management plan. Butaritari, all villages have been consulted for their management plan, has 3 Marine Protected Areas, and still confirming emerging ones from new villages, a new island wide CBFM committee has been established.

	CBFM documentary video was accomplished. Hosted a community stakeholder meeting in August 21 to 22nd where island representatives like Mayors, Unimwane, village members and a few councillors were invited from Makin, Butaritari, Marakei, Abaiang, North Tarawa, Maiana, Aranuka, Abemama, Nonouti and North Tabiteuea with the objective of knowledge sharing between islands on CBFM and ways forward for accelerating scaling up of CBFM on Kiribati. Training to Fisheries Assistant trainees on CBFM skills and techniques is an ongoing program where trainees are continuously involved in community consultations with the team. Mid-term Review for the CBFM project was conducted in August where community members were interviewed on the impact of CBFM, as well as Fisheries Staff and some projects that have worked with CBFM The National Community Based Resource Management Taskforce meeting was held on 13 to 14th of August with the aim of Developing workplan for the committee. Maiana, Abemama and Nonouti were visited for consultation on fisheries management plan development. There were a lot of villages who have expressed interest in initiating fisheries management in their respective villages. There are Marine Protected Areas established in Abatiku (Abemama), Autukia (Nonouti) and 3 proposed MPAs in Maiana. Catch monitoring data collection was done in Tanimaiaki and Kuma on Butaritari to do research on fishing patterns, amount and size of fish and fish species Makin and Marakei were recently visited to introduce CBFM and seek opinions from people on issues directly and indirectly affecting fisheries.

Source: MFMRD-CBFM

There are also fisheries programs to safeguard resources and food security rendered to outer islands. The public provision of Te Waa-n-O (local fishing canoes) empowers families in the outer islands to fish for food or income in more distant and deeper waters. The Government has also supported ice plants, with funding assistance from Japan, to all outer islands to help with storage of catch for transport and marketing. Fishery cooperatives in a number of outer islands also facilitate community groups to share fishing equipment and storage.

Island council by-laws exist to ensure proper control of their marine/sea resources by requiring foreign fishing vessels to apply for the Council approval. At the national level, the Fisheries Act outlines proper control and measures for foreign fishing companies, consistent with the conditions

of international agreements like the Parties to the Nauru Agreement (PNA). Alongside laws are policies on conservation and the prudent management of marine resources.

The Conservation of marine resources is also regulated under Environment Act 2007 through the licensing and enforcement programs and scientific research permits. ECD has the integrated Community Based Mangrove and Natural Resources Co- Management plan (CBMMP) that contributes to the conservation and sustainability of marine resources.

2.7. Threatened Species and the International Union for the Conservation of Nature (IUCN) Red list-action and Measures taken

The International Union for the Conservation of Nature Red List action and Measure taken is to improve how we manage to conserve plant and animal species that are nearly extinct both on land and marine environment: nevertheless, these threatened species are increasing after being exposed by human destruction activities and climate change impact. Hence, Kiribati people attempt to achieve management and conservation of threatened species by putting aside differences and working together to create environment governance, engaging all parts of society to share the responsibilities and the benefits of conservation.

2.7.1. Invasive Alien Species

Invasive species, especially rats and feral cats are a particular threat to the ecological balance in small islands in the Pacific Islands region. In Kiribati, invasive alien species are one of the greatest threats to Kiribati's Island biodiversity, economy and to Kiribati's way of life. Some examples of invasive alien species (IAS) that currently exist in Kiribati include Pacific or Polynesian rat- Rattus exulans, Ship- rat- Rattus rattus; House mouse – Mus musculus; Asian rat – Rattus tanezumi(present on McKean Island of the Phoenix Islands Group; Feral cats (Felis catus) – present on Kiritimati island; Feral rabbits (Oryctolagus cuniculus) – present on Rawaki Island of the Phoenix Groups; wedelia - (Wedelia Trilobata), and mynah birds (Acridotheres tristis).

These species could be found in some other islands in the Kiribati group such as the Phoenix group and the Line Islands. In the Phoenix group, mynah birds are a great threat as four of the islands in the group are designated wildlife sanctuaries. There are also serious pests in Kiribati which include insects and non-insects that have important economic implications in Kiribati's island biodiversity.

Impacts of IAS in Kiribati range from total ecosystem impacts to quite specific impacts on one or more native species. A classic example of a total ecosystem impact is that of the European rabbits introduced to Rawaki in the PIPA where they grazed most species of plants to ground level and totally eliminated some others. The removal of the rabbits in 2008 has resulted in the recovery of a number of plant species. Then, in 2015 a feasibility study for restoring uninhabited Malden Island via cat removal was completed and consequently reduced the number of cats and rats in the island.

2.7.2. International Union for the Conservation of Nature (IUCN) Red List – action and Measures taken

The IUCN Red List of Threatened species is the world's most comprehensive inventory of the international conservation status of plant and animal species. It uses a set of quantitative criteria to evaluate the extinction risk of thousands of species. The IUCN Red List is recognized as the most authoritative guide to the status of biological diversity. The IUCN Red List is a critical indicator of the health of the world's biodiversity. Far more than a list of species and their status, it is a powerful tool to inform and catalyse action for biodiversity conservation and policy change, critical to protecting the natural resources we need to survive. It provides information about range, population size, habitat and ecology, use and/or trade, threats, and conservation actions that will help inform necessary conservation decisions.

IUCN red list is used for a variety of purposes such as international agreements. These include, but are not limited to agreements such as CITES, the Ramsar Convention, UN sustainable Development Goals and CBD Aichi Targets. Kiribati is recognized as one of the pacific islands which are part of the abovementioned international agreements, except for CITES. The global list of threatened species provides the basis for Target 12 of the Aichi Biodiversity Targets, to help identify species for conservation action. In addition to the provision of this data, the IUCN Species Programme also works closely with the Species Survival Commission to both implement species conservation action on the ground and ex situ, and to develop and share guidance on species conservation action.

Data from the IUCN Red List are used as indicators for the United Nations Sustainable Development Goals, particularly Goal 15: Life on Land. It is also used by the Convention on Biological Diversity (CBD) to monitor progress towards achieving the Aichi Targets.

2.7.3. Summary of Kiribati's species on the IUCN Red List

Kiribati is part of the Polynesia- Micronesia Biodiversity Hotspot, one of the 34 regions of the world where extraordinary levels of biodiversity and endemism are coupled with extremely high levels of threat. Although 90 species found in Kiribati are listed as globally threatened on the currently available *2010 IUCN Red List of Threatened Species*, the true number of threatened species in Kiribati is significantly higher than this. The primary threats to Kiribati biodiversity are i) habitat alteration caused by unplanned or poorly planned development (especially causeway construction), ii) over harvesting of resources (over-fishing, gleaning, harvesting of mangroves), iii) waste and pollution, iv) modern agricultural methods and v) the spread of invasive species.

Table 8: Summary of Kiribati's threatened species on the 2019 IUCN Red List.

SPECIES	VALUES	SPECIES	VALUES	SPECIES	VALUES	TOTALS
Mammals	**2**	**Reptiles**	**2**	**Birds**	**6**	**10**
Amphibians	**0**	**Fishes**	**14**	**Molluscs**	**1**	**15**
Other inverts	80	Plants	0	Fungi & Protists	0	80
TOTAL						**105**

Source: ALD, 2019

The 2019 IUCN Red list provides the latest collated information for Kiribati. The table illustrates a snapshot of the number of species in Kiribati documented in 2019.

2.7.3.1. Atoll Forestry (NT 5,7 and 11)

Forests and trees play significant roles in the lives of te I-Kiribati, economically, socially, culturally and environmentally. In all islands of Kiribati, agroforestry and tree crops provide most of the food, medicines, construction materials, firewood, tools and uncountable of other products and services that cannot be replaced with imported substitutions. The major challenge for Kiribati is to ensure sustainable management of scarce and diminishing forest and trees resources, taking into account demands for economic development and the social and environment needs of its growing population.

A significant amount of the standing coconut palm resource about more than 50%, according to Word's estimate is of senile palm trees of over 50 years old, which are no longer economic to maintain for nut production (Worf & Kataebati). This translates to a population of about 2.2 million standing senile palm trees containing an estimated 674,000m3 of saw timber, biomass in its tree trunks that, properly utilized, would generate significant benefits both locally and at the national level.

To address the sustainability, use of these standing senile coconut trees, Taiwan Technical Mission (TTM) donated 16 portable sawmills to Kiribati in 2016. The purpose of these sawmills is to support local people in timber processing for house constructions, and encourage rehabilitation and

replanting of coconut trees. The distribution of Sawmills was carried out by the ALD to most of the islands in the Gilbert, Linux, and Phoenix groups.

Some of the nearby island shared one sawmill under the understanding of their closer distance apart. As required for the implementation of Saw milling, Operators for these machines were nominated from all islands of the Gilbert group. There were 22 operators invited and trained through the instructions of two trainers from Papua New Guinea Forestry Institute. The training was targeted to upgrade the skills of these operators on the Safety and operation of the Sawmill with maintenances.

With the Line and Phoenix group, a Local trainer was contracted to carry out the same training in Xmas, Tabuaeran and Teraina. All Safety and Operation with maintenance trainings were carried out in 1 month due to the isolations of these islands from South Tarawa. The same trainer has had his contract renewed and assists in the same training for other islands that have the need for more training.

The operations of Sawmill in outer islands are monitored by island councils with the supervisions and recommendations of the Agricultural Assistants on the island.

Table 9: Volume of timber produced per island

Island	No. Coconut palms felled	Volume of timber produced (m3)
Makin	20	65.28
Butaritari	23	74.98
Marakei	9	29.38
Abaiang	58	189.08
Maiana	38	123.88
Kuria	29	94.54
Aranuka	15	48.9
Abemama	46	149.96
Nonouti	25	81.5
Tabiteuea North	34	110.84
Onotoa	21	68.46
Beru	27	88.02
Nikunau	42	136.92
Tamana	13	42.38
Arorae	18	58.68
Total	418	1362.80

Source: ALD, 2019.

2.7.3.2. Sustainable Land Management (NT 5,7,11, and 14)

Sustainable Land Management has been recognized by policy makers as one of the proactive and effective approaches for improving long term ecosystem and human resilience. (ICCD/COP (14)/CST14 2019:5). It is an approach that sets the guidance to best utilize and manage land-based activities and at the same time it provides an opportunity to sustain and conserve both terrestrial and marine resources.

Our land resource is restricted to the total land area of 811 km2, of which 37% is under customary land ownership and the remaining is State Land including all islands in the Line and Phoenix Group. Large proportion of the population lives in the Gilbert group where land tenure is customary land and most development takes place. Further to customary land the government leased some parts of the islands, but most are in the capital island of Tarawa (BTC and TUC), and the term is for 99 years under the Native Lands Ordinance. Land tenure in state lands such as Kiritimati, Tabuaeran and Teraina is governed by the State Lands Act, which combines land tenure with planning requirements for the sustainable use of land resources.

The main roles and responsibilities of LMD fall under SLM. These include safeguarding Government Lease Land, State Land, and all designated areas on customary lands (the outer islands) with special focus on land use planning, land registry, land survey, GIS management and foreshore development control.

2.7.3.3. Participatory Land Use Planning (PLUP) Consultations

A first stage of community Participatory Land Use Planning (PLUP) consultations was conducted throughout Kiritimati Island during October – December 2018 to inform communities about the Integrated Land Use Planning process underway and facilitate input into the planning process. This round of PLUP consultations, outlined in Table 1.3.1 below, involved almost 450 individuals, not including interviews with business sector informants and other key informants (for details of these please see Annex 2).

Table 10: Stage 1 PLUP Consultations Conducted 1

Date		Location	Attendance (approx..)	Description
1	27.10.18	Tabwakea I	60	General community consultation and information session.
2	04.11.18	Kiritimati Uniting Church, London.	25	General community consultation and information session.
3	09.11.18	Kakai Scheme site, west side of Poland road in copra plantation area, south Kiritimati	34	Kakai Scheme consultation involving copra cutters.
4	11.11.18	Tabwakea II (Catholic Maneaba)	20	General community consultation and information session.
5	12.11.18	London St Christopher Church Maneaba, London (Catholic)	30	General community consultation and information session.
6	13.11.18	Old Man and Old Women Groups, Millennium Maneaba, London	22 (two thirds M; one third F)	Community consultation and information session. Also explored oral history possibilities.
7	16.11.18	Youth Consultation, St Francis Secondary School, London.	40 (two thirds F; one third M)	Community consultation and information session.
8	17.11.18	Copra Sector	10 males	Copra sector consultation
9	20.11.18	Poland (Catholic Church Maneaba)	40 (30 M; 10 F)	Community consultation and information session.
10	22.11.18	Church Leaders, KUC	10 (2 M; 8 F)	Consultation with senior persons from various churches (SDA, Mormon, KPC and Catholic).

11	23.11.18	Pet Fish Sector	4 (2 M; 2 F)	Consultation with Pet Fish operators (followed by site and field visits)
12	27.11.18	Local Fishers	4 M	Consultation with Local Fishers
13	28.11.18	Fishing Guides	9 M	Consultation with Fishing Guides
14	29.11.18	Banana	60 (30M; 30F) 1/3 under 18 years	Community consultation and information session.
15	1.12.18	Tennessee	0	Teachers. No attendance despite preparation (decamped to 21st birthday party instead).
16	2.12.18	Bamboo	36 +29 children	Community consultation and information session. Largely a squatter community.

The consultations targeted both general members of the public and sectoral groups (i.e., copra, pet fish, business community), with an emphasis on participation by females as well as males. Findings and feedback arising from these PLUP consultations is used to develop the ILUP.

2.7.3.4. Kiritimati ILUP Link with NT and Aichi Target

At the most, the purpose of ILUP is to set up a wider and inclusive plan to better manage and control land and marine-based activities related to tourism and fisheries services on this very large atoll. Along the same line this plan was intended to meet the National Target and contribute to the Aichi Target as clearly explained below. GOK began the initiative of planning the formulation of this integrated land use plan during the Tong's administration prior 2015. Initially GOK developed this plan with the help of the EU but never completed it during that administration (Teriba 2019). With the formulation of the KV20 by this new administration, MELAD through LMD was tasked to revive this plan for completion. In 2018, the team carried out the study to develop and incorporate all existing land used plans in line with the Line and Phoenix Island Development Strategic Plan 2016-2036. (MELAD 2016).

The progress on this was that the ILUP was completed in early 2019 and the CLPB have approved this in August and awaits Cabinet's approval this year. (MELAD 2019). It was noted that after the study there were 11 essential actions needed to be considered but the following actions have a link with NT and ABT.

2nd Essential Action: relates to fisheries and Marine service such as 1) location of ports, wharfs, jetties, general cargo container vessels, cruise liners, fishing vessels; 2) Identify the scale of the

proposed transhipment port and land needs for associated facilities (such as net mending facility, ship yard repair etc); and, (3) Identify suitable locations for other new fish processing facility that may want to come to Kiritimati.

3rd Essential Action: Support to MLPID, Lands and Wildlife and Conservation Unit, Kiritimati Urban Council and other agencies to organize and facilitate ILUP.

4th Essential Action: Involves support Tourism to work with MELAD, MLPID and other agencies on how to develop tourism, land-use changes and other recommendations (including developing of archaeological aspects, nuclear-era history, and development of signage and information boards, planned museum at Ronton, advertising campaign and marine tourism). The Tourism Office needs to be relocated to a more suitable location as soon as possible and an experienced Tourism Advisor needs to be mobilized to guide tourism development on Kiritimati.

5th Essential Action: Address lagoon management and review of reserve sites for food security, tourism, fisheries developments and equally important for domestic needs.

6th Essential Action: Focuses on need to support agriculture, livestock, and coconut tree planting, sustainable use of the lands for tourism, transhipment needs and domestic consumption. Support to local market and internal trading between Kiritimati and 2 nearby islands especially Teraina that has most of the ingredients for agriculture and livestock. (Inclusions of local market and trades between Teraina Is, Tabuaeran Is and Kiritimati Is). (Integrated Land Use Planning for Kiritimati Island, Republic of (Kiribati: Final Report Service Contract No. 2018/398424 Final Report 2018)

Based on the Line and Phoenix Island Strategic Plan along with Kiritimati Island Strategic Plan that are in line with KDP 2016-2019, LMD with the help of EU have made an effort to integrate and devise ILUP to the potential use of Kiritimati. The process of this plan has taken into account the NT and ABT. As depicted in Table 12 below the Possible Ancillary Land Uses are identified and described with the area in ha. (Kiritimati Report 2019).

Table 11: The Possible Ancillary Land Uses with area ha in Kiritimati.

ZONE #	MAIN ZONE	SUB ZONE	MAIN CLASS	BIODIVERSITY CONSERVATION	RESIDENTIAL	INDUSTRY	COMMERCIAL	AGRI-CULTURAL	AMENITY	WATER SUPPLY	TOURISM	AREA (HA)
1_1	Ronton	Ronton	Built Environment Consolidation	None	Mixed	Warehouses and Processing Plants	Retail	Small holding	General	None	Hotels, Bars, Restaurants, Cultural Centres	98.9
2_1	Tennessee	Tennessee	Mixed Marine	Fishing	None	None	None	None	None	None	Recreation, Fishing	145.7
2_2	Tennessee	Tennessee	Built Environment Consolidation	None	Mixed	Port Consolidation and Expansion	Retail	Small holding	Fuel and Electricity	None	Limited	59.0
2_3	Tennessee	Tennessee Port	Industrial Reserve P1	None	Mixed	Port Consolidation and Expansion	Retail	None	Fuel and Electricity	None	Cruise Ship	8.2
3_1	Tabwakea	Tabwakea	Built Environment Consolidation	None	Mixed	None	Retail	Small holding	General	None	Hotels, Bars, Cultural Centre	144.5
3_2	Tabwakea	Tabwakea North	Residential Expansion P1	None	Expansion	None	Retail	None	None	None	None	50.2

3_3	Tabwakea	Tabwakea North	Institution Reserve	None	Schools and Hospital	None	None	None	Waste Management	None	Hotels	72.2
3_4	Tabwakea	Tabwakea East	Coconut Reserve	Conservation	Limited	None	None	Coconut	None	None	Hotels	57.0
3_5	Tabwakea	Tabwakea	Mixed Marine	Fishing	None	None	None	None	None	None	Recreation, Fishing	76.7
3_6	Tabwakea	Tabwakea Port	Industrial Reserve P1	None	None	Port Consolidation	Retail	None	General	None	Cruise Ship	6.6
4_1	Decca and Four Wells	Decca Four Wells	Water Reserve	Conservation	None	None	None	None	Electricity	Water Reserve	Recreation, Walking	596.3
4_2	Decca and Four Wells	Decca Four Wells	Institution Reserve	None	Schools and Hospital	None	None	None	Waste Manage-ment	None	Hotels	44.5
4_3	Decca and Four Wells	Decca Four Wells	Coconut Reserve	Conservation	Limited	NASDA	None	Coconut	None	None	None	44.3
4_4	Decca and Four Wells	Decca Four Wells	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	None	1273.4

5_1	New Banana	New Banana	Residential Expansion P2	Limited Conservation	Expansion	None	Retail	Small-holding, Coconut	None	None	None	611.4
5_2	New Banana	New Banana	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	None	702.0
6_1	Captain Cook	Bamboo	Residential Expansion P3	Limited Conservation	Limited	Consolidation	Consolidation	Small-holding, Coconut	None	None	Consolidation	138.6
6_2	Captain Cook	Bamboo	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	None	495.9
7_1	Banana	Banana	Built Environment Consolidation	None	Mixed	None	Retail	Expansion	General	None	None	171.4
7_2	Banana	Banana	Built Environment Preservation	None	Preservation	Warehouses?	Retail, Airport	Preservation	General	Water Reserve	None	84.8
7_3	Banana	Banana	Water Reserve	Conservation	None	None	None	None	None	Water Reserve	None	629.7

7_4	Banana	Banana	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	Recreation	1552.1
8_1	Eastern	Eastern Coast	Amenity	None	None	Quarrying	None	None	Waste Manage-ment	None	None	1300.3
8_2	Eastern	Manulu	Environmental Conservation	Conservation	None	Salt	None	Coconut	None	None	None	3694.4
9_1	SE Wildlife Refuge	SE Peninsula	National Park	National Park	None	None	Limited Park	None	None	None	Walking Cultural, Wildlife, Dark Reserve	19268.8
9_2	SE Wildlife Refuge	Old Kakai	National Park	National Park	None	None	Limited Park	Coconut	None	None	Camping, Walking, Wildlife	3088.7
9_3	SE Wildlife Refuge	Tang-uoua	National Park	Wildlife Protection	None	None	None	None	None	None	Walking, Cultural, Wildlife	369.5

9_ 4	SE Wildlife Refuge	SE Peninsula	Coconut Reserve	Conservation	None	None	None	Coconut Nursery	None	None	None	113.4
10_1	New Zealand	New Zealand	Water Reserve	Conservation	None	None	None	None	Electricity	Water Reserve	None	572.8
10_2	New Zealand	Tahiti	Coconut Reserve	Conservation	Kakai Camping	None	None	Coconut	None	None	None	290.3
10_3	New Zealand	Cecille Peninsula	Environmental Conservation	Conservation	None	None	None	None	None	None	None	343.4
10_4	New Zealand	New Zealand	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	None	913.6
11_1	Poland	Poland	Built Environment Consolidation	None	Mixed	Warehouses	Retail	Expansion	General	None	Limited	19.4
11_2	Poland	Poland W	Residential Expansion P4	None	Expansion	None	Retail	Small-holding, Coconut	None	None	None	108.9

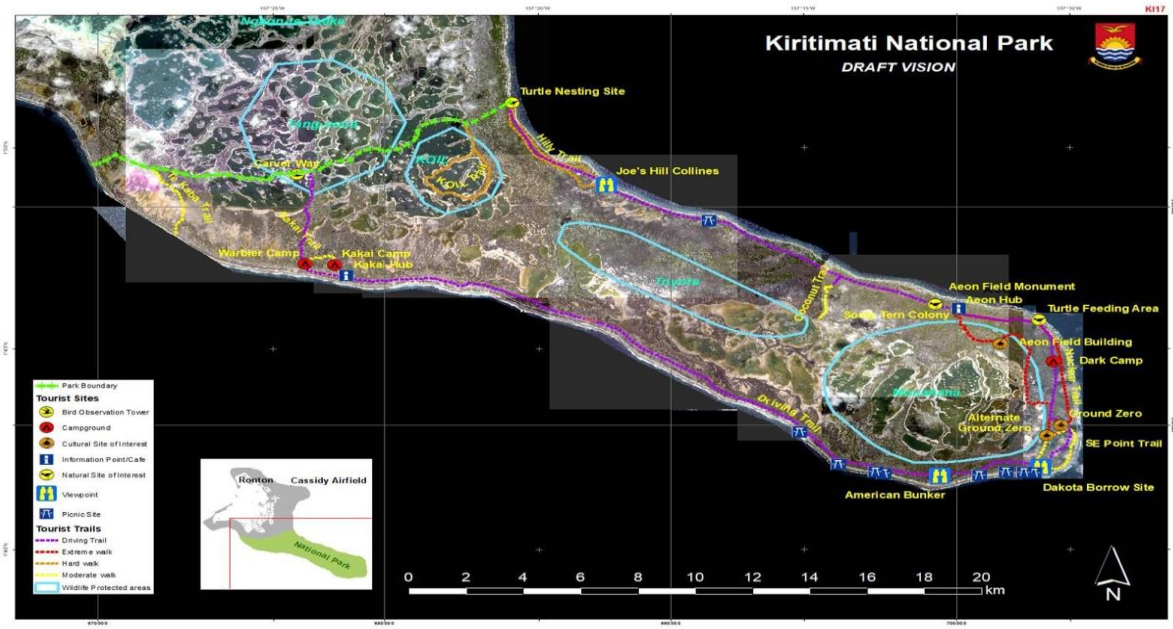
11_3	Poland	Poland E	Residential Expansion P4	None	Expansion	None	Retail	Small holding	None	None	None	51.3
11_4	Poland	Vaskess Bay	Industrial Reserve P1	None	None	Reserve	Processing Related	None	None	None	None	57.3
11_5	Poland	Vaskess Bay	Coconut Reserve	Conservation	None	None	None	Coconut	None	None	None	1050.7
11_6	Poland	Poland East	Industrial Reserve P2	None	None	Reserve	Processing Plants	None	None	None	None	12.4
12_1	Paris	Paris Peninsula	Tourism Development	Conservation	None	None	Tourist Related	None	Tourist Related	None	Hotels, Villas, Activities, Cultural	760.8
12_2	Paris	Long Beach	Tourism Marine	Conservation	None	None	Tourist Related	None	None	None	Water sports, Recreation	783.5
12_3	Paris	St Stanilas Bay	Tourism Marine	Conservation	None	None	Tourist Related	None	None	None	Marina, Water sports, Sports Fishing	1749.9

13_1	Western Approach	Western Approaches	Mixed Marine	Fishing, Wildlife	None	None	None	None	None	None	Water sports	3375.9
13_2	Western Approach	Anchorage	Mixed Marine	Turtles, Wildlife	None	Anchorage	Fish Ships	None	None	None	Fishing, Water sports	1259.8
14_1	Outer Lagoon	Outer Lagoon	Mixed Marine	Fishing, Wildlife, Coral	None	None	None	None	None	None	Water sports, Sports Fishing,	3316.3
14_2	Outer Lagoon	Cook Island	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	81.3
14_3	Outer Lagoon	Ronton Approach	Mixed Marine	None	None	Channel	None	None	None	None	Fishing, Recreation,	114.4
14_4	Outer Lagoon	Outer Lagoon	Mixed Marine	Fish No Take Zone, Coral Nursery	None	None	None	None	None	None	Wildlife, Sports Fishing, Snorkelling	425.3

15_1	Inner Lagoon	Inner Lagoon	Marine Restricted	Fishing	None	None	None	None	None	None	Sports Fishing, Wildlife	6934.9
15_2	Inner Lagoon	Motu Tabu	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	27.0
15_3	Inner Lagoon	Bathers Lagoon	Tourism Marine	Conservation	None	None	Tourist Related	None	Tourist Related	None	Recreation, Water sports	346.6
15_4	Inner Lagoon	North Lagoon	Mixed Marine	None	None	Channel	None	None	None	None	Fishing, Sports Fishing	590.5
15_5	Inner Lagoon	Motu Upua	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	78.7
16_1	Flats	Flats	Marine Restricted	Fish No Take Zone	None	None	None	None	None	None	Sports Fishing	7985.1
16_2	Flats	Dojin	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	441.0

16_3	Flats	Ngaon Te Taake	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	781.2
16_4	Flats	Tang-uoua	Wildlife Protection	Wildlife Protection	None	None	None	None	None	None	Wildlife	2183.9

Figure 4: Map of Kiritimati National Park



Source: LMD, 2019

18 National Target Identification, assessment and mapping of ecotourism resources by 2017 1, 18, 20

19 National Target Restoration of destroyed ecotourism resources by 2017 1, 14

20 National Target Develop regulations on the protection of Ecotourism Resources 4, 12

2.7.3.5. Sustainable Fisheries (NT 6)

The deployment of Fish Aggregating Devices (FADs) was one of the fisheries programs that contributed to sustainable fisheries. FADs were developed as an alternative fishing ground in which, fish used to aggregate along this device which makes fishermen and vessels easy to catch fish. It was also very crucial in terms of reducing fishing pressure on natural ecosystems such as corals, seagrasses and mangroves. A number of FADs have been deployed in South Tarawa including outer islands such as Tamana, Arorae and many others.

Milkfish farming at Ambo milkfish centre was one of the programs conducted by fisheries. The ponds were developed for milkfish only, purposely for restocking of milkfish species and provision of fries for milkfish ponds both private and island councils' ponds on Tarawa and outer islands. The farming was under Taiwan Technical Mission assistance in which Coastal Fisheries Division was responsible to continue with the implementation of this program.

The cage farming was a new program which had just started last year 2018 in which milkfish fries were cultured and fed in the cage and sold when it reached maturity size. The first launching happened at the end of 2018 in which matured milkfish was sold to communities on South Tarawa.

Community based fisheries management has a big role in empowering and facilitating the development of CFMPs to ensure that the fisheries is sustainably used and biodiversity recovered. The communities are educated on the simple fisheries science and life cycle of some fish and invertebrates for informed decision making when it comes to drafting management plan. Some examples of fisheries management tools applied by communities include marine protected areas, seasonal closures, ban of destructive fishing gears and fishing methods. The table below shows the different management tools employed by island communities.

Table 12: Fisheries management tools applied and implemented.

Island	**Village**	**Fisheries Management tool applied and implemented**	**Year**
Butaritari	Bikati	MPA for clams Ban of destructive fishing methods and gears	2015
	Kuma	MPA, ban of small mesh gillnets, Ban harvest of berried crabs, Bonefish seasonal closure, waste management	2015
	Tanimaiaki	Ban of destructive fishing method, encircling of corals with gillnet, Beach seine, Ban harvest of berried crabs, MPA	2015
	Ukiangang	MPA on the ocean side	2019
Marakei	Tekuanga	Protected Milkfish pond	2017
Abaiang	Nuotaea	MPA for clams, small mesh gillnets, encircling of corals with gillnets	2018
	Ribono	MPA for clams, waste management, ban small mesh gillnet	2018
	Tabontebike	MPA for clams, ban of small mesh gillnets	2017

North Tarawa	Buariki	Seasonal closure for Bonefish and goat fish	2015
	Tabonibara	Seasonal closure for silver biddy, ban of encircling corals with net, ban harvest of berried crabs	2015
	Tabiteuea	Small mesh gillnets ark shell (te bun) and strawberry strombus (te nouo) protected areas.	2018
Maiana	Bubutei	MPA, small mesh gillnet	2019
	Full Council	2 MPAs (Tebikerai islet and Channel under te Bangetua), Ban of destructive fishing method called water splashing (te ororo) and small mesh gillnet.	2019
	Tekaranga	Closed anadara (te bun) fishery Milkfish pond.	2019
Abemama	Abatiku	MPA established	2019
	Baretoa	MPA established	2019
Nonouti	Autukia	2 MPAs: one breeding ground for fish and the other a mudflat for Pacific asaphis (bivalve)	2017

Source: MFMRD, 2019.

Revitalization of seaweed was one of the programs conducted by the fisheries. Seaweed was one of the marine resources that I-Kiribati people rely on for their income source. Seaweed was provided to communities or local farmers who were interested in this program with the idea that they will culture and farm it for exportation purposes, however the exportation of seaweed was not very active within this year (2019) due to the unavailability of buyers.

Biological sampling of reef fish was also one of the activities conducted by the fisheries for the purpose of providing information on maturity age of fish which was very crucial for the

development of management plans and regulations for coastal resources. For instance, based on the biological sampling conducted by SPC in 2012, bonefish maturity size was 30cm therefore bonefish with size less than 30cm were considered as undersize or immature.

For offshore fishery, certain management tools have been applied for the sustainable use of tuna which include the use of Vessel Monitoring Scheme (VMS) that could track fishing routes of all vessels licensed to fish in the Kiribati waters. In addition, vessels are required to have Monitoring Transceiver Unit (MTU) installed that link to satellite and to VMS. Along with these, there will be 100% observer coverage to ensure data gathered on all Purse Seiners vessels is plausible for assessment. The boarding and inspection were also conducted for all vessels at both ports in Tarawa and Christmas for compliance and catch certification.

Tabuaeran Island in the Line Group is the main seaweed producing island and currently represents about 95% of the total production in Kiribati. In the Gilbert group seaweed production was very active in the late 90s to early 2000 however the production fell dramatically due to the unfavourable weather condition resulted by the El Nino. To revive the seaweed in the Gilbert, group a new strain of seaweed (Mamure strain) was reintroduced in 2012. This strain was better adapted to heat stress and has shown promising growth results in Ambo, Abaiang and Aranuka however the farms was unsustainable due to unfavourable conditions to weather patterns that affect seaweed health and growth rate.

Establishing of marine protected areas by communities was another way towards sustainable fisheries. Most communities were aware of the great value and importance of marine resources. This is why most communities mostly from outer islands have established their protected areas since they have experienced issues that relate to overharvesting of their resources such as clams, ark shells and other marine resources including fish.

The communities can also gain economic returns from these MPAs by integrating tourism activities such as fly fishing. Fly fishing is a type of game fishing which involves catch and release of certain fish species such as Bonefish, Trevally and Giant Trevally. The establishment of the MPAs ensures the sustainable regeneration of the marine population including the game fish which is what fly fishermen pay big money to 'hunt'. Through the LDFC funding, the Tourism Authority of Kiribati (TAK) in partnership with *Tie'n'Fly Outfitters, Australia,* has been developing the fly-fishing sector on the three LDCF pilot islands of Nonouti, Maiana and Abemama. The island of Nonouti is famous for its Bonefish, in which an MOU was signed between the fly-fishing agent *Tie'n'Fly Outfitters,* and the Nonouti Island Council in 2018 for the creation of an international class Bonefish/Giant Trevally Fishing Lodge on the island. With the expected increased interest on Nonouti and with fly fishing shifting from Kiritimati to the Gilbert islands, the need for tourism training in hospitality and tour guiding, especially fishing guides are essential for the successful growth of this niche market. MPAs also open up tourism opportunities in diving, snorkelling, eco-tourism developments (for example accommodations) and even small business avenues such as handicraft stalls and traditional dance performances. By promoting the MPAs through tourism, the communities will not only preserve their fish stocks, but also earn an income.

2.7.3.6. Biosecurity (NT 3 and 9)

According to ALD, there are a number of training on guarantee, IRA and bio-security inspections conducted, number of national surveillances on pests and diseases and a number of staff trained in different aspects of quarantine and bio security.

There were 3 training sessions conducted, 9 new Agricultural Assistants trained, 2 Surveillance on crazy red ants, coconut Rhinoceros beetle is ongoing (no identified pest detected). The outcome of a surveillance conducted on the Coconut rhinoceros beetle concludes that the pest is still not present. Pest interception on Maiana Is needs proper identification of insects however, the AA on Maiana has been advised to send the specimen, once received it will be sent for proper ID. After the pest has been ID it is shared and it would be the responsibility of Bio security.

There is also one biosecurity mini laboratory refurbished, however, the lab construction is still pending waiting for building permit.

2.7.3.7. Waste Management, Hazardous Waste and Sanitation (NT 4 and 8)

In terms of sanitation, the Ministry of Infrastructure and Sustainable Energy (MISE) has implemented a number of projects for WASH as shown in table 4. The projects are aimed to improve sanitation facilities and protect the groundwater from sewerage.

2.7.3.8. Climate Change (NT 10 and 15)

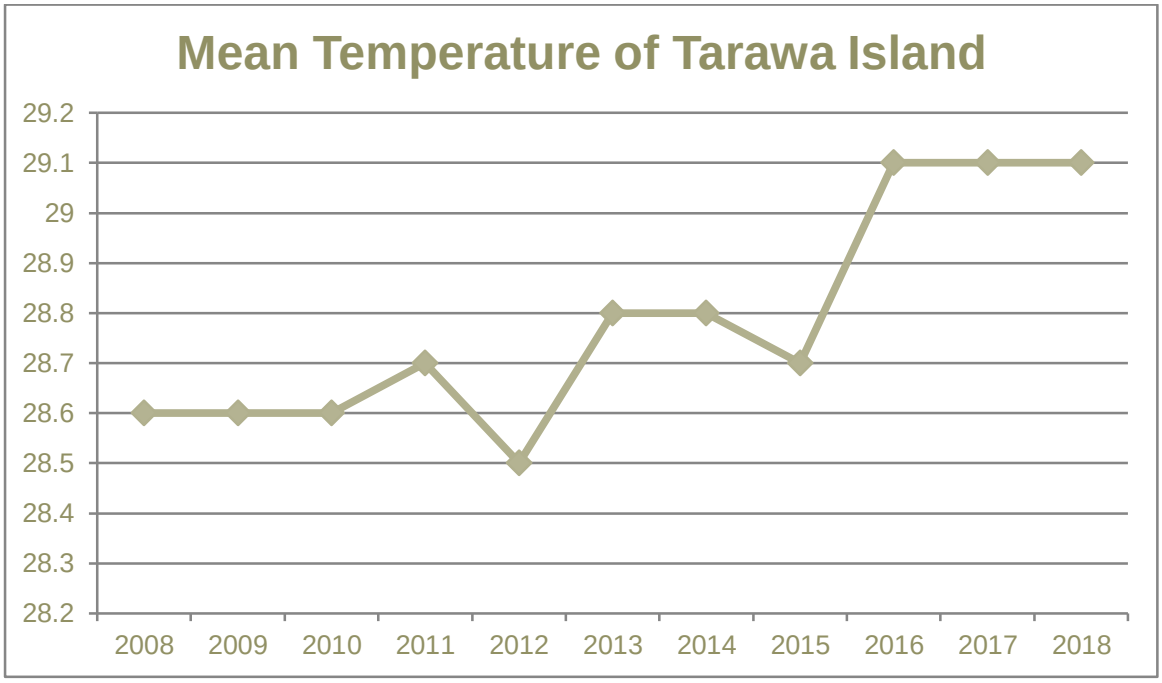
Kiribati is one of the Small Island Developing States (SIDS) that is in danger due to climate change (Barnett & Adger 2003). Climate change is affecting the habitats of several species and is known as one of the major factors in the decline of biodiversity in Kiribati.

Kiribati has a hot, humid tropical climate, with air lures very closely related to the temperature of the oceans surrounding the small islands and atolls. The islands are prone to droughts of up to a year in length, often related to the presence of negative ENSO or “La Nina” conditions.

1. Temperature

Across Kiribati, the average temperature is relatively contact year-round, and changes in the temperature from season to season are no more than about 1°C. The atoll of Tarawa lies north of the equator in the Central Gilbert Islands and experience weather typical of the equatorial Pacific. Temperatures range from 25 ºC to 34 ºC throughout the year with an average humidity of over 75% (Donner et al. 2010).

Figure 5: Mean Temperature from 2008 to 2018



Source: KMS, 2019

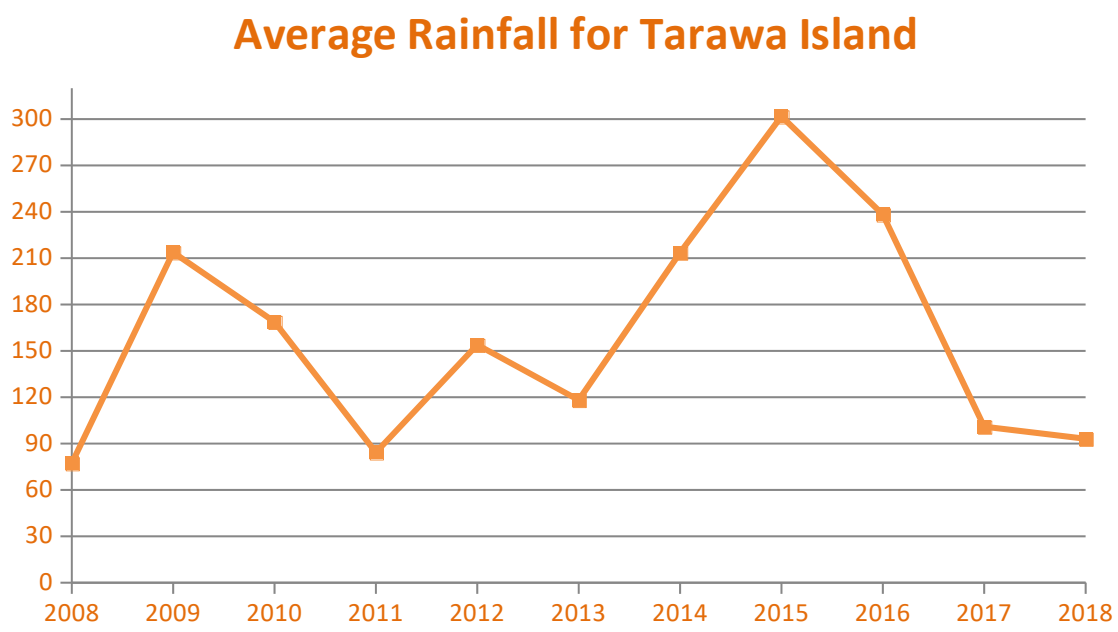
The above graph represents the mean temperature of the capital island of Tarawa for the past decade. The lowest mean temperature of 28.6 ° Celsius occurred in 2012; however, the overall trend shows the increase of temperature from 2008 to 2018.

2. Rainfall

The rainfall in Kiribati is affected by the movement of the South Pacific Convergence Zone and the Inter-tropical Convergence Zone. The annual rainfall averages 2000 mm in the capital island, and most of which falls during a bimodal wet season between November and April.

The average rainfall for Tarawa has been changing throughout the past decade which is demarcated in the above figure. The lowest average rainfall of 77.25 mm occurs in 2008, while the highest of 301.72 mm occurred in 2015. However, it has continuously decreased until 2018. The overall trend shows the variation of rainfall in each year, which could be related with the change in climate and natural catastrophes.

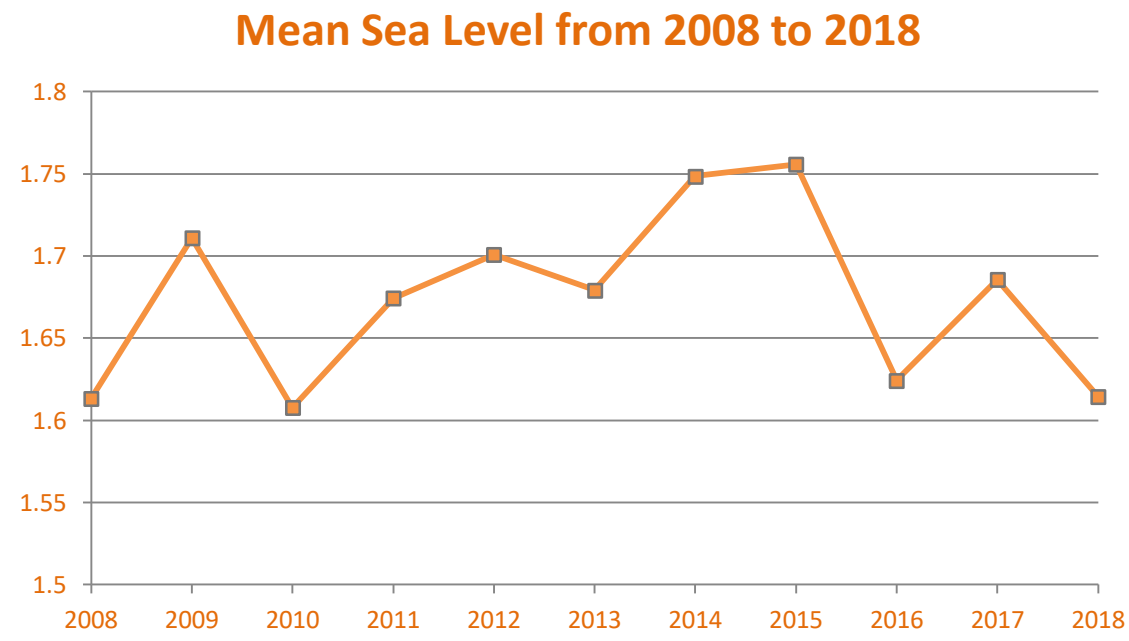
Figure 6: Average Rainfall from 2008 to 2018



Source: LMD, 2019

3. Sea Level Rise

Figure 7: Mean Sea Level



Source: KMS, 2019

The above graph indicates the mean sea level from 2008 to 2018. The overall trend seems to be changing throughout the past decade. The highest mean sea level occurs in 2015, which is believed to be related with the Cyclone Pam that occurred in 2015.

However, these findings are consistent with the following scenario that has been developed for Climate Change in Kiribati over the 21st century:

- Air temperature will continue to increase. Annual and seasonal mean temperature will also increase by 0.3–1.3°C for the Gilbert Islands and by 0.4–1.2°C for the Phoenix and Line Islands by 2030 (high confidence).
- Sea-surface temperatures will increase by 0.6–0.8°C in 2030 and by 1.2–2.7°C in 2100.
- Rainfall patterns will see changes, with increases in wet season, dry season and annual average rainfall (high confidence).
- There will be noticeable increases in extreme rainfall events and very hot days: the intensity and frequency of days of extreme heat and warm nights will increase, and periods of cooler weather will decline.
- The mean sea level is projected to continue to rise by 5–15 cm by 2030 and 20–60 cm by 2090 under the higher emissions scenario. In addition, sea-level rise combined with natural year-to-year changes will increase the impact of storm surges and coastal flooding.
- Ocean acidification will continue to increase. As a result, corals reefs are projected to degrade progressively, with losses of live coral of >25% by 2030 and >50% by 2050 due to rising sea surface temperatures and more acidic oceans.
- Analysis of available data on the relevant variables should be assessed in relation to the national circumstances and state of the environment to characterize trends and variability.

2.7.4. Gender Responsiveness Examples from Lead Government Agencies and Programs (MWYSA Women)

National Expo 2018- was a one-off event that engaged and allowed women and men who had traditional knowledge in culinary art, handicrafts skills and contemporary creation like Mauri Wear, bed clothes, to come together and sell their local products.

Economic Empowerment training- targeted unemployed women on outer islands and on South Tarawa. This training was basically on handicrafts, Mauri wear sewing and agriculture where all participants were taught and encouraged to plant local food such as breadfruit, coconut tree and banana including cooking (balance diet) for Children and adults. Men were not excluded in this training and those that interested could take part; however, the men were more interested to work on fixing sewing machines. The Gender Equality & Women Development Policy- under this policy, gender equality is mainstreamed at government levels and is obliged to include gender equality in the decision making, policy planning, budget and activities

Gender will be mainstreamed in government policies, plans, budget and programmed to enhance equal opportunity for men and women. Government will also implement measures through a gender development policy to increase the participation of women in all economic, social and political decision-making processes (e.g., higher representation of women in

Parliament); improve access to disadvantaged groups to businesses opportunities, health and education services, housing, justice, etc.

Under the ESGBV Unit, Strengthening Peaceful Villages (SPV) which is a primary preventive program is currently working with the communities to make sure that sexual gender-based violence should be eliminated at all cost. Also, as part of this program, men and women were trained to understand the power they have and how this could affect their family and community if it is used negatively.

Policies in the women's sector:

- Gender Equality and Women Development Policy
- Eliminating Gender based violence policy

The five priorities of the policy (GEWDP) include:

1. to progressively implement a gender mainstreaming approach to achieve gender equality
2. to improve the economic empowerment of women
3. to support stronger, informed families
4. to improve women's political representation and leadership
5. to eliminate sexual and gender-based violence.

Gender in Fisheries is also one of the pillars of the second phase of CBFM and was also emphasized in the first phase. With management plans developed at the community level, the marginalized groups which are women and youth are included among middle aged men and elders in decision making. Culturally, women and youth are not part of decision making at the village level, but their voices could be heard through their husbands (Timiti, 2015).

Women are commonly involved in gleaning for shellfish, peanut worms, strawberry strombus and sometimes gillnetting in shallow waters and night fishing on reef flats and post-harvest. Youth on the other hand are more involved in various fishing activities such as gillnetting, spearfishing, hand lining, lobster fishing and so much more.

Women and youth are an important gender group and if they are excluded then a lot of information will be missing, and their concerns will not be reflected in the management plan and therefore the success of their management plan will be minimal. Having a mixed gender in management plan development consultation will reflect diverse opinions.

2.7.5. For the Implementation Measure, indicate to which NT and ABT it contributes to Land Management Division.

Land Management Division has developed a strategic plan that relates to the protection of the local land. The Strategic plan is also aligned to the National target and Aichi Biodiversity

Target to ensure the protection and management of terrestrial environment from development.

2.7.5.1. Actions taken to achieve NT and ABT

The existing strategic plan and the actions taken were initiated from the MSP 2016-2019 and based on the current KDP with the KV 20 given the importance of Land Use Planning as a guiding tool in conserving, managing both terrestrial and foreshore development. These action plans assisted the development in utilizing designated areas to their potential use in light of the National Target with the ABT. However, the LMD has limited capacity in implementing all strategies and policies on most of the Gilbert group due to land tenure. In comparison to the Line and Phoenix, the development is all under control as they are all State Lands however strategic action plans have to be put in place to manage future interventions on biodiversity.

LMD was and still is coordinating and executing decisions and tasks from various Boards, Committees, and Taskforce established under the law and by Cabinet decisions. For example, the LLPB and the CLPB are the boards established under the Land Planning Ordinance cap 48 1977(Rev 2000).

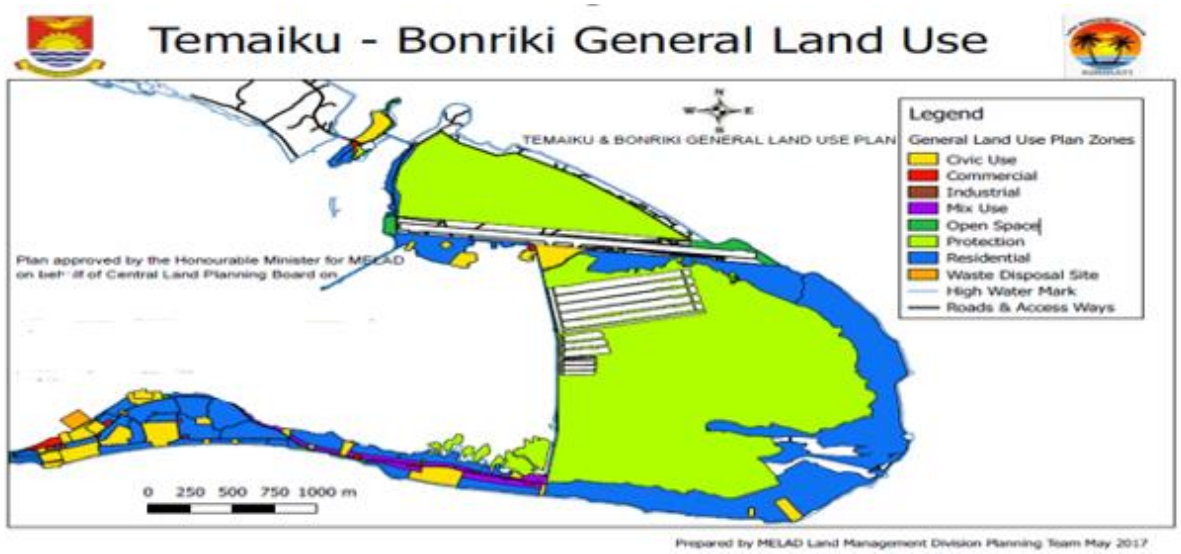
There are 4 LLPB established in Makin, BTC, TUC and Kiritimati. The main functions and key roles include developing the DLUP of their areas of authorities and approving land development in line with land use plan and zoning. Board members are councillors and LMD shouldering secretarial role and an advisor to the Board. The Board plays an important role in sustainable land use and use of resources. In the case of Makin LLPB, they have been working towards the conservation of coconut and other tree reserves by allocating land development within zonings such as residential, civic, commercial and protected areas.

2.7.5.2. Strategies/Plans link with NT and ABT

The National Seawall Guideline Policy was developed prior 2015 and recently endorsed by Cabinet in 2018 to regulate activities within the foreshore. It was a joint effort of the Foreshore Management Committee, the subsidiary body represented by the MELAD- LMD, ECD, Mineral Division of MFMRD, OAG, Civil Engineering Division of MISE, BTC and TUC which was controlling the foreshore development activities within the shorelines of South Tarawa and Betio. With an effort to regulate the variation of seawall and land reclamation size, the committee set up a limit to extend outward to the lagoon where only 10m was permitted to developers. This is the new guideline being used at the local level to reduce impacts on lagoon resources. (MELAD 2019)

In 2017 LMD launched the Consolidated General Land Use Plan for South Tarawa and Betio. This land use document is devised to guide land development according to the zoning.

Figure 8: show the zoning in Temaiku and Bonriki South Tarawa.



Source: LMD, 2017

The map above shows various zonings, the large green shaded areas are under Government's protection. The above shaded green area contains water reserve areas that provides water supplies for people living in the urban areas of South Tarawa. However, the shaded green area covers a large zone of pond farming used for fish cultivating such as milkfish, tilapia and so forth. The completion of the Consolidated General land Use Plan has set the basis for land use planning which, both LLPB now uses for planning decisions. For instance, with regard to the "Protection" Land Use as depicted in the GLUP for parts of South Tarawa in (Figure 8) above, the area should be monitored effectively to ensure the water reserve is well managed.

LMD have tried several attempts to evict people from this area, however this year there was a cabinet decision where OB and MELAD were tasked to prepare a detailed report on full information of squatters at the water reserve. It was anticipated that when final consultation is conducted with dwellers of the water reserve, it would be expected that the area will be free from human settlements. (LMD 2019)

In the same manner the ILUP for Kiritimati Island has been developed and approved by the CLPB recently in 2019 but awaits cabinet's endorsement. This is an Integrated Plan which is targeting sustainable land use plan, designating areas to conserve and manage sustainability of fisheries tourism services on the island.

2.7.6. Other tools and Methodology used for the Assessment.

There are other important methodology and tools used for doing the assessment given by UNDP shown in the table below;

Links and Website for accessing Webinar Series

Webinar Series	Links and website for accessing
6NR Data tracking tools CBD online reporting tools 6NR Biodiversity Indicators: Tips and Information Sources Clearing House Mechanism	https://youtube/EzVKx7wPk40 https://youtube/KpWR6Bx4Tiw https://youtube/Hiba5CkHKZA https://chm.cbd.int
Technical Guidance	Link and website for accessing
Technical Reporting Guidance Technical Revie Framework	https://bit_1y/2GCdkUR https://bit_1y/2AfJWDK

There are other important and effective tools and methodology used during the assessment prepared by UNDP given in the table below: These types of tools and methodology were easy for everyone to access and use and also to know the current status and progress of their Biodiversity in their Countries.

Link for other tools and methodology used for the Assessment.

6NR Technical Webinar # 3 on Data Tracking tools.	https://www.youtube.com/watch
CBD Online Reporting Tools.	nbsapforum.net/knowledge-base/resource/cbd-online-reporting-tool-6nr-webinar-series
Integrating Spatial Data into 6NR	https://youtube/89HM7MqqL94
UN Biodiversity Lab Oceania Pacific	https://youtube/oDXH89Xq10
Technical Reporting Guidance	https://bit_ly2GCdkUR

2.7.7. Other Relevant Information

The Aichi Biodiversity Targets and Kiribati National Targets are adopted in the NBSAP, but they were developed by the CBD. These targets are very important in updating the trend and current status of the biodiversity. Apart from that, there are other relevant information which aid to support and promote the conservation and management of biodiversity which are the regulations and policies such as Fisheries Amendment Act 2010, Kiribati Integrated Environment Policy, Kiribati Joint Implementation Plan, Kiribati National Fisheries Policy 2013-2023, PIPA Management Plan 2011-2014 & 2015 – 2020 and Phoenix Islands Protected Area Regulation 2008. These regulations and policy are very significant and helpful in managing and preserving the marine and terrestrial resources, the drivers and burdens acting on these resources and affecting the conservation and their sustainable use, the impact from climate change, population increase and economic development. These kinds of environmental issues offered a blend of targets that reflects the Aichi Biodiversity Targets and the Kiribati National Target.

Table 13: The list of donors funded projects that contribute to the achievement of Kiribati National Targets.

Projects	Year (start-end)	Donor funded	Kiribati National Target.
Ridge to Reef	2016-2020	GEF-UNEP-SPC	1,8,14
Turtle Monitoring Project	2012-2015	New Zealand- SPREP	11,12
Enhancing Food Security in the context of climate change	2017-2020	GEF-UNDP- LDCF	11,18,7
Implementing the Montreal Protocol	Ongoing	Multi-lateral Fund UNEP	5
HCTC phase-out management plan or HPMP Stage 1 project.	2011-2020	MLF – UNEP	5
Enabling Activities for HFC phase down project	2019-2020	MLF – UNEP	5
Preparation of HPMP Stage 2 project	2019-2020	MLF – UNEP	5

Source: MELAD-ECD, 2019

In table 14 above, most of the projects were funded under climate change and biodiversity were targeting communities, schools and churches to carry out their activities which contribute to biodiversity. Their activities include conducting consultations with

communities, school visits for their awareness and doing training in the churches about the importance of our marine and terrestrial resources. These projects are important in the conservation of marine resources and restoration on traditional plants and trees from climate change and human induction.

2.7.8. Relevant Websites, Web links and Files

Referring to the table below are links and websites, files and other vital documents to look for more information and data for updating the Kiribati status and progress of the Biodiversity which relate to the National Targets and Aichi Biodiversity Targets. These are given in the links below:

Link for more information about the status and progress of Kiribati Biodiversity.

(a) https://www.cbd.int/doc/world/ki/ki-nbsap-v2-en.pdf

(b) http://www.mfed.gov.ki/sites/default/files/INFORMAL%20DRAFT%20-%20KDP%20Mid-Term%20Review%20and%20VNR%202018%20%281%29.pdf

(c) file:///C:/Users/ECD/Desktop/Documents%20to%20read/Fifth%20National%20Report.pdf

(d) Kiribati Integrated Environment Policy (KIEP)

(e) Kiribati National Invasive Species Strategy and Action Plan.

(f) (https://www.mfmrd.gov.ki/?page_id=681)

(g) https://www.iucn.org/resources/conservation-tools/iucn-red-list-threatened-species 61

(h) Kiribati Integrated Environment Policy (KIEP)

SECTION 3. DESCRIPTION OF NATIONAL TARGETS AND ASSESSMENT OF PROGRESS TOWARDS ACHIEVEMENTS

National targets for Kiribati are mainly taken from different strategic plans used by each ministry, NGOs and state-owned enterprises. These national targets are in line with the KDP and KV20 to show the national progress pertaining to all biodiversity related aspects.

3.1. Assessment of Progress towards Achieving the NTS

At the national level, each ministry, NGOs and state-owned enterprises are obliged to work towards this national target that has been set by the Government of Kiribati. The table below shows the assessment of progress towards each national target.

Table 14: Assessment of Progress towards Achieving the NTS

Number	National Targets	Assessment of progress
1	Establish at least one marine protected area and expand protected areas program to other islands in Kiribati by 2020	PIPA has been declared as a national marine protected area in the world and nationally. However, MELAD-ECD and MFMRD-CFD have also expanded this initiative or activity through establishing few/several marine protected areas at the community, village and at an island level.
2	Establish at least 3 community-based management plans for coastal resources (Fisheries and Mangroves) by 2018	The management plans have been developed through community based, village level and at an island level. These management plans have integrated both issues from land and at sea and particularly on mangroves.
3	Develop and implement at least one or two PA management plan by 2020	Shown below are villages and islands where the management plans have been developed and endorsed. Also, some identified islands and villages have draft management plans. Endorsed Management Plans at an island level: 1. Aranuka Island **Draft Management Plans developed at an island level:** Makin Island, Butaritari Is and Maiana Is.

		Endorsed management plans at village level Abemama Is- Baretoa,Tanimainiku&Reina villages Butaritari Is – Onomwaru village North Tarawa Is -Nooto village
4	Turtle nesting beach enhancement by 2018	In the Wildlife Ordinace, the Turtle is fully protected in certain areas (Wildlife Ordinance Schedule 2). Turtles are recognized under the Wildlife Ordinance but in certain areas and also under the Protected Species regulation which have yet to be endorsed. However, through the integrated mangrove and natural resources management plans, turtles are also declared by some islands and communities to be protected (partially – can be harvested only during important feast). There was also an MOU developed and signed between communities or islands with an endorsed management plan. The MOU is purposely developed to ensure communities have to implement and enforce the management plans by their own efforts and resources. Monitoring of illegal mining is regularly undertaken on South Tarawa and Betio. There is a limitation in doing this monitoring in outer islands because of the scope and coverage on South Tarawa and Betio only. Hence, the secondment amendment that is now currently made with AGs office will help to address this gap. Enhancements of nesting beach have been done in some outer islands and Tarawa through mangrove plantings.
5	Develop Coastal Management Plan and Policy by 2017	A national policy – Kiribati National Coastal Policy was developed and endorsed in 2016 through a financial assistance from MELAD –ECD under KAPIII (by Arther Webb).

6	Identify the vulnerable coastal areas (flooding, hazard risks) that need protection taking into considering the existing key biodiversity areas (KBA) in Kiribati	There are numbers of V&A studies been undertaken under projects (LDCF project). Also, technical assessment which have also been carried out by Mineral and MELAD-LMD (such as beach profiling) are also significant in showing how vulnerable coastal areas are to inundation and flooding. MELAD-ECD have constructed and undertaken mangrove plantings / buibui during outer island trips to project sites (KAP III, LDCF etc)
7	Expanding soft measures (coastal vegetation, mangroves, buibui) for coastal protection by 2019	MELAD-ECD have constructed and undertaken mangrove plantings / buibui during outer island trips to project sites (KAP III, LDCF etc)
8	Clean-ups in Urban areas – South Tarawa and Christmas Island	This is a regular activity that is usually practiced every Weeks by MELAD-ECD. Including NGOs and ministries are also engaged in this activity. Communities are also actively engaged with clean ups at their own areas and at coastal sites. (Improvement is seen on South Tarawa). Not only clean-ups, but recycling of wastes (pet bottles etc) and also reusing of organic waste for different purposes. Currently, MELAD-ECD has initiated a National dialogue which aims at collecting views from SOEs, communities and ministries on how to tackle the issue dealing with waste.
9	Eradication of invasive species on the PIPA infested islands.	PIPA management plan 2015-2020 has been implemented with a vision to conserve the natural and cultural heritage of the Phoenix Islands Protected Area for the sustained benefit of the people of Kiribati and the world.
10	Removal of the rusted wrecked vessels impacting on the corals and marine life.	The survey of shipwrecks in Betio have been initiated and commenced in previous years by MELAD-ECD but the removal has not yet done due to financial issues.
11	Reduce the use of unsustainable fishing practices by 2020 by 30%	A regulation for reducing/avoiding the use of unsustainable fishing practices called Fisheries (Conservation and Management of coastal marine resources) regulations has been endorsed by cabinet.

12	Reduce the overharvesting practices of terrestrial resources by 2018	PA & PS regulation is yet to be endorsed but the final update of the regulation was submitted to AGO to work on the amendments for endorsement.
13	Restoration and rehabilitation of marine and terrestrial habitats by 2020	Identification of marine and land based destructive activities were identified during the development of the CBMMP and CBFM and also during household surveys. Through MELAD-ECD, coral replanting is only regularly done for the restoration and rehabilitation of marine and terrestrial habitats and through replanting of coastal vegetation Assessment has not yet been fully undertaken due to capacity constraints.
14	Rehabilitation and restoration of ponds for aquaculture development by 2018	Training has been conducted at Maiana, Abemama and Nonouti, however there is a delay in training in other islands and this is caused by insufficient funds. There is a need to identify unused ponds in all Kiribati islands and select the best five islands that have a suitable pond for cultivating milkfish, however, this activity has only been conducted on Maiana, Abemama and Nonouti Islands, whereas the other islands have not yet be done due to limited funds.
15	60% of local growers/farmers practiced organic agriculture in Kiribati by 2020	Islands' organic bylaw developed, endorsed, and implemented. Organic certified products are readily available at local and international markets
16	Develop and increase adoption of sustainable atoll soil management technologies by 2020	Training on Compost making is also undertaken at MELAD-ECD as part of the Waste Minimization Project –UDP Soil health analysis is a mandate of MELAD-ALD and is now currently doing it as part of the V& study and also part of their institutional programs.
17	By 2017, national guidelines and policies for the development and management of ecotourism activities will be developed	Only Agritourist workshop conducted. PA & PS has incorporated wildlife sanctuaries to be protected for ecotourism activities. These have also reflected in the Wildlife ordinance.

	and ready for implementation and use	No tender has been developed for TA on ecotourism.
18	Identification, assessment and mapping of ecotourism resources by 2017	PA & PS has incorporated wildlife sanctuaries to be protected for ecotourism activities. These are reflected in the Wildlife ordinance. Few mangrove sites have been demarcated for ecotourism purposes (eg. Maungan Te tongo, Aranuka – Also recognized as the Queen's Commonwealth Canopy) but have yet to be assessed and identified
19	Restoration of destroyed ecotourism resources by 2017	PA & PS has incorporated wildlife sanctuaries to be protected for ecotourism activities. These have also been reflected in the Wildlife ordinance. Few mangrove sites have been demarcated for ecotourism purposes (eg. Maungan Te tongo, Aranuka – Also recognized as the Queen's Commonwealth Canopy) but have yet to be assessed.
20	Develop regulation on the protection of Ecotourism Resources	TBIS conducted on Beru, Tab North and Tab South. Work with MIA to compile island profiles which contains unique features of each island such as shrines, WWII artefacts and other tourist attractions.
21	Identification of endangered, threatened, rare, extinct and protected species, by 2020	Meetings have been conducted with the purpose to establish committee members, however there is little progress on this activity as there is limited funding to implement and conduct this activity on Kiribati Islands (From Makin Is to Arorae Is). Additionally, Kiritimati has identified a list of endangered, rare and extinct birds, however the documentary has not been endorsed. However, for PIPA the management plan has been developed containing the identification of endangered, threatened and protected species.
22	Development and implementation of at least two turtle species community-	Specification or emphases on the protection of turtles have been incorporated into the integrated mangrove and natural resources management plans.

	based management plan by 2019	There are no separate management plans for turtles in place.
23	Marine stock enhancement program by 2020	There is a small scale on seaweed farming done at Butaritari, Maiana, Nonouti & Abemama, however haven't revisited these islands for harvesting process. Seaweed packaging will be implemented, after the harvesting process has done.
24	Establishment and extension of gene-banks of traditional plant food crop species by 2018	These have been implemented at project pilot islands of LDCF housed within MELAD-ECD. Project sites are: Abemama, Maiana and Nonouti.
25	Expanding nursery centres to include native food crops and plants on a number of outer islands by 2018	Nurseries for native food crops and plants established Data/record of distributed or planted native food crops and plants Improve nutritional standard of living for outer islands communities
26	Restoration of at least 2 overharvested plants and trees species in at least 2 islands by 2018	List of overharvested plants and trees created Number of overharvested plants and trees replanted per island Number of overharvested plants and tree species replanted per island
27	By beginning of 2017, Bonefish Bye Law for selected islands (e.g., Nonouti Island) will be ready for implementation	Have been implemented under the Fisheries regulation and through the request of KNTO for tourism or recreational activities.
28	By 2018, knowledge and understanding on value of agro biodiversity improved at the national and local levels.	Awareness activities in relation to Biodiversity were always carried out to schools' communities, but have yet to be conducted at national level such as community trainings on the importance of agro-biodiversity and biodiversity
29	By 2020, knowledge on the importance of marine environment and impacts	

	from human induced activities.	
30	Revisit Nonouti Island by 2017 for consultations and awareness on importance and value of bonefish conservation.	Nonouti has been visited as one of LDCF pilot island. Community consulted; schools visited as part of ongoing activity under KNTO
31	Implementation of environment/biodiversity communication strategy by 2017.	Biodiversity Campaign materials such as pamphlets, clips and other appropriate materials have been developed. Also, national biodiversity days were part of MELAD-ECD annual celebration where it involves activities like mangrove planting, clean ups and awareness through media.
32	Baseline data of biodiversity for food and agriculture established by 2018.	Achieved on going 4 Dataset in-place, but needs to be centralized Nanikai baseline (CTA program) completed- in 2019. Baseline survey conducted on Maiana, Abemama and Nonouti- LDCF 1 number of Baseline data collection training to be conducted in 2019- LDCF
33	Strengthen the capacity on fisheries surveys	The local dive instructor needs to renew his licence annually, for certifying the new staff in dive training. However, the SCUBA dive training has not been conducted yet, as there are no new staff who have participated in this training.
34	Upskilling of technical capacity to implement, assess and monitor the Key Biodiversity Areas (KBA) by 2020	MELAD-ECD has established its database called EDMIS which enables staff and other sectors to report according to the identified indicators including KBAs. This serves as KBA database which shows trends of various kind of environmental information. TA have also been identified under CBII Project to fully establish this. However, as of now, it is just a matter of putting all information that is relevant for this database.
35	To strengthen the capacity of the National DRM committee,	Workshops on Environment Safeguard System have been conducted in few outer islands. This ESS has broadened and

	Local Government staff and local communities in environment/biodiversity integrations in development activities in at least one island by 2019	enhanced the capacity of local people in managing and protecting their environment/biodiversity from the adverse impacts of development projects and also human activities.
36	To strengthen institutional capacity to assess and monitor the development projects in at least one outer island by 2019	This is done under LDCF Project for the 3 pilot islands where FEA and AAA were trained to assist in implementing and protecting the environment. However, there is an issue with implementing this on other outer islands since ECD do not have extension staff on all islands.
37	Commodity pathway analysis strengthened by 2020	Training with importers, customs, trade on quarantine, IRA and biosecurity inspection. A survey was conducted on Abemama Island to update pest disease that are outburst, therefore need more funding to do surveys in other islands.
38	Border security strengthened by 2018	New staff trained in different aspects of quarantine and pests and disease identification and control. Importers of animal and plant products are monitored through the import permit issued prior the arrival of the products. Staff are well-versed and able to identify pest disease. Training conducted for new staff on biosecurity inspection.
39	Enhance and strengthen human resources (WCU-ECD, EYC, Fishing Guides, Ecotourism) Communities in the Northern Line Islands) by 2020	Number of Survey and monitoring reports produced on status of birdlife for Northern Line Islands (Kiritimati, Fanning and Washington). Management plan and guideline developed Number of local communities involved in bird protection as part of ecotourism activities.
40	Strengthen the institutional and human resource (ECD, JET, EYC with local communities) capacity to enforce biodiversity related legislation in at least one island by 2019	Strengthening the enforcement of biodiversity related legislation have been implemented and have also been enforced through the assistance of ECD-LCS and also police officers. Enforcement training manual was already developed for enforcement activities

41	By early 2017, refresher training for Fishing Guides including Catch and Release Fishing Techniques conducted.	Fishing guides are well-versed now with latest sustainable game fishing techniques
42	Identify potential islands to conduct training on Development of products and packages by 2018.	The training has not yet been conducted at these potential islands; Beru, Tab South, Tamana, Arorae.
43	Marketing of products and packages	Product development on LDCF pilot islands Community based tourism, Cultural tour packages, fly - fishing packages on Nonouti, Cultural tours for Butaritari Island for cruise. Marketing of new tourism resorts in Abaiang (Tarabuka Hideway) and North Tarawa (Lagoon Breeze).
44	Preparation of Kiribati for ratification to the Nagoya Protocol through implementation of the regional project in Kiribati by 2017.	These have been implemented also at project pilot islands of LDCF housed within MELAD-ECD. Project sites are Abemama, Maiana and Nonouti apart from where ALD have conducted.
45	The KNISSAP is implemented and sustained in at least 3 islands by 2018.	Previously, eradication and control of IAS have been implemented with the assistance of TA. This has been done in Onotoa and Xmas Island and South Tarawa/Betio where YCA and mynah were eradicated
46	Pest and disease problems identified, and control methods developed and used by 2019.	There are a number of training on guarantee, IRA and bio-security inspections conducted, number of national surveillances on pests and diseases and number of staff trained in different aspects of quarantine and bio security. There are 3 training sessions conducted, 9 new Agricultural Assistants trained, 2 Surveillance on crazy red ants and coconut Rhinoceros beetle is ongoing (no identified pest detected). The outcome of the surveillance on the Coconut rhinoceros beetle concludes that the pest is still not present. Pest interception on Maiana needs proper identification of insect however, the AA on Maiana has been advised to send

		the specimen, once received it will be sent for proper identification. After ID of pest is shared, it would be the responsibility of Bio security. There is also one biosecurity mini laboratory refurbished. The lab construction is still pending waiting for building permit.
47	By 2017, Biodiversity registers accepted by Language Board (LB) and used nationally.	TCET (Translation ad hoc Committee for Environmental Terminology) is a committee which develops Environmental glossary, and this has incorporated biodiversity terms.
48	By 2018, completion (75%) of documentation of TK in relation to environment/biodiversity.	This has always been part of MIA-Culture during outer island visit.
49	By 2020, the preparatory phase for appropriate legal mandate to protect traditional knowledge, skills and practices will have been undertaken.	The second amendment Environment Act has incorporated the recognition of traditional knowledge and genetic resources but have yet to be endorsed.
50	By 2017, the Biodiversity Planning Committee, in particular focal points of all biodiversity related conventions have enhanced synergies and harmonization of their national actions harmonizing their national actions.	The program of actions under all biodiversity related conventions is harmonized and coordinated and contribute to national reporting under the different conventions Biodiversity related programs at the national level are synergized and harmonized.
51	Review the draft protected areas and protected species regulation by 2017.	PA & PS have been reviewed and awaits AGO clearance for endorsement.
52	Undertake the evaluation and review of biodiversity related policies implementation by 2019.	No evaluation of biodiversity related policy has been conducted.

53	By beginning of 2018, Act and Regulations for the development and management of ecotourism activities is ready for implementation.	The recent Kiribati Tourism Act 2018 does not include ecotourism development and management; however, this is in our 2019 MOP.
54	Biodiversity information monitoring system established by 2020.	Raw data and information related biodiversity are well stored within each Agricultural unit, but poor monitoring and assessment for these databases.
55	Staff is able to analyse fisheries data by 2020.	Number of training for data analysis has been initiated at ECD level.
56	Biodiversity database is established by 2018.	EDMIS has been developed for centralizing all environment related data.
57	Centralized all Agriculture and Livestock information and data facility established by 2018.	There are limited choices for livestock production in Kiribati. Most common are smaller animals – pigs, poultry and ducks. The traditional breeds of small animals raised on atolls are disappearing. The recommended strategy is to improve the local breeds by crossing with good breeds that can adapt to Kiribati conditions, taking into consideration also the potential impacts of climate change.
58	Documentation of all atoll agriculture and livestock researches by 2020.	Agriculture researches in all atolls have been documented; although some researches documentary is still on trial. Livestock researches in all atoll have been developed and documented, but all data are still on trial.
59	Conduct study on threats on tourism developments in Kiribati by 2019.	No proposer study has been undertaken by ECD to assess the impact of tourism developments on biodiversity but there is an obligation of applicants who wish to undertake these developments to produce and conduct first an EIA and to produce EIA reports for a particular activity.
60	Conduct research on Virgin coconut oil (VCO) by 2018.	TA and local counterpart recruited to carry out research on Virgin Coconut Oil.

3.2. Additional Information

Below are some of the websites, links and files which contribute to the completion of this section.

a) https://www.cbd.int/doc/world/ki/ki-nbsap-v2-en.pdf

b) http://www.spc.int/CoastalFisheries/CFM/Document/ShowDocument/7f540622-357a-417f-bd0d-368d50efb9fc?attachment=False)

3.3. Other tools used for assessing national progress.

Apart from the NBSAP, there are some other tools tabulated below that have been used for assessing national progress.

Table 15: Tools for assessing national progress

Tools used for assessing national progress	**Rationale in assessing national progress**
Kiribati Development Plan	KDP implemented the six key priority areas such as human resource development, economic growth and poverty reduction, health, environment, governance and infrastructure. Taking KPA 4 (environment) as an instance, MELAD-ECD has constructed and undertaken mangrove plantings /*buibui* during outer island trips to project sites (KAP III, LDCF etc.)
Kiribati Integrated Environment Policy	This document provides updates, progress and on-going actions undertaken by each stakeholder. It basically provides the guidance and direction for government and local communities in protecting, managing and utilizing the natural resources and in enhancing environment protection. New environment policy has been implemented at the national level.
Kiribati Vision for 2020	KV20 has four pillars such as wealth, peace and security, infrastructure and governance. The government of Kiribati is now fulfilling these four pillars by increasing the copra price and the salary level for all government civil servants,

Ministry Strategic Plan	Each Ministry has its own MSP. Ministry of environment, lands and agricultural development is now working towards its strategic plans which involves managing environment, land and agricultural developments

3.4. Monitoring of progress towards national target

Within the ministry of Environment, Lands and Agricultural Development, there are 3 key divisions such as; Lands and Management Division, Agriculture and Livestock Division and Environment and Conservation Division. These divisions are established to serve the mission and vision of the ministry. Each division is also comprised of several development projects that are implemented to achieve certain objectives for each division as well as for the ministry to enhance the development of Kiribati and its people. The Kiribati's National Biodiversity Strategies and Action Plan for 2015- 2020 is implemented by the Ministry of Environment, Lands and Agricultural Development through its division known as, Environment and Conservation Division.

Monitoring the progress towards the national target is currently executed by the ministry of Environment, Lands and Agricultural Development through the Project and Planning Unit (PPU). The PPU is one of the units established within the ministry with its responsibilities which involve; monitoring and evaluation of the progress for all of the ministry's projects. This unit monitors the Ministry's entire project through the submission of projects' quarterly progressive reports which include the progress status of the project, key issues encountered, project briefs, and project monthly meetings. The PPU is also responsible for formulating project proposals for funding and one of the requirements that all divisions of MELAD has to comply with is to ensure that each project is well aligned with Kiribati's national targets, priorities and policies.

Table 16: Projects that contribute to the national targets 2016-2019, implemented by the Environment and Conservation Division.

#	Project Title	National targets (Kiribati's NBSAP)	Aichi Biodiversity Targets
1	Solid Waste Management Phase 2	8, 10	8, 5
2	UPOPS	2,8,15,31	1,2,3,4,7,8,10,11, 14,17

3	Invasive Alien Species (IAS)	9, 45, 46	4, 8, 9, 17
4	National E-Waste Management	8, 10	8, 5
5	Turtle Monitoring & Eco-tourism	4, 29	1, 19, 11, 12
6	HP Montreal Protocol Workshop	8, 10	8, 5
7	PAC E-waste	8, 10	8, 5
8	Global Programme of Action (GPA) to Protect the Marine Environment from Land-Based Polluting Activities	8,10, 29	1,5,8,19
9	POP NIPs	8, 10, 29	1, 8, 5, 19
10	SAICM II post national project	8,10,29,39	1,5,8,11,19
11	GEF Pacific International Water Ridge to Reef Project	5,6,8,14, 15, 20	1,4,5,6,8,12, 14
12	Integrating Global Environment Priorities into the National and Policy Programs	3, 5, 6, 29	1, 11, 5,19
13	LDCF Enhancing Food Security	2, 26	5, 7, 10, 11, 14,
14	Enhancing national food security in the context of global climate change	2, 26	5, 7, 10, 11, 14,
15	Implementing Montreal Protocol in Kiribati	8, 10	8, 5
16	Hydro chlorofluorocarbon Phase Out Management	8, 10	8, 5

17	Support to KNAP for UNCCD 10 years Strategy	5,6,7, 8,15,16,28,31,32&35	1,2,3, 4, 5, 7,8, 10,14,15,17,19
18	Third National Communication (TNC) to UNFCCC	6	5
19	Mercury Initial Assessment (MIA)	8,10,29,39	1,5,8,11,19
20	Special Programme (SP) Project on "Strengthening System, Institutional, and data collection infrastructure in Kiribati.	8,10,29,39	1,5,8,11,19

SECTION 4. DESCRIPTION OF THE NATIONAL CONTRIBUTION TO THE ACHIEVEMENT OF EACH GLOBAL AICHI BIODIVERSITY TARGET (ABT)

MFRMD through Coastal Fisheries Division recently developed a blueprint to guide sustainable management and development of coastal fisheries to benefit all I-Kiribati in 20 years' time.

The strategy not only supports the objectives of the Kiribati Vision 20 and Kiribati National Fisheries Policy 2013-2025, but also stresses the importance of coordination and collaboration among stakeholders and Ministries with their respective programs. The national roadmap (Figure 2) also provides a framework for Kiribati's implementation of the principles and commitments set out in the 'New Song' policy on coastal fisheries in the Pacific region, and also in the Voluntary Guidelines for Small-Scale Fisheries. This includes the commitments and support for community-based coastal resource management. (MFMRD, 2019).

4.1. Describe how and to what extent Kiribati has contributed to the achievement of this ABT and summarize evidence used to support description

Undertaking these actions has enabled Kiribati to contribute to the achievement of this ABT and NTs in terms of Biodiversity-related Public Awareness such as public education, Cultural Day and other activities that engage schools. Also, Research 75 Training such as the establishment of Marine Protected Area and other related important activities which have contributed to biodiversity.

4.1.1. Aichi Biodiversity Target 1: Public Education and Awareness

Kiribati's commitment to Article 13 of the CBD which is "Public Education and Awareness" related to Biodiversity is evident in Environment Week and World Food Day, which have become the MELAD Week and Culture Day. In this week of celebration, a number of concerted national campaigns are launched to mark the commemoration of International Biodiversity Day. The campaign focuses on a number of awareness activities such as school programs, mangrove replanting with primary school students and youth as well promotional events through the mass media. Other activities that contribute to biodiversity is public education on the importance of proper waste management, school visits to inform students and staff not only about the importance of biodiversity but also the best conservation strategies. Thus, the made aware of the importance biodiversity to their lives.

4.1.2. Research and Training.

Kiribati also contributes to Article 13 of the CBD, "Research and Training. The Biodiversity-relate training conducted by PIPA this year which related was on the importance of establishing Marine Protected Area on every island. This training involved Government and Non-Governments stakeholders. The establishment of Marine Protected Area is important in Kiribati especially on most outer islands where suspected overfishing is occurring and there is essentially a need for restocking. Apart from that, the consultations on the outer islands were carried out by MFMRD and MELAD to conduct training on management plans including how to establish their marine protected areas. The training is crucial to conserving and

protecting their marine species and terrestrial resources from being overused. Butaritari and Tarawaieta Islands are the best examples in this research and training as these islands evidently practice the MPA diligence for sustainability of their species from overfishing. Such activities have contributed to the achievement of Aichi Biodiversity Targets. (4.2 National Progress towards Aichi Targets.)

4.2 National Progress towards Aichi Targets (Tabulated progress for NBSAP)

Kiribati NBSAP 2016-2020 is developed with the main purpose of identifying the national Biodiversity priority action plans for the four-year period and fulfilling her obligation under the convention on Biological Diversity to achieve the Aichi Targets set by the Convention. The identified priority areas which the government, with the support from NGOs, communities, regional and international partners would work and focus on. Different action plans were outlined under each priority area that would support the improvement and enhancement of the biodiversity. The priority areas are as follows:

1. Protected and conservation areas
2. Ecosystem management
3. Species Conservation and sustainable use
4. Communication and education
5. Capacity building
6. Invasive alien species/biosecurity
7. Traditional knowledge and practices
8. Environmental governance
9. Research and Information

The table below shows various thematic areas that Kiribati is contributing to achieving the 20 Aichi targets. Also, the national targets and action plans that have been set have included several sectors that contribute to achieving the national targets linked to the CBD Aichi targets. Hence, the progress that shown through colour coding reflects what MELAD-ECD and its key biodiversity sectors have implemented and achieved according to its national targets and outputs that are aligned to Biodiversity Aichi targets.

Colour	Status of Progress
	100% target completion
	75% (most targets achieved)
	50%
	25% (slight achievement)
	0% No progress

Figure 9: Colour code indicate the progress toward each national target.

Table 17: National targets and outputs that are aligned with Biodiversity Aichi targets.

Biodiversity Threats	National Targets	National Action	Aichi Targets	indicator	Output	Responsible Agency	Rationale for progress status
Protected and Conservation Areas							
Decline in marine and land resources	Establish at least one marine protected area and expand protected areas program to other islands in Kiribati by 2020	Identify potential protected areas in Kiribati Consult community& stakeholder for prior consent Map biodiversity areas such as terrestrial plant species, marine habitats and substrate distribution Seek Cabinet endorsement	Aichi 11 Aichi 11	Number of protected areas established Number of consultations undertaken Number of biodiversity sites identified and mapped Cabinet approval is secured.	Secured Local community's agreement for establishing protected areas Established Protected area(s) GIS map for biodiversity sites is available M & E	ECD, FD, LMD, ALD and MLPID, PIPA (Implementing the Rawaki Act secondary activity)	PIPA has been declared the national marine protected area not only in Kiribati but also in the world. MELAD-ECD and MFMRD-CFD have also expanded this initiative or activity through establishing few/several marine protected areas at the community, village and at island level.

	Establish at least 3 community-based management plans for coastal resources (Fisheries and Mangroves) by 2018	Stock Assessment and mapping (fisheries surveys) Identify potential sites and resources requiring management plans	Achi 7 Achi 11	Number of sites surveyed and mapped Number of sites and resources identified needing management plans Number of management plans formulated on both Fisheries and Mangroves Plans	Reported on the sites surveyed and map produced Community based management plans (CBFM, CBMMP) developed, finalized and implemented M & E	FD, ECD, PIPA	The management plans have been developed through communities at village and island levels. These management plans have integrated issues from both land and sea with strong emphasis on mangroves. Listed below are villages and islands where management plans have been developed and endorsed or drafted. Endorsed Management Plans at an island level: Aranuka Is Draft Management Plans developed at island level • Makin • Butaritari • Maiana

							Endorsed management plans at the village level: Abemama Is • Baretoa • Tanimainiku • Tabontebike • Reina • Butaritari Is • Onomwaru • North Tarawa Is • Nooto Village
Decline in Marine and Terrestrial Resources / Biodiversity loss	Develop and implement at least one or two PA management plans by 2020	Seek Cabinet endorsement of PA and PS regulations Raise awareness on PA & PS regulations Formalize and legalize the status of Cook Islet, Motu Tabu and rat-free inland motus on Kiritimati island	Objecti ve 1 Aichi 1 Objecti ve 2 Aichi 2 & 3 Objecti ve 2 &	Finalized and endorsed PA & PS regulations by Cabinet Carried out number of Public Awareness programs Finalized the list of PAs and PS for	PA & PS regulations endorsed & enforced Increased number of PA and PS Management Plans developed	WCU-, ECD, Fisheries, LMD, MLPID, PIPA	PA & PS regulations had been previously submitted to cabinet for the endorsement, but it was rejected. The reason being the need for MELAD ECD to seek again the consent of the public for the protection of the species to be legal ECD is now working closely with AGs office to have all

		including the Southern Line Islands as Protected Areas (including their lagoons as MPAs) under the PA & PS regulations. Develop management plans for Cook Islet, Motu Tabu, rat-free inland motus on Kiritimati Island and including the Southern Line Islands. Seek Cabinet endorsement for management plan and inclusion of Cook Islet, Motu Tabu, rat free inland motus on Kiritimati island and the Southern Line Islands.	5 Aichi 4 Objecti ve 2, 3 & 5 Aichi 6 Objecti ve 3 Aichi 11 Aichi 9	Cabinet endorsement Developed, finalized number of Management plans and endorsed by Cabinet Implemented number of actions cited in Management Plan, e.g. eradication and control of IAS, monitoring & surveillance of PAs Revenue collected from license/permit fees to enter/land at PAs e.g., research permit, bird watching, etc.	and implemented. Increased community awareness on PA & PS Biosecurity		these regulations endorsed together with the second amendment of the Environment Act. Overall, PA & PS is yet to be endorsed. Cook Islet, Motu Tabu and motus on Kiritimati island have been legally recognized as protected areas in the PA regulation but the PA has yet to be endorsed. It is anticipated that once the PA & PS regulation is endorsed, an effective implementation and enforcement would be fully supported and carried out. However, there are few components of the PA&PS that have already been implemented since their legal recognition status

		Implementation of Management plans at Island level.	Aichi 2	Involved number of community members/associations in the development of Management plan & implementation Eradicated and controlled a number of IAS			under the Wildlife Ordinance.
Decline in the turtle nesting beaches	Turtle nesting beach enhancement by 2018	Establish and strengthen the turtle conservation network (local counterpart) at community level Designate turtle nesting beaches under the Environment Act 1999 Establish and put in place Memorandum	Aichi 12 Aichi 11	Turtle conservation network in place and operational Designated number of beaches for turtle nesting under the Environment Act Established Memorandum of Agreement (MOA) between ECD and	M & E	ECD, Designated villages, counterparts	In the Wildlife Ordinance, the turtles are fully protected in certain areas (Wildlife Ordinance Schedule 2). Turtles are recognized under the Wildlife Ordinance in certain areas but yet to be endorsed under the Protected Species regulations However, through the integrated mangrove and

		of Agreement (MOA) between ECD and the community for turtle habitat enhancement program Replant coastal vegetation Manage and monitor beach mining	Aichi 2 Aichi 13 Aichi 11	the local community counterparts Replanted number of coastal vegetation species at designated turtle nesting beaches Monitored beach mining			natural resources management plans, turtles are also declared protected species by some islands and communities (partially – harvests only on important occasions). There was also an MOU developed and signed between communities and islands with an endorsed management plan. The MOU is purposely developed to ensure communities implement and enforce the management plans using own manpower and resources. Monitoring of illegal beach mining is regularly undertaken on South Tarawa and Betio. Because the scope and coverage is on South Tarawa and Betio illegal beach mining on the outer islands is not done. Hence, the secondment

							amendment that is now currently made with AGs office will help to address this gap. Enhancements of nesting beach have been done on some outer islands and Tarawa through mangrove plantings.
Ecosystem Management							
Coastal erosion	Develop Coastal Management Plan and Policy by 2017 Identify the vulnerable coastal areas	Assign TA to develop the Coastal Plan and Policy Conduct consultation with stakeholders and communities on the coastal policy Seek Cabinet endorsement on the coastal policy	Objecti ve 3 Aichi 5 Aichi 2 Aichi 2	Number of consultations with stakeholders and communities conducted The coastal policy is developed and finalized Number of reports on eroded sites	Produced the Kiribati coastal policy Produced Assessment	ECD, LMD, Mineral Division, MWPU	A national policy – Kiribati National Coastal Policy was developed and endorsed in 2016 through a financial assistance from MELAD –ECD under KAPIII (by Arthur Webb) There are also numbers of V&A studies been

	(flooding, hazard risks) that need protection taking into consideration the existing key biodiversity areas (KBA) Expanding soft measures (coastal vegetation, mangroves, *buibui*) for coastal protection by 2019	Identify the most vulnerable areas for possible/best protection measures (buibui, mangrove planting) Undertake survey to determine change in shoreline Construct soft measures (coastal vegetation, mangroves, buibui) for coastal protection on specific islands or sites, Acquire lands at imageries that also includes shallow water areas.	Aichi Target 7 Aichi 19 Aichi 11 Aichi 11	received by the office (through telephone, consultation Number of surveys carried out to verify the reports received and to identify vulnerable sites Number of assessment studies Number of types of soft measures applied and adopted Number of sites protected with soft measures. Combine shoreline change map and flooding with biodiversity information to estimate the	studies on vulnerable areas Applied Soft measures M & E		undertaken under projects (LDCF project). Also, technical assessment which have also carried out by Mineral and MELAD-LMD (such as beach profiling) are also significant in showing how vulnerable coastal areas are to inundation and flooding. MELAD-ECD have constructed and undertaken mangrove plantings / buibui during outer island trips on project sites (KAP III, LDCF)

				impact on biodiversity			
Degradation of habitat from pollution	Clean-ups in Urban areas – South Tarawa and Christmas Island	Engage the community in clean-up activities Conduct clean ups at least 2 times a month Conduct coastal clean ups at least 4 times a year	Aichi 8	Number of communities engaged in clean-up activities Number of inland clean-ups conducted Number of coastal clean ups conducted in a year	Sites selected for clean ups were well organized and cleaned Less % of wastes lying around attended	ECD, TUC and BTC. Local community	This is a regular activity that is usually practiced every week and every month by MELAD-ECD. Other NGOs and ministries also practiced this. Communities are actively engaged with clean ups at their own areas and at coastal sites. (Improvement is seen on South Tarawa). Not only clean-ups, but recycling of wastes (pet bottles) and also reusing of organic waste for different purposes. Currently, MELAD-ECD has also initiated a National dialogue which aims at collecting of views from SOEs, communities and

							ministries on how to fight against the issue dealing with waste.
Degradation of habitat from mammalian invasive species	Eradication of invasive species on the PIPA infested islands.	Eradicate invasive species forms part of the PIPA Management Plan 2015-2020	Aichi 5	% Recovery of vegetation growth and increase in bird species population after the eradication.	Habitat improved supporting terrestrial life.	PIO, Kanton PIPA Coordinator, ALD.	Funding issue has deferred this activity to be conducted on respective remote islands.
Degradation of marine habitat from wrecked vessels producing black reefs.	Removal of the rusted wrecked vessels impacting on the corals and marine life.	Remove shipwrecks collaboratively with PIPA partners	Aichi 5	% on recovery of the black reefs.	Improved habitat supporting coral growth and marine life.	PIPA scientists, PIPA Kanton Coordinator, Fisheries.	The survey of shipwrecks in Betio have been initiated and commenced in previous years by MELAD-ECD but the removal has not yet begun due to financial issues.
Over-harvesting of terrestrial and marine resources	Reduce the use of unsustainable fishing practices by 2020 by 30%	Conduct community awareness and education on the use	Aichi 1 & 2	Number of awareness and education programs	The regulation is endorsed	FD, ECD, OAG KPPS	A regulation for reducing/avoiding the use of unsustainable fishing practices called Fisheries (Conservation and

Change of economic activities and lifestyle		of unsustainable fishing practices Endorse the draft fisheries (protection of marine resources) regulations 2014 that incorporates the control on the use of unsustainable fishing practices with Cabinet Conduct enforcement on the provisions for unsustainable fishing practices	Aichi 2, 6, 10 Aichi 2	conducted with communities The approval of the draft regulation is secured Number of cases found breaching the provisions of the fisheries (protection of marine resources) regulations 2014 on the use of unsustainable fishing practices	Data and report on the number of cases found on the use of unsustainable fishing practices showing effectiveness of the raising awareness and education programs		Management of coastal marine resources) regulations have been endorsed by cabinet.
	Reduce the overharvesting practices of terrestrial	Revise, update and finalize endorsement and implementation of the regulation of	Aichi 7	Revised and updated regulation of protected areas and species	The protected areas and protected species regulation are	ECD, FD, AGO	PA & PS regulation is yet to be endorsed but the final update of the regulation was submitted to AGO to work on

	resources by 2018	protected areas and species Consult Attorney General's Office for finalization of the regulation Conduct outreach programs (communication, awareness and education) at different levels on the regulation of protected areas and species	Aichi 2 Aichi 1, 2, 3, 11,12	Consultation with Attorney General's Office is conducted Number of outreach programs were carried out to the public at different levels	endorsed and implemented % coverage of public at different levels reached through outreach programs		the amendments for endorsement.
Habitat Loss	Restoration and rehabilitation of marine and terrestrial habitats by 2020	Assess destructed marine and terrestrial habitats Identify marine based and land based destructive activities	Aichi 11, 12, 13	Number of assessments conducted Number of marine based and land	Stock assessment report on destructed marine and terrestrial habitats produced	FD, PIPA, ECD, ALD Island Councils	Marine and land based destructive activities were identified during the development of the CBMMP and CBFM and during household surveys. MELAD-ECD conducts coral and coastal vegetation

		Conduct rehabilitation and restoration of marine and terrestrial habitats (coral planting, mangrove planting, medicinal, crop)	Aichi 10 Aichi 10, 11, 6, 7	based destructive activities identified Number of marine and land habitats restored and rehabilitated	Report on the destructive marine based and land-based activities produced Types of marine and terrestrial habitats restored and rehabilitated M & E		replanting regularly for the restoration and rehabilitation of marine and terrestrial habitats Assessment has not yet been fully undertaken due to capacity constraints.
Heavy Pressure on coastal resources for commercial purposes	Rehabilitation and restoration of ponds for aquaculture development by 2018	Conduct training on milkfish culturing to communities involved with aquaculture activities	Aichi 6, 14	Number of milkfish pond rehabilitated Number of trainings conducted	Community and household ponds rehabilitated and active Local farmers and communities involved with	FD Island Councils	Trainings have been conducted on Maiana, Abemama and Nonouti. However, this has not eventuated due to insufficient fund on the other islands.

		Conduct training on seaweed farming to local exporters	Aichi 6, 14, 19	Seaweed production and exportation Increased	aquaculture activities M & E		Need to identify unused ponds in all Kiribati islands and select the best five islands that have a suitable pond for cultivating milkfish. However, this activity was only conducted on Maiana, Abemama and Nonouti Islands, whereas the other islands this is yet to be due to limited funds.
Unsustainable farming practices	60% of local growers/farmers practice organic agriculture in Kiribati by 2020	Conduct training on organic farming to local farmers Conduct training on participatory guarantee organic certification system Conduct awareness and education programs on organic agriculture principle	Aichi 5 Aichi 1, 8, 14 Aichi 1, 8	Number of islands with organic agriculture bylaws Number of organic certified products Number of established organic farmers'	Islands' organic bylaw developed, endorsed, and implemented. Organic certified products are readily available at local and international markets	ALD, ECD, NGO – Kiribati Organic Farmers Association (KOFA), Local Government	Training has been conducted on organic farming. Abaiang is one of the Kiribati Island that has a certified organic product. There is a delay in local organic agriculture on other outer islands due to limited funding. However, the work-plan has been developed for organic farming, and to be implemented on LDCF's pilot

		Establish organic farming associations on outer islands. Incorporate organic agriculture provision in at least two islands' bylaws.	Aichi 1, 8 Aichi 1,2,5,13	associations on outer islands Number of bylaws incorporating organic agriculture	M & E		islands: Abemama, Maiana and Nonouti.
	Develop and increase adoption of sustainable atoll soil management technologies by 2020	Conduct training on compost making by farmers Raise awareness on the use of cover and other nitrogen fixing trees Conduct surveys on soil health status	Aichi 8, 19 Aichi 1, 7, 8	Number of farmers using improved and new technologies of soil management Number of awareness conducted Number of surveys and studies on soil	Farms with improved soil management technologies established Reports of soil health analysis produced	ALD, Organic Farmers Association Local Government - MIA	Training on compost making was also undertaken at MELAD-ECD as part of the Waste Minimization Project –UDP Soil health analysis is a mandate of MELAD-ALD and is now currently being implemented as part of the V& study and also part of their institutional programs

				health status conducted	M & E		
Absence of national guidelines and policies for the development and management of ecotourism activities	By 2017, national guidelines and policies for the development and management of ecotourism activities will be developed and ready for implementation and use	Tender TA position nationally and regionally to develop national guidelines and policies. Conduct consultations, meetings and awareness.	Aichi 2, Aichi 2	National Guidelines and Policies developed, completed, endorsed and ready for implementation.	M & E	KNTO, ECD	PA & PS have incorporated wildlife sanctuaries to be protected for ecotourism activities. These are reflected in the Wildlife ordinance. No tender has been developed for TA on ecotourism.
Unsustainable use and destruction of	Identification, assessment and mapping of ecotourism resources by 2017	Conduct survey and mapping of ecotourism resources	Aichi 10, 11	Number of islands visited for survey, assessment and mapping	Report on survey and mapping produced and submitted to Cabinet for updates and information.	KNTO	Few mangrove sites have been demarcated for ecotourism purposes (e.g., Maungan Te tongo, Aranuka – Also recognized as the Queen's Commonwealth Canopy) but have yet to be assessed.

ecotourism resources							Assessment and mapping of ecotourism sites on outer islands visited including Butaritari for cruise visit and Nonouti for flyfishing. Assessments made for Abemama agro-tourism and cultural tourism.
	Restoration of destructed ecotourism resources by 2017	Assess destructed ecotourism resources and conduct outreach awareness and education programs to communities on the benefits of ecotourism	Aichi 1	Assessment and awareness of destructed ecotourism resources per island were conducted	Destructed site assessed and restoration and rehabilitation of ecotourism resources done	KNTO	Require auditing of resources. Ongoing tourism awareness programs as part of KNEG, LDCF consultations to pilot islands and outer islands under KNTO operational budget.
	Develop regulation on the protection of Ecotourism Resources	Engage TA to draw up Regulations on the Protection of Ecotourism Resources	Aichi 2, 20	Number of consultations with stakeholders and communities conducted		KNTO	Consultations made between MIA and Fisheries and NIC on bone fishing bylaw. No TA engaged.

		Consult awareness with stakeholders and communities Seek Cabinet endorsement before submission to Parliament for first and second reading of the bill	Aichi 1 Aichi 4				Cabinet paper yet to be developed.
Species Conservation and Sustainable use							
Increasing number of endangered, threatened, and extinct species	Identification of endangered, threatened, rare, extinct and protected species, by 2020	Create and update the list of endangered, extinct and protected species in line with Regional and international identification Conduct national consultation for	Aichi 12 -	Number of endangered, threatened, extinct and protected species identified National list of endangered, threatened, extinct and protected species is updated in accordance to regional and	The list of endangered, threatened, extinct and protected species is in place and nationally endorsed. M & E	ECD, FD, ALD	Meeting were conducted to establish committee members to coordinate this activity. However, there is little progress due to limited funding to implement and conduct this activity on Kiribati Islands (From Makin to Arorae). Additionally, Kiritimati has identified a list of endangered, rare and extinct

		species conservation and sustainable use		international identification category			birds, however the document hasn't been endorsed.
	Identification of endangered, threatened, rare, extinct and protected species, by 2020	Create and update the list of endangered, threatened extinct and protected species in line with regional and international identification.		Number of endangered, threatened, extinct and protected species have been identified		PIPA	PIPA management plan has been developed containing the identification of endangered, threatened and protected species.

	Development and implementation community-based management plan by 2019 of at least two turtle species	Consult communities Recruitment of TA to conduct refresher course Conduct refresher course on turtle species conservation with local counterparts in communities.	Aichi 2 Aichi 20	Number of consultations conducted with communities Number of refresher courses conducted on turtle species conservation with local counterparts	The community-based management plan for turtle species was established TA recruited Number of local counterparts trained M & E	ECD, FD, regional partners and TA	Specification or emphasis on the protection of turtles has been incorporated into the integrated mangrove and natural resources management plans. There are no separate management plans for turtles in place.
	Marine stock enhancement program by 2020	Translocation of Ark shell, giant clam and sea cucumber Conduct training on seaweed farming to local exporters	Aichi 6 Aichi 6,14,19	Number of ark shell, giant clam and sea cucumber trans-located Increase in seaweed production and exportation	Increase abundance of ark shell, giant clam and sea cucumber Report on translocation program produced	FD, ECD	There is a small scale on seaweed farming done at Butaritari, Maiana, Nonouti & Abemama, however revisiting these islands for harvesting process has not eventuated due to limited funds. Seaweed packaging will be implemented, after the

							harvesting process has been done.
Decline in native food crops and plant diversity	Establishment and extension of gene-banks of traditional plant food crop species by 2018	Conduct community and stakeholder consultation Identify suitable site/land for gene banks establishment Seek Cabinet approval for site/land to use Collect rare varieties or sub species of traditional food plants Establishment and extension of gene banks	Aichi 1 Aichi 6, 12, 16 Aichi 7, 15 Aichi 19	Number of established gene banks of traditional food crop species Site/Land suitable for gene banks establishment identified Cabinet approval for site/land to use secured Number of rare varieties or sub species of traditional food plants conserved	Gene banks established and maintained M & E	ALD, ECD, PIPA	These have been implemented also at project pilot islands of LDCF housed within MELAD-ECD. Project sites are Abemama, Maiana and Nonouti.

				Number of sites/lands used for gene banks			
	Expanding nursery centres to include native food crops and plants on a number of outer islands by 2018	Include at least 3 native food crops and plants in established nurseries	Aichi target 7	Number of nurseries holding native food crops and plants. Number of native food crops and plants seedlings mobilized and planted. Number of islands involved	Nurseries for native food crops and plants were established Data/record of distributed or planted native food crops and plants Improve nutritional standard of living for outer islands communities.	ALD, ECD	Already established nursery centers on each Kiribati Island, and include 3 or more plants and native food crops.
	Restoration of at least 2 overharvested plants and trees species in at	Identify and create the list of overharvested plants and trees	Aichi 5, 7, 12	List of overharvested plants and trees created	Effective Methods that retrieved the	ECD, ALD, TTM Extension Officer, KFHA	Heavy pruning method has been done on Maiana, Abemama, Nonouti to

	least 2 islands by 2018	Replant overharvested plants and trees		Number of overharvested plants and trees replanted per island Number of overharvested plants and tree species replanted per island	snag plant and trees. Survey crops on outer islands.		restore the lives of snag plant and trees. Replanting method has been practiced on Tarawa and outer islands to replace the dead ones. Survey conducted at outer islands in per household which determine the number of dead trees beside the survives one, and encourage the plantation of any kind of trees at the backyard.
Lack of legal framework that will protect and conserve bonefish species for the purpose of ecotourism development on some Islands	By beginning of 2017, Bonefish By Law for selected islands (e.g. Nonouti Island) will be ready for implementation.	Consult with stakeholders and Nonouti community Review and finalize Bylaw Island Council only	Aichi 2, 4, 17 Aichi2, 17	Number of consultations and meetings held. The bylaw on bonefish is endorsed by the local council	People of Nonouti Island are consulted. Bylaw finalized and endorsed by Island Council Implementation of Bylaw	Selected Island Council, FD, MIA, AG's Office,	Have been implemented under the Fisheries regulation and through the request of KNTO for tourism or recreational activities.

					M & E		
Communication and Education							
Limited awareness, understanding and knowledge on the contribution of biodiversity to food security, production resilience, and health	By 2018, knowledge and understanding on value of agrobiodiversity improved at the national and local levels.	Conduct national and community trainings and awareness workshops on agrobiodiversity and biodiversity Incorporate agrobiodiversity in education system	Aichi 1	Number of trainings and awareness workshops conducted Number of households/communities and schools with diversified agricultural production Number of awareness and information materials on agrobiodiversity published	Households/communities/schools with diversified agricultural production established Agrobiodiversity information and awareness materials published	FD, ALD, ECD, MoE	Awareness activities were carried out in schools and communities on biodiversity on both terrestrial and marine, but have yet to conduct national and community trainings on the importance of agrobiodiversity and biodiversity.

	By 2020, knowledge on the importance of marine environment and impacts from human induced activities	Incorporate marine science topic in school curriculum for upper classes	Aichi 1, 19	Number of classes having marine science topics	Revised school curriculum for upper classes M & E	PIPA	In 2019 the PIPA has been integrated in the school curriculum and provide important information related to marine science at Junior Secondary level.
Limited awareness, understanding and knowledge on the contribution of conserving bonefish for resilience and health.	Revisit Nonouti Island by 2017 for consultations and awareness on importance and value of bonefish conservation.	Conduct community consultations and awareness workshops on Bonefish Game Fishing Conduct awareness programs with JSS and Primary Schools Develop awareness materials for students	Aichi 1, 5, 6 Aichi 1 Aichi 1	Number of consultations and awareness workshops conducted Number of schools and communities visited Number of awareness and information materials published	Communities consulted M & E Schools visited Awareness and Information materials published	KNTO, FD, MOE, ECD,	Nonouti visited as one of LDCF pilot islands Community consulted; schools visited as part of ongoing activity under KNTO

Limited outreach on biodiversity	Implementation of communication strategy on biodiversity by 2017	Revise, update and implement the communication strategy Pool available outreach resources Conduct specific training on communication, awareness and education on biodiversity Establish the Biodiversity TOT team on communication, awareness and education Conduct the Training of Trainers	Aichi targets: 1,2, 3,4, 17	Number of staff trained for equipment use Number of participants with high confidence level trained Number of biodiversity related days observed Number of communities and target audience visited	A number of specific biodiversity campaign material sets Necessary equipment acquired On-going celebration of biodiversity days M & E	ECD, PIPA	Campaign materials such as pamphlets and clips have been developed for biodiversity campaigns. Also, national biodiversity days were also part of MELAD-ECD annual celebration with activities like mangrove planting, clean ups and awareness through media.

Capacity Building							
Limited skills in assessing and monitoring of biodiversity status (terrestrial and aquatic resources)	Baseline data of biodiversity for food and agriculture established by 2018,	Establish a list of existing datasets of biodiversity for food and agriculture Identify information and knowledge gaps and training needs for capacity building on baseline data collection Identify key or appropriate personnel (technical working group) for trainng Engage international/regional expert to conduct training	Aichi 19 Aichi 1 Aichi 4, 17 Aichi 3	Number of existing datasets on biodiversity for food and agriculture collected Number of baseline data collection and trainings conducted Number of national and local staff trained	Trainings and capacity building programs conducted M & E	ALD, ECD, FD, LMD,	Achieved on going. - 4 Dataset in-place but needs to be centralized - Nanikai baseline (CTA program) completed- 2019 - Baseline survey conducted on Maiana, Abemama and Nonouti- LDCF - 1 Baseline data collection training to be conducted in 2019- LDCF

	Strengthen the capacity on fisheries surveys	Conduct training on fisheries surveys (SCUBA dive training, and UVC)	Aichi 1	Number of trainings conducted Number of people trained	Certified divers (level of achievement)	FD, ECD	The local dive instructor needs to renew his licence annually, for certifying the new staff in dive training. However, the SCUBA dive training hasn't been conducted yet, as there are no new staff to participate in this training.
	Upskilling of technical capacity to implement, assess and monitor the Key Biodiversity Areas (KBA) by 2020	Conduct training to establish KBA database Identify TA to conduct training on KBA implementation, assessment and monitoring, and sustainability Establish KBA database to provide trends in future reports such as	Aichi 1, 4, 17 Aichi 4, 20	TA identified and recruited Number of trainings conducted Database on KBA is established Number of people of different levels and background trained		ECD, ALD, FD, local community	MELAD-ECD has established its database called EDMIS which enables staff and other sectors to report according to the identified indicators including KBAs. This has shown trends of various kind of environmental information. TA has also been identified under CBII Project to fully establish this. However, as of now, it is just a matter of compiling of relevant

		vegetation coverage, mangrove mapping, coral reef health status and other ecosystems status, including cultural significant sites,	Aichi 4, 5, 6, 7				information for this database.
Adverse impacts of major developments on biodiversity in the face of climate change in Kiribati (national, island and village level)	To strengthen the capacity of the National DRM committee, Local Government staff and local communities in biodiversity integrations with development activities on at least one island by 2019	Training of National DRM committee, Island Council staff, (local communities (including youth and women in biodiversity considerations and to mitigate impacts of development projects	Aichi 15	Number of trainings with Island Council staff, island communities on biodiversity safeguards, ELs and ESA in the context of climate change	Minimal adverse impact of negative environmental/biodiversity impacts of development undertakings M & E	ECD, FD, Mineral Division, ALD	Workshops on Environment Safeguard System have been conducted on few outer islands. This ESS has broadened and enhanced the capacity of local people in managing and protecting their biodiversity from the adverse impacts of development projects and human activities.

	To strengthen institutional capacity to assess and monitor the development projects on at least one outer island by 2019	Training of institutions (national, island and village level)	Aichi 1	Number of trainings conducted Number of people trained Number of institutions trained	Training of institutions conducted per island. Staff trained for implementing the protection of the environment	ECD, FD, ALD, Mineral Division, MIA - RDD, LGD, Island councils, local community	This was done under LDCF Project for the 3 pilot islands where FEA and AAA were trained to assist in implementing and protecting the environment. However, there is an issue with implementing this on other outer islands since ECD do not have extension staff on all islands.
Widespread incursions of high-risk introduced animal and plant pests and diseases Incursion of marine and	Commodity pathway analysis strengthened by 2020	Training in import risk assessment analysis (IRA), and import specification, accessing markets, updating national pest lists, and issue of phyto-sanitary and animal health certificate for exported and	Aichi 1, 4	Number of training on quarantine, IRA and biosecurity inspections Number of national surveillances on pests and diseases Number of staffs trained in different aspects of	Updated national pest list database M & E	ALD, ECD, Environmental Health Unit	Training with importers, customs, trade on quarantine, IRA and biosecurity inspection. A survey was conducted only on Abemama to update pest disease outbreaks. More funding is needed to do similar surveys on other islands.

terrestrial invasive species		imported commodities.		quarantine and biosecurity			
	Border security strengthened by 2018	Training in pest and disease identification, diagnostic skills and control treatment of incursion pests and diseases. Equipping and refurbishing of mini laboratory at main ports (Kiritimati and Tarawa) Conduct refresher training course on biosecurity inspection and pest identification	Aichi 9 Aichi 19 Aichi 9	Number of trainings conducted Number of biosecurity staff trained Number of biosecurity mini laboratory refurbished	Biosecurity mini laboratory refurbished Report on identified agricultural existing and introduced pests and diseases M & E	ALD, ECD	Staff were well-versed and easily identified pests and disease Training conducted for new staff on biosecurity inspection. Biosecurity mini laboratory has been refurbished. New staff trained on different aspects of quarantine and pests and disease identification and control. Importers of animal and plant products are monitored through the import permit issued prior to the arrival of the products. However, poor biosecurity inspection and pest

							identification on outer islands is due to limited funding
Limited knowledge and skills on bird monitoring and survey	Enhance and strengthen human resources (WCU-ECD, EYC, Fishing Guides, Ecotourism) Communities in the Northern Line Islands) by 2020	Recruitment of TA to conduct hands-on training in bird survey and monitoring In-country training conducted on bird monitoring - status, population and health Develop management plan and guideline Conduct survey and monitoring	Target 11 Target 19	Number of trainings conducted Trained number of Wildlife Wardens and Honorary Wardens Number of Survey and monitoring reports produced on status of birdlife for Northern Line Islands (Kiritimati, Fanning and Washington).	Wildlife Wardens and Honorary Wardens confident to carry out bird surveys and monitoring Survey and monitoring reports produced Management plan and guideline in place Number of local communities empowered to assist and support the	WCU-ECD, MLPID, Fishing guides	The Kiritimati island conservation and protected areas project funds has just been secured through the BIOPAMA program, funded by EU – end of 2020 as one of the commitments & achievement of the NBSAP Action Plan 2016-2020. The scope of the project would cover all the actions mentioned

				Management plan and guidelines developed Number of local communities involved in bird protection as part of ecotourism activities.	protection of birds. M & E		
Limited enforcement on biodiversity related legislation	Strengthen the institutional and human resource (ECD, JET, EYC with local communities) capacity to enforce biodiversity related legislation on at least one island by 2019	Recruit TA to conduct training Enforce training on biodiversity related legislation Develop the manual for enforcement on biodiversity related legislation Train enforcement officers under the Fisheries Act	Aichi 20 Aichi 17 Aichi 20	Number of trainings conducted Number of people trained TA is identified and recruited Enforcement manual is developed	M & E	ECD OAG KPPS	Strengthening the enforcement of biodiversity related legislation has been implemented and have also been enforced through the assistance of ECD-LCS and police officers. Enforcement training manual was developed for enforcement activities

Limited knowledge and skills on sustainable fishing game techniques for fishing guides of selected Islands	By early 2017, refresher training for Fishing Guides including Catch and Release Fishing Techniques conducted	Conduct refresher training	Aichi 1	Number of refresher trainings conducted Number of people trained	M & E	KNTO, ECD, FD, selected Councils	Fishing guides are well-versed now with latest sustainable game fishing techniques
Lack of appropriate skill-based training in developing biodiversity-ecotourism related products and packages	Identify potential islands to conduct training on Marketing of products and packages	Pilot islands to conduct training selected Conduct training to communities in selected islands Conduct marketing campaigns	Aichi 2, 3	Number of trainings conducted Number of marketing campaigns conducted		KNTO, Community, Tourism Advisory Committee	Beru, Tab South, Tamana, Arorae have not been covered. Tarabuka Hideaway (Buariki), Lagoon Breeze (Abaiang) Product development on LDCF pilot islands Community based tourism, Cultural tour packages, fly - fishing packages on Nonouti,

					Local communities trained Types of products marketed and sold		Cultural tours for Butaritari Island for cruise. Marketing of new tourism resorts on Abaiang and North Tarawa.
	Development of products and packages by 2018	Develop Products and packages	Aichi 1	Number of products and packages developed		PIPA	Draft Request for proposals for PIPA Ecotourism was developed and completed in 2020.
Invasive alien species/biosecurity							
Limited eradication and containment measures for invasive alien Species	Kiribati National Invasive Species Strategic and Action Plan (KNISSAP) is endorsed by 2016	Develop Cabinet paper and seek Cabinet's endorsement on the KNISSAP	Aichi 9	KNISSAP is endorsed by cabinet Number of activities identified KNISSAP implemented and completed	KNISSAP is in place M & E	ECD, MELAD Admin	KNISSAP was already endorsed and effective from 2015-2020

	The KNISSAP is implemented and sustained on at least 3 islands by 2018	Eradicate, control, and manage IAS	Aichi 4	Number of IAS eradicated, controlled and managed per island	The KNISSAP is sustained on each island	WCU -ECD, ALD, FD	Previously, eradication and control of IAS was implemented with the assistance of TA. This was done on Onotoa and Christmas Island and South Tarawa (Betio) where YCA and mynahs were eradicated
Agricultural pests' incursion and outbreak	Pest and disease problems identified, and control methods developed and used by 2019	Identify pest and disease problems Develop control methods on pest and disease Develop and review of Emergency response plan for pest incursion and disease outbreak Establish and refurbish laboratories at main ports of entries (Betio wharf,	Aichi 8, 9 Aichi 17 Aichi 9 Aichi 9	Number of control measures developed and used Number of pest and diseases identified Number of well-equipped laboratories	Emergency Response Plan for pest's incursion produced and revised Diagnostic laboratories refurbished and built. M & E	ALD,	Prompt responses to pest and disease issues at South Tarawa and Betio. Recommendation: need funding to conduct this activity on outer islands. Control method was developed to avert the incursion of pest and disease problems.

		Bonriki airport, and Christmas ports)					
Traditional Knowledge (TK) and Practices							
Absence of language review board to officially translate biodiversity terms to vernacular language	By 2017, Biodiversity terms accepted by Language Board (LB) and used nationally	MELAD prepare draft submissions to LB for agreed vernacular	Aichi 18	An officially translated biodiversity terms into vernacular language is established Number of biodiversity terms translated to vernacular language	A glossary for vernacular biodiversity terms is produced	MoE, ECD, OB, FD, ALD	TCET (Translation ad hoc Committee for Environmental Terminology) is responsible for developing Environmental glossary, and this has incorporated biodiversity terms.

Incomplete and fragmented documentation of origin and ownership of biodiversity related Traditional Knowledge (TK)	By 2018, completion (75%) of documentation of TK in relation to biodiversity	Acquisition of necessary and state-of the art equipment and tools for recording, preserving and presentations Participation in NBSAP visits to outer islands	Aichi 18	Types of tools, equipment and state of art techniques acquired 80-100 % participation in NBSAP on outer island visits		Culture Division, CD, ALD FD	This has always been part of MIA-Culture during outer island visits.
Erosion of traditional knowledge system	Identify and establish biodiversity related traditional knowledge system by 2017	Identify biodiversity related traditional systems (e.g. cultivation, traditional medicine, fishing) Create a list of biodiversity related traditional knowledge system	Aichi 18	Biodiversity related traditional systems identified A list of biodiversity related traditional knowledge systems developed A list of uses of biodiversity related traditional	M & E	ECD, Culture Division,	Many published books that contain various biodiversity related traditional knowledge system such as local farming, gardening, traditional medicine, and fishing are well kept at ECD and Umwanibong's library (Museum).

		Create a list of uses of traditional knowledge systems		knowledge systems developed			
No legal back-up to protect traditional knowledge, skills and practices	By 2020, the preparatory phase for appropriate legal mandate to protect traditional knowledge, skills and practices was undertaken	Review existing legislation related to Intellectual Property Rights (IPR) Undertake consultation with appropriate authorities on IPR in relation to biodiversity Undertake consultation, awareness and education with local communities	Aichi 11, 18	The legislation related to IPR has been conducted Number of consultations conducted with appropriate authorities on IPR in relation to biodiversity Number of consultations, awareness and education programs with local communities conducted		ECD, FD, ALD, MCIC, Culture Office	The second amendment Environment Act has incorporated the recognition of traditional knowledge and genetic resources but has yet to be endorsed.
Environmental Governance							

Limited coordination in implementing and reporting to biodiversity related conventions	By 2017, the Biodiversity Planning Committee, in particular focal points of all biodiversity related conventions, to enhance synergies and harmonization of their national actions.	Produce synergies of environmental and biodiversity related programs at the national level. Focal points of all biodiversity related conventions to harmonize their reporting obligations under the different conventions Programs of different biodiversity related conventions to be harmonized and coordinated by the National biodiversity Planning committee	Aichi 3, 4 Aichi 4 Aichi 17	The program of actions under all biodiversity related conventions is harmonized and coordinated and contribute to national reporting under the different conventions Biodiversity related programs at the national level are synergized and harmonized	M & E	ECD	The Biodiversity Planning Committee have been organised and formulated to participate in meetings, workshop related to biodiversity. Also, contribute to feed in data for the development of biodiversity report. Focal points coordinate and organize the development of report related biodiversity to fulfil its obligation for every convention. However, the National Biodiversity Planning committee lacked the interest to implement their tasks. There is a need to revive the committee.

Weak law enforcement on provisions for biodiversity	Review the draft regulation on protected areas and species by 2017	Develop the enforcement manual for the biodiversity provisions in the Environment Act	Aichi 1 Aichi 18	Two trainings on the effective enforcement of the biodiversity provisions in the Environment Act have been conducted Enforcement manual on biodiversity provisions in the Environment Act has been developed and implemented	Biodiversity resources covered under the Environment Act are more protected, managed and sustained. Confidence of staff increased in the enforcement of biodiversity provisions in the Environment Act. More biodiversity breach cases were prosecuted M & E	ECD, AG's Office and National Biodiversity Planning Committee	PA & PS have been reviewed and awaits AGO clearance for endorsement.
Poor monitoring on the implementation of the	Undertake the evaluation and review of biodiversity related policies	Recruit TA to undertake evaluation and review of biodiversity related		TA has been recruited	An effective monitoring mechanism has been endorsed	ECD, FD, ALD, National Biodiversity	No evaluation of biodiversity related policy has been conducted.

biodiversity related policies to determine success and failure rates	implementation by 2019	policies implementation Undertake desktop review and consultation with appropriate authorities on all biodiversity related policies and their status of implementation Develop and present the report on findings and key recommendations	Aichi 20 Aichi 17	Desktop review conducted Consultation with appropriate authorities conducted Report on the review and way forward Completion and presentation of report		Planning Committee	
Incomplete TK and practices draft IPR Bill	Completion of a DRAFT Intellectual Property Right & Copy Right Bill with TK and practices	Recruit TA to assist in the IPR review Alignment of IPR Bill with draft TK bill with Culture Division	Aichi 17	TA recruited IPR Bill and draft TK regulation with Culture including KIEP/Environment Act are aligned	Endorsed Bill as Act by Parliament	MCIC MIA-Culture Division ECD	The Draft IPR and Copy Right Bill have been endorsed and effective in 2019, therefore any form of traditional knowledge such as music, published books, local artefact and

	provisions by 2019	Seek Cabinet endorsement		Number of consultations with relevant stakeholders, including Parliamentarians conducted			others will be registered and kept at MCIC. MCIC will be responsible to provide a penalty for those who copy the original creative local product, according to Copy Right Bill charges Best quality local artefact or product will be showcased in Pacific Expo
Absence of national legal framework for the development and management of ecotourism activities	By beginning of 2018, Act and Regulations for the development and management of ecotourism activities is ready for implementation	Tender for TA at the national and regional level to develop legislation Conduct consultations and awareness programs to communities Submit to cabinet for endorsement before	Aichi 4, 17	TA recruited Number of consultations and awareness programs conducted Cabinet endorsed the proposed bill to progress to Parliament	Act and regulations developed, completed and ready for implementation.	KNTO, ECD, TA	The recent Kiribati Tourism Act 2018 does not include ecotourism development and management. However, this is in MOP 2019.

		submission to Parliament 1st Reading of the bill 2nd Reading of the Bill		Bill read by Parliament			
Research and Information							
Absence or poor biodiversity information monitoring system	Biodiversity information monitoring system established by 2020	Improve the information and database facilities (ALD) Updating and validating data Capacity building to train staffs on areas require expertise on (FD) and (MET)	Aichi 19 Aichi 19	Number of monitoring and assessment of components of biodiversity within different production systems and islands	Functional information and data facility established and updated from time to time	ALD	Raw data and information related biodiversity are well stored within each Agriculture's unit, but monitoring and assessment for these databases need improvement

Data analysis	Staff are able to analyse fisheries data by 2020	Support capacity in analysing fisheries data	Aichi 17	Number of trainings conducted Number of staff trained	Analysed data established	FD, ECD	Number of trainings for data analysis has been initiated at ECD level.
Biodiversity data and information scattered	Biodiversity database is established by 2018	Set up a centralized database for biodiversity Design the database to serve the national need Collect data for the database Create a database using collected raw data	Aichi 17	Database is established and operational. Biodiversity data is easily accessed	Committee is established. Database is developed. Data is centralized and available to public users	ECD, Biodiversity Planning Committee, MFEP	EMIS has been developed for centralizing all environment related data.
Improve the information and	Centralization of all Agriculture and Livestock information and	Capacity building for Information Officer at ALD		Trained personnel to update Agriculture and Livestock	Accessible and creditable Agriculture and Livestock Data to	ALD	Raw data and information on biodiversity are separately well kept in different Agriculture section's data

database facilities (ALD)	data facility established by 2018.	Procurement of machines and materials Updating of Information and Data from time to time	Aichi 19	Data/Information from time to time	support decision making on biodiversity		storage. That is, all data hasn't been centralized yet.
Lack of Documented Agricultural Research to support and sustain biodiversity	Documentation of all atoll agriculture and livestock researches by 2020	Establish ALD core team to coordinate all undertaken Agriculture and Livestock researches for documentation and publication. Crop research on climate change adaptation. Soil amendment research Livestock Feed trial and research	Aichi 13, 19	Number of Agriculture and Livestock researches/trials conducted Number of documented researches published	Documented atoll agricultural (crop, soil) and livestock (local feed) and Plant Health researches published for public use	ALD	Agriculture researches in other units have been documented; although some researches are still on trial. Livestock researches for all atoll have been developed and documented, but all data are still on trial.

		Plant Health research on locally available pesticides.					
Lack of research on the possible threats of tourism development in Kiribati on biodiversity.	Conduct study on threats on tourism developments in Kiribati by 2019.	Recruitment of TA to conduct study Conduct survey and study on threats on tourism in Kiribati	Aichi 17, 19, 20	TA recruited Survey and study conducted	Report completed, tabled and circulated for information of involved stakeholders	KNTO, ECD	No study has been undertaken by ECD to assess the impact of tourism developments on biodiversity but there is an obligation of applicants who wish to undertake this development to produce and conduct first an EIA and to produce EIA reports for a particular activity.
Lack of research, data and information on most suitable variety of coconut for producing virgin coconut oil.	Conduct research on Virgin coconut oil (VCO) by 2018	Recruitment of TA and local counterpart to carry out research on VCO identification	Aichi 14, 19	TA and local counterpart recruited Research conducted	Report completed, presented to and circulated to relevant stakeholders	MCIC ALD ECD	The virgin coconut oil has already been introduced by Kiribati Copra Mill Company.

The tabulated information above clearly shows that the majority progress of each national target have been achieved in response to biodiversity threats stated in each priority area. However, the tables below indicate or measure the progress and performance of indicators of each national action emphasized in Table 18, and executed by other responsible sectors.

4.2.1. Livestock and Animal Health (LAH)

There are limited choices for livestock production in Kiribati. Most common are smaller animals – pigs, poultry and ducks. The traditional breeds of small animals raised on atolls are disappearing. The recommended strategy is to improve the local breeds by crossing with good breeds that can adapt to Kiribati conditions, taking into consideration the potential impacts of climate change.

Table 18: Number of Pigs dispatched for Breeding

Island	Year	Number	Island	Year	Number
Makin	2015	1	Nonouti	2015	3
Butaritari	2018	16	Tabiteuea North	2018	10
Marakei	2016	2	Tabiteuea South	2019	10
Abaiang	2015	10	Beru	2018	10
North Tarawa	2016	2	Nikunau	2018	20
Christmas	2016	6	Onotoa	2015	8
Maiana	2016	3	Tamana	2017	9
Kuria	2017	6	Arorae	2017	10
Aranuka	2017	6	Banaba	2016	15
Abemama	2015	8			

Source: ALD,2019

Table 19: Number of Roster chicken dispatched

Islands	Year	Number	Island	Year	Number
Banaba	2016	120	Kuria	2017	20
Aranuka	2017	20	Xmas	2018	150
Kanton	2017	5			

Source: ALD, 2019

Under the same Section, Animal Health Unit works closely with clinical services required from the public. All clinical services are free of charge with an exception for de-sexing in pigs, dogs and cats. The clinical visit is weekly unless urgent.

Table 20: Clinical visits 2018-2019

2018	Case attended	2019	Case attended
October	2	January	49
November	0	February	35
December	14	March	19
		April	21
		May	29
		June	46
		July	9
		August	44
		September	4

Source: Public Health, 2019

Biosecurity

The main focus of Biosecurity is to safeguard Crop and Livestock Biodiversity. Biosecurity staff are supported by the Pacific Pant Protection (PPPO), SPC Land Resources Division Plant Health Group and FAO to comply with international standards through training in import risk assessment and import specifications, accessing markets, updating national pest lists and issuing phyto-sanitary and animal health certificates for export commodities. Capacity to carry out commodity pathway analyses are also strengthened.

Efforts will be made to sustain low pest prevalence while facilitating trade. Border security is the first line of defence against the introduction of exotic pests and diseases. The staff will be trained in different aspects of quarantine and pests and disease identification and control. Importers of animal and plant products are monitored through the import permit issued prior to the arrival of the products.

Table 21: Number of Import permit issued

Year	No. of Imported Permit Issued			
	Animal	Plant	Kava	Secondhand clothing
2015	119	34	9	15
2016	189	73	14	23
2017	274	83	11	20
2018	453	82	8	18
2019	354	104	8	18
Total	1389	376	50	94

Source: ALD, 2019

4.2.2. Information, Training and Extension Services (ITE)

Agriculture Extension services are free to the general public and were set up to mobilize communities to participate in agriculture activities. The services include the free training of village communities on compost making and vegetable gardening with the tree crop propagation and management.

Table 22: Community trainings 2016-2019

Island	Reference	No. of Communities
Makin	Monthly report	55
Butaritari	Monthly report	20
Abaiang	Monthly report	9
North Tarawa	Monthly report	28
South Tarawa	Monthly report	29
Maiana	Monthly report	2
Kuria	Monthly report	3
Aranuka	Monthly report	4
Abemama	Monthly report	6
Nonouti	Monthly report	13
Tab North	Monthly report	10
Tab South	Monthly report	8
Onotoa	Monthly report	11
Beru	Monthly report	12
Nikunau	Monthly report	18
Tamana	Monthly report	4
Arorae	Monthly report	46

Source: ALD, 2019

Youth training 2016-2019

Agriculture Youth training program is another approach Extension has been looking into to engage and boost the capacity of I-Kiribati youth to work their dreams into reality. The programs involve intakes from interested youths and train them on basic agricultural skills to develop their skills and understanding to start farming. Certificate of participation is awarded after 5-6wks completion of the hands-on practical exercises.

Table 23: Youth trainings 2016-2019

Islands	Reference	No. of trainings
Makin	Monthly Report	30
South Tarawa	Quarterly Report	8
Nonouti	Monthly Report	17
Arorae	Monthly Report	10

Source: ALD, 2019

Coconut replanting program has always been a roll-on activity that aims to increase copra production as income generation for outer island communities. The program on its own does not have secure funding but goes under the Departmental warrant for Outer Island Extension services of ALD. Extension Officers on outer islands are carrying out the program which targets 2000 coconut trees per island to be planted to replace senile coconut trees every year.

Table 24: Coconut Replanting 2016-2019

Year	Reference	No. of coconut seedlings replanted
2016	Monthly Report	7691
2017	Monthly Report	4610
2018	Monthly Report	17061

Source: ALD, 2018

Crop Production and Research Development (CPRD)

Community based Agro-forestry systems (CBAFS) for Conservation in field gene banks of local and exotic fruit trees are carried out from 2015-2019. The system involves the integration of trees and shrubs into crop and animal farming systems to create environmental, economic and social benefits.

The LCDF Project is currently working on her pilot islands namely Maiana, Abemama and Nonouti to establish gene banks in 80% of households. The program invites participation of households to the Vegetable garden competition at the end of 2019. The registration required each household to plant 5 local food crops in their backyards to be eligible to the competition. The target crops were breadfruit, pandanus, native fig, banana and taro or other root crops. Raising pigs and chickens were also included the list of requirements.

ALD Gene bank at Tanaea is currently in stocking with pandanus, coconut, and other medicinal plants. The purpose of this gene bank is to establish a variety of vigorous mother plants of many species that will enable the supply of planting materials. To date there are 12 coconut tree dwarf varieties and13 pandanus plants established in the area. Another 6 cuttings of pandanus have already been planted at the coastal area as guard rolls for sea spray from the ocean.

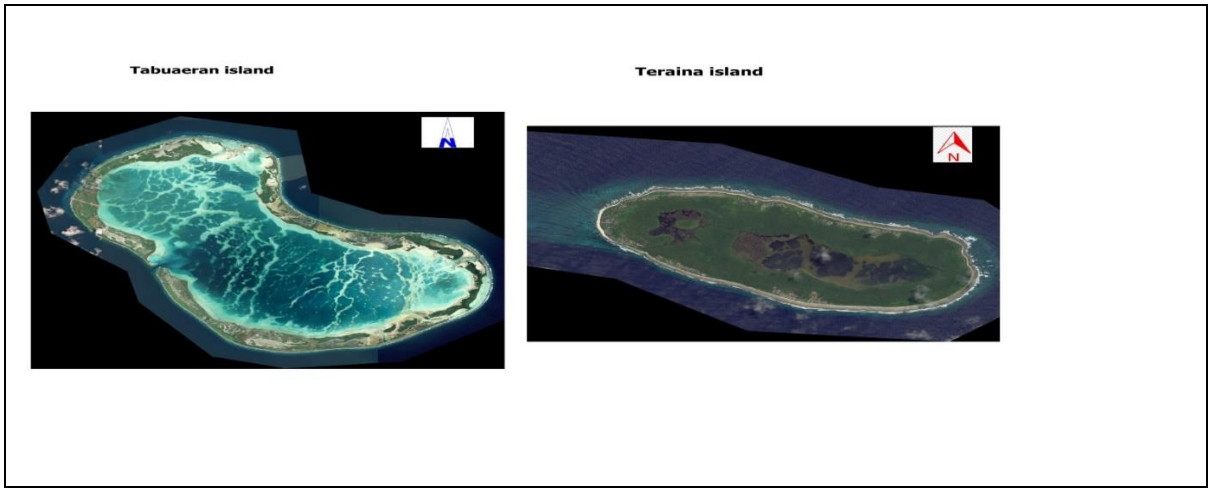
Table 25: Gene Bank 2015-2019

Gene banks 2015-2019	Reference	Type
Maiana (under LCDF Project)	Progress Report	Community based Agroforestry system (CBAFS)
Abemama (under LCDF Project)	Progress Report	Community based Agroforestry system (CBAFS)
Nonouti (under LCDF Project)	Progress Report	Community based Agroforestry system (CBAFS)
ALD Tanaea Gene bank	Quarterly Report	Agroforestry system (AFS)

Source: ALD, 2019

4.2.3. Line Group

Figure 10: Tabuaeran Island and Teraina Islands.



Source: ECD, 2018

Tabuaeran (Fanning Island) and Teraina (Washington Island) are part of the Kiribati Line Islands and are located at 3.9 and 4.7 north latitude respectively. Tabuaeran (34 km2) is a typical atoll with large lagoon and multiple channels, while Teraina (10 km2) is a raised atoll with extensive freshwater wetlands, including Washington Lake and associated reed-beds. Both islands support human populations of about 2000 and the habitats are dominated by coconut plantations that were established during the twentieth century. Both islands have long been serviced by regular cargo/passenger services from Kiritimati and Oahu, Hawaii, and in 2016 this was extended to include bi-weekly twin otter aircraft flights to and from Cassidy Airport, Kiritimati.

Native vegetation such as coconut trees have declined; many of them centuries old. (Wester et al 1992), but there are remaining vegetation like *te buka, te ren* and others still on Teraina. On Tabuaeran '*te bokikokiko* bird' known as Reed Warbler, once existed, but unfortunately they seem extinct for unknown reasons. The Rimatara Lorikeet bird (*te kura*) still exist, but are rarely sighted. This implies a limited knowledge for the status of these species and other indigenous biota, highlighting the need to safeguard these species.

Figure 11: Native Birds considered to be endangered on Tabuaeran Island

'Te Bokikokiko', 2012

'Te Kura', 2007

Photos by Eric VanderWerf : https://ebird.org/species/kuhlor1/ & https://ebird.org/species/chiwar1

Invasive ants

Surveys for Yellow Crazy Ants (YCA) and other invasive ants has revealed the presence of YCA on Tabuaeran at two widely separated locations (Table 27). One was on the edge of a coconut forest of North Tabuaeran and other was in gardens between Napari and Teurithiki villages. Besides, there are other invasive species on Tabuaeran and Teraina that might threaten the lives of plants and animals. These invasive species also contribute to the loss of both terrestrial and marine species. (See also Tables 27 & 28)

Table 26 – Survey findings on invasive ants on Tabuaeran

Note N40 refers to *Te Noni* 40 checked, L5 = 5 paired lures set, etc., V = visual through walks.

Date	Time	Location	GPS Lat/long 3.xxx 159.xx	Area/ length	Habitat	Method	IAS found
12	1510-1710	N Tabuaeran	87104; 27431	2.3 km	Plantation	V	YCA
13	Pm	West Landing	8604; .3637	0.5 ha	Landing	L5	0
13	Pm	Airport, village	86098; 3635	c.1 ha	Mosaic	L5	0
13	1425-1525	Napari Copra	8703; 2742	0.5 ha	Shed	L5	0
13	1430-1530	Napari Copra2	8752; 3594	0.5 ha	Building	L4	0
13	1550-1620	Teurithiki West	8532; 3578	0.5 ha	Village	N5	YCA
13	1620-1730	Teurithiki East	From above to 8530; 3580	1.5 km	Village	N40	0

Table 27: Invasive species at Fanning Island (Tabuaeran Is)

Pathway	Source	Invasive species threats	Risk level
CXI supply vessels	CXI – Several annually	Rodents (Pacific rat, ship ran, mice invertebrates) Weeds	High
Kwai	Honolulu, Cooks, Line Is- several visits annually	All of above (rodents, ants, weeds like Wedilia) plus cane toad, mongoose, giant African snails, reptiles, other ants e.g., YCA, RIFA, avian malaria.	High
Yachts and voyaging canoes	Fr Polynesia, USA several annually	Little fire ants, yellow crazy ants, red imported fire ants, other invertebrate (e.g., fruit fly) rats and mice, pets (e.g., dogs, cats, birds, and others)	Moderate
Cruise liners	Honolulu, Tahiti a few each year	As for yachts and canoes above	High
Wrecks	Anywhere- rare	Rats, mice and invertebrates	Extreme
Aircraft, Passenger and freight	CXI- twice weekly and charters	Rodents (rats and mice), ants, other invertebrates and weeds	High

4.2.4. Phoenix Group (Kanton Island)

Kanton is the only populated island in the Phoenix Island Group. Kanton is very isolated from other islands, but has historically played an important role in regional and local

developments. Government and private funds and external financial aid have been spent on constructing and maintaining infrastructure assets including roads, government buildings, wharves, jetties, causeways, airfields, schools and others. The primary transport infrastructure are the port and airfield which were constructed between 1940 and 1965 and have been severely degraded and in some cases derelict. The factors that enhance management of sustainability on Kanton Island include strong government commitment, strong institutional framework (PIPA), low population pressure, low fishing pressure, and low tourism. The factors that constrain sustainability at Kanton include externalizes such as cyclones, degraded infrastructure, limited renewable energy, water and waste disposal infrastructure and limited training of residents.

PIPI IO proposed zoning for Kanton Island in 2013 (PIPA 2013). The proposed zoning mapped the primary infrastructure such as airfield, settlement, port, road, bird sites, coral, turtle nesting and other key marine habitats. The largest proposed zoning areas were open space zone (green) for the land and tourism (yellow) for the beaches and lagoon. There are hundreds of people who dwell at one time per day indicating the limitation on number of people allowed to live on Kanton. Additionally, the proposed zoning includes conservation, heritage or fishing zones, which is the majority of the lagoon or area surrounding Kanton Island. Kanton uses a sustainable plan applicable only for the people of Kanton and not for their neighbouring islands.

Apart from that, tourists to Kanton should have with them an application form along with a disturbance plan and a point person. The reason for this is that all areas on Kanton are protected and conserved. Obtaining a permit allows one to explore the island and engage in diving, bird watching and other activities.

Figure 12. Map of Proposed Zoning for Kanton Island

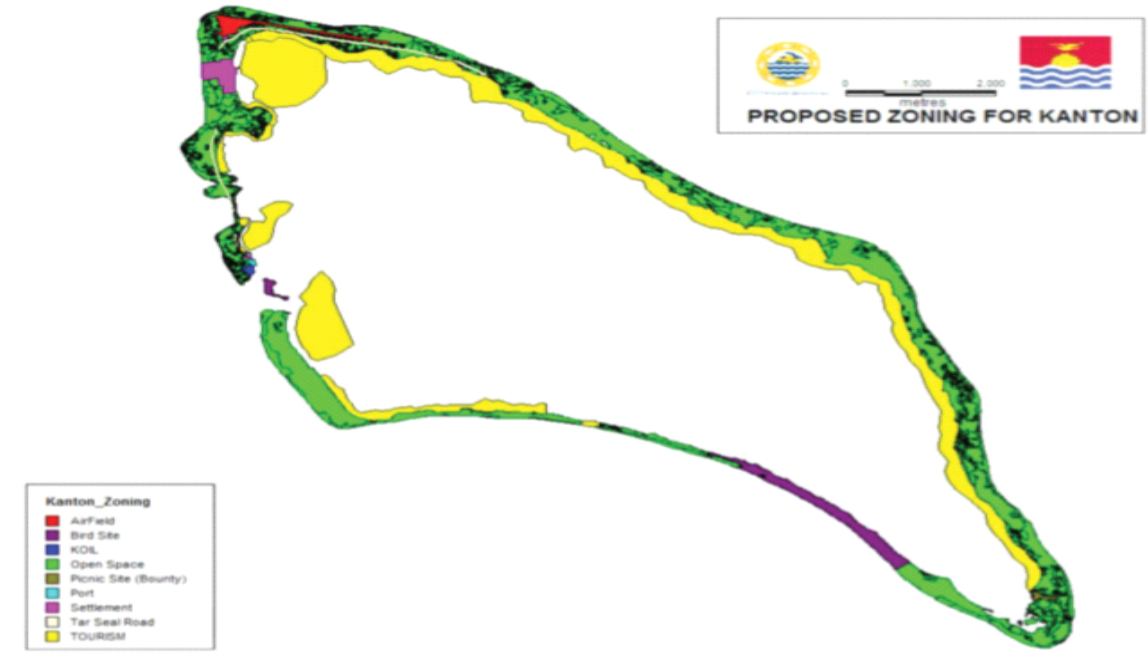


Figure 5. Proposed zoning of Kanton Island (source PIPA 2013).

4.2.4.1. Terrestrial vs Fauna

The terrestrial and marine biodiversity of Kanton Island is considered to be in relatively good condition with abundant and diverse plants, including 19 species of birds, approximately hundred and thirty species of fish, high coral cover consisting of eleven Genera, large numbers of nesting and feeding seabirds, and healthy terrestrial vegetation.

Table 28. Ecosystem Categories, Condition rating, Potential issues and risk and Potential management action for Kanton Island.

Category	Condition rating	Issue and Risk	Management Action
Fish	Good	Subsistence fishing (2kg pp. day) Low tourism, LOW risk	Closed areas, spawning closures, protected species, Limit of 1 fish pp. day proposed for tourism
Coral	Good	Anchor, fin damage LOW risk	Closed areas, Moorings
Bird	Good	Disturbance, pests LOW	Closed areas and times
Shark	Excellent	By-catch VERY LOW	Closed areas, protected
Vegetation	Good	Development, weeds LOW	LOW Closed areas, replanting

Kanton Island has approximately 170 years of colonial occupation and the use of its natural resources include guano mining, commercial fishing, agriculture, Defence and transport (Uwate and Teroroko, 2007). The human population has ranged from 0 to 1100 and is currently approximately 30-40 (Uwate and Teroroko, 2007; Reef Ecologic, 2017). There have been extensive introductions of plants, minor introductions of marine species (Turban snail) and several pests, mainly cats, rats, mice. There are many procedures and studies on terrestrial and marine conservation, protected area management and planning on Kanton. The carrying capacity of the island is challenging and necessary for sustainable management. Management plan limits of between 40 and 750 people have been implemented for islands in the Pacific. For example, the Midway Atoll Visitor Services Plan provides visitor opportunities for up to 50 overnight guests at any one time.

4.3 Evidence based for national progress (List of figures/Tables/data/results/pictures)

In Kiribati, the evidence based for national progress in programs such as survey, workshops and island trips contributed to the national progress. The programs were carried out on both Aranuka in 2019 and Eutan North Tarawa in 2017. On Aranuka, the initial program and activities included Marine Protected Area monitoring, Biodiversity and Conservation Survey and the demarcation of mangrove areas and mangrove replanting in areas mostly affected by the impact of the climate change.

This program of planting mangrove included the provision of support for each mangrove planted against strong waves action and tides. The support also included piling heavy rocks in front of the plants to act as barriers to reduce the pressure of the waves. Biodiversity and conservation surveys were conducted to collect local people's perspectives on their island biodiversity, to stock – take biodiversity data to feed in the national environmental indicators reporting and to understand the status of island biodiversity in their locality.

The survey findings indicated there are some threatened species biodiversity on Aranuka such as mud crabs, coconut crabs, lobsters and flying fish from over-harvesting. The collective decision was to find rehabilitation strategies to help these threatened species to recover for sustainability of resources.

Figure 13: Youths participating in mangrove picking and planting activity with ECD reps.

Source: ECD, 2018

Furthermore, in Eutan North Tarawaieta CBFM under MFMRD carried out her important activities related to conservation of biodiversity in terms of developing management plans, proposals for Marine Protected Area for the islets of Kainaba, Nabeina, Tabiteuea and Abatao. Developing the management plans is significant for the establishment of their own community-based fisheries management plans with rules and actions which can be taken by the villagers in managing their coastal fisheries using their strong beliefs and knowledge on their fisheries. The benefit to them is valuable knowledge and understanding of the status of their coastal fisheries in their localities. This action has contributed to the national progress in conserving the biodiversity from overharvesting.

Figure 14: Eutan North Tarawa Ieta in developing their management plan

Source: ECD, 2018

4.4. Summary of Progress

Table 29: (Level of confidence for each ABTs/overall rating for progress toward ABTs)

Aichi Biodiversity Targets	Progress	Level of confidence and overall rating for progress towards ABTs
Target 1: By 2020, at the latest, people of Kiribati are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	PA & PS regulations have been previously submitted to cabinet for endorsement, but was rejected. The reason being that MELAD-ECD was required to seek again the consent of the public for each of the protected species to be legally protected. However, ECD is now again working closely with AGs office to have all these regulations endorsed together with the second amendment of the Environment Act. Overall, PA & PS is yet to be endorsed. Cook islet, Motu Tabu and motus on Kiritimati are legally recognized as protected areas in the PA regulation although the PA hasn't yet endorsed it. It is anticipated that once the PA & PS regulation is endorsed, an effective implementation and enforcement of it would be fully supported and carried out. However, there are slight components of the PA&PS that were already implemented since they had been legally recognized under the Wildlife Ordinance.	Progressive of about 75% complete

	Few mangrove sites have been demarcated for ecotourism purposes (eg. Maungan Te Tongo, Aranuka – Also recognized as the Queen's Commonwealth Canopy) but have yet to be assessed. Awareness activities have always been carried out to schools' communities on biodiversity but have yet to conduct national and community trainings on the importance of agrobiodiversity and biodiversity. This is done under LDCF Project for the 3 pilot islands where FEA and AAA were trained to assist in implementing and protecting the environment. However, there is an issue with implementing this on other outer islands since ECD does not have extension staff on all islands.	
Target 2: By 2020, at the latest, Kiribati biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	A regulation for managing the use of unsustainable fishing practices, referred to as Fisheries (Conservation and Management of coastal marine resources) Regulations, has been endorsed by cabinet.	50% Progress towards ABTs
Target 3:	Campaign materials such as pamphlets and clips have been developed for biodiversity campaigns. Also, national biodiversity days have become part of the MELAD-ECD annual	50% Progress towards ABTs.

By 2020, at the latest, Kiribati incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.	celebration which involves activities like mangrove planting, clean ups and awareness through media.	
Target 4: By 2020, at the latest, Kiribati Governments, business and stakeholders at all levels have taken steps to achieve and implement plans for sustainable production and consumption and have kept the impacts of use of natural	Previously, eradication and control of IAS have been implemented with the assistance of TA. This was done on Onotoa and Christmas islands and on South Tarawa/Betio where YCA and mynahs were eradicated	85%progress towards each ABT.

resources well within safe ecological limits.		
Target 5: By 2020, the rate of loss of all-natural habitats, including forests in Kiribati, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	The Kiribati National Coastal Policy was developed and endorsed in 2016 through a financial assistance from MELAD –ECD under KAPIII (by Arthur Webb). There are also numbers of V&A studies undertaken under projects (LDCF project). Also, technical assessment which were carried out by Mineral and MELAD-LMD (such as beach profiling) are also significant in showing how vulnerable coastal areas are to inundation and flooding. The survey of shipwrecks in Betio had been initiated in previous years by MELAD-ECD but the removal has not yet been done due to financial issues.	50% progress towards each ABT.
Target 6: By 2020 all fish and invertebrate stocks and aquatic plants in Kiribati are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no	MELAD-ECD has established its database called EMIS to enable staff and other sectors to report according to the identified indicators including KBAs. This has served as KBA database showing trends of various kind of environmental information. TA has also been identified under CBII Project to fully establish this. However, as of now, all it needs is putting all relevant information into this database.	45% Progress towards ABTs

significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.		
Target 7: By 2020 areas under agriculture, aquaculture and forestry in Kiribati are managed sustainably, ensuring conservation of biodiversity.	PA & PS regulation is yet to be endorsed but the final update of the regulation has been submitted to AGO to work on the amendments for endorsement.	95% progress towards ABTs.
Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem functions and biodiversity.	This is the MELAD-ECD weekly, and at times monthly, activity. Other NGOs and ministries also engage in this. Communities are also actively engaged with clean ups in their own areas and on coastal sites. With evident improvements on South Tarawa. Recycling of wastes (pet bottles and others) and reusing of organic waste for different purposes are also carried out. Currently, MELAD-ECD has initiated a National dialogue which aims at collecting views from SOEs, communities and ministries on how to manage waste.	70% progress towards ABTs.

Target 9: By 2020, invasive alien species and pathways in Kiribati are identified and prioritized, with priority species controlled or eradicated, and measures are in place to manage pathways to prevent their re-introduction and establishment.	KNISSAP was already endorsed in and effective from 2015-2020	95% progress towards each ABT.
Target: 10 By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized so as to maintain their integrity and functions.	Through MELAD-ECD, coral replanting including replanting of coastal vegetation is regularly done for the restoration and rehabilitation of marine and terrestrial habitats Assessment has not yet been fully undertaken due to capacity constraints. PA & PS has incorporated wildlife sanctuaries to be protected for ecotourism activities. These are reflected in the Wildlife ordinance.	100% progress towards ABTs.
Target 11: By 2020, at least 17 per cent of terrestrial and inland water,	PIPA has been declared a national marine protected area in the world.	70% Progress towards ABTs.

and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effective and equitable management, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	However, MELAD-ECD and MFMRD-CFD have also expanded this initiative or activity through establishing several marine protected areas at the community, village and island levels. The management plans have been developed through community, village and at island levels. These management plans have integrated issues from both land and sea, particularly on mangroves. Shown below are villages and islands where the management plans have been developed and endorsed at island and village levels. Also, it identifies islands and villages with draft management plans. Endorsed Management Plans at island level • Aranuka Draft Management Plans developed at island level: • Makin • Butaritari - Tekinati • Maiana Endorsed management plans at village level: • Abemama – Baretoa, Tanimainiku, Tabontebike, Reina villages • Butaritari – Onomwaru village • North Tarawa - Nooto Village MELAD-ECD have constructed and undertaken mangrove plantings/buibui during outer island trips to project sites (KAP III, LDCF)	

	The second amendment Environment Act has incorporated the recognition of traditional knowledge and genetic resources but has yet to be endorsed.	
Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, mostly those in decline, has been improved and sustained.	In the Wildlife Ordinance, the Turtle is fully protected in certain areas (Wildlife Ordinance Schedule 2). Turtles are recognized under the Wildlife Ordinance in certain areas and also under the Protected Species regulation which have yet to be endorsed. However, through the integrated mangrove and natural resources management plans, turtles are also declared by some islands and communities to be protected (partially – can be harvested only for important feasts). There was also an MOU developed and signed between communities or islands with an endorsed management plan. The MOU was purposely developed to ensure communities implement and enforce the management plans with their own efforts and resources. Monitoring of illegal mining is regularly undertaken on South Tarawa and Betio. There is a limitation in monitoring on outer islands because of the scope and coverage focus on South Tarawa and Betio only. Hence, the second amendment that is now currently with AGs office will help to address this gap. Enhancements of nesting beaches have been done on some outer islands and Tarawa through mangrove plantings.	80% progress toward ABT
Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated	Identification of marine and land based destructive activities were identified during the development of the CBMMP and CBFM and during household surveys.	100% progress towards each ABT.

animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.		
Target 14: By 2020, ecosystems that provide essential services, including services related to water and health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	TBIS were conducted on Beru, North Tabiteuea South Tabiteuea. Work with MIA to compile island profiles which contains unique features of each island such as shrines, WWII artefacts and other tourist attractions.	95% progress towards each ABT.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	Workshops on Environment Safeguard System have been conducted on few outer islands. This ESS has broadened and enhanced the capacity of local people in managing and protecting their environment from the adverse impacts of development projects and human activities. KMS can contribute on this in terms of early warning system already set up and products issued for planning and decision making	95% progress towards each ABT.
Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	These have been implemented on project pilot islands of LDCF housed within MELAD-ECD. Project sites are Abemama, Maiana and Nonouti apart from where ALD have conducted this.	85% progress towards ABT.

Target 17: By 2015 each Party has developed and adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	Have been implemented under the Fisheries regulation and through the request of KNTO for tourism and recreational activities. The recent Kiribati Tourism Act 2018 does not include ecotourism development and management; however, this is in the 2019 MOP. Number of trainings for data analysis has been initiated at ECD level. EMIS has been developed for centralizing all environment related data.	90% progress towards ABT.
Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of	TCET (Translation ad hoc Committee for Environmental Terminology) is a committee which develops Environmental glossary, and this has incorporated biodiversity terms. This has always been part of MIA-Culture during outer island visit. No actual traditional system is in place. The first National Cultural Policy is being developed – it is currently in draft. The cultivation has been done on Abemama and Nonouti.	

indigenous and local communities, at all relevant levels.		
Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, their values, functions, status and trends, and the consequences of their loss, are improved, widely shared and transferred, and applied.	Training on Compost making is also undertaken at MELAD-ECD as part of the Waste Minimization Project –UDP. Soil health analysis is a mandate of MELAD-ALD and is now currently conducting it as part of the V& study and also part of their institutional programs. Achieved and on going 4 Dataset in-place, but needs to be centralized Nanikai baseline (CTA program) completed- 2019 Baseline survey conducted on Maiana, Abemama and Nonouti- LDCF 1 Baseline data collection training to be conducted in 2019- LDCF No proposer study has been undertaken by ECD to assess the impact of tourism developments on biodiversity but there is an obligation of applicants who wishes to undertake these developments to produce and conduct first an EIA and to produce EIA reports for a particular activity.	75% progress towards each ABT.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	Specification or emphasis on the protection of turtles has been incorporated into the integrated mangrove and natural resources management plans. There are no separate management plans for turtles in place. Strengthening the enforcement of biodiversity related legislation has been implemented and enforced through the assistance of ECD-LCS and police officers. Enforcement training manual was already developed for enforcement activities	92% progress towards ABT.

4.5 Other relevant information

Coastal Based Fisheries Management under the Coastal Fisheries Division in the Ministry of Fisheries and Marine Resources has contributed to biodiversity in assisting communities in the Outer islands to restore their marine resources from overfishing. Her activities are to assist in providing the communities to develop their management plan which really useful for them to protect, conserve and sustain their coastal fisheries resources. For example, on Butaritari in Bikati village, the clams for the past years had been overharvested which means that these species are threatened. However, today these clams have recovered as everyone in that village are protecting them. Apart from Bikati, Tarawa Ieta is seeking CBFM staff assistance for their marine resources which are now already under threat, such as 'te Amori'. Therefore, people in the village have invited CBFM Staff to aid them on the preservation of their marine resources. This will undoubtedly contribute to the biodiversity from restoring their marine resources and preventing them from overexploitation.

4.6. Linkage/contribution of ABTs to the implementation of 2030 Agenda for Sustainable Development and the Sustainable Development Goals SDGs and SDG Targets

The table below will show the linkage and contribution of Kiribati National Targets to SDG and MEA reflect the Kiribati commitment in celebrating its agreement to international conventions and agreement through the implementation of biodiversity events.

Table 30: Link between ABTs, SDGs and SDG Targets.

Aichi Biodiversity Targets.	**Sustainable Development Goals SDG targets MEA**	**Goals SDG targets**	**MEA**
Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	Goal 12: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Goal 4: Ensure sustainable consumption and production patterns	12.4.2, 12.5.1, 12.7.1&12. b.1 4.3.1, 4.4.1 & 4. a.1	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)
Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes are	Goal 1: End poverty in all its forms everywhere. Goal 3: Ensure healthy lives and promote well - being for all ages.	1.3.1, 1.5.4& 1.a.1.	Fund Protocol 92 Kyoto Protocol 141 as appropriate reporting systems.

being incorporated into national accounting, as appropriate, and reporting systems.		3.8.1, 3.b.3& 3. d.1.	
Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.	Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.	15.1. 2,15.4.1, 15.9.1	United Nations Framework Convention on Climate Change United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)
Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve and implement plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Goal 12: Ensure sustainable consumption and production patterns.	8.6.1, 8.9.1, 8.9.2, 8.b.1 12.4.1, 12.5.1& 12. b.1.	World Heritage Convention Vienna Convention for the Protection of the Ozone layer
Target 5: By 2020, the rate of loss of all - natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	15.1.2, 15.3.1 15.5.1& 15.8.1	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD) Cartagena Protocol on Bio – Safety to the Convention on Biological Diversity

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally with ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Goal 12: Ensure sustainable consumption and production patterns. Goals 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.	2.4.1& 2.5.1 12.4.1, 12.5.1 & 12.b.1. 14.1.1, 14.4.1 14.5.1, 14.6.1, 14.b.1& 14. c.1	Convention on the Conservation and Management of the High Seas Fishery Resources in the South Pacific Ocean. Pacific Tuna Fisheries. International Whaling Convention (IWC)
Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	Goals 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity.	14.1,14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.c 15.1, 15.2, 15.3, 15.5, 15.7, 15.8, 15.a, 15. b	Convention on the Conservation and Management of the High Seas Fishery Resources in the South Pacific Ocean. United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)
Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem functions and biodiversity.	Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land	14.1.1, 14.4.1, 14.5.1, 14.6.1 14. b.1& 14.c.1 15.1.2, 15.3.1,	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)

	degradation and halt biodiversity loss	15.5.1& 15.8.1	
Target 9: By 2020, invasive alien species and pathways in Kiribati are identified and prioritized, with priority species controlled or eradicated, and measures are in place to manage pathways to prevent their re-introduction and establishment.	Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity.	15.5.1& 15.8.1	Cartagena Protocol on Bio – Safety to the Convention on Biological Diversity. United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)
Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized so as to maintain their integrity and functions.	Goal 14: Conservation and sustainably use the oceans, seas, and marine resources for sustainable development	14.3.1, 14.4.1, 14.5.1, 14.6.1 14. a.1 & 14. b.1	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD) Vienna Convention for the Protection of the Ozone layer. Stockholm Convention on Persistent Organic Pollutants (POPs)
Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effective and equitable management, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 14: Conservation and sustainable use of the oceans, seas and marine resources for sustainable development.	11.2.1, 11.4.1 11.7.1, 11.a.1 11. b.2 14.3.1, 14.4.1, 14.5.1& 14. b.1	Convention on the Conservation and Management of the High Seas Fishery Resources in the South Pacific Ocean. Pacific Tuna Fisheries. International Whaling Convention (IWC)
Target 12: By 2020 the extinction of known threatened species has	Goal 11: Make cities and human settlements	11.2.1, 11.4.1 11.7.1,	Ballast Water Management Convention 2004

been prevented and their conservation status, mostly those in decline, has been improved and sustained.	inclusive, safe, resilient and sustainable. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests combat desertification, and halt and reverse land degradation and halt biodiversity loss.	11.a.1& 11.b.2 15.1.2, 15.3.1 15.5.1& 15.8.1	SPREP Dumping Protocol SPREP Pollution Emergency (Protocol concerning cooperation in combating Pollution Emergencies in the South Pacific)
Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio - economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	2.2.2, 2.3.2 2.5.1, 2.a.1& 2. c.1	Kyoto Protocol Vienna Convention for the Protection of the Ozone layer
Target 14 By 2020, ecosystems that provide essential services, including services related to water and health, livelihoods and well - being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests combat desertification, and halt and reverse land degradation and halt biodiversity loss.	15.3.1, 15.8.1& 15. b.1	United Nations Convention to Combat. Desertification, Land Degradation and Drought (UNCCD). Vienna Convention for the Protection of the Ozone layer. Stockholm Convention on Persistent Organic Pollutants (POPs)
Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration,	Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	8.1.1, 8.2.1, 8.3.1& 8.5.2	Cartagena Protocol on Bio – Safety to the Convention on Biological Diversity

including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.	14.3.1, 14.4.1, 14.5.1& 14. b.1.	United Nations Convention on Biological Diversity (UNCBD)
Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	2.2.2, 2.3.2, 2.5.1, 2.a.1& 2. c.1	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD). Cartagena Protocol on Bio – Safety to the Convention on Biological Diversity.
Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	Goal 1: End of poverty in all its forms everywhere. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	1.4.1, 1.5.1 & 1.5.4	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD) United Nations Convention on Biological Diversity (UNCBD)
Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local	Goals 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	16.2.2, 16.3.1, 16.3.2, 16.7.1& 16.7.2	SPREP Dumping Protocol Ballast Water Management Convention 2004

communities, at all relevant levels.			
Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, their values, functions, status and trends, and the consequences of their loss, are improved, widely shared and transferred, and applied.	Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.	11.3.1, 11.4.1 11. a.1& 11.b.2 17.6.1, 17.8.1 17.14.1, 17.16.1 17.18.1& 17.18.3	World Heritage Convention. Basel Convention on the Control of Trans - boundary Movements of Hazardous Waste and their Disposal
Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011 - 2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	Goal 10: Reduce inequality within and among countries. Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.	10.1.1, 10.7. 1 10.a.1, 10.b.1& 10.c.1 11.1.1, 11.2.1 11.3.2 & 11.7.2	United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD) Cartagena Protocol on Bio – Safety to the Convention on Biological Diversity

SECTION 5. ADDITIONAL INFORMATION OF THE CONTRIBUTION OF LOCAL COMMUNITIES

The focus of this section are case studies used to acquire more additional information which contributes to the community level. It will also provide information related with Kiribati National Targets and Aichi Biodiversity Targets.

5.1. Case study 1: Community based mangrove management plan (CBMMP)

The Environment and Conservation Division MELAD is mandated under the Environment Act to conserve the environment. While implementing this Act, an environment licensing system is put in place to ensure environment significant activities including foreshore activities minimize adverse impact to marine resources.

The Community- based conservation is an approach that recognizes the participation of the local communities in the designs and implementation of a conservation project as its core component. ECD also has the Integrated Community based mangrove and Natural Resources Co- Management plan that contributes to the conservation and sustainability of marine resources. (http://www.mfed.gov.ki/sites/default/files/Kiribati%20VNR%202018.pdf)

5.1.1. RAMSAR

The Ramsar Convention on Wetlands site in Nooto, North Tarawa contains a range of coastal ecosystems, which support high levels of biodiversity and are rich in resources. The site is also an important breeding area for marine species, including endangered species, and is one of the few areas in Kiribati where mangroves grow naturally. In 2016, the management plan was prepared and produced by the people of Nooto, North Tarawa with technical assistance from the Government of Kiribati, through the Environment and Conservation Division of the Ministry of Environment, Lands and agricultural Development. The production, editing and publishing of the management plan was provided by the office of the Beretitenti through the Kiribati Adaptation Programme III (KAP III).

5.2. Case study 2: Community based fisheries management (CBFM)

The model of CBFM conducted in Kiribati first started with focused villages which were Kuma, Tanimaiaki and Bikati in Butaritari Island and Buariki and Tabonibara in North Tarawa. CBFM started small in order to draw lessons and challenges and build on them. By the end of 2015, the pilot villages had a management plan in place and the communities started implementing them in a gradual manner (Timiti, 2015). For instance, Tabonibara villagers shared many concerns on their management plan and therefore started with only three actions and those included, the banning of fishing during the spawning aggregation for silver biddy, ban of small mesh gill nets and banning the harvest of berried crabs.

The development of the plan was done in participatory and inclusive manner where women, youth, men and old men were involved. The structure of the management plan had a vision on top, which is mainstreamed into themes and specific actions under those themes. (Timiti, 2015). Each gender group worked on development of the management plan which were later merged according to the most priority issue to the least. The merging of the management plan was discussed with the whole village and the different gender groups were encouraged to argue their concerns. This is a way of empowering the marginalized group.

Kuma village in Butaritari is among the first five pilot villages by CBFM from 2014. Kuma is the northern most village on the island of Butaritari, a low-lying coral atoll located up-north of the Gilbert Group in the Republic of Kiribati. The population is around 300 with the majority made up mostly of younger people aging 25 and below. Life in the village revolves around the land and sea. Since almost everyone is involved in any sort of fishing activity, the majority of proteins consumed come from the lagoon and the ocean.

On 6th June 2015, Kuma finalized a management plan that was inclusively developed by old men, middle aged men, youth and women. Although there are two wards in Kuma, Kuma North and Kuma South and has two sets of executive committees and two councillors for each ward, the management plan was developed for the whole of Kuma in the belief that when it comes to fishing, the people of both wards can fish anywhere in Kuma. This management plan looked into sustainable fishing practices such as the ban of small mesh gill nets, ban catching of berried crabs and the use of solar lights to catch crabs, encircling corals with nets, catch of bonefish during the spawning aggregation. The plan also includes indirect fisheries issues such as waste management and prevention of defecation on the beach as it also supports the overall health of the marine ecosystem.

On 20th May, 2016, a follow up was made on the management plan, some of the findings were, the small mesh gill nets were completely banned, ban of harvest of berried crabs, ban of destructive fishing methods like encircling of corals was banned but only opened for special functions, prohibition of rubbish dumping at sea and more than half the number of households had built their toilets while the remaining were given a deadline up to July 2016 to build their toilets. (CBFM trip report 2015)

The team returned again on May 2017 and witnessed many changes like the clean beaches, positive perceptions from villagers like the increased catches of silver biddy, emperors seen near shore which were not seen before CBFM intervention. As stated by Bita Ioane Kuma South Councillor “Catches have once declined nearshore before the arrival of CBFM in 2014. The creation of management plans brought in positive impacts to our marine resources and fishermen are experiencing more catches now than before”

Due to the lack of contact and visits by CBFM team the villagers of Kuma soon felt demotivated and started breaching their management plan. Destructive fishing methods and gears were again practiced, and the villagers shortly realized the decline in their fisheries. The village elders’ council for both Kuma called ‘Takenraoi’ saw the benefits of CBFM and urged village members to revive and continue the practice of their management plan. Atanibure Tamwaiti member of Takenraoi said that “Implementing our management plan have crucial benefits on the overall health of our coastal fisheries resources. We do not want to completely abandon our management plan as we have seen numerous benefits. We want everyone in Kuma to know the vitality of this practice and to continue for our benefit and of the future generation.”

Again, in late 2018 and 2019, Kuma revived the implementation of its management plan and strictly enforced seasonal closure sites for bonefish. Local fishers have been heavily involved with the enforcement and were tasked to guard marine managed areas during spawning seasons by floating on water using canoes or boats. Te Unimwane, Island Councillors and village leaders started a campaign for the recognition of Kuma's management plan and seasonal closure site to the whole island of Butaritari

The mayor of Butaritari, Kareke Itinibeia stated that Kuma's motivation in keeping up with their management plan for a long time has inspired other villages on the island. Kuma 's management plan has been implemented since 2014 until today, and they are still fighting in full council meetings that every village is to recognize and respect marine managed areas in Kuma. All villages on Butaritari support Kuma's cause and are willing to follow their footsteps by creating management plans of their own.

It is clear, that the intervention of CBFM has brought positive impacts on Kuma but the villagers were not fully committed in the first place, thinking they were managing their fisheries for Ministry of Fisheries. When Kuma ceased utilising their management plan, and started using destructive fishing methods and gears, their fisheries instantly degraded and that was when Kuma realized that the management plan is for Kuma and not for the Government. The realization of the importance of CBFM by Takenraoi association and motivation and support shown by the whole village as well as other villages indicates the full commitment and buy-in of the community and the whole island of Butaritari.

5.3. Case Study 3: Community based Island Development (IDP)

The Kiribati Family Health Association (also known as KFHA) is a non-profitable, Non-Government Organization and is a member association of the International Planned Parenthood Federation (IPPF). While KFHA's core mission is on the delivery of information and services on Sexual and Reproductive Health and Rights (SRHR), its involvement with MFAT funded project- Health Families Project, has allowed expansion on its core mission through integration of health-related issues to promote the welfare and good health for all islanders.

The extension of this program to 7 Outer Islands was made possible through funding support from MFAT (Healthy Families Project).

The development and implementation of the Island Development plan (IPD) on 7 outer islands and 2 urban councils (BTC and TUC) is a holistic, integrated and multi-dimensional approach in supporting good health. This approach involves engagement of Island authorities, traditional and church leaders, donor partners (MFAT, NZ) and KFHA's other key Stakeholders (Government Ministries) in the development of the plan, and island (local) communities in their implementation. The plan consists of four key areas namely- Development, Peace, Health and Biodiversity Sustainability. The islands set their own targets on each of these key

areas for the inter-village competition. Then there's a collective target (for each of the Key Areas) which was set and agreed by all islands participating.

In 2018, the collective targets set were:

For Development

- The Island must have at least 2 'Skill' Center where women could sell (and make money from) handicrafts.
- 80 % of households must have toilets
- Clean homes and villages
- For Biodiversity Sustainability
- Planting of Coconut trees that equals to half of Island's population.
- Planting of at least 3 food crops near homes (backyard)
- Islands must have policies or bylaws in place that will ensure conservation / preservation of their own marine resources.

The islands participating (Butaritari, Marakei, Abaiang, North Tarawa, Maiana, Aranuka and Abemama) together with the two urban councils (BTC and TUC) will be competing on these targets.

In December 2018, the islands delegation which comprises of the Mayor, Islands Clerk, Old Men Representative and Women Interest Worker were invited to a Symposium (hosted by KFHA) to showcase their achievements on the 'Targets'.

Table 31: The achievements of 3 islands (Butaritari, Aranuka and Marakei) are summarized in the table below:

Island	Key Area	Collective Target	Achievement	Comment
Butaritari	Biodiversity Sustainability	Replanting of coconut trees, the number which equals half the islands population	504 household on Butaritari were tasked to plant 100 coconut trees each Not fully achieved due to land space limitations	According to Butaritari Report, people are encouraged to continue planting until target is achieved.
		Planting of at least 3 food crops near each home	All 504-household planted 10 pawpaw	

			trees, 10 tapioca and 10 cassava	
		Policies/byelaw on marine resources conservation/preservation	Closure of fishing sites enforced on the villages of Bikaati, Onomaru, Tanimaiaki and Kuuma. Onomaru had a policy on Mangrove protection and preservation. Other villages were encouraged to do the same.	
	Development	At least 2 'Skill' Center where women could sell (and make money from) handicrafts, local wear (Mauri Wear)	Only one Skill Center owned and run by Catholic Women's Group (Itoi-ni-ngaina) were local handicrafts and local wear are sold. Women's Interest Worker (WIW) office is used to sell garments made by women	
		80 % of households must have toilets	90 % of household (N= 504) have toilets. The remaining 10% (50 households) were fined $5 and ordered by The Old	

			Men Association to build their toilets. Villagers raise fund to build toilets for students of St Leo High School	
		Additional information	95% (n= 480) of household have their wells sheltered	
Aranuka	Biodiversity Sustainability	Replanting of coconut trees, the number which equals half the islands population	2,000 coconut trees planted	A working committee (n=30) was established to oversee this and to work closely with the Assistant Agricultural officer and Nursery man.
		Planting of at least 3 food crops near each home or at backyard	100% of household (n=244) have planted pawpaw trees, banana and Breadfruit trees near their homes (or at backyard)	
		Policies/byelaw on marine resources conservation/preservation	Byelaw passed and endorsed by FMRD 2-inch fishing banned Mangroves not to be used as building material.	

	Development	At least 2 'Skill' Centre where women could sell (and make money from) handicrafts, local wear (Mauri Wear)	No skill centre	From the island's report, a project proposal has been developed for the construction of the new 'Skill Center" which they plan to have and ready for use in 2019.
		80 % of households must have toilets	65% of household have toilets	Total Household= 159. Household with toilets= 159.
Marakei	Biodiversity Sustainability	Replanting of coconut trees, the number which equals half the islands population	Marakei has a population (Health Census 2018) of 2721 Young coconut trees planted = 1339 (49.2%)	Trees planted per village: • Rawannawi – 397 • Temotu – 167 • Raweai – 231 • Tekarakan - 176 • Bainuna – 183 • Norauea – 82 • Tekuanga – 67 • Antaai - 36
		Planting of at least 3 food crops near each home or at backyard	Household = 309 80% of households planted Banana, Pawpaw and pumpkin in their backyard	

			20% have vegetable gardens.	
		Policies/byelaw on marine resources conservation/preservation	Byelaw on Ónauti Control Price'was passed in 2018	
	Development	At least 2 'Skill' Centre where women could sell (and make money from) handicrafts, local wear (Mauri Wear)	None has been established however Nei Tokanimarakei Women's Association has proposed to the Island Council to be included in the islands project priority list	
		80 % of households must have toilets	Only 47.6% of total household have toilet	Household# – 309

During the Symposium, the islands were assessed based on their reports and evidences provided. The island of Aranuka was identified as the winner and received a Trophy and a Cash Prize of $2,000.

In August 2019, a Memorandum of Understanding (MOU) between KFHA and MELAD was signed with a view to integrate environmental and biodiversity conservation and protection issues in the Island Development Plan (IDP). With this new partnership, KFHA and ECD (MELAD) are working together towards achievements of some of National targets set in the Kiribati Biodiversity Action Plan 2016-2020. Five out of the Seven Outer Islands have had their IDPs reviewed and updated. Some of the changes include:

- Implementation of Activities that will ensure identification and restoration of at least 2 overharvested plants and trees species. (The Kiribati Biodiversity Action Plan 2016-2020)

Five Islands (Butaritari, Marakei, Abaiang, North Tarawa and Aranuka) have identified that Pandanus Tree and Te Bero (Pandanus tectorius) are the two most threatened tree species in Kiribati.

- Integration of Non SRHR topics such as Waste Management and Agriculture in the women's Sexual Reproductive Health and Rights (SRHR) training on South Tarawa and Outer Islands with a view to empower women to enable them to better deal with environmental issues and thus promoting the welfare and good health at the home and community level (Supporting the IDP)
- In September 2019, 85 women from various communities and church groups on South Tarawa attended this training workshop.

The same training workshop was carried out on 5 outer islands but due to unavailability of resource personnel to deliver topics on Waste Management and Agriculture, these topics were omitted. The Island's progress with regard to their IDP will be showcased again in December 2019.

SECTION 6: PRIORITY PROBLEMS, ISSUES, AND CHALLENGES AFFECTING THE STATUS OF ISLAND BIODIVERSITY AT THE NATIONAL, ISLAND, AND VILLAGE LEVELS.

Managing and conserving marine resource was challenging at the national level as it requires full commitments and collaboration among different stakeholders mainly with the involvement of resource users or communities that usually harvest marine resources for their daily consumption and income source however Coastal Fisheries Division under the Ministry of Fisheries and Marine Resources Development has been conducting various programs of activities which contributed to the conservation and management of marine coastal resources.

At the national level there are ten islands that have initiatives in fisheries management at the community level and these are Makin, Butaritari, Marakei, Abaiang, North Tarawa, Maiana, Aranuka, Abemama, Nonouti and North Tabiteuea have been involved since 2014 and in 2018 the community-based fisheries management initiatives have expanded to the island level. Makin, Marakei and Aranuka are small islands and fisheries management consultations in late 2019 involved all villages on the islands and thus the CFMPs are both at the village and collectively become an Island fisheries management plan, they are still in draft form but to be finalized in 2020.

Maiana, Abemama and Nonouti are pilot islands under LDCF and these islands have Island Level Strategic plans. Before the development of ISP there were already village consultations on management plans, 2 villages in Maiana, 1 village in Nonouti and 4 villages (CBMMP) on Abemama. These CFMPs were included during the development of ISPs. North Tabiteuea was recently consulted on October 21st to 28th, 2019.

6.1. STATUS OF PROBLEMS, ISSUES, AND CHALLENGES AT THE NATIONAL LEVEL

As known, Kiribati islands are grouped into 3 and islands are different in features. There are some with lagoons, without lagoons, with high precipitation, low precipitation and so forth. Hence this is one of the challenges when it comes to protecting the environment since each island atoll has its own features to deal with. For example, applying mangrove planting and local seawall 'buibui' does not work on every island but in islands with favorable parameters for these EBA works.

The isolation of islands from the main capital is also one issue. This is specifically for the southern islands at the far end of the line plus the Line groups. Issues (on environment, health emergencies etc) on these islands could not be addressed quickly compared to nearby atolls to Tarawa where transportation is more accessible. The project health might not be so good as well since the monitoring to them might not be as frequent as there was only one flight a week and so it could take few months for the flight to be vacant for the project team.

6.2. STATUS OF PROBLEMS, ISSUES, AND CHALLENGES AT THE ISLAND LEVEL

The connection between the people and their land in every island are unique in many ways such as their culture, belief, actions and mostly their biodiversity. Their cultures and belief are very important for them in the way of preserving and sustaining their biodiversity from exploitation. Today as we can see in real life their relationship with biodiversity can be changed from human actions in the way of subsistence economy and other related problems like climate change, bush fire and unawareness about the importance of biodiversity.

Additionally, people on each island are reliant on marine resources for their livelihood and their subsistence economy as well. For example, the people in Abaiang use to harvest the Ark shell and giant clam at a high rate and selling them out at the Market in South Tarawa for their beneficial income. In relation with biodiversity, these marine resources can be diminished if its harvested in a very huge amount. This is commonly occurring in Abaiang and other islands, because most local people are unaware of the importance of the marine resources and terrestrial to their lives.

Moreover, money contingency is one of the main problems in the island level, as nowadays most people are indolent to engage with traditional activities such as cutting toddy, bwabwai plantation, fishing and so forth: and as the outcome of these the traditional knowledge and skills are gradually lacking. Maintaining and preserving of culture can contribute to the sustainability of natural resources and the way of living like making toddy syrup (kamaimai), making of pandanus fruits (kamaimai), and other preserved food. Local society have become idle in providing their own local food and drink, they rely on money to buy these commodiites from their neighbours. In relation with National Targets and Aich Biodiversity Targets it is obvious that depending greatly on money can cause the loss of our traditional knowledge and skills.

Climate change and sea level rise are also causing negative impacts on each island. There are many sites and areas that have been affected from sea level rise, for instance in Tebunginako

village, some areas such as houses, banana pit and bwabwai pit were affected badly which cause dwellers to relocate to other safe areas. Water pollution is also an issue caused by sea level rising in which the intrusion of saline water into the freshwater lense, as a result water is unclean and unsafe for drinking. Similarly, lives of plants and vegetation such as breadfruits, banana pit, bwabwai pit and pandanus tress were demise from the impact of the saltwater intrusion.

Furthermore, the increase in temperature can also disturb the lives of plant trees in several islands, for example in Nonouti Is, many trees are gradually died out due to the increasing of temperature. By looking at these, people in every island are facing many challenges, consequently they are deliberately looking for assistance from any projects such as KiriWatSan project provides water tanks to people of Abaiang Is, as four households in every village will shared one water tank and some household used te Tamana bump for drinking water and other important usage. Moreover, a team from Government of Kiribati visit Abaiang Is to consult with villagers encouraging them to plant many trees such as te bwabwai, breadfruit, banana, coconut tree, pandanus tree and so on. And also conducting training on preserving and maintaining plants for the growth and sustainability of natural resource.

6.3. STATUS OF PROBLEMS, ISSUES, AND CHALLENGES AT THE VILLAGE LEVEL

The main issue with local people in villages is needing of incentives. Most of them need incentives as part of partnership with them, i.e., while developing their management plans there is cash distributed for everyone for their lunch. This arises the interest of neighboring villages not because they intend to protect their natural resources by formulating their management plan for conservation, but for monetary need. In such, villages who does not actually willing to volunteer for conserving their resources does not implement what they set in their plans.

On the other hand, there are certain boundaries for each village on the island. One issue that been raised while CBMMP consultation is the enforcement of community constitution at the village level for conservation purpose. The case is that the neighboring community usually breaks their local constitution by fishing under their village, cutting mangroves nearby etc. This is happening as the local people fight for the truth that no-one owns the sea but the government and also boundaries between villages were not clearly marked by the island council.

Furthermore, the change in leaders (chairman, vice chairman etc) of the village is also one of the main challenges. Each person has different plans and priority for the village to achieve, for example some are sport minded, conservative minded and so forth. The change in the village leader means the change in village direction in some way which this could also affect the strength of the community to support conserving of their natural resources. Village people always need someone to motivate and push them to what good for them. However, if the leader is not so supportive for conservation that he/she focus more on commercial initiatives this could also divert the peoples' behavior and belief from what they had and worked for before.

SECTION 7: UPDATED BIODIVERSITY COUNTRY PROFILES

7.1. Update of country profile accessible

Kiribati is a small country with a total land area of 811sq km. It widely scattered located in the Pacific Ocean along the edges of the Equator, include the Gilbert, Phoenix and Line islands groups. It has limited natural resources of great economic significance such as arable land, fish and phosphate. It also includes all marine and terrestrial ecosystems such as plants, animals and varieties found in these ecosystems, with its people being the holders of traditional knowledge, their beliefs, language and uses which are all related to the environment and sea. The people have always relied on biodiversity for their main source of income, meat and shelter. Additionally, Kiribati has taken a big step in declaring a large protected Area which is Phoenix Island Protected Area that covers 408250 sq km. The PIPA embodies Kiribati's move towards conservation of its most valuable artefact, through which there should be greater management and control over the extraction of marine resources that would benefit not only the future generations but the world as a whole. The protected marine areas in Kiribati have passed the marine targets set out under CBD Aichi Target 11 with 12% territorial waters protected. The entire PIPA area consists of lagoons, corals reefs, channel and deep open sea was officially closed to commercial fishing. The abundance in marine life is known to support a number of worldwide endangered and endemic species and concourse interesting and unique species gathering found nowhere elsewhere on earth.

Furthermore, past scientific findings have confirmed that PIPA is an important place for spawning site for the tuna species. The land is also wealthy in bird's life with 50 bird's species found on that island and 19 breeding seabird species breeding at that site.

7.2. Status and trends of biodiversity

In Kiribati the biodiversity is often divided into two vital features: marine and terrestrial biodiversity. The terrestrial in Kiribati is not particularly wealthy or epidemic and what is survived is threatened by human action such as development and expansion activities across limited land area. In that case, the alteration in Biodiversity in Kiribati was causing by several factors regard the human activities, increase in population, natural phenomenon, the impacts of climate change impacts, urbanization and the low level of awareness activities. These factors were regarded as threats to both the marine and terrestrial biodiversity occurrence on the services of the ecosystem and the livelihood of local communities in Kiribati. It is obviously that, Kiribati is now experienced the declined in biodiversity both marine and terrestrial. The decline in terrestrial refers to the agro – biodiversity such as traditional staple foods like breadfruits, pandanus, fig tree, coconut trees and giant swamp taro. Common causes of the decline in agro biodiversity include the intrusion of seawater inland, continue in drought in some places, and change in human behaviours such as decline of interest in

cultivation. Besides, the land birds are also now comparatively few in Kiribati. The only common native species are commonly found in Kiribati are Te Bitin, Te Bokikokiko, long tailed koel, and te Kura.

Table 32: The table below has shown the stock assessment status for marine Species.

Species	**Stock assessment status**
Shark Bakoa	Stock levels of some species low in some area's Oceanic whitetip heavily overfished
Goatfish Maebo and Tewe	Depleted in Betio
Spangled emperor Morikai	Depleted in Tarawa lagoon
Grouper (Epimetheus spp.) Kauoto (and others)	3 species listed as endangered in the KNBSAP 2005
Flame angel Bakaurantaake	Heavily exploited for aquarium trade in Kiritimati, harvest declines
Bêche-de-mer Romamma	Significant overfishing is occurring Surveyed stock levels very low on many islands
Giant clam Were	Heavily fished Recruitment overfishing on some islands T. maxima only lightly impacted on Abemama T. gigas extirpated from some islands KNBSAP 2005 lists 3 species as endangered which impacted on Butaritari.
(Spiny) lobster Nnewe	Some species are threatened

Bonefish (Ikari)	Heavily depleted in coastal lagoons, particularly Tarawa

7.3. Main pressures and drivers of change

Kiribati is a small country and a least developed country with limited resources. It globally supports wildlife and biodiversity throughout the country. However, biodiversity in Kiribati has always been challenged economically, politically, socially and even judicially. Additionally, the Kiribati biodiversity loss is mainly caused by human activities and climate change namely: over exploitation, land & sea pollution, deforestation, invasive species, Sea level rising, ENSO or La Nina and so forth. These are the direct drives that significantly contribute to biodiversity loss and these include the increase in population, change of economic activities and lifestyle, limited awareness about the importance of biodiversity to the Kiribati people, lacking commitment from the public towards preservation initiatives and weak to enforce the law to everyone.

Figure 15: The direct drivers of biodiversity loss by human activities and Climate Change in Kiribati.

(a)Land pollution b water pollution

(c) Over-exploitation of natural resource.

(d) Sand mining without license

(e) Sea level rise

(f) Global warming

Source: ECD, 2018

7.4. Main pressures on conservation on Biodiversity

Capacity constraints emanating from limited financial and human resources, limited technical capacity, limited scientific based data and poor monitoring and evaluation of the progress of the national biodiversity action plans have undermined the country's effort to protect and conserve biodiversity effectively. As a nation with very limited resources, Kiribati cannot afford to sit back and allow the serious degradation to continue. (National Biodiversity Strategies and Action Plan 2016-2020, 2015)

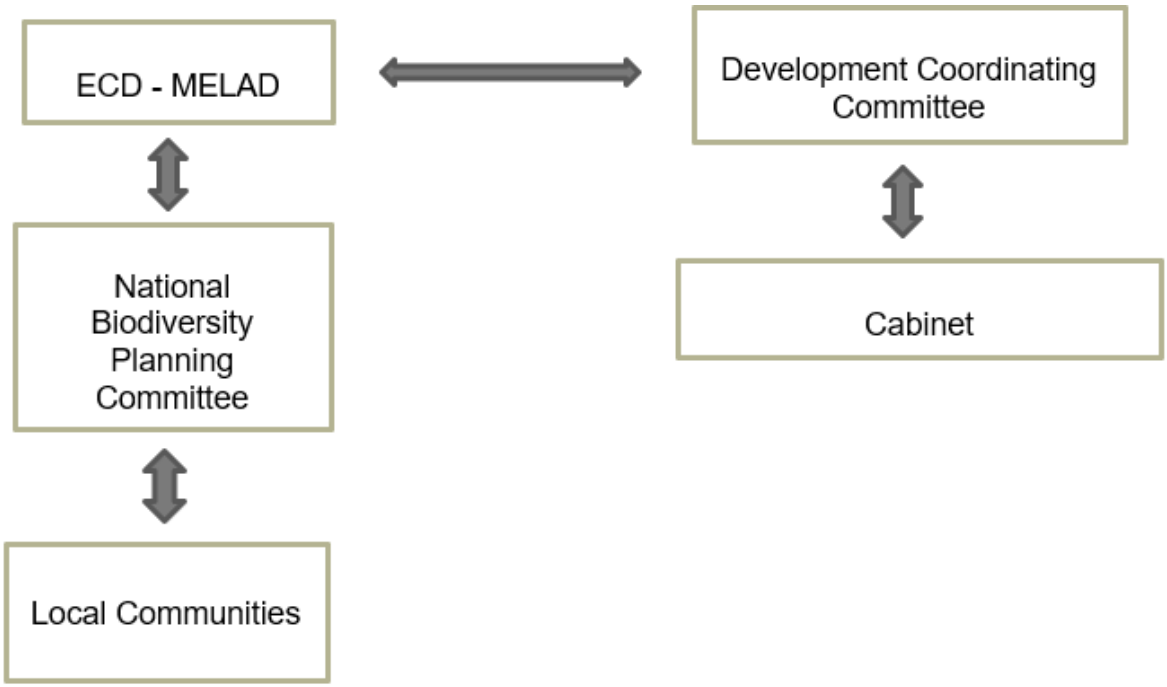
With the challenges it continues to face with its conservation, compounded with the impacts of climate change and sea level rise which Kiribati is very vulnerable to, there is a strong need to act to address the issue. The NBSAP 2016- 2020 was developed with the main purpose to identify the Kiribati Biodiversity priority action plans for the next four years until 2020. Other meanings are to meet the Kiribati's obligation under the Convention on Biological Diversity which Kiribati is party to. As well as to fulfill the Aichi Targets set by the Convention for parties to work towards until 2020.

On the other hand, the Kiribati's National Invasive Alien Species Strategic and Action Plan 2016- 2020 were developed to enhance the conservation of biodiversity against the pressure caused from the negative impacts of invasive species in the country. This plan is also a live framework for Kiribati to fulfill the objectives of NBSAP, KDP and KV20.

7.5. Implementation of the National Biodiversity Strategy Action Plan

The implementation and development of the Strategy Action Plan is based on the outcomes and recommendations of the various national and follow up participatory workshops, consult the local community, church groups, youth and women will also support implantation activities, the National Biodiversity, Planning Committee, NGOs and Government department. It also has gone through the Development Control Committee (DCC) which mostly consists of Secretaries level who is heading the Government ministries. This gives them their time to make comments and recommend on the document for their improvement before it goes to the final stage for approval and also submitted to the Cabinet as well.

Figure 16: below show the coordination and information flow on the NBSAP implementation.



Kiribati National Biodiversity Strategies and Action Plan for 2016 – 2020 are developed with the main purpose to identify the Kiribati Biodiversity priority action plans for the next four years until 2020. It is also a means to meet Kiribati's obligation under the Convention on Biological Diversity which is Kiribati party to and also to achieve the Aichi Biodiversity Targets

set by Convention for parties to work towards 2020. In addition, the development of the NBSAP was built from the first NBSAP with three pillars of sustainable development such as social, environmental and economic were taken into account during the development of the NBSAP. The outputs of NBSAP 2016-2020 contribute significantly to the Kiribati Integrated Environment Policy with a sustainable Environment's version which is the people of Kiribati continue to enjoy their natural biodiversity that is resilient to the impacts of climate change and supports the socio – economic livelihoods.

The Biodiversity conservation has been included in the Kiribati Development Plan for 2016 – 2020, Kiribati Joint Implementation Plan for Climate Change, Fisheries Act and Disaster Risk Management. There are nine priority areas that would support the improvement and enhancement of biodiversity which are protected and conservation area, ecosystem management, species conservation and sustainable use, communication and education, capacity building, invasive alien species/biosecurity, traditional knowledge and practice, environmental governance and research and information. Additionally, there are five principals of NBSAP firstly guided by the following: good governance and leadership; food security and nutrition; collective responsibility; respect for traditional knowledge, practice and skills; and integration of biodiversity in economic development aspirations, but it will mainly focus on good governance and leadership.

In the Kiribati Biodiversity Action Plan classifies eight areas which are Biodiversity Threats, National Targets, National Action, Aichi Targets, indicator, output, Responsible Agency and the Cost. These areas are very crucial as it contribute in achieving Aichi Biodiversity Targets. The church groups, local communities, youth and women are also involving in the implementation of the NBSAP. During the implementation of the NBSAP there are set up Committee which assist in development and responsible for the monitoring implementation progress. This Committee involves the National Biodiversity Planning, NGOs, and private sector. Apart from that, the ECD will set up and implementation of NBSAP monitoring and protocol. There is an establishment of Environment Fund, the Kiribati Biodiversity CHM and the Environmental Management Information System is also under development. The first NBSAP was set in 2005. In the year 2010, Kiribati declares that its Phoenix Island Protected Area is now conserve and monitor to protect every marine species. This PIPA is contributing to the conservation of Marine Species and Target 11 as well. All area in the PIPA is conserving and closed to commercial fishing, and also have a sustainable use area for the people at Kanton. There are also other important achievements in the implementation of the 159 NBSAP in terms of awareness and educational materials such as pamphlet, posters, sites visit and community fisheries-based management Plan.

Furthermore, Convention on Biological Diversity strategic goals and targets Kiribati adopted for NBSAP. These targets guide the action plan developed for Kiribati for the next four years. This will be given in the Annex 1 as well.

7.6. Actions taken to achieve the Aichi Biodiversity Targets

Kiribati has developed policies and regulations to make sure that his country's environment is to safeguarded actions taken to achieve the Kiribati National Targets and the Aichi Biodiversity Targets as well. It also has taken a big step in declaring a large marine protected area which is Phoenix Islands Protected Area. The most prominent distinguished legislation, policies and act that promotes the protection, reliable use and preservation of natural resources is Environment (Amendment) Act 2007. The Environment (Amendment) Act 2007 was implemented due to its usefulness in protecting biodiversity, particularly in Kiritimati Island.

Besides, there are other important legislations that support and promote the conservation, sustainable and management of biodiversity are the wildlife Conservation Ordinance (CAP 100), Fisheries Amendment Act 2010, Protected Area Ordinance 1957, Biosecurity Act 2011, Shark Sanctuary Regulation and Phoenix Islands Protected Area Regulation 2008. In that case, these regulations, Act and Policies are minimizing the issues of poverty and over exploited of both marine and terrestrial resources.

7.7. Support mechanisms for national implementation

Generally, there are nine and other existing legislation address the issues of biodiversity that supports CBD objectives such as Recreational Act 1996, Fisheries Amendment Act 2010, Protected Area Ordinance 1957, Bio security Act 2011, Land Planning Ordinance 172, Marine Zones (Declaration) Act 1983, Land Planning Ordinance 1972, Foreshore & Land Reclamation Ordinance 1977, Shark Sanctuary Regulation and Phoenix Islands Protected Area Regulation 2008, and other policies and strategies plans such as Kiribati Integrated Environment Policy, Kiribati Joint Implementation Plan, Kiribati National Fisheries Policy 2013-2023, Agriculture Strategic Plan, Line and Phoenix Islands Sustainable, Integrated Development Strategy 2016 – 2036, and PIPA Management Plan 2015 – 2020 were developed under different government Ministries, NGOs and state owned and private companies which address the issues of biodiversity to some level and also play an important roles in biodiversity conservation, protection, management and sustainable use. To up to date for the policies and legislation and Kiribati Integrated Environment Policy (KIEP) this provides guidance and direction for government and local communities in protecting, managing and utilizing the natural resources and enhances environment protection. Kiribati National Fisheries Policy 2013- 2023 and PIPA Management Plan 2015-2020 and Agriculture Strategic Plan were providing the guidelines on the protection; improve bio security and conservation of the natural and cultural heritage of the PIPA, Agricultural and Kiribati National Fisheries for the sustained benefit of the people of the Republic of Kiribati and the world.

The supporting of the mechanisms for national implementation is the most essential for certain priority areas in the Kiribati Biodiversity to tap funding from Global Environment Facility and other manageable funding sources. In that case, the Government really know

that supporting mechanisms for national implementation is very important to the people of Kiribati in which they strengthen and support the engagement of local communities in environmental protection, conservation and management at the national level. This also includes working very closely with local communities to resuscitate, support and fortify traditional knowledge and practices that intensify and support biodiversity preservation and management both at the village and the island level. This is very important to involve with the communities because are the ones who really knows about their environment and also are the sense of ownership in community.

7.8. Monitoring and review mechanisms

The monitoring and review of Sixth National Report implementation is essential. The assessment will provide assistance and report on how the government with its different quarters and stakeholders have progressed towards achieving their National target and Achi Biodiversity Targets. Environment and Conservation Division under Ministry of Environment Land Agriculture and Division is now responsible for ensuring the appropriate implementation of this mechanism. It is very vital that monitoring and reporting consistent and normal based on indicators and timeline proposed. Steering Committee, Project Planning Team and Drafting Committee Team of the sixth National Report support to update on inputs and progress of activities in every work plan which is derived from documents such as Kiribati National Strategic Plan 2016-2020, Kiribati Integrated Environment Policy and National Invasive Species Strategy and Action Plan. These documents are very important in assessing the progress and reviewing the progress and update of the Sixth National Report.

GLOSSARY

Agroforestry: Intentional integration of trees and shrubs into crop and animal farming systems to create environmental, economic and social benefits.

Atoll forestry: a low island practices of planting, managing and repairing forests on designated sites for human and environmental benefits.

Biodiversity: The variety of life in the world or in a particular habitat or ecosystem.

Convention on Biological Diversity (CBD): The Convention on Biological Diversity, known informally as the Biodiversity Convention, is a multilateral treaty. The Convention has three main goals including: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources.

Customary Land: The Native land owned by the indigenous people such as islands in the Gilbert group.

Designated Area: Part of the land declared under the Land Planning Ordinance to serve for various uses or class of uses.

Ecotourism: a form of tourism that builds the environmental and cultural awareness as well as respect for the local communities and natural areas in a destination.

Detail Land Use Plan: it is the Plan depicts various and class of uses of land showing many details of specific areas e.g., Detailed Land Use Plan of Bairiki shows roads, churches, wharf etc.

Freshwater reticulation system: water distribution networks which have to be collected and then treated before distributed to the consumer

General Land Use Plan: the map showing the land use or zoning of the land such as residential, civic, commercial etc.

Island Biodiversity: islands and their surrounding near-shore marine areas create unique ecosystems habitually encompassing many plant and animal species that are endemic.

Land Tenure: it is a traditional land ownership system; a land property holds by an individual from the government.

Marine spatial planning- Uses maps to create a more comprehensive picture of a marine area to identifying where and how an ocean area is being used and what natural resources and habitat exist.
Marine Protected Area: Any marine area, together with its associated flora, fauna, historical and cultural features, which has been reserved by law to protect part or the entire enclosed environment.

WASH-related diseases: disease caused by contaminated water and poor sanitation hygiene.

Water-borne disease: disease caused by drinking contaminated or dirty water.

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ANNEX 1: Chronological order for the plan undertaken to develop and finalize the Sixth National Report:

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
07th February 2019	1	ECD Boardroom	To update and introduce the Sixth National Report Project to the Project Steering Committee	Maiango Teimarane (MFMRD), Karabi Bate (MOE), Keebwa Teremita (MISE), Tukabu Teroroko (PIO-MELAD), Ben Namkin (KICS), Kinaai Kairo (Agriculture and Livestock Division), Felicity Kaiuea (Deputy Secretary – MELAD). Nemani Tebana (Kiribati National Tourism Office). Tiero Tetabea (Kiribati Family Health Association), Ruiti Anetaake (FSPK) Marii. Marae (Director of Culture), Eremita Barako (AMAK) Eretii Timon (Director of Public Health. Robite Teaete (ECD – MELAD) Rebeka Abaiota (Project Coordinator – 6NR), Leslie Tearawabwebwe (Project Assistant of 6NR) Puta Tofinga (ECD- MELAD)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
18th February 2019.	2	Special School Conference Room	First workshop or prep inception meeting with representatives from relevant stakeholders including government ministries, local communities, non-government-organizations (NGOs), church groups and state-owned enterprises. Coordinate by the Environment and Conservation Division and lead by the Secretariat of the 6NR. - to brief on Kiribati NBSAP 2016-2020, 5NR, Aichi Biodiversity Targets and introduction to 6NR - to formalize during the meeting and consists of respective members from MFMRD, MOE (CDRC), MISE, KICS, ALD, MCIC, KFHA, MIA, MHMS, TEITOININGAINA, KNTO, AMAK, FSPK and ECD with their main roles are to assist on developing and completing the 6NR report to CBD.	Kabuati Nakabuta (ALD-MELAD), Rateiti Vaimalie (Fisheries Officer), Kautu Tabaka (Culture Officer), Rebeka Abaiota (PC of 6NR), Leslie Tearawabwebwe (PA of 6NR), and Kabure Takaria (ECD-MELAD).

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
7th March 2019	3	ECD Boardroom	The 1st Steering Committee (SC) meeting is held to: - present 6NR project overview, developing the 6NR work plan, roles and responsibilities of the 6NR steering Committee and developing the project planning team - support the formulation, compilation and completion of the six focal areas of 6NR, working closely with technical staff and respective stakeholders from each sector who will provide relevant information required for the report	Puta Tofinga (ECD-MELAD), Ben Namakin (KICS), Marii Marae(Director Culture), Tukabu Teroroko (Director PIPA), Keebwa Teremita (MISE), Kinaai Kairo (Director of Agriculture Livestock Division- MELAD), Felicity Kaiuea (DS-MELAD), Maiango Teimarane (Mineral Offshore OfficerMFMRD) Nenami Tebana (KNTO), Tiero Tetabea (KFHA), Ruiti Anetaake (FSPK), Ioanna Taraia (Teitoningaina), Eremita Barako (AMAK), Robite Teaete (ECD), Rebeka Abaiota (PC of 6NR), Leslie Tearawabwebwe (PA of 6NR), Karabi BATE (MOE) & Eretii Timon (Director of Public Health).
18th March 2019	4	ECD Boardroom	A first project planning Team (PPT) meeting - to present the six focal areas of the 6NR - to commit specific areas to each stakeholder - to discuss TOR for PPT members	Kamori Ueantabo – (PIO- MELAD) Nemani. Tebana (KNTO), Kautu Tebaka- (Culture officer), Ben Namakin (KICS) Maiango Teimarane (Mineral Division) Keebwa Ieremita (Water and Sanitation Engineering Unit-MISE) Kabure.Takaria (ECD -MELAD) Leslie Tearawabwebwe (PA of 6NR) Rebeka Abaiota (PC of 6NR)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
25th March 2019	5	ECD Boardroom	2nd PPT meeting – First input to the 6NR (Stakeholders from their respective ministries/churches/NGOs/SOEs) - to present their findings as contributions to the 6 main focal areas of the report	Nenenteiti Teariki-Ruatu (DECD), Alister Maruia (GIS Officer), KautuTebaka (Culture Officer), Keebwa Teremita (MISE), Ben Namakin (KICS), Kabuati Nakabuta (ALD), Kamori Ueantabo (PIPA Officer – MELAD) Tokanikai Rubetaake (Tourism Officer), Tiero Tetabea (KFHA), Kamaitia Rubetaake (Climate Officer), Eretii Timeon (Director of Public Health), Rebeka Abaiota (PC of 6NR) and Leslie Tearawabwebwe (PA of 6NR)
28th March 2019	6	ECD Boardroom	The meeting is a consultancy type - to explain their progress and activities which in line with biodiversity.	Kautu Tabaka (Culture Officer), Kokoria Temware (Coastal Fisheries Division), Tiero Tetabea (KFHA), Ueneta Toorua (Chief Meteorological Services Officer), Nemani Tebana (KNTO), Keebwa Teremita (MISE), Maiango Teremita (Mineral Division- MFMRD), Kabuati Nakabuta (ALD), Rebeka Abaiota (PC of 6NR), Nenenteiti Teariki-Ruatu Director of Environment and Conservation Division & Leslie Tearawabwebwe (PA of 6NR)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
18th July 2019	7	ECD Boardroom	3rd PPT meeting - to present their inserted inputs and comments from the second PPT meeting.	Eretii Timon (Director of Public Health), Tokanikai Rubetaake (MICTTD-KNTO), Taouea Reiher (DDECD-MELAD), Tiero Tetabea (KFHA), Kabure Takaria (ECD – MELAD), Kamori Ueantabo (PIPA-MELAD), Keebwa Teremita (MISE) Leslie Tearawabwebwe (Project Coordinator of 6NR), Regina Rotitaake (LGD-MIA), Kamaitia Rubetaake (OB-Climate Officer), Bungiia Kinta (Senior Health Inspector- MHMS), Tabeti Biritia (ECD) & Nenenteiti Teariki-Ruatu (Director of ECD).
26th August 2019	8	ECD Boardroom	A fourth PPT meeting is - to review the current inputs from stakeholders and revise Table of Contents of the report to see which sections in the 6NR report haven't been covered yet.	Tokanikai Rubetaake (MICTTD), Tanawai Nimarota(MCIC), Orebwa Morate (NSO) Tawaia Ietimeta (CDRC), Teaaro Otinia (Agriculture Livestock Division) Tekimwau Kanoua (Ministry of Women Youth Sports Social Affairs), Keebwa Teremita (MISE), Leslie Tearawabwebwe (Project Coordinator of 6NR), Tabeti Biritia (Ag.PA of 6NR), Madsen.DK (ECD-MELAD) & Regina Rotitaake (Local Government Division, Ministry of Internal Affairs)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
1st October 2019	11	ECD Boardroom	Second Drafting Committee met - to present version one of the reports and insert current inputs from Drafting Committee members	Rateiti Vaimalie (Fisheries Officer), Tarateiti Uriam (Project Coordinator of Community Based Fisheries Management at MFMRD), Ueakeia Tofinga (MISE) Kareketaake Uriam (Project Officer – MELAD), Raurenti Bwebwetaake (Lands Management Division- MELAD), Tebana Nenami (Kiribati National Tourism Officer) Ieete Timea (ALD), Nenenteiti Teariki-Ruatu (Director of ECD), Leslie Tearawabwebwe (Project Coordinator of 6NR) & Tamwariti Kaiteie (Acting Project Coordinator of 6NR)
3rd October 2019	12	ECD Boardroom	Third Drafting Committee met - to present the updated version two of the report after the insertion of inputs from the second drafting committee meeting - to present currents inputs from members	Rateiti Vaimalie (Fisheries Officer), Tarateiti Uriam (Project Coordinator of Community Based Fisheries Management at MFMRD), Ueakeia Tofinga (MISE) Kareketaake Uriam (Project Officer – MELAD), Raurenti Bwebwetaake (Lands Management Division- MELAD), Tebana Nenami (Kiribati National Tourism Officer), Ieete Timea (ALD) Nenenteiti Teariki-Ruatu (Director of ECD), Leslie Tearawabwebwe (Project Coordinator of 6NR) & Tamwariti Kaiteie (Acting Project Coordinator of 6NR)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
17th October 2019	15	ECD Boardroom	Sixth Drafting Committee meeting - to present the updated version five of the report which has been developed after the insertion of inputs from the fifth drafting committee meeting - to present current inputs and comments from members	Rateiti Vaimalie (Fisheries Officer) Tarateiti Uriam (Project Coordinator of Community Based Fisheries Management at MFMRD), Ueakeia Tofinga (MISE) Kareketaake Uriam (Project Officer – MELAD), Raurenti Bwebwetaake (Lands Management Division- MELAD), Tebana Nenami (Kiribati National Tourism Officer) Ieete Timea (ALD), Nenenteiti Teariki-Ruatu (Director of ECD), Leslie Tearawabwebwe (Project Coordinator of 6NR) & Tamwariti Kaiteie (Acting Project Coordinator of 6NR)
23th October 2019	16	ECD Boardroom	Seventh Drafting Committee meeting - to present the updated version 5a of the report which has been developed after the insertion of inputs from sixth meeting. - to present current inputs and comments from members	Rateiti Vaimalie (Fisheries Officer) Tarateiti Uriam (Project Coordinator of Community Based Fisheries Management at MFMRD), Ueakeia Tofinga (MISE) Kareketaake Uriam (Project Officer – MELAD), Raurenti Bwebwetaake (Lands Management Division- MELAD), Tebana Nenami (Kiribati National Tourism Officer) Ieete Timea (ALD), Nenenteiti Teariki-Ruatu (Director of ECD), Leslie Tearawabwebwe (Project Coordinator of 6NR) & Tamwariti Kaiteie (Acting Project Coordinator of 6NR)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
2nd September, 2020.	17	ECD Boardroom	The Second Steering Committee: - to review and discuss the 6NR draft sent by UNEP - to add inputs and comments on their related areas	Tebweretaake Reoneti (ALD), Takenano Timon (CDRC-MOE), Kautu Tabaka(CMD-MIA), Kamaitia Rubetaake(KMS-OB), Ruby Atireti (RAK-KUC), Aberina Ioteba (Itoiningaina), Nemani Tebana (TAK), Ioane Titaake (MICTTD), Iaritaake Ioane (MHMS) and Mareweiti Rition (RPD-MIA)
15th September 2020.	18	ECD Boardroom	The Third Steering Committee: - review and discuss inputs and comments of the draft 6NR report. - to approve the finalization of the 6NR report by Stakeholders	Taina Temakei (MISE), Tebweretaake Reoneti (ALD), Ioane Titaake (MICTTD), Tarateiti Uriam (CFD-MFMRD), Ntarie Tokanikai(MCIC), Mareweiti Rition (RPD-MIA), Alistair Maruia (GCMD), Nemani Tebana (TAK), Kareati Waysang(PIPA), Manibuka Rota (MFMRD), Mika Bita (ECD-MELAD), Puta Tofinga (ECD-MELAD), and Madsen Kanono (ECD-MELAD)

Date	Number of meetings	Venue	Purpose	Meetings and workshops Attendees
23rd September 2020	19	ECD Boardroom	A fifth PPT meeting: - to review the progress of the report. - To create the drafting Committee group whose main role to draft the report and also for consultation purposes.	Nenenteiti Teariki-Ruatu (Director of ECD), Taulehia Pulefou (Program Manager of ECDMELAD), Teaaro Otiuea (Deputy Director of Agriculture Livestock Division- MELAD), Kareketaake Uriam (Project Officer – MELAD) Tokaia Tekaie (Kiribati Fish Limited) Mareweiti Rition (Rural Planning Officer) Kanrooti Aukitino (Office Attorney General) Tekimwau Kanoua (MWYSSA) Eritina Benete (ECD- Climate officer) Rateiti Vaimalie (FO-Coastal Division – MELAD) Marian. Tekanene (Ministry of Education) Regina Rotitaake (LGO- MIA) Kautu Tebaka (Culture Officer) Raurenti Bwebwetaake (LMD-MELAD) Madsen DK (Environment Officer) Rooti (CBFM Officer – MELAD) Iataake King (Tourism Officer) Leslie Tearawabwebwe (PC of 6NR) Tamwariti Kaiteie (PA of 6NR)
27th September 2020	20	ECD Boardroom	First Drafting Committee meeting - to view the current progress of the report - revise again the table of contents to see that all areas have been covered	Rateiti Vaimalie (Fisheries Officer) Tarateiti Uriam (Project Coordinator of Community Based Fisheries Management at MFMRD), Ueakeia Tofinga (MISE) Kareketaake Uriam (Project Officer – MELAD), Raurenti Bwebwetaake (Lands Management Division- MELAD), Tebana Nenami (Kiribati National Tourism Officer) Ieete Timea (ALD), Nenenteiti Teariki-Ruatu (Director of ECD), Leslie Tearawabwebwe (Project Coordinator of 6NR) & Tamwariti Kaiteie (Acting Project Coordinator of 6NR)

ANNEX 2: Global Aichi Biodiversity Targets

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across the government and societies	
Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.
Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	
Target 5: By 2020, the rate of loss of all-natural habitats, including forest, is at least halved and where feasible brought close to zero, and degradation and fragment is significantly reduced.	Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity	Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning	
Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity	
Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes	Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained
Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained, and strategies have been	

developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services	
Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and wellbeing, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation	
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	
Target 17: By 2015, each party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan	Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resources needs assessments to be developed and reported by Parties

ANNEX 3: Relevancy of the Kiribati's National Biodiversity Strategies & Actions Plan to the Global Aichi Biodiversity

#	Reference	Target (http://www.spc.int/CoastalFisheries/CFM/Document/ShowDocument/7f540622-357a-417f-bd0d-368d50efb9fc?attachment=False)	Related Strategic Goals/Aichi Targets
1	National Target	Establish at least one marine protected area and expand protected areas program to other islands in Kiribati by 2020	11
2	National Target	Establish at least 3 community-based management plans for coastal resources (Fisheries and Mangroves) by 2018	7, 10, 11, 14
3	National Target	Develop and implement at least one or two PA management plan by 2020	11
4	National Target	Turtle nesting beach enhancement by 2018	11, 12
5	National Target	Develop Coastal Management Plan and Policy by 2017	5
6	National Target	Identify the vulnerable coastal areas (flooding, hazard risks) that need protection taking into considering the existing key biodiversity areas (KBA) in Kiribati	5
7	National Target	Expanding soft measures (coastal vegetation, mangroves, buibui) for coastal protection by 2019	10, 14
8	National Target	Clean-ups in Urban areas – South Tarawa and Christmas Island	8
9	National Target	Eradication of invasive species on the PIPA infested islands.	9
10	National Target	Removal of the rusted wrecked vessels impacting on the corals and marine life.	5, 8
11	National Target	Reduce the use of unsustainable fishing practices by 2020 by 30%	1, 2, 12
12	National Target	Reduce the overharvesting practices of terrestrial resources by 2018	1, 7
13	National Target	Restoration and rehabilitation of marine and terrestrial habitats by 2020	14
14	National Target	Rehabilitation and restoration of ponds for aquaculture development by 2018	6, 14

15	National Target	60% of local growers/farmers practiced organic agriculture in Kiribati by 2020	1, 8, 14
16	National Target	Develop and increase adoption of sustainable atoll soil management technologies by 2020	1, 4, 7, 8
17	National Target	By 2017, national guidelines and policies for the development and management of ecotourism activities will be developed and ready for implementation and use	4, 20
18	National Target	Identification, assessment and mapping of ecotourism resources by 2017	1, 18, 20
19	National Target	Restoration of destroyed ecotourism resources by 2017	1, 14
20	National Target	Develop regulation on the protection of Ecotourism Resources	4, 12
21	National Target	Identification of endangered, threatened, rare, extinct and protected species, by 2020	12
22	National Target	Development and implementation of at least two turtle species community-based management plan by 2019	, 18
23	National Target	Marine stock enhancement program by 2020	6
24	National Target	Establishment and extension of gene-banks of traditional plant food crop species by 2018	12, 13, 19
25	National Target	Expanding nursery centers to include native food crops and plants on a number of outer islands by 2018	7
26	National Target	Restoration of at least 2 overharvested plants and trees species in at least 2 islands by 2018	5, 14
27	National Target	By beginning of 2017, Bonefish Bye Law for selected islands (e.g. Nonouti Island) will be ready for implementation.	2, 4, 17
28	National Target	By 2018, knowledge and understanding on value of agro-biodiversity improved at the national and local levels.	1
29	National Target	By 2020, knowledge on the importance of marine environment and impacts from human induced activities.	1, 19
30	National Target	Revisit Nonouti Island by 2017 for consultations and awareness on importance and value of bonefish conservation.	1
31	National Target	Implementation of environment/biodiversity communication strategy by 2017.	1, 2, 3, 4, 17

32	National Target	Baseline data of biodiversity for food and agriculture established by 2018.	19
33	National Target	Strengthen the capacity on fisheries surveys	1, 4
34	National Target	Upskilling of technical capacity to implement, assess and monitor the Key Biodiversity Areas (KBA) by 2020.	1, 4
35	National Target	To strengthen the capacity of the National DRM committee, Local Government staff and local communities in environment/biodiversity integrations in development activities in at least one island by 2019	15
36	National Target	To strengthen institutional capacity to assess and monitor the development projects in at least one outer island by 2019	1
37	National Target	Commodity pathway analysis strengthened by 2020	1, 4
38	National Target	Border security strengthened by 2018	9, 19
39	National Target	Enhance and strengthen human resources (WCU-ECD, EYC, Fishing Guides, Ecotourism) Communities in the Northern Line Islands) by 2020	11, 19
40	National Target	Strengthen the institutional and human resource (ECD, JET, EYC with local communities) capacity to enforce biodiversity related legislation in at least one island by 2019	17, 20
41	National Target	By early 2017, refresher training for Fishing Guides including Catch and Release Fishing Techniques conducted.	1
42	National Target	Identify potential islands to conduct training on Development of products and packages by 2018.	2, 3
43	National Target	Marketing of products and packages	1
44	National Target	Preparation of Kiribati for ratification to the Nagoya Protocol through implementation of the regional project in Kiribati by 2017.	16
45	National Target	The KNISSAP is implemented and sustained in at least 3 islands by 2018.	4
46	National Target	Pest and disease problems identified, and control methods developed and used by 2019.	8, 9, 17
47	National Target	By 2017, Biodiversity registers accepted by Language Board (LB) and used nationally.	18
48	National Target	By 2018, completion (75%) of documentation of TK in relation to environment/biodiversity.	18
49	National Target	By 2020, the preparatory phase for appropriate legal mandate to protect traditional knowledge, skills and practices will have been undertaken.	11, 18

50	National Target	By 2017, the Biodiversity Planning Committee, in particular focal points of all biodiversity related conventions have enhanced synergies and harmonization of their national actions harmonizing their national actions.	3, 4, 17
51	National Target	Review the draft protected areas and protected species regulation by 2017.	1, 18
52	National Target	Undertake the evaluation and review of biodiversity related policies implementation by 2019.	3, 14, 17
53	National Target	By beginning of 2018, Act and Regulations for the development and management of ecotourism activities is ready for implementation.	4, 17
54	National Target	Biodiversity information monitoring system established by 2020.	19
55	National Target	Staff are able to analyze fisheries data by 2020.	6, 17
56	National Target	Biodiversity database is established by 2018.	2, 17, 19
57	National Target	Centralized all Agriculture and Livestock information and data facility established by 2018.	19
58	National Target	Documentation of all atoll agriculture and livestock researches by 2020.	13, 19
59	National Target	Conduct study on threats on tourism developments in Kiribati by 2019.	17, 19, 20
60	National Target	Conduct research on Virgin coconut oil (VCO) by 2018.	14, 19