

# QUARTERLY PROGRESS REPORT

3<sup>rd</sup> & 4<sup>th</sup> Quarters 2015

**Country** – Kiribati

**Project Title** – Integrating global environmental priorities into national policies and programs

**Implementing Partner** – Environment & Conservation Division (ECD),  
Ministry of Environment, Lands and Agricultural Development (MELAD)

**GEF Implementing Agency** – United Nations Development Programme  
(UNDP)

**Period Covered** – 1<sup>st</sup> July – 31st December 2015

## 1.0 Introduction

### *Project Description:*

The Government of Kiribati is undertaking a cross-cutting capacity development project aimed at targeting the critical need for new and improved environmental data and environmental analysis to strengthen the foundations of Kiribati's policy and planning frameworks in order to meet commitments to the Rio Conventions. The Kiribati Capacity Building (CB2)/Cross-Cutting Capacity Development (CCCD) project is in-line with the GEF-5 CCCD Programme Frameworks two (2) and five (5), which calls for countries (2) to generate, access and use information and knowledge and (5) to enhance capacities to monitor and evaluate environmental impacts and trends. It is a direct response to national priorities identified through the NCSA conducted in 2007-2011 and reiterated in the recently approved Kiribati Integrated Environment Policy (KIEP) and the approved Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP). Through a learning-by-doing process, this project will harmonize existing environmental information systems, and integrate internationally accepted measurement standards and methodologies, as well as develop a more consistent reporting on the global environment. Under the first component, the project will target the development of capacities at the individual and organizational level, strengthening technical skills to collect data and transform information into knowledge. Under the second component, the project will target a more holistic construct of monitoring and evaluation systems through strengthening the institutionalization of these systems as a means to feed lessons learned and best practices from interventions to decision-makers/policy-makers. Through the provision of better environmental information, the project will increase the capacity of national and local levels' stakeholders and counterparts to diagnose and understand complex dynamic nature of national and global environmental problems and develop local solutions; including the greater capacity to monitor and evaluate environmental programs and projects and also to better report on the state of the environment, including the national reports to the MEAs. Finally, the development of capacity of decision-makers will strengthen the environmental governance system in place in Kiribati.

### Challenges:

Collection, storage, maintenance, archiving, generation and utilization of environmental data are major issues within ECD because of its limited institutional capacity. Some data/information is readily available within the various Units of ECD. Yet proper information collection, storage, maintenance, archiving, generation, utilization and collation is not undertaken because of individual and institutional limitations. There is also a lack of technical capacity within ECD to develop, maintain and operate this environment information management system for national, regional and international reporting on the state of the environment in Kiribati. This project will address this critical need to provide better environmental information in Kiribati. This is a timely response to address this national priority, particularly when considering the emerging issues due to global climate change. The possibility to monitor and record environmental data will be useful to respond to threats including negative impacts of global climate change on the local environment, which is the basis of livelihoods, human health and economy in Kiribati. (Please refer to section 2.0 below for the list of planned activities within the 3<sup>rd</sup> and the 4<sup>th</sup> quarter 2015)

## 2.0 Implementation Status

<b>Activities (as per AWP)</b>	<b>Status</b>	<b>Issues</b>	<b>Solutions</b>
Review existing databases and management information,	This has been successfully carried out by the technical working group born out of the steering committee within the 4 <sup>th</sup> and 3 <sup>rd</sup> quarter 2015	No technical assistant from within ECD	The TOR has been developed and having one of the PMU team members follow up the progress of the work with this working group. Thus ECD recruited a fulltime staff member to assist the project. This post is the divisional post apart from the project. In addition specification requirements are done carefully to identify the adequate hardware, communication and network equipment.
Identify environmental information needs	This has been pending since the 3 <sup>rd</sup> quarter 2015	Lack of Technical assistance from local pool of expertise to accomplish the task	PMU needs the technical assistance
Design and develop an environmental data repository, including the collection, QC and validation of produced data.	This has been pending since the 3 <sup>rd</sup> quarter 2015	Lack of Technical assistance from local pool of expertise to accomplish the task	PMU needs the technical assistance
Establish protocol for provision of data and information,	This has been pending since the 4 <sup>th</sup> quarter 2015	Lack of Technical assistance from local pool of expertise to accomplish the task	PMU needs the technical assistance
Establish and set benchmarks,	This has been pending since the 4 <sup>th</sup> quarter 2015	Lack of Technical assistance from local pool of expertise to accomplish the task	PMU needs the technical assistance
Assess existing technologies in use	The technical working group has accomplished the task successfully	Members of the working group are full-time employees from different ministries having less time to commit on the project.	The TOR has been developed and having one of the PMU team members follow up the progress of the work with this working group. Thus ECD recruited a fulltime staff member to assist the project. This post is the divisional post apart from the project.
IT equipment procurement	The procurement has been pending since.	Lack of Technical assistance from local pool of expertise to accomplish the task	PMU needs the technical assistant
Progress Reporting	This is the first offline progress reporting to be submitted ever since the project started up in	ATLAS access has been unreliable and inconsistent	More training on the application of ATLAS is required for PMU staff. Additionally a better internet

	July 2015.		connection will ensure reliable means of communication with UNDP and external stakeholders.
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## 2.0 Major Achievements

- I. Existing databases and management information have been reviewed and the report was made available to UNDP. Comments from UNDP have been provided to the consultants.

### Analysis and Review of Technologies (Databases, Data Storage, Internet Connection, Network)

SWOT analysis is a tool used to review and assess existing technologies capability. With the strength, weakness, opportunities and threats of applied technologies that are of being observed, the list has been layout out in bulleted form instead of in a table format to allow the authors more room to elaborate more on the findings;

#### **Strengths**

1. There are some Access Database systems currently in used at ECD including the EIA Register that is used to record the Environment Impact Assessment applications, TRENDS Database to record Turtle data and the Assets Database to record Assets.
2. Centralized data repository currently stores various data files from staff of ECD.
3. The current server is capable of providing a number of services such as printing and file sharing and can also be configured to provide centralized user authentication which may be required when the EMIS is deployed.
4. The server hard drives are relatively large and have sufficient space (800GB free space) to accommodate a large number of documents such reports and raw data which will be collected as part of the EMIS Project.
5. All staff have access to computers (1 desktop and the rest of the staff use laptop computers).
6. Most computers have free antivirus software installed and some have licensed antivirus software.
7. There is a 48 port network switch that can be used to connect all laptops and desktop computers if there is a problem with the wireless access point.
8. All rooms have at least 1 wall mount socket available for connection to the main switch.
9. One of wireless access points has been configured to use WPA2 which is the current standard in wireless security
10. The ADSL modem has a bandwidth of 512/256kbps which is sufficient for ECD staff access to the Internet
11. There is 1TB external hard drive and it is used for backup purposes and was found to contain backups of the network drives from July 2015
12. The file server has been configured with multiple shared file directories and these were configured to be accessed only by authorized group of users within the Division.

#### **Weaknesses.**

1. Files in data repository are only searchable from the local network and are not available via the web.
2. The current practice of storing raw data in various formats such as Excel and Word makes it hard to find specific information and there is a high risk of having the same files in various locations within the file server.
3. The server (data repository) was not powered on when we last visited ECD because of there was an issue with UPS. Currently the server can still be powered on without the UPS but with a higher risk of getting its power supply damaged from power surges.
4. The current UPS (Uninterruptible Power Supply) is not working well and does not have sufficient capacity to provide power to more hardware such as the EMIS server, adsl modem, Ethernet switches and wireless equipment located along the current server room.
5. The current server cannot be used to host the Environment Management Information System because it does not have RAIDed hard disks and because the server is currently used for other services i.e file and print server.
6. The server hard drives are not configured to use RAID (Redundant Arrays of Inexpensive Disks), which allows for redundancy in case one of the hard disks fails.

7. There is no dedicated server room to house the current server as well as the EMIS and air conditioning is not available 24/7 which will be required if the EMIS will be accessible by the general public 24/7.
8. There is no currently permanent staff to support the Information Technology infrastructure.
9. There is no specialised software or hardware firewall software between the Local Network and the Internet to block intrusions into the network or to prevent data from going out of the network
10. Not all of the computers have licensed antivirus software. This may affect staff computers as well as documents that will be uploaded onto data repository and EMIS when completed.
11. There is no automated onsite or offsite backup systems in place that can be used to backup all data in the current file server or the planned EMIS.
12. The current 48 port Network Switch only supports speeds of up to 100mbps and has been used in ECD since at least 2005 and some of the ports may not be working.
13. The current internet link (512/256kbps) is not sufficient to support the access of EMIS from outside the network
14. The use of wireless as a primary means of connection between staff laptops to the network resources will limit the speeds of uploading and download large files from the data repository as well as EMIS when deployed.  
The wireless access point named ECD02 was found to have a weak signal in some areas of ECD
15. Both wireless access points (ECD Hotspot and ECD02) do not support the faster Network Standards such as 802.11n and 802.11ac and therefore the maximum speeds between laptops and these wireless devices is limited to 54mbps (usually it will be a lot less than this).
16. The security protocol used on wireless access point ECD02 is WPA which is a weaker protocol compared to WPA2 which is used on ECD Hotspot. Using WPA increases the risk of malicious users piggybacking on the ECD's internet bandwidth.
17. Three of the wall mount sockets for network connections found in ECD are working while the rest seemed to be out of order.
18. The network cables currently running around the whole ECD building are quite old and could be easily torn out.

### **Opportunities**

1. Donor funding is available and can be utilized to upgrade the network infrastructure to support EMIS.
2. Technical expertise from the Committee may be available to guide the development of the EMIS as well as the upgrade of the network infrastructure

### **Threats**

1. Sustainability of the project with respect to continued support to the operation of EMIS will depend of continuation of funding from the Ministry
2. There is a high risk of complete data loss from natural disasters as well as man-made ones such as fire since there is no off-site backup system in place

### **Recommendations**

Based on the assessments above, the following are a number of recommendations that the Team believe will enable ECD to successfully fulfill its vision of having a sustainable Environmental Management Information in place.

#### ***1. New Server for EMIS***

A new server should be procured specifically for EMIS with the following minimum specification:

- Server brand (e.g Dell or HP)
- 2.5Ghz Quad Core Processor
- 16GB RAM
- 4 x 600GB 10K hard drives configured in RAID 10

#### ***2. Network Switch and Cabling***

- A new gigabit network switch should be procured to provide faster speeds (up to 1gbps) to all staff computers.
- New CAT6 network cables should be installed all around the Division office so that staff may be able to use the cable at most locations in the Ministry. This will require installing 2 wall mount sockets per computer in all rooms of the Division to provide redundancy in case of unforeseen problems with some cables.

### **3. Access Points**

- There's a need to procure for more powerful Access Points that will enable to reach all the ECD rooms from one central location. This will replace any wireless extending devices currently in place. Recommended APs are Linksys, Ubiquiti, and TP-Link.
- The access points should support the newest wireless standards such as 802.11n and 802.11ac

### **4. Antivirus Software**

- All computers should have a fully licensed antivirus software to protect the users from security threats that may affect their documents and files especially those stored on a centralised location. It only takes one infected computer to infect or render the data or files useless on the centralised data repository especially with the advent of ransomware (viruses that encrypt data on a computer and ask for a fee to unlock it)
- Recommended anti virus softwares include Bitdefender, Kaspersky, Avira, Eset Endpoint and Avast.

### **5. Uninterruptible Power Supply**

- An online UPS is needed to support the operation of EMIS. An online UPS is one that provides extra protection from power surges as well as power outages as it runs on battery all the time. The minimum rating of 1000VA is recommended for the server specified above however the bigger the better.

### **6. On-site/Off-site Backup System**

- This can be in the form of a Network Attached Storage (NAS) that will store all data stored on the data repository as well as the EMIS. A NAS system with a minimum capacity of 4TB (2 x 4TB configured in RAID 1) is sufficient for all ECD data and future needs. This will be setup in the MELAD Headquarter office so that the backup can act as an off-site one but at the same time close enough to ECD in case of a need to quickly restore any required data.

### **7. New Internet Connection**

- The current internet connection is sufficient for ECD staff internet use only so if there are plans to have EMIS accessible over the Internet, a new Internet connection will need to be setup so that ECD staff internet traffic will not have any impacts on the accessibility of the EMIS from the Internet and visa versa.
- An ADSL modem (or similar technology) with minimum speed of 512/256kbps should be configured solely for EMIS however speeds in excess of 1gbps/512kbps would make EMIS more responsive from outside the ECD network. Access to EMIS from within ECD, ie from staff is not affected but this as they will be accessing EMIS via the local network.

### **8. Firewall Software**

- A dedicated firewall software will be required if EMIS will be accessible from the Internet so that it will be more difficult for malicious users (hackers) to gain access into the ECD network infrastructure and consume or corrupt data

- II. Assess existing technologies in use - the report has been produced after the review was carried out by local technical assistant. The recommended IT equipment has also been identified as above.
- III. PMU establishment - PMU staff were recruited and on board by June 2015, and office equipment were procured and in operation by July 2015.
- IV. Inception phase - the inception phase consisted of the establishment of PMU, and the completion of induction training (by UNDP) and an inception workshop that was led by Government and supported by UNDP.
  - a. Atlas and CDR awareness
  - b. The setting up of the steering committee
- V. Although the project started up halfway through the year 2015, it was able to deliver 29.5% of the budget (i.e. US\$16,960 was expended from a revised budget of US\$57,455). This is somewhat satisfactory as the

project has just started up and the PMU staff was placed on a steep learning curve. With concerted efforts throughout 2016, the project should be able to improve its financial delivery by the end of the year.

### 3.0 Project Results Framework - Status

### 4.0 Conclusion and plans for next quarter

Though the project has accomplished the review and the assessment of the current technology within ECD most activities have not been undertaken due unavailability of expertise from the local pool. As indicated earlier, the activities are as follows:

1. Identify environmental information needs
2. Design and develop an environmental data repository, including the collection, QC and validation of produced data.
3. Establish protocol for provision of data and information,
4. Establish and set benchmarks,
5. IT equipment procurement
6. Progress Reporting

ECD has since requested UNDP to procure expertise on behalf of Government It is expected that consultants will be hired by end of second quarter 2016. In the meantime, the PMU is overseeing the renovation of office space to house the IT equipment.

Additionally the main focus for next quarter is to closely work with the consultant accomplishing all activities that have been planned in the AWP.

Objectives and Outcomes	Indicator	Baseline	Targets End of Project	2015 Progress	2016 Progress (please add additional columns for later years)
<b>Objective:</b> To improve information management and compliance monitoring in order to achieve global environmental benefits.	1. ECD stated as the primary source for environmental information in Kiribati by a significant number of national, regional and international development partners	<ul style="list-style-type: none"> <li>Capacity of the main stakeholders for translating environmental information from EMIS into decision-making is low and dispersed over many organizations</li> </ul>	<ul style="list-style-type: none"> <li>50% of stakeholders have benefitted from capacity development activities for better use of this information in decision-making and policy-making</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	2. Reported availability of better environmental monitoring information	<ul style="list-style-type: none"> <li>Collection and use of up-to-date environmental management information is ad-hoc and feebly coordinated</li> </ul>	<ul style="list-style-type: none"> <li>Up-to-date environmental information is being used by policy-makers and also by the public</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	3. Quality of monitoring reports and communications to measure implementation progress of the Rio Conventions	<ul style="list-style-type: none"> <li>Current reports are produced with limited data, weak analysis and weak trend analysis</li> <li>There are not fully responding to the national and international requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Reports present adequate disaggregated data at local level, are informative and present environmental trends over time</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	4. Capacity development scorecard rating	Capacity for: <ul style="list-style-type: none"> <li>Engagement: 3 of 9</li> <li>Generate, access and use information and knowledge: 6 of 15</li> <li>Policy and legislation</li> </ul>	Capacity for: <ul style="list-style-type: none"> <li>Engagement: 6 of 9</li> <li>Generate, access and use information and knowledge: 10 of 15</li> <li>Policy and</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Objectives and Outcomes	Indicator	Baseline	Targets End of Project	2015 Progress	2016 Progress (please add additional columns for later years)
		development: 3 of 9 <ul style="list-style-type: none"> <li>Management and implementation: 3 of 6</li> <li>Monitor and evaluate: 1 of 6 (total score: 16/45)</li> </ul>	legislation development: 7 of 9 <ul style="list-style-type: none"> <li>Management and implementation: 5 of 6</li> <li>Monitor and evaluate: 4 of 6 (total targeted score: 32/45)</li> </ul>		
<b>COMPONENT 1.0: ENVIRONMENTAL MANAGEMENT INFORMATION SYSTEM (EMIS)</b>					
<b>Outcome 1:</b> An operational environmental management information system (EMIS) providing accurate and timely information.  <b>Output 1.1:</b> An environmental data repository with standards, norms and protocols to collect, analyze, store and make available accurate, and reliable	5. An environmental data repository architecture in place	<ul style="list-style-type: none"> <li>No data architecture is in place to structure environmental information at ECD</li> </ul>	<ul style="list-style-type: none"> <li>Environmental data is stored in a structured way and easily accessible</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li>1st QTR: XXXX</li> <li>2nd QTR: XXXX</li> <li>3rd QTR: XXXX</li> <li>4th QTR: XXXX</li> </ul>
	6. Information technologies in place to store the data repository	<ul style="list-style-type: none"> <li>Limited technology is in place to support data management for an EMIS</li> </ul>	<ul style="list-style-type: none"> <li>Hardware, communication and networking equipment is in place to store environmental data and provide easy access to this information</li> </ul>	<ul style="list-style-type: none"> <li>3rd QTR: Not applicable for the reporting period</li> <li>4th QTR: IT equipment and consultant Procurement have been pending</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	7. Agreements for data sharing in place	<ul style="list-style-type: none"> <li>Information is shared on an ad-hoc basis among institutions following formal requests made at Secretary level</li> </ul>	<ul style="list-style-type: none"> <li>3-4 agreements are in place between ECD and 3-4 agencies/institutions to share data on a regular basis</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Objectives and Outcomes	Indicator	Baseline	Targets End of Project	2015 Progress	2016 Progress (please add additional columns for later years)
<p>environmental information related to all three Rio Conventions, and of direct use by decision-makers.</p> <p><b>Output 1.2:</b> An information technology architecture in place to store, manage and provide public access to environmental information.</p> <p><b>Output 1.3:</b> Environmental information available and disseminated to stakeholders.</p>	8. Use of this environmental information in decision-making and policy-making	<ul style="list-style-type: none"> <li>Limited environmental information is used to develop policies and programmes</li> </ul>	<ul style="list-style-type: none"> <li>3-4 policies, programmes or plans are developed using environmental information from the EMIS</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	9. Environmental information is shared regionally and internationally	<ul style="list-style-type: none"> <li>Limited interaction exists at the regional level to share environmental information</li> </ul>	<ul style="list-style-type: none"> <li>2 regional sharing procedures in place by the end of the project</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	10. Quality, quantity and timeliness of reports submitted to conventions	<ul style="list-style-type: none"> <li>Reports are not submitted on time and do not contain much primary collected data</li> </ul>	<ul style="list-style-type: none"> <li>National communications/ reports are submitted on time and contain primary data collected by the EMIS</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	11. Public states higher awareness of environmental information products	<ul style="list-style-type: none"> <li>Public and decision-makers are not aware about existing environmental information</li> </ul>	<ul style="list-style-type: none"> <li>50% of Members of Parliament are aware about existence of easily accessible environmental information at ECD</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>COMPONENT 2.0: ENVIRONMENTAL INDICATORS AND COMPLIANCE MONITORING SYSTEM (CMS)</b>					
<b>Outcome 2:</b> A Compliance Monitoring System (CMS)	12. Adequate environmental indicators monitored	<ul style="list-style-type: none"> <li>The existing set of environmental indicators is not comprehensive and does not respond to</li> </ul>	<ul style="list-style-type: none"> <li>Set of environmental indicators in place and responds to national and international</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Objectives and Outcomes	Indicator	Baseline	Targets End of Project	2015 Progress	2016 Progress (please add additional columns for later years)
developed and tracking key environmental indicators.		the information requirements	information requirements		
<b>Output 2.1:</b> An institutionalized set of environmental indicators.	13. Adequate national standards, norms, procedures for monitoring these environmental indicators are officially in place	<ul style="list-style-type: none"> <li>There is no unified set of standards, norms and procedures to collect data, conduct observations and make sampling</li> </ul>	<ul style="list-style-type: none"> <li>Adequate official standards, norms and procedures are in place and use by the relevant institutions</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Output 2.1:</b> An institutionalized set of environmental indicators.	14. An in-service training programme for public servants include course(s) covering environmental information management and monitoring system	<ul style="list-style-type: none"> <li>There is no training programme for public administrators on environmental information management and monitoring system</li> </ul>	<ul style="list-style-type: none"> <li>The catalogue of in-service training programme include course(s) on environmental information management and monitoring system</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Output 2.2:</b> An operational compliance monitoring system.	15. Number of public servants trained by taking the course(s) on EMIS and CMS	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>100 Public Servants are trained using the new training programme</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable for the reporting period</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>