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First Series Technical Consultation of the Regional Scientific and Technical Committee for the GEF Pacific Ridge to Reef Programme

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Session 3, Topic 2:

Pacific R2R Information Management Systems
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Summary:

Beginning of 2019, GEF Ridge to Reef Programme engaged Geo-informatics Section within Geo-science, Energy and Maritime Division, SPC to design and develop a data repository for the State of Coast platform. The section started implementing the project using the parallel approach of:-

- (i) Collating regional baseline spatial data for national projects, and facilitating access to said data, derived from several SPC-hosted, regional and international platforms; and
- (ii) Developing an extensible mapping platform to enable sharing of data products from the programme

After a year of prototyping, which was mostly dependent on availability of relevant data-sets and templates, the section stood up an Spatial Data Infrastructure, built upon industry standards, which the section envisages will cater for the data exposure and analytical needs of the projects, and will be well supported by the GEM Division beyond lifespan of the GEF R2R programme.

Currently the platform hosts baseline and project data for pilot sites in Vanuatu and Waimanu Catchment River, Fiji, along with some regional open data deemed relevant to the national projects. The data-sets have relevant metadata tied to them. A GEF R2R programme has engaged interns who would continue to populate the SDI platform on behalf of national projects.

The platform is deployed on Amazon Web Services, Sydney, and being built on proven open source standards and components, can be deployed at national-levels with minimal costs and on commodity hardware (eg: no licencing costs). GEM Division has been supporting similar SDI platforms in the region, at a country-level or ministry-level for the past 12 years.

Recommendations:

The R2R Technical Consultation is invited to -

- (i) Explore the GEF R2R Spatial Data Infrastructure deployment, its feature-sets and contribute ideas and feedback to ensure suitability for the programme outputs, noting that it is under active development and data population.
- (ii) Provide advocacy for the platform at a national project-level to encourage relevant stakeholders to start sharing their spatial data, related assets, visualisations and models via the platform, in order to enable decision making on a national/regional scale.

Pacific R2R Information Management Systems
R2R State of Coast Platform
Spatial Data Infrastructure for GEF Pacific Ridge to Reef Programme
<http://r2r.spc.int>
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Outlook and Next Steps

- (i) Encourage national projects to take ownership and provide feedback for further development
- (ii) Enable external project stakeholders to expose their data and assets via the platform
- (iii) Facilitate credentials and instructions on administering data-sets and products to external stakeholders and national project counterparts.
- (iv) Complete Environmental Data-Sheet Register (GEF R2R Programme Interns)
- (v) Implement Indicators Capture and Analytics
- (vi) Enable Geo-processing - running impact models dynamically with user-defined parameters
- (vii) Raise awareness with other partnerships, STAR, IW, SPREP etc, and enable relevant data exchange interoperability where possible (eg: pacific-data.sprep.org and other global environmental data platforms)

Note: SDI

A Spatial Data Infrastructure, commonly referred to as SDI, is in essence a data infrastructure that enables the efficient use and management of spatial information. Although the manifestation of an SDI is ultimately a technology platform of loosely coupled servers and services, at its heart there is a core set of four guiding principles: people, standards, policy, and data.

People are an integral part of any SDI, as they will use it to deliver services and analysis to stakeholders. Within a corporate environment, one can categorize people into three broad types:

Data Producers - who use powerful GIS/RS tools to create, manipulate, and maintain spatial information, derived from remote sensing techniques or field surveys.

Data Users - concerned with the analysis and interrogation of spatial information to provide answers. They use a combination of web-based and desktop-based tools.

Data Consumers – primarily non-technical, concerned with the consumption of data products, analytics and models (usually from data users) to inform decision making and/or business planning.

A guiding principle for an SDI is interoperability, which is to say that a policy around the use of spatial tools should not necessarily dictate or advocate the use of any one specific tool. In other words, standardization should not be achieved at the software or tool level but rather at the service level, through the adoption of industry-recognized standards, such as those of the OGC. This ensures long-term sustainability and data reuse beyond project/funding life-cycles.