

Developing the Seychelles Spatial Data Infrastructure (SDI) and managing Geographic Information in a Small Island Developing State (SIDS)

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Presentation Outline

- History of GIS in Seychelles
- History of Disaster Risk Management in Seychelles
- GI and Data Management in Seychelles
- GI and Data Management in Seychelles-DRM Perspective
- Challenges of sharing and keeping datasets up to date in fast growing cities – Seychelles
- What are the solutions that are implemented
- What is the role of open data like OpenStreetMap
- Initial Seychelles Spatial Data Infrastructure
- Revamping Spatial Data Infrastructure

History of GIS in Seychelles

- Initially started with Setting up of GIS Unit at Ministry of Environment (MOE) in 1996 with the assistance from PRIMTAF (Programme de renforcement institutionnel en matière technologique en Afrique francophone) – QC, Canada
- Simultaneously , a Land Information System (LIS) was set up in the Ministry of Community Development (MCD) in 1993
- Marks the initial Capacity Building in IS in both institutions
- MOE dealt mostly with Environmental related datasets whereas MCD dealt primarily with Cadastral Information involving automation of parcel information in a digital environment link to land titles and land use information
- Due to movement of staff, the MOE GIS unit moved to MCD in late 90s which saw the creation of Centre for GIS, the largest GIS body in the country

History of GIS in Seychelles....Cont;

- Due to great demand, MOE decided to set up its GIS again in 2000 – other Departments followed suit
- Today many organisations use GIS as a tool: Those include Government institutions, private and NGOs
- GIS even features in Tertiary education curriculum
- Notable GIS Bodies in Seychelles include:
- MHILT, MEECC, SFA, Statistics, Census, Agriculture, NGOs, Utilities companies (private and para-statal)
- MEECC (formerly MOE) and MHILT (formerly MCD) holds the largest datasets in the country.

History of Disaster Risk Management in Seychelles

- Creation of Department of Risk Disaster Management (DRDM) after Tsunami in 2004 and became fully functional in 2006 to cater for all Disasters nationally
- Prior to 2004/2006 there were coordinated efforts from the local Departments concerned under the guidance of National Disaster Committee which was itself set up in the mid 80's
- DRDM fall under the Presidents Office for maximum impact and commitments
- Team is still small and still depend on other National Institutions for assistance in time of national crisis

GI and Data Management in Seychelles

- Initially (up to early 2000) most institutions using GIS used Desktop GIS and usage of databases was non-existent
- As national projects involving the development and creation of large data sets in the mid 2000 took off, the larger institutions moved towards Geo-databases
- Development of open source freeware contributed to that effect along with lowering price of hardware such as servers
- Now, most institutions dealing with larger datasets have their datasets in Geo-databases
- Cloud becoming more attractive
- Most Geo-databases have or are moving towards data accessibility anywhere via the internet (controlled)
- However we are still issues with connecting together – institutions to institutions – Not a technical or capacity issue. This due to:
 1. Willingness
 2. No proper sharing agreements and policies to guide the process
 3. some datasets are large and sieving thru custodian conditions and agreements can be tedious
- Using both propriety and open source soft and freeware

GI and Data Management in Seychelles-DRM Perspective

- The Seychelles DRDM does not have a fully functional GI systems in place
- Have attempted to set in the past with little success – commitment and recruitment of adequate personnel
- Recent recruitments and involvement in local Geospatial activities show willingness towards setting up a GIS
- Do have disaster database which can easily be integrated into a GI System
- At present, all GI and most DM issues are handled by various Government institutions such as the MHILT and MEECC
- Other institutions conducts the mapping of critical facilities, communications network, Disaster and risk areas etc on behalf of DRDM

Challenges of sharing and keeping datasets up to date in fast growing cities - Seychelles

Sharing

- As more people are using spatial data for analysis and publications, willingness to share drops
- Custodians have various and different conditions and need to have the right data sharing agreements
- Depending on which institution, the mode of sharing can be problematic if the dataset is large

Updated datasets

- Credible datasets – verification of data from providers can be problematic
- Difficult to control data redundancy as do not know what every institution is working on all the time as no inter-connectivity
- Increasing data gaps – faster development – more data to generate
- Updated metadata – often ignored
- Standards sometimes ignored
- Storage capacity expansion with increasing data sets

What are the solutions that are being implemented

- Working on implementing SDI for connectivity , standards and sharing of data issues
- Increase and improve capacity building and training at all levels
- Make use of, introduce and implement new emerging Geo spatial technologies to improve efficiency (outputs)
- Learn lessons from our past experience
- Encouraging development of metadata at the get go
- Ensure large projects generating datasets have continuity beyond project duration – Storage etc;

What is the role of open data like OpenStreetMap (OSM)

- Not complicated as such, easier to train users from different technical background
- Can get school children involved and interested through various projects and school curriculum
- Easy to access High Quality data to work with
- Datasets and databanks increasing exponentially if get good pool of contributors
- Less hassle with data sharing and exchange as it the case with propriety data (Gov/Private/NGOs, etc)
- Takes care of data storage
- Controlled Standards
- *Definitely a solution to improve datasets nationally, however traditional SDI is still needed for SIDS/Seychelles – Co-exist*

Initial attempt to set Seychelles Spatial Data Infrastructure

- Initiated in the early 2000
- Never set up properly per se
- Several failed attempts in the past due mostly to non commitments of those involved, such as:
 1. Steering committee and technical committees not meeting up regularly with eventual phasing out – staff movement
 2. No adequate structure and plan of work
 3. Various institutions not agreeing with each other on how to run the process
 4. Simply not enough GIS work being conducted and datasets produced then
 5. Not seeing the use of working together

Revamping Spatial Data Infrastructure

- Currently drafting
 1. Data sharing agreement – Partners-National scale
 2. Data Sharing Policy – Access to data and medium (portals, etc)
- Guidance on appropriate Institutional arrangements and data sharing platforms are also being drafted
- Setting up of committed High level Steering committee and Technical Working Group (Geospatial Working group in existence)
- Issues like standards, capacity building, metadata are also under review
- All to go through the Cabinet of Ministers soon for greater ownership and support and backing
- Being done with support from World Bank

THANK YOU - MERCI

QUESTIONS?