UNEP- *Geospatial Information access and dissemination capabilities - UNSDI expectancies.*

Panel 1 (top left)

Arrangements & components | *Limitations*

UNEP/DEWA operates and collaborates with a number of GRID Centres, plus WCMC.

DEWA, on behalf of UNEP, maintains relationships with important providers of geo-information: *space agencies, national and regional environmental authorities etc…*

DEWA also maintains a MoU with ESRI under which UNEP centres and close affiliates receive cost-free licenses and discounted maintenance on ESRI products.

Varying degrees of expertise and capacity in geo-information serving.

Services are not well integrated with the rest of the programme.

These capabilities receive sporadic use.

Lack of awareness and perceived relevance amongst most staff on GIS capabilities.

Organizational side
Technical side

Internal Geospatial Information Access

DEWA operate the computer systems implementing numerous web mapping and Web Feature Services delivering content from geodatabases and file systems in many centres, supported by metadata catalogue systems.

DEWA operate a number of database services that, while not GIS themselves, are nonetheless geo-linkable (eg. *The GEMstat water quality database maintained byGEMS/water, and the GEO Data Portal operated at GRID-Geneva*.

GRID staff work with network administrators to ensure that appropriate port configurations are maintained to enable non-web-service interaction between selected geo-databases.

Internet bandwidth limitations in HQ and some outposted offices make effective use of rich data frustrating.

Panel 2 (top right)

Arrangements & components | *Limitations*

GRID was established, historically, precisely to disseminate geo-information.

UNEP's Division of Communication and Public Information (DCPI) have the mandate for communication of high-level policy relevant content to UNEP's political constituency.

It's successes occurred mostly in specialized GIS communities.

Necessity for GRID to revamp as openGRID and exploit Internet technologies to extend its services to non-specialist communities.

There is as yet inadequate effective delivery of DEWA assessment-related analysis into these more generalized product delivery services.

Lack of integration of geo-information with the rest of the Environment programme.

Organizational side
Technical side

Geospatial Information Dissemination to partners

Outside specialist communities (i.e. those content and competent to use WMS and WFS services, or who need active data download) there are few technical components at this stage.

Work is afoot to bring web map services more closely with UNEP's corporate web presence but this is a long-term prospect.

Panel 3 (bottom left)

Arrangements & components | *Limitations*

Specific MoUs addressing data access - for example, with USGS in the case of GRID-Sioux Falls.

Provisions within specific projects (such as UNEPs Global Environment Outlook or WCMCs).

Specific governments provide in-kind support to the programme by supporting data harvesting activities.

Institutional presence in the global observation community (IGOS/P, GTOS, CEOS).
Technical member of OGC.
Participates in two GEOSS working groups.
Supported liaison with ISO .

The time and effort it currently takes to locate partners' data services, assess their suitability and other characteristics, are often insurmountable problems.

The added complexities of wildly-different and inconsistent data access policies are a further bottleneck

None of these are geo-information providers but their work, collectively, shares the characteristic of addressing some or many of the constraints noted earlier

Organizational side
Technical side

External Geospatial Information Access

Various UNEP centres operate data services that harvest from different providers and repackage content suitable for UNEP applications (the GEO Data Portal being one).

Others deploy WFS and WMS that integrate content provided dynamically from external sources.

GRID Nairobi maintains an archive repository of large datasets acquired externally but kept available locally for re-use without choking the internet connection.

In too many cases the services are locked in stacks (or silos) that are inaccessible to applications running in UNEP. meaning that data or products have to be customized, duplicated and shipped, with all the costs that that entails.

As stared earlier, bandwidth limitations are a a real operational constraint in Nairobi.

Panel 4 (bottom right)

UNSDI expectancies:

SERVICES
Promote modular system implementation (i.e. break down the stacks) so that system-to-system services can become a reality
Promote user-driven on-demand service delivery rather than pre-defined and packaged assemblies of content
Promote re-use of content and methods developed by authoritative sources

STANDARDS
The advocating of particular standards and protocols by an objective external body would dampen many of the nitpicking debates that obstruct effective interoperation.
Promote simple, standardized boilerplate data access policy templates and promote them amongst UN agancies and member states

ORGANIZATIONAL
A formalized UNSDI would provide an external driver to gain the senior management attention required for institutionalizing geo-information in UNEP.
A UN-wide perspective would also provide useful arguments against system developers embarking on the development of yet more silos.
One operational result of an effective UNSDI would be easier and more widespread visibility of geo-informed products elsewhere in the UN system, against which UNEP might start measuring itself and demanding similar capability - this would be equally true in administrative documents as in outreach publications.