UNEP.Net – an environmental information discovery mechanism

Sean Khan¹, Gerard Cunningham¹

Background
UNEP.Net commenced implementation in October 2000 following a strategic planning meeting held at the Environmental Systems Research Institute (ESRI) headquarters in Redlands, California. The objective was to develop a definitive gateway to environmental information by leveraging today's Internet technology. The pilot phase from 2001-2002 yielded many lessons pertaining to the purpose, implementation, sustainability, etc, of UNEP.Net. These experiences underscore important elements that need to be addressed in the future development of UNEP.Net. Key amongst these challenges are:

- the need for endorsement from the UNEP Governing Council and UNEP senior management to ensure purpose and budget;
- a defined target audience and user needs analysis as the basis for monitoring and adjusting for effectiveness;
- a better defined niche to demonstrate comparative advantage and eliminate duplication; and
- the need to identify and collaborate with other initiatives to reduce maintenance and build ownership.

In general, the pilot phase activities were supply driven and lacked ownership. Buy-in by prospective partners was missing for a number of reasons including branding, due credit, and clarity of purpose. However, the pilot has been a useful exercise necessary for gaining practical experience and insights on the technical and institutional realities of implementing a much-needed mechanism.

1. Rationale
Each year sees countless disparate portals, information-rich online databases and websites developed on the Internet. “UNEP.Net type” initiatives (i.e. the pilot phase) have been implemented within the UN and the international arena. Many are still in

¹ UNEP-Infoterra network, Partnership Management Unit, Division of Early Warning and Assessment, United Nations Environment Programme, Nairobi, Kenya.
active operation while others were established with rich content but are rarely updated.

Over the past three decades UNEP has spawned a number of environmental information networking activities, namely ENRIN, GEO, GRID and Infoterra that have stakeholder involvement at the global, regional, sub-regional and national levels. Overlapping activities; working with different institutional partners in the same country; and sometimes working with different people within the same institution has led to confusion and duplication of effort. UNEP recognizes that there are many externally funded initiatives that produce data and information, and a culture to publicize or sell accomplishments using the Internet, will continue to exist. It is amidst this culture that a niche for UNEP.Net lies and defines our way forward.

Our niche lies in putting in place a discovering mechanism that provides access to, and filters, the wider array of emerging and already available scientific and technical data and information about the environment for our assessment, monitoring and early warning responsibilities.

UNEP.Net is a framework consisting of two distinct utilities:

- a discovery mechanism for UNEP and its partners to share and publicise high quality data and information about the environment that they own or manage;
- functionality that allow users to use UNEP.Net to create and complement their own services.

Central to UNEP.Net is a credible backbone that connects and makes available structured information from various information systems, portals, clearing houses.
databases and other information providers. Besides a simple interface for accessing
the network, the UNEP.Net itself is invisible. Its service value is reflected through
its collaborating partners. The framework gives due credit to the information pro-
vider, specifies protocol and specification for sharing and using information on the
network. Under this framework, all data and information accessible through the
network is maintained by the data or service provider - the custodian. Implementa-
tion of this network will in addition to the IT related activities, include processes to
identify and partner with existing information services or information providers (e.g.
environment-directory, GPA clearing-house, SANET, etc)

This backbone is comprised of four main components:

- A meta-data service (or MDS) that monitors the network, collects use statistics,
  indexes information and data from its partnering nodes into a structured format
to allow seamless discovery of scientific and technical information
- A quality assurance unit (or QA) responsible for enforcing network policy (i.e.
  what partners can publish on the network, correctness and consistency of meta-
data, interoperability specifications, etc).
- A user interface (UI) as the default entry point to the network. This interface is
  a website with a search facility to access the network resources, and a set de-
  fault but customizable themes. In other words, the user interface also serves as
  a generic portal that allows any user (individual or organization) to create a
  customized view of information available through the network. For example, a
  user interested in obtaining land cover datasets for Africa, may create a theme
  which when activated will search, identify and rank partner node (clearing
  houses, portals, networks, etc) that publish datasets with relevance to the search
  criteria.
- Various supporting utilities (modules, plug-ins, etc) for UNEP and its partners
to use UNEP.Net to create or complement their own portals, websites and appli-
cations.

2.  Way forward

Amidst the many information products driven by different demands (real or per-
ceived), UNEP.Net as an enabling framework for information discovery will serve
as the only environmental information network that links credible existing informa-
tion and data sources such as UN clearing houses, portals, project databases, and
GIS systems, through a user customized interface and, guarantees high quality,
structure and persistence -- characteristics the “googles” and “yahoos” of the internet
have not achieved.

The focus of UNEP.Net in the future is to implement the necessary utilities at the
technical level to permit open exchange of information, put in place processes for
quality assurance and, implement a plan to identify and partner with credible information providers.