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Symposium:
Collaborative Marine Spatial Planning with SeaSketch
Perspectives in the Western Indian Ocean

WIOMSA Scientific Symposium
Dar es Salaam, Tanzania, 2017

The workshop is organized in partnership with the MOZALINK project, funded by the Western Indian Ocean Marine Science Association through its Marine and Coastal Science for Management programme (2014-2017). The MOZALINK project aims to develop data, knowledge and solutions to support transparent, sustainable and science-based Marine Spatial Planning (MSP) in the Western Indian Ocean.
Citizens remain poorly informed about the stakes and decisions drawn along MSP processes in the region. Although MSP presents itself as neutral and legitimated by science, it is, in the end, a political process involving negotiations, mediations and arbitrations among a wide range of stakeholders. The SeaSketch web-based application can be used to support equitable and transparent MSP negotiations.

Background:
Marine spatial planning (MSP) requires the use of geospatial information and technology for the design of zones that regulate ocean uses such as fishing, mining, shipping, aquaculture and tourism. Historically, the tools that have been used to design and analyze prospective zones (i.e., geographic information systems or GIS) have required a sophisticated skill set that are typically out of reach for the average stakeholder. In recent years, however, web-based mapping applications have lowered the barriers to participation by stakeholders with limited or no experience with GIS by exposing simple tools for visualizing, creating and analyzing map data.

SeaSketch (www.seasketch.org), is a web-based application that has been used for MSP in the United States, Canada, New Zealand, Barbuda, Montserrat, Curaçao, the Galapagos Islands and Indonesia. Configured to reflect the planning goals and objectives specific to a given MSP initiative, SeaSketch offers users the ability to view spatial information about the distribution of human activities, natural resources and infrastructure in and around the ocean. Then, using this information as a guide, users can sketch prospective ocean zones and analyze whether they meet science and policy guidelines for ecosystem protection, economic impacts to ocean users and their relative tradeoffs.

Frequently, stakeholders have information about how ocean space is used and valued - information that is essential for planning but that is often unrepresented as spatial (map) data. SeaSketch is used to conduct crowdsourced and facilitated surveys in which stakeholders may contribute this information and express these values. For example, in the Caribbean, SeaSketch surveys were used to collect information on the distribution of valued fishing and diving areas which, ultimately, were represented in heatmaps of ocean uses. These data have proven essential in evaluating the potential impact of marine protected areas on local ocean users that may be displaced by these zones.

Because stakeholder participation is central to any successful MSP effort, SeaSketch has features that allow planners to track, visualize and quantify user activity. Through an administrative "dashboard", planners can analyze logins, messaging and sketching activity. Using this information, planners may target underrepresented users or stakeholder groups and geographies to ensure proper representation in the process.

Symposium Objective:
Workshop participants will learn about how SeaSketch (www.seasketch.org) has been used to facilitate a variety of successful marine spatial planning (MSP) initiatives at various scales. Participants will also gain hands-on experience using survey and collaborative design tools in a mock planning exercise using a SeaSketch project (wiomsa.seasketch.org) configured for the Western Indian Ocean region. Using over 50 regional datasets, users will sketch and evaluate prospective zones and discuss their relative merits in an online forum. Additionally, participants will learn how new data (such as valued fishing and diving areas) may be collected with an online survey tool.

Target Audience:
Marine spatial planners, resource managers, geographic information systems (GIS) practitioners, marine scientists with relevant spatial data, academics with interest in participatory and collaborative planning.

Workshop Programme:
- Introductions, MOZALINK, SeaSketch overview and case studies (1 hr).
- Mock MSP session with SeaSketch (wiomsa.seasketch.org) (1 hr).
- Group discussion and interactive demonstration of how SeaSketch may be customized to effectively represent the needs of the Western Indian Ocean stakeholders and regional planning objectives (1 hr).