Environmental policy and decision making requires knowledge of the state of environment and the complex interactions between humans and the natural world. Enhanced knowledge of the state, trends and outlooks of the environment is a key characteristic of effective policy devices that protect and promote ecological systems. Geospatial technologies (which include GPS, Remote Sensing and GIS) have helped transform our understanding of earth system dynamics and they have a great potential to become more potent tools in environmental governance. They play a key role in all phases of the environmental policy continuum (see Leeuv et al 2010) (see fig 1). For example, they help detect environmental harm and assess if there is need for initiating appropriate policy response. Thus, Sensors launched on the Nimbus-7 satellite in 1978 helped identify and visualize worrying levels of ozone depletion, thereby catalyzing the political will needed for decisive national (US) and global action on ODSs. Similarly, EOs are very useful in monitoring recovery and/or deterioration of ecosystem goods and services. Further, EOs also could play a positive role in promoting ‘environmental’ democracy. For example, geospatial technologies make environmental harms easier to trace (e.g. oil spills, forest fires etc) and allow empirically grounded and analytically rigorous decision making, which could in turn lead to more accountability and transparency to the policy making and decision making process (see Esty 2004). Nonetheless, the application of Geospatial technologies in environmental policy and decision-making in the developing world has been constrained by various influences, including capacity and institutional constraints.

Last year, START, as part of the Global Observations of Forest and Land Cover Dynamics (GOFC-GOLD) project partnership effort to promote use of earth observations in advancing scientific knowledge, led an effort to explore priority knowledge and capacity needs related to the utilization of EOs in environmental policy and governance support by coordinating six case studies from 5 countries in Africa on current use and future potential of EOs in advancing environmental policy in the region and beyond. Focusing on varied themes such as natural resources management (Nigeria, Kenya), forest fire monitoring (Swaziland), water policy (Ghana) and urban growth (Uganda), the six case studies highlight data, knowledge and capacity gaps associated with EOs and assess the current and potential role of geospatial technologies and knowhow in supporting livelihoods and ecological systems in the region. The need for better collection, preservation, sharing and dissemination of in-situ data; fostering research, technical and institutional capacity; investing in geospatial infrastructure as well as the need for assessing the state of National Spatial Data Infrastructures (NSDIs), including enabling policy environments on data collection and sharing and the various applications of EO data and products.

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across the environmental policy cycle feature prominently in these case studies.

Below we identify a few common threads that run through the studies, which are likely applicable in many developing countries, especially LDCs:

- **EO data and products are already being used in the detection of environmental problems in many developing countries (e.g. forest fires in Swaziland, gas flaring in Nigeria). There is a need for encouraging use of geospatial technologies in the monitoring and evaluation of existing environmental policy and regulatory regimes. There is a need for mainstreaming the use of EO data and tools across the national environmental policy continuum.**

- **Despite the exponential increase in the availability of EO data, there is still lack of adequate access and, even where there is access, lack of capacity in data processing and analysis. Inadequate ICT infrastructure, including low Internet bandwidth, is a major constraint on the uptake of remotely sensed data.**

- **Effective utilization of geospatial technologies for environmental policy support will depend on how countries develop their research, technical and institutional capacity as well as NSDIs. Such effort needs to be fostered through establishment of networks and communities of practice and targeted R&D investments.**

- **The existence of national space and geospatial policy frameworks is helpful in fostering NSDIs.**

- **In-situ data is just as important, if not more so, for environmental policy and decision-making — there is a need for enhanced collection, preservation, sharing and dissemination of such data, which is helpful for validation and calibration of satellite datasets and products. Equally important, there is a need to present EO products and services in user-friendly forms.**

- **Last but not least, there is a need for meaningful engagement with the policy community.**

**References**
