

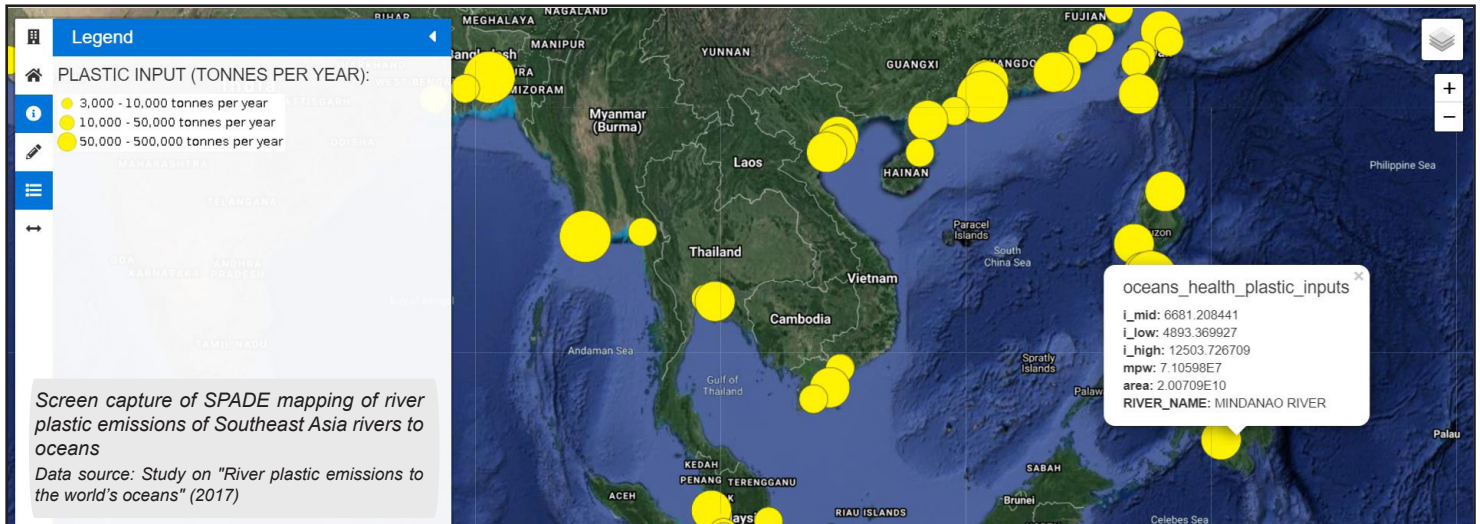
EVENT SNAPSHOT



URBAN CLIMATE
CHANGE RESILIENCE
TRUST FUND

Asian Development Bank

Geospatial tools for biodiversity and ecosystem assessment



Screen capture of SPADE mapping of river plastic emissions of Southeast Asia rivers to oceans

Data source: Study on "River plastic emissions to the world's oceans" (2017)

EVENT DETAILS

Green Bag Seminar: **Geospatial Tools for Biodiversity and Ecosystem Assessment**

- Thursday, 18 June 2020 | Microsoft Teams
- Organized by the ADB Library with the Environment Thematic Group and Urban Sector Group

MODERATOR: Loureal Camille Inocencio, Information and Research Coordinator (Environment), ADB Library

SPEAKERS:

- **Francisco Ricciardi**, Environmental Specialist, Safeguards Division
- **Bonapart Masangcay**, SPADE Technical Lead, UCCRTF

SPADE was launched by the Urban Climate Change Resilience Trust Fund (UCCRTF) in 2018 in collaboration with the Sustainable Development and Climate Change Department (SDCC), and the Operations Department. A dedicated computer terminal for SPADE is set-up in Library eHub where staff and consultants could request tutorials on how to use the SPADE platform.

IBAT is a comprehensive database of key biodiversity information established by an alliance composed of Birdlife International, Conservation International (CI), International Union for Conservation of Nature (IUCN), and United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC). ADB uses the IBAT platform to support environmental assessments undertaken for all its projects.

GEOSPATIAL TOOLS FOR MANAGING BIODIVERSITY AND NATURAL HABITATS

The ADB Library, with the Environment Thematic Group and Urban Sector Group, held a webinar on optimizing geospatial tools, such as geographic information systems (GIS), mapping, and spatial analysis, as a means of managing biodiversity and natural habitats. This featured the Integrated Biodiversity Assessment Tool (IBAT) and Spatial Data Analysis Explorer (SPADE).

SPADE is an interactive web-based cloud platform that can host geospatial information and be used by ADB staff and consultants for project identification and preparation, due diligence, engineering design and monitoring, and analysis of climate change impacts. IBAT is a visualization tool that hosts three key global biodiversity datasets used by ADB to support project screening for biodiversity and ecosystems risk.

The discussion highlighted features of SPADE and IBAT that could support biodiversity and ecosystem assessment to guide effective decision-making. IBAT can provide information to assess if a development project

is in a critical ecosystem or can adversely impact biodiversity features. Data can be downloaded and used in GIS.

To demonstrate its capabilities, SPADE presented various use cases including fieldwork data collection for Rapid Environmental Assessment (using the SPADE mobile application); flood hazard analysis in Hue, Vietnam; visualization of air quality in China pre- and during COVID-19 lockdown; forest loss in Southeast Asia from 2000 to 2018; and visualization of the volume of plastic emissions of various Southeast Asia rivers to oceans.

The discussion also highlighted how the features of IBAT and SPADE can be combined for a more comprehensive biodiversity and ecosystem assessment. By superimposing the IBAT database on the SPADE geospatial platform, users of the system can zoom in on the actual location of their project site to determine if there are any direct impacts on local floral and fauna.

URBAN CLIMATE CHANGE RESILIENCE LESSONS

Mapping biodiversity and ecosystem services could be a starting point of environmental safeguard assessments to guide decision making in all project stages – from identification to implementation and monitoring – towards protecting the environment.

SPADE can support visualization of biodiversity and ecosystem drivers and pressures (e.g. land/ water uses and management, climate change, water and air pollution, etc) and their different gradients and variations in space and time by creating multiple layers on a geospatial platform. This can provide better understanding on the spatial dynamics of these factors and environmental quality.

Adding information on location of threatened species, protected areas, and key biodiversity areas available on IBAT on top of the multi-layered information on SPADE offers effective utilization of tools for integrated and informed decision-making in the organization.

FURTHER INFORMATION

- **Loureal Camille Inocencio**, ADB Library | linocencio@adb.org
- **SPADE** | www.adb-spade.org | For login details and other inquiries, email ADB Library or spadehelp@adb.org
- **IBAT** | <https://www.ibat-alliance.org/> | For login details, email ADB Library or Francesco Ricciardi – fricciardi@adb.org

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