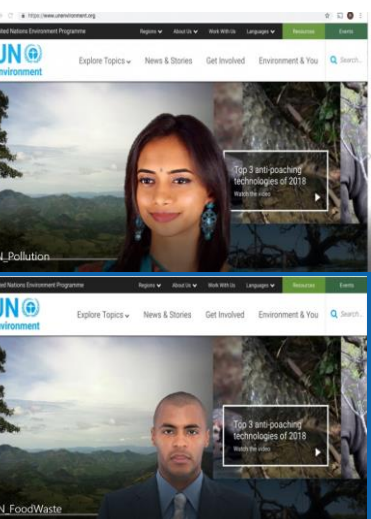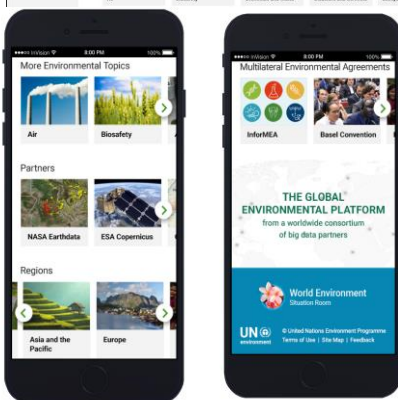# UN Environment Assembly 2019
A programme of Big Data on the Environment Events

Second UN Science-Policy-Business - Sat-09-Mar-2019
- Where We are and Where We Want to Be – Introduction **[09:30]**
- UN Environment Situation Room: Where it all started
- Earth Observations: The Potential to Better Understand Earth and its Environment
- The Space Climate Observatory (SCO) : Observing Climate Change and its Impacts – Creating the Model Project
- China's New Technological Frontiers in Planetary Data Management **[16:15**]
- Earth Observations and the SDGs – Horizon 2020
- Transforming Development with Planetary Data and Artificial Intelligence
- Earth Observations: The Role of Citizen Science
- Diversified Finance for Development - What's for Free and What is Not

Second UN Science-Policy-Business - Sun-10-Mar-2019
- Foresight, Early Warning for Decision-making **[09:00]**
- Innovative Technologies and Approaches in Monitoring the SDGs
- Measuring Progress towards Achieving the SDGs
- Monitoring Ambient Water and Air Quality : Launch of GEMStat Data Interface
- Conclusions and final Remarks : Big Data on the Environment

2019 Sustainable Innovation Expo - Mon-11-Mar-2019 at 11:30 to 13:00
- Harnessing Big Data on the Environment for Sustainable Development.

2019 Partnership meeting of the GRIDS - Tue-12-Mar-2019
- Meetings of the Global Resource Information Database Network Centres and the Governing body for the Foresight Briefs.
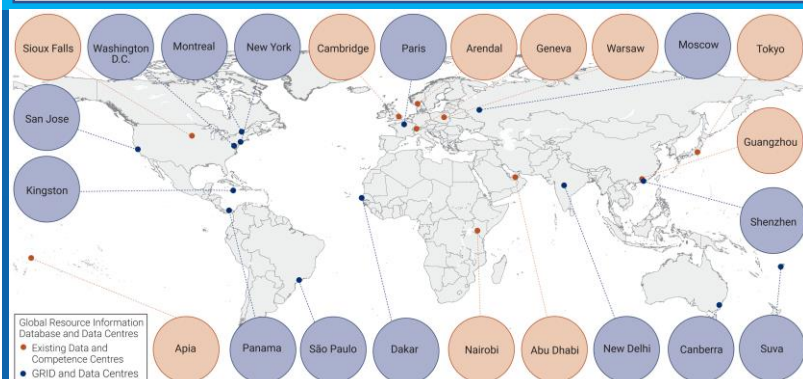
World Environment Situation Room – Morning [11:00] Pop-up Chats Mon – Fri
- Mon-11: SDG Ontology
- Tue-12: Global Environment Monitoring System for Water (GEMS/Water) and GEMStat database
- Wed-13: Using freely available satellite data to estimate daily pollution levels and trends in cities
- Thu-14: Indicator based reporting - Global, Regional, National, Sub-national, and Thematic
- Fri-15: Environment and Security

World Environment Situation Room – Afternoon [15:30] Pop-up Chats Mon – Fri
- Mon-11: Water bodies of concern: map-based platform and analysis tool
- Tue-12: UN Environment-Google-EU JRC Partnership: Measuring global water bodies, SDG 6.6.1 and how this can be applied to other environmental indicators
- Wed-13: Cost effective options for countries to monitor and analyse air pollution
- Thu-14: Environment Live Global Database and SDMX
- Fri-15: Partnerships [Global Resource Information Database (GRIDs)]
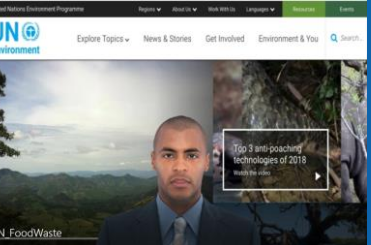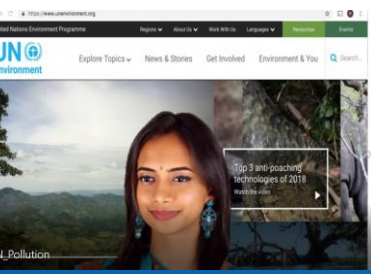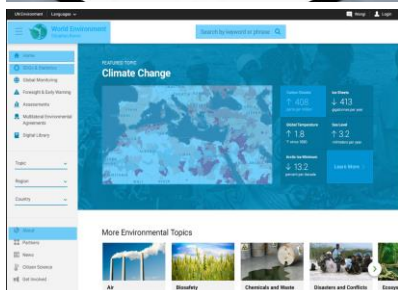
Date: Mon-11

Time: 11:00

Title: SDG Ontology

Speaker(s):
• SDG and Environment Statistics unit
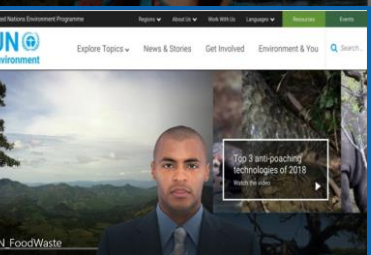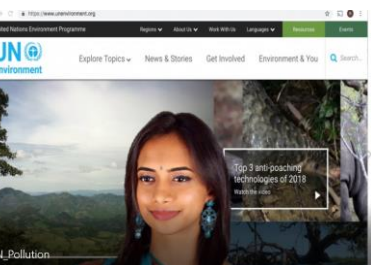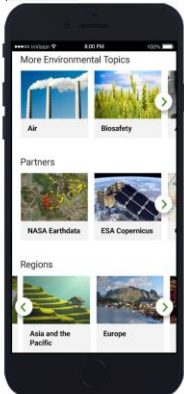
Concept and Content:

Ontology: a machine-readable representation of human knowledge which can be used to guide information and data mobilization and analysis.

The IAEG-SDG in its 2nd meeting (Bangkok, October 2015) requested UNEP to develop the SDG Interface Ontology (SDGIO). The session will provide a status update.

For more information contact dany.ghafari@un.org

Date: Mon-11

Time: 15:30

Title: Water bodies of concern: map-based platform and analysis tool (based on UNEP-DHI's Flood and Drought Monitor tool
Speaker(s):
• Oluf Zeilund Jessen (Affiliation: UNEP-DHI Center; Email: ozj@dhigroup.com)

Concept and Content:

Freshwater ecosystems such as lakes, rivers, wetlands and underground aquifers provide water resources and services to reduce poverty, promote economic growth and environmental sustainability. However, many freshwater bodies are facing serious threats from rapid population growth, changing consumption patterns and climate change, with challenges relating to degrading water quality, water scarcity, flood and drought, among others. There is growing concern about the impacts that the degradation of water bodies will have on societies and economies.

Through its global Freshwater Strategy which is firmly embedded in our role in the Sustainable Development Agenda, UN Environment has a global mandate to help countries protect and restore their key water-related ecosystems, address water quality challenges, and deal with water-related conflicts and disasters. To help countries bring together various sources of information and data, the Freshwater Ecosystems Unit has engaged the services of the collaborative centre UNEP-DHI (Danish Hydrological Institute) to develop a map-based platform and analysis tool it is called the "Water bodies of concern."

Building on an existing Flood and Drought Monitoring tool and a newly launched Google platform for SDG indicator 6.6.1 (which will also be shown in the World Environment Situation Room during UNEA-4), UNEP-DHI intends to combine socio-economic, climate, conflict-relevant, ecosystems and water data and bring them together on a map-based platform. In further steps, an operational web-based solution will be provided for the identification of the world's current (and future) water bodies of concern.

Join us to see a beta version of this system and learn more about the process and plans for this work.

For more information: http://www.flooddroughtmonitor.com/home
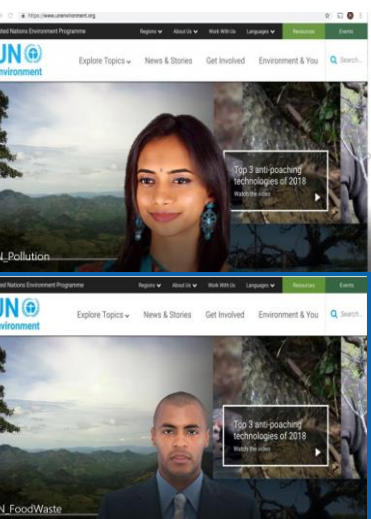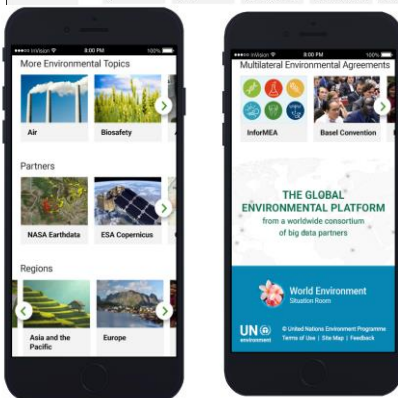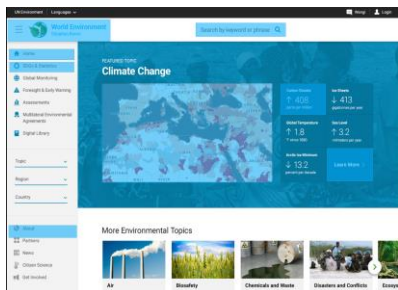
Date: Tue-12

Time: 11:00

Title: Global Environment Monitoring System for Water (GEMS/Water) and GEMStat database

Speaker(s):
•   Philipp Saile, Head of GEMS/Water Data Centre, International Centre for Water Resources and Global Change (ICWRGC)
•   Deborah Chapman, Head of GEMS/Water Capacity Development Centre, University College Cork, Ireland

Concept and Content:

Monitoring and assessment of water quality are essential for understanding the intensity and scope of the global water quality challenge. Yet there are significant gaps in water quality data availability, both in spatial and temporal terms, and the complexity of assessing water quality is increasing with emerging pollutants and multiple diffuse sources of pollution that are difficult to identify or manage.

The Global Environment Monitoring System for Water (GEMS/Water) collects world-wide freshwater quality data. Its GEMStat database (gemstat.org) is an online platform for water quality data, providing services to assist member states in all aspects of water quality data management, such as data submission, quality assurance, analysis and reporting. This session will demonstrate the functionalities and data services of the revamped GEMStat platform on global water quality data on ground and surface waters.

This session will also showcase the capacity development work being done by GEMS/Water globally. A variety of offerings, from online learning to face to face trainings that cover all aspects of water quality monitoring, empower countries to fill the data gap.
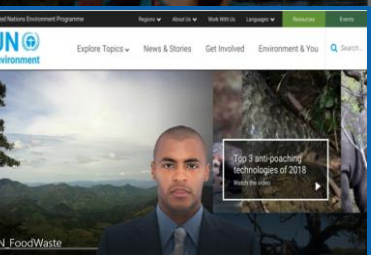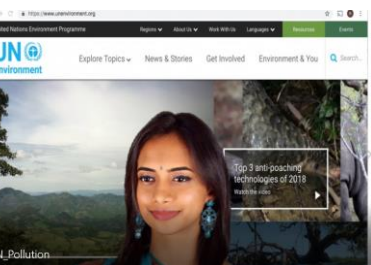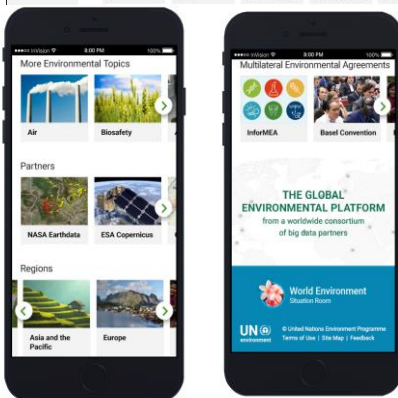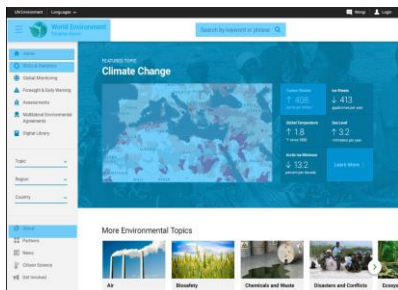
Date: Tue-12

Time: 15:30

Title: UN Environment-Google-EU JRC Partnership: Measuring global water bodies, SDG 6.6.1 and how this can be applied to other environmental indicators

Speaker(s):

- Brian Sullivan, Google
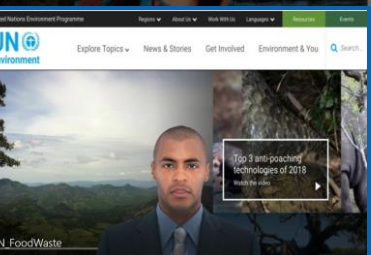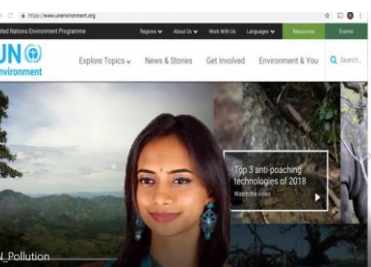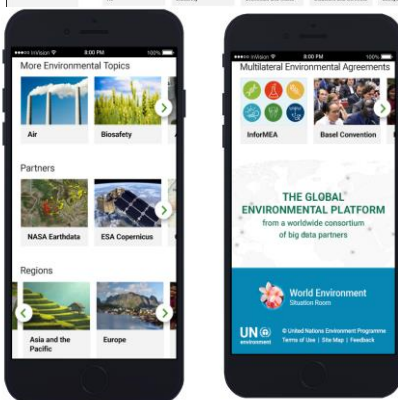- Jillian Campbell, UN Environment

Concept and Content:

This will be an interactive session where anyone can come and ask questions on how information on water bodies can be used in their national, regional or local context. Jillian and Brian will provide live demonstrations of how to access and use the data on water bodies, including how to drill down to particular water basins or local areas. They will also be able to answer questions on how this approach could be applied to other environmental areas, how this data could be combined with other data sources and any other questions that might arise. The work on global water and SDG 6.6.1 will also be presented at the Science-Policy-Business Forum (Conference Room 1 at 3pm on Saturday), this Popup event will provide an opportunity for more informal Q&A and discussion.

Date: Wed-13

Time: 11:00

Title: Using freely available satellite data to estimate daily pollution levels and trends in cities
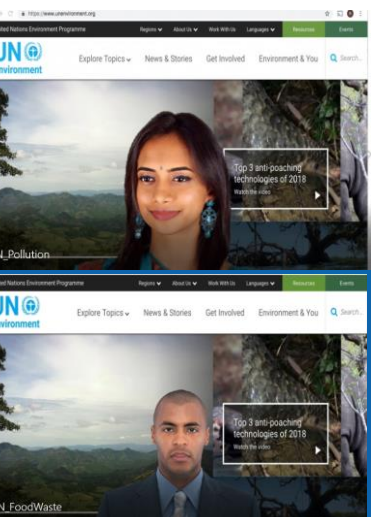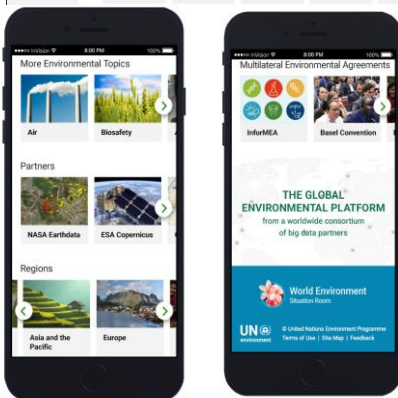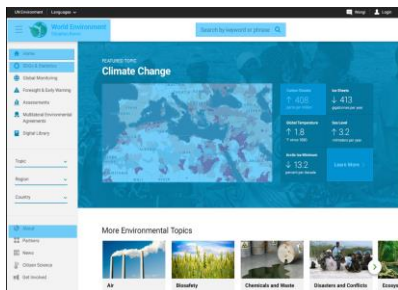
Speaker(s):
•   Mr. Nathan Pavlovic, Sonoma Technology

Concept and Content:

Nathan will introduce an innovative approach to estimate ambient air pollutants concentration known as fused model, which uses freely available satellite data, combined with ground measurements (including traditional monitoring equipment and low-cost monitoring devices) to estimate ambient air pollution. He will also share with us a recent case study in Accra, Ghana that used this fused model. Other works on global monitoring of air quality will also be presented at the Science-Policy-Business Forum (Conference Room 1 at 12:30 pm on Sunday), this Popup event will provide an opportunity for more informal Q&A and discussion.

UN Environment Assembly 2019

World Environment Situation Room - Schedule for the Pop-up Chat

Date: Wed-13

Time: 15:30

Title: Cost effective options for countries to monitor and analyse air pollution
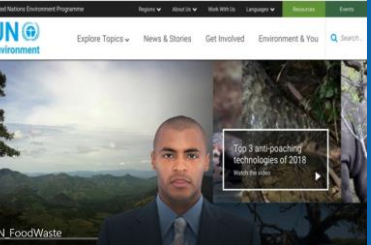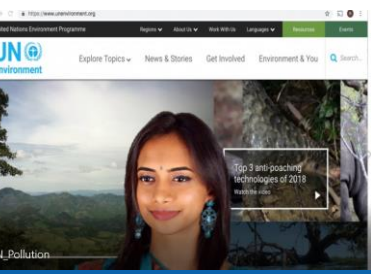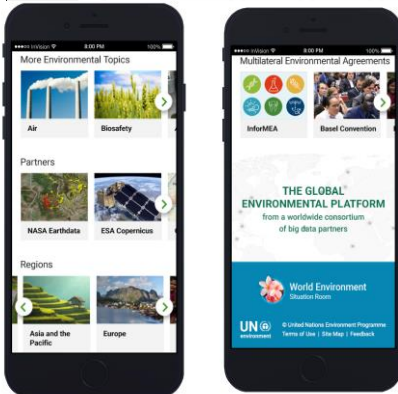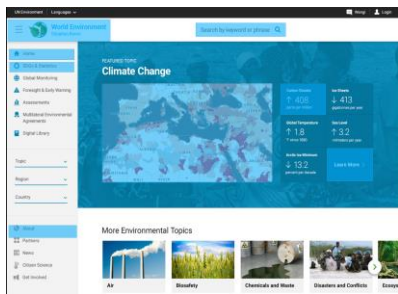
Speaker(s):
•   Dr. CUI houxin, Sailhero
      Dr. Mikko Laakso, Vaisala Oyj

Concept and Content:

This will be an interactive session where participants could understand how to monitor ambient air quality with advanced low-cost monitoring devices. Speaker will bring and demonstrate their low-cost air quality monitoring devices, why they could be a cost-effective method to complement traditional monitoring equipment, especially in developing countries where ambient air pollution data is lacking. Speakers will also share some of their use cases in cities globally and experience gained. Other works on global monitoring of air quality will also be presented at the Science-Policy-Business Forum (Conference Room 1 at 12:30 pm on Sunday), this Popup event will provide an opportunity for more informal Q&A and discussion.

Date: Thu-14

Time: 11:00

Title: Indicator based reporting – Global, Regional, National, Sub-national, and Thematic
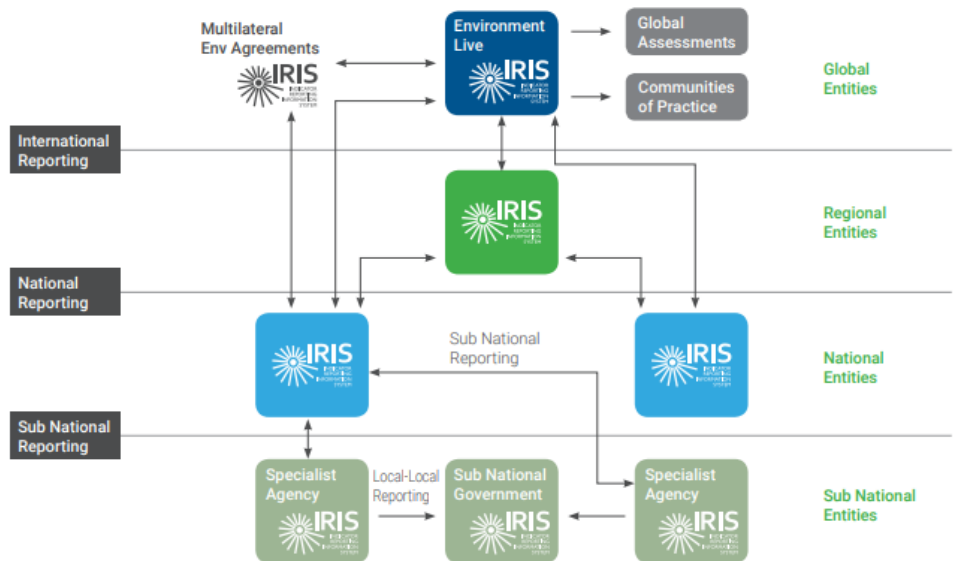
Speaker(s):

- IRIS Team
- Thea Carroll, Coordinator, Convention on Endangered Species (CITES MIKE)
- Derek Gliddon Acting Director for Research and Innovation, Environmental Agency of Abu Dhabi (EAD)

Concept and Content:

IRIS is an enterprise web application that has been jointly developed by the Environment Agency Abu Dhabi (EAD) and UN Environment in the context of their implementation-partnership, the Abu Dhabi Global Environmental Data Initiative (AGEDI). The aim of IRIS is to reduce institutional reporting burden by automating, as-far-as-possible, the production of periodic environmental reports.

For more information: https://environmentlive.unep.org/myiris or contact erick.litswa@un.org

Date: Thu-14

Time: 15:30

Title: Environment Live Global Database and SDMX

Speaker(s):
•	SDG and Environment Statistics unit

Concept and Content:

Environment Live Global Database is the primary central repository for all UNEP developed data and serves as a central repository for data from other UN agencies, international organizations, academic institutions and other partners. The database includes national data across a broad spectrum of topics that are needed to analyse the environmental dimension of the SDGs and to keep the environment under review. The database serves as a backbone for the World Environment Situation Room with data of a more than 1500 indicators.

For more information: https://environmentlive.unep.org or contact dany.ghafari@un.org