



**UN Science-Policy-Business  
Forum on the Environment**

**Working Group on Big Data and Digital  
Ecosystem for the Planet**

**At the Group on Earth Observations Ministerial Summit**

**National  
Convention  
Centre Canberra**

**6-8 November 2019**

\*Following the Convening of the Governing Consortium of the UN Science-Policy-Business Forum, Hyatt, 4-5 November 2019



**Tuesday, 5 November 2019**

Hyatt Hotel, Canberra / 19:30 – 22:00

**Cocktail Reception**

Hosted by the International Copper Association  
(By Invitation only)

**Day 1**

**Wednesday, 6 November 2019**

8:00 – 08:45      Arrival and Registration at the Canberra National Convention Centre

**I. Opening of GEO Week and GEO Week Industry Track**

09:00 – 09:30  
Bradman Theatre      **Industry Track Welcome and Keynote Address**  
Industry Track participants will be welcomed to GEO Week 2019 and then keynote speakers will set the scene for discussions by drawing out the issues and opportunities in the global Earth observation industry, providing insight for greater cooperation and industry growth in a rapidly evolving sector.

09:30 – 10:30  
Bradman Theatre      **Leadership Dialogue: Industry and GEO**  
Led by the Space Industry Association of Australia (SIAA) and Earth Observation Australia (EOA), this session will be a forum to exchange views and opinions on the future demands and potential solutions facing this everchanging industry.

10:30 – 11:00  
Exhibition Area

COFFEE BREAK

11:00 – 12:00  
Bradman Theatre

**Leadership Dialogue: “Towards a Global Digital Ecosystem for the Environment”**  
Addressing GEO objectives while building Earth observation industry capabilities and revenue. What are the roles for citizens, governments, the private sector and intergovernmental organizations in collecting, sharing and processing data to create analytical insights and information?

12:30 – 13:30  
Exhibition Area

LUNCH

## Day 1

Wednesday, 6 November 2019

### II. Opening of the HL Working Group on Big Data and Digital Ecosystem for the Planet Setting the Vision and Ambition

Venue: Murray Conference Room

13:35 – 13:55

#### Welcome Address by Hosts

**Gilberto Camara**, Director, Group on Earth Observations (GEO) and Working Group Co-chair

**Martine Woolf**, Ag Chief Environment, Geoscience Australia

13:55 –  
14:10

#### Opening Remarks

**Jian Liu**, Director of Science, UNEP and Working Group Co-chair

**Edan Dionne**, VP, IBM and Working Group Co-chair

## Speakers



**Dr. Gilberto Camara** is Director of the Group on Earth Observations (GEO). He is a leading researcher in Geoinformatics, Geographical Information Science, and Land Use Change. He is co-chair of the UN-SPBF Working Group on Big Data.



**Dr. Martine Woolf** is Lead of Hazards and Risk Applications and Infrastructure Section at Geoscience Australia. She is a catastrophe risk modelling and science management expert. Previously, she was Director of Program Management at Risk Management Solutions (RMS), responsible for the development and release of commercial catastrophe risk models.



**Prof. Jian Liu** is Director of Science at UN Environment Programme. He served as Deputy Secretary of the Inter-Governmental Panel on Climate Change (IPCC). His earlier posts include Deputy Director General of the Bureau of Resources and Environment, Chinese Academy of Sciences.



**Edan Dionne** is Vice-President of Environmental, Energy, & Chemical Management Programmes at IBM. She leads a team responsible for defining IBM's strategy, establishing and maintaining its global environmental management system.



14:15 –  
15:00

### Context, Mandates and Ambition

#### From Paris to Canberra: Looking Back and Looking Forward

**Laurent Durieux**, Head, Earth Observations, Institute of Research for Development, France and Co-organizer of Inaugural SPBF Session on Big Data, Paris

#### Ministerial Action and Ambition

**Ado Lohmus**, Permanent Representative of Estonia to EC and Former UNEA Presidency Representative / Bureau Member, UN Environment Assembly (UNEA)

#### Towards a Global Strategy on Big Data for the Environment

**Pascal Peduzzi**, Director, UNEP-GRID Geneva / Project Lead World Environment Situation Room

15:05 –  
15:30

### Discussion and recommendations

15:30 –  
16:00  
Exhibition  
Area

### COFFEE BREAK

## Speakers



**Dr. Laurent Durieux** is Space Observations Expert at the Institute of Research for Development (IRD), France. He is a Geographer specializing in GEO- Technologies and in tropical environment monitoring and modelling. He was Head of Spatial Observations at ESPACE-DEV and President of the South-American Association of Remote Sensing (SELPER International) between 2010 and 2016.



**Ado Lohmus**, is Permanent Representative of Estonia to the European Union. He is a Member of the Committee of the Permanent Representatives of UN Environment Programme and UNEA Bureau Member; Member of the Estonian Sustainable Development Committee and Chair of the Committee for Estonian Business Awards on the Environment.



**Pascal Peduzzi** is Director of GRID-Geneva at the United Nations Environment Programme (UNEP/ GRID-Geneva). He leads a team of Environmental Data Scientists to quantify the effects of Global Change on population vulnerability and impacts on ecosystems.

16:05 –  
16:55

### Strengthening the Global Data Ecosystem & Addressing Data Gaps

**Gregory Scott**, UN Statistics, Inter-Regional Advisor on Global Geospatial Information Management

**Stefano Nativi**, The European Commission

**Prof. Gavin Shaddick**, Alan Turing Institute and Chair of Data Science and Statistics, Exeter University Steffen Fritz, International Institute for Applied Systems Analysis

**Anne Bowser**, Global Partnership for Citizen Science: Citizen Science Perspective

### Speakers



**Gregory Scott** is Inter-Regional Advisor on Global Geospatial Information Management in the United Nations Statistics Division (UNSD). He provides high level strategic policy advice, coordination and planning in the implementation of UN-GGIM initiatives.



**Dr. Stefano Nativi** is Lead Scientist at the Joint Research Centre of the European Commission. He focuses on Data Science, Earth and Space System Informatics, Geospatial information data models and interoperability. He founded the Earth and Space Sciences Informatics (ESSI) Division of the European Geosciences Union.



**Gavin Shaddick** is Director of the Center for Doctoral Training in Environmental Intelligence. He is also Member of the Committee of Medical Effects of Air Pollution (COMPEAP), and Director of the Exeter-Chinese University of Hong Kong (CUHK) joint centre for environment, sustainability, and resilience.



**Dr. Steffen Fritz** is Deputy Program Director of the Ecosystem Services and Management (ESM) Program, and Leader of the Earth Observation and Citizen Science (EOCS) Research Group at the International Institute for Applied System Analysis.



**Dr. Anne Bowser** is Director of Innovation with the Science and Technology Innovation Program (STIP). She leads the Wilson Center's work on citizen science through initiatives like the UN-backed Citizen Science Global Partnership, and through Earth Challenge 2020.



17:00 – 17:35	<b>Towards an Open Data Economy and Ethical Infrastructure</b> <b>Jean Dusart</b> , Policy Specialist, The European Commission <b>Edan Dionne</b> , Vice President, IBM
17:40 – 18:20	<b>Discussion and Recommendations</b>
19:00 National Arboretum	<b>Gala Dinner</b> (By Invitation only)

## Speakers



**Jean Dusart** is a Policy Officer at the Directorate-General for Research and Innovation of the European Commission. His role involves the development of research and innovation policies on Earth Observation data and information systems, and coordinating European participation to the multi-governmental Group on Earth Observations (GEO) initiative through the Global Earth Observation System of Systems initiative (EuroGEOSS).



**Edan Dionne** is Vice-President of Environmental, Energy, & Chemical Management Programmes at IBM. She leads a team responsible for defining IBM's strategy, establishing and maintaining its global environmental management system.

## Day 2 Thursday, 7 November 2019

Venue: Murray Conference Room

8:00 - 08:45 Arrival at the Canberra National Convention Centre

### III. Mega Platforms: Opportunities, Threats, Lessons Learnt and Way Forward

09:00 – 09:20 **World Environment Situation Room**  
**Pascal Peduzzi**, Director, UNEP/GRID Geneva

09:25 – 09:45 **Space Climate Observatory (SCO)**  
**Dr. Selma Cherchali**, CNES

09:50 – 10:10 **China's Digital Earth**  
**Professor Chen Fang**, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

10:15 – 10:35 **Copernicus Observations Programme (ESA)**  
**Ivan Petiteville**, European Space Agency

10:40 – 11:00 **Discussion and Conclusions**

11:00 – 11:30 COFFEE BREAK

## Speakers



**Pascal Peduzzi** is Director of GRID-Geneva at the United Nations Environment Programme (UNEP/ GRID-Geneva). He leads a team of Environmental Data Scientists to quantify the effects of Global Change on population vulnerability and impacts on ecosystems.



**Dr. Selma Cherchali** is Program Director at the Space Climate Observatory (SCO) where she studies the impacts of climate change. Over the course of 25 years she has worked on over 50 projects applying remote sensing data to environmental issues. She is a co-chair of the Committee on Earth Observation Satellites' (CEOS) Global Agricultural Monitoring Working Group and a member of GEO Global Water Sustainability Steering Committee.



**Prof. Fang Chen** is a Professor at the Institute of Remote Sensing and Digital Earth at Chinese Academy of Sciences (CAS). He combines remote sensing, ecology and other fields of study to assess disaster risk. He is currently serving as Executive Deputy Director of the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM) and Deputy Secretary-General of "Digital Belt and Road" Program (DBAR).



**Ivan Petiteville** is Coordinator for the Centre for Earth Observation at the European Space Agency (ESA). He is also Co-Chair for the Group on Earth Observations (GEO) Programme Board. He is Chair of the Working Group on Disasters, part of the Committee on Earth Observation Satellites. He served as CEO of ESA for three years.



11:35 – 12:50

#### IV. Panel Discussion

**Should government and business analytics be part of an open source digital platform on the environment?**

Technical and data foundation for sustainability analysis and reporting

**Jürgen Weichenberger**, Data Science Senior Principal, Accenture

Creating a Culture of Accountability

**Luhui Yan**, CEO, Carbonstop

Measures and metrics of [business] biodiversity performance

**Benjamin Tregenna**, Head of Informatics, UNEP World Conservation Monitoring Centre

How Open is Open-source

**Cyrus Hodes**, Chair of The AI Initiative, The Future Society

12:50 – 14:00

LUNCH

#### Speakers



**Jürgen Weichenberger** is a Data Science Senior Principal at Accenture Analytics, with extensive experience in engineering consulting, data science, big data and digital change. He is a specialist in the application of environmental and energy optimization, quantum computing and large-scale model automation.



**Luhui Yan** is Founder and CEO of Carbonstop - China's first carbon management consulting and software provider. Carbonstop has helped more than 1,000 organizations since 2011 with carbon management training, software and consulting services.



**Dr. Benjamin Tregenna** is Head of Informatics Programme at UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC).



**Cyrus Hodes** is Chair of The AI Initiative at the Future Society. He is helping shape the global governance agenda for Artificial Intelligence. He is a member of three Committees of the IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems as well as a Senior Advisor to The Future Society.



14:10 – 14:40

New Tech & Innovation

Live Streaming Space

**Dr. Elena Lobo**, Director of Innovation, SEN

Opportunities in 5G

**Jeremy Mitchell**, Director of Corporate & Public Affairs, Huawei Australia

Discussion and Recommendations

## Speakers



**Dr. Elena Lobo** is Director of Business Innovation at Sen. After completing her Ph.D. on the effects of climate change on tropical rain forests, she has amassed a wealth of experience working on projects around the world, including with The Smithsonian Institution, supporting the UK Space Agency as the UK Executive Secretariat for the International Charter Space and Major Disasters, and leading the area of satellite applications for sustainable development at Satellite Applications Catapult.



**Jeremy Mitchell** is Director of Corporate & Public Affairs at Huawei Australia, New Zealand, and South Pacific. He is an expert in public affairs, engaging with international governments and corporate entities on technology innovation, immigration, defence, political and trade policy. He was previously the Senior Media Relations Manager at Telstra and an Adviser to the Australian Government.



**Dr. Hendrik F. Hamann** is a Principal Research Staff Member and Research Manager in the Physical Sciences Department at IBM, along with leading the Physical Analytics program at IBM Research. He is an IBM Master Inventor, a member of the IBM Academy of Technology and has served on governmental committees such as the National Academy of Sciences, the National Science Foundation and as an industrial advisor to Universities.



14:45 – 15:55	<b>V. Panel Discussion</b> <b>Digital Planet: The Imperative for and Challenge of Disruptive Innovation</b> <b>Dr. Hendrik Hamann</b> , Chief Scientist for Geoinformatics, IBM <b>Rebecca Moore</b> , Director, Google Earth Engine <b>Steve Kopp</b> , ESRI <b>Andrew Zolli</b> , Vice President, Global Impact Initiatives, Planet Lead by: <b>Charles Ross</b> , The Economist Intelligence Unit
16:00 – 16:20	COFFEE BREAK
16:20 – 17:00	<b>Conclusions and Closing of Day 2</b>

## Speakers



**Rebecca Moore** is a computer scientist and longtime software professional at Google. She conceived and leads the Google Earth Outreach program. She also established, and continues to lead, Google Earth Engine, a new technology platform which supports global-scale data-mining of satellite imagery for societal benefit.



**Steve Kopp** is a Program Manager at the Environmental Systems Research Institute (ESRI) where he has been working for over 30 years. ESRI is an international supplier of geographic information system (GIS) software, web GIS and geodatabase management applications.



**Andrew Zolli** is Vice President of Global Impact Initiatives at Planet. He oversees the humanitarian, ecological, and sustainable development impact portfolio of Planet, a breakthrough geospatial imaging organization. Planet has deployed the largest constellation of Earth-observing satellites in history.



**Charles Ross** is Director of Thought Leadership Research for Asia at the Economist Intelligence Unit. He analyses the business impacts of new technology trends, such as Industry 4.0, smart cities, big data, cloud computing, entrepreneurship and the internet of things, for Hitachi, Cisco, Telstra, Microsoft, Wipro, Akamai and the Singapore government.

## Day 3 Friday, 8 November 2019

09:00 – 09:20	Arrival / Morning Coffee
09:25 – 10:05	<b>Innovative Finance and Business Models</b> <b>Gordon Noble</b> , Head Policy and Advocacy, Australian Sustainable Finance Initiative <b>Dr Zaffar Sadiq Mohamed-Ghouse</b> , President, Surveying & Spatial Sciences Institute, Australia. <b>Jean Dusart</b> , Policy Officer, The European Commission <b>Marika Popp</b> , Head of Space Business Development and Sales, Guardtime AS
10:05 – 10:30	Discussion and Recommendations
10:30 – 11:00	COFFEE BREAK
11:05 – 13:30	Review and endorsement of recommendations / Closing
13:30 – 14:30	FAREWELL LUNCH

## Speakers



**Gordon Noble** is Head of Policy & Advocacy at the Australian Sustainable Finance Initiative. He holds a long history in responsible investment as well as deep political advocacy experience, having been a federal political adviser. He has worked in superannuation and investment at Inflection Point Capital Management, ASFA, CBUS and PRI.



**Dr. Zaffar Sadiq Mohamed-Ghouse** is Executive Director at Spatial Vision. He is also the President of Australia's peak professional body - Surveying & Spatial Sciences Institute (SSSI). He serves on the Executive Board of World Geospatial Industry Council and is the First Vice President-Elect for the International Society of Digital Earth as well as the Vice-Chair of Locate Conference Australia Board.



**Jean Dusart** is a Policy Officer at the Directorate-General for Research and Innovation of the European Commission. His role involves the development of research and innovation policies on Earth Observation data and information systems, and coordinating European participation to the multi-governmental Group on Earth Observations (GEO) initiative through the Global Earth Observation System of Systems initiative (EuroGEOSS).



**Marika Popp** is Head of Innovation at the Estonian Ministry of Economic Affairs and Communication and Head of Space Business Development and Sales at Guardtime. She works closely with EU Institutions and its Member States as well as other international organisations, bodies and agencies such as the European Space Agency, OECD, CERN.



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