# UN/Austria Symposium
# "Space Applications for Sustainable Development Goal 13: Climate Action"

1-3 September 2020

**Closing summary**

Nathalie Ricard and Luc St-Pierre

UNOOSA

3 September 2020

*The outcomes of the UN/Austria Symposium will be reported to the Committee on the Peaceful Uses of Outer Space in a parliamentary report in the 6 official languages to the UN. Its acknowledgement by COPUOS will be endorsed later by a General Assembly Resolution. This report is thus the contribution from participants to this Symposium on the benefit of space-based solution towards the achievement of SDG 13.*

*UNOOSA will continue to work with the local organizing committee of the Symposium to draft and complete the report. Meanwhile, we wish to make now an initial, and most certainly not comprehensive, summary of the sessions and other presentations: a short list of take-aways.*

**Session 1: Climate Action**

The 4 speakers really set the scene, helped us understood different perspectives of implementing space-based solutions towards SDG 13. From UNFCCC, EURISY and national entities of Brazil and Indonesia, we were informed on what is available and what works, from the global to the local level. We learnt what are the mechanisms, initiatives, processes and partnerships that make the international governance for EO's contribution to SDG 13; we saw operational examples of services accessible to end-users globally; and saw how some governments are making inclusive access to space-based data and solutions a reality. Always, the capacity to access and use those data/solutions is strengthened, a *sine qua non* to ensure Space science and technologies can have positive impacts.

**Session 2: Energy and natural resources**

We wanted to not only talk about climate change but about the relationships that exist with other sectors, or how the economic activities in other sectors need to be understood, monitored and how to mitigate their impacts. We discovered amazing examples of detection and monitoring programmes on sources of pollutants or greenhouse gas, methane for example. These initiatives foster collaboration with industries; notably when planning the extraction of resources to provide for an ever-increasing demand; and local applications of EO are used to solve conflicts equitably on the use of resources or of the land.

**Session 3: Agriculture and forestry**

We saw concrete applications of EO in monitoring agriculture, evaluating risk of crop failures, desertification, and on integrated tools to improve economic and environmental performance of farms. All the presentations provided tools to enable sustainable and efficient agriculture to mitigate its impact on climate, while at the same time increasing the resilience of agriculture practices to the impact of climate change.

The forest ecosystems are of course vital for carbon sequestration and the presentation demonstrated EO-based applications and tools to monitor forest ecosystems and their health. We got much information on the latest developments of EO satellites and sensors, on the potential of open tools and data, and on the integration of EO-based applications/tools to other tools to make space-based solutions more effective for governments, for businesses and for communities.

**Session 4: Urban planning and disaster management**

Most of us are aware of damage assessments after a disaster, in particular from weather related hazards. This week though we learnt how new approaches are being set because of the covid-19 crisis (!); and we learnt of global services are being put in place, e.g. under Copernicus, to provide accurate and timely assessments of the extension of floods, critical in areas where accessibility is impossible at the onset of an emergency. At the local levels, speakers demonstrated how multi-source data and proper governance are being implemented to reduce erosion and to manage floods.

The 4 sessions provided us with knowledge on frameworks, tools, sources of data, best practices, and on consultative processes to bring the benefits of space-based solutions to all stakeholders. We insist on repeating that all the presentations of the Symposium are available at unoosa.org and will remain there. Please consult and share them in your respective services.

**Keynotes**

The Symposium offered 3 extraordinary keynotes. Mr. Aschbacher of ESA presented the achievements and challenges in EO for climate monitoring. Not only did the Keynote informed clearly on the status of the EO resources; it also convincingly shown how the contributions of EO to SDG 13 are critical.

Ms. Maman of the Ben-Gurion University introduced us to an initiative to combat the "leaky pipeline" by which women give up on an academic career at an early stage of their life, before they even start to study at university. The She-Space initiative targets high-school girls whom become ambassadors giving talks in school on using space to tackle climate change issues. Motivating youth to study science, in particular space science and technology, has long term positive impacts on development and economy.

Finally, Ms. Di Pippo presented the current status of international cooperation in the space sector that is relevant to SDG 13 and under which frameworks these partnerships are implemented. Making a parallel between the global actions taken to combat covid-19 and the emergency of

acting towards mitigating and adapting to the effect of climate change, she stated that we are at a “make-or-break moment” for the health of our planet, and we must all get involved.

**Panels**

**Panel 1** on “General Principles of International Environmental Law and Space Activities” addressed the question to what extent international law in the areas of environmental protection and space law interact. The presentations showed that both areas of law are characterised by a considerable degree of vagueness. States should commit to more ambitious goals and obligations to protect the Earth and the space environment and to combat climate change. This includes regulatory frameworks at the international, regional, and national levels. Verification and compliance mechanisms should be strengthened, and in this regard space technology could provide useful assistance.

**Panel 2** on “International cooperation and best practices for Climate Action” gathered a wide range of stakeholders committed to take action: intergovernmental organisations, governments, space agencies, the space industry and NGO. To coordinate global climate actions, it is essential to share the same diagnosis worldwide on the causes, the effects and the evolution of climate change. The panel reviewed different international collaboration activities and best practices to support global climate actions, with the goal to take concrete measures and act in synergy. Participants explained existing actions for the coherent implementation of the Paris

Agreement and the 2030 Agenda, to maximize sustainable development and climate co-benefits. Overall, we aim to improve the livelihood of current and future generations, so that all can live in dignity on a healthy and prosperous planet.

In between Sessions and Panels, several very short “pitch” presentations presented innovative projects from various world regions.

**End**

Before hearing from our dear co-organizers, we personally wish to thank them for their dedication and as said in my opening remarks on Tuesday, they both work with us to turn the current situation into an opportunity. Moving online was a good decision as we had an excellent symposium and a large participation. Thank you Mr. Otto Koudelka (Technical University Graz) and Ms. Irmgard Marboe (University of Vienna).

**THANK YOU!**