

UNISEC-Global's UNCOPUOS technical presentation (25 August 2021, PM)

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Mr Chairman and distinguished delegates,

My name is Quentin Verspieren, researcher at the Science, Technology and Innovation Governance (STIG) Program of the Graduate School of Public Policy, The University of Tokyo, collaborating with UNISEC-Global on an initiative on government policies in support of space education. I am grateful and honoured for the opportunity to address this committee.

The UNiversity Space Engineering Consortium, or UNISEC, is a Japanese non-profit organisation established to promote practical space projects such as micro/nano satellites and hybrid rockets at university level in Japan, by engaging with students, academics, universities, governments and private companies. Based on this domestic success, UNISEC-Global was established in 2013 as an international non-profit and non-governmental organisation, now composed of 21 chapters around the world. Since 2017, UNISEC-Global has the honour to be a permanent observer of the UNCOPUOS.

UNISEC-Global envisions to make space science and technology available to everyone around the world, through the development of an environment promoting the free exchange of ideas, information and capabilities related to space engineering and space applications, with a specific attention for young people in developing and emerging countries.

UNISEC-Global has been very active in the organisation of hands-on training programs, mission idea contests as well as symposia and conferences. In particular, since the advent of the COVID-19 pandemic, the annual UNISEC-Global Meeting has been transformed into a monthly event, free and open to anyone, with prominent speakers, interactive activities and updates on UNISEC-Global's various chapters worldwide. I strongly encourage you to join these monthly online meetings.

Going back to the main topic of this presentation, for better or worse, space technologies are now tightly woven into the fabric of our societies and daily life. There is no simple action which does not involve directly or indirectly some form of space application. This strong dependency on the space infrastructure requires actors in various fields to possess some knowledge of space technologies and their applications. What used to be a small community of highly specialised experts is now extending over countless sectors of the government, the industry and academia. Nevertheless, space education

is only at its beginnings. For the long-term sustainability of this field, dear to us all, and for long-term sustainability of our societies, it is crucial to advance space education worldwide.

By space education, I mean any form teaching, training, or capacity building, at any relevant level. This includes formal – scholarly – education from primary, secondary up to post-graduate levels, as well as vocational training, science and technology communication to the general public, in sum anything that can contribute to raising awareness on the critical importance of space technologies in our lives.

Acknowledging that additional efforts are needed to increase space-related knowledge in the general population despite the support provided by governments around the world to space education in the last decades, UNISEC-Global initiated this year a project aiming to promote virtuous governmental policies in support of space education. It will mostly consist of two research items: (1) collecting and analysing existing policies worldwide and acknowledging best practices, and (2) with our network of research partners, devising and proposing innovative policies in support to space education, from modest ones requiring only agency- or ministry-level decisions to more ambitious ones requiring parliamentary work. The concrete outcome of the project would be a report, revised and published annually in order to monitor the evolution of space education policies worldwide.

Through these two main goals and associated report, we aim to have an impact on different types of actors.

For governments with an established space program, this project could be the opportunity to compile and review existing space education policies at different levels – ministries, space agency, etc. Secondly, the project's outcomes would provide them with a wide overview of existing practices of other nations, against which to benchmark their efforts and make potential changes. And finally, they could be interested in implementing or at least experimenting some of our innovative policy recommendations.

For the governments of emerging space countries, this project and its outcomes would provide a long list of best practices on which to build the foundations of a sustainable space program thanks to an abundant and skilled workforce. In addition, early space development programs in emerging countries often face criticism from the public opinion due to their apparent frivolity compared with the concrete hardships affecting the population. Hence efforts on raising awareness on the direct and indirect benefits of space technologies for sustainable development would be extremely helpful in increasing government and public support to the allocation of resources to space activities.

Thirdly, the largest category of actors that we target with this project are all those, people or institutions, that can benefit from good space education policies, be they newly implemented or not. In fact, it is often very challenging for a student or a professional willing to switch its field of work to find the educational resources made available to them by governments or international institutions. Raising awareness on existing policies and practices would provide tremendous benefits in terms of program accessibility. In addition, the implementation of new policies or a better implementation of existing ones could allow for an improvement of the quality of education programs, a potential increase of volume and efficiency of dedicated funding as well as fostering new research opportunities, at home and abroad.

Finally, it is important not to forget critical actors in the development and spread of space education around the world: private companies. Government support to international space capacity building programs led by or involving private entities is crucial to ensure the development of innovative commercial solutions to space education.

As our project is in its infancy, we would like to use the opportunity provided by this technical presentation to call for partners and support from all of you, distinguished delegates. Being a minor element of governmental action, information on space education policy is scarce. We would therefore be extremely grateful if you would be willing to provide us with data on what your respective governments have implemented in the past or any relevant experience that you acquired in this field. We are convinced that there are countless examples of excellent space education policies that you have implemented over the years. Now is the time to collaborate with us in promoting them and making them widely available.

To be precise, we are currently looking for two types of partners. On the one hand, data providers, be they from the government, the industry, academia or non-profit organisations, whose role would be limited to providing us with actual data and answers to our questions. On the other hand, research partners who would be working with us in analysing existing policies and proposing innovative ones. This second type of partners would be primarily from academia, think-tanks, or any relevant non-profit organisation.

This year, we intend to conduct a pilot study with a limited number of countries. Our primary goal is to gather enough research partners around the world to have a team operating on all continents and having access to vast amounts of data and information. Secondly, we will focus, with the partners, on defining a clear and transparent methodology. To this end, we will draft and issue a charter of good research practices. The first concrete announcements on this project in terms of methodology and

research approach will be made at the beginning of December of this year, during the 27th Asia-Pacific Regional Space Agency Forum (APRSAF).

To conclude this presentation, I want to emphasise that our only objective is to promote space education, which is the *raison d'être* of UNISEC-Global. We aim to empower the global space community by collecting, acknowledging and widely sharing best practices, nothing more but nothing less.

I thank you very much for your kind attention and encourage you to contact us by email at secretariat@unisec-global.org if you are interested in collaborating or supporting us.

Mr Chairman, I yield the floor.