

### Stronger. Together.

The United Nations Global Geodetic Centre of Excellence (UN-GGCE) vision is a future where all countries have strong political support for geodesy which enables them to – together – implement the General Assembly Resolution 69/266 ‘A Global Geodetic Reference Frame for Sustainable Development’, and accelerate the achievements of the Sustainable Development Goals to derive social, environmental and economic benefits.

[ggim.un.org/UNGGCE](https://ggim.un.org/UNGGCE)

## HIDDEN RISK

# Critical weaknesses in the global geodesy supply chain

UN report shows critical weaknesses in the supply chain that all satellites, like GPS and Galileo, need to operate every day.



PHOTO: Galileo constellation. ESA-PCarril

**SATELLITE SERVICES** Society's dependence on satellites is high - and growing at a rapid pace.

“The weaknesses in the global geodesy supply chain could have catastrophic impacts on critical infrastructure and national economies,” says Nick Brown, Head of Office at the UN-GGCE, and author of the report.

Society's dependence on satellite services is very high and growing at a rapid pace. Economic development, the operation of critical infrastructure and defence applications are just some examples.

### Lack of resources

The global geodesy supply chain is invisible to most people which means the risks are hidden and the supply chain suffers from a lack of resources. As a result, satellite services are at risk of degradation or failure.

“For satellites to operate accurately and reliably, their place in space and

### The Global Geodesy Supply Chain

The global geodesy supply chain is the collection of ground observing stations, data centres, analysis centres and highly qualified experts who observe the Earth and convert these observations into geodetic products which are essential to communicate accurately and reliably with satellites.

*More information:*

[Hidden Risk, UN-GGCE report](#)

Earth's place in space need to be observed and analysed constantly, and uploaded to satellites,” Nick Brown explains.

This place in space information is generated from a global geodesy supply chain of highly qualified people operating ground station observatories distributed around the world, along with data, analysis, combination and product development centres.

### Strengthen awareness and governance

To avoid further degradation of the supply chain the UN-GGCE is working with Member States and partners to: strengthen national awareness and governance in geodesy; recognize the global geodesy supply chain as critical infrastructure; and, engage in bilateral or multilateral agreements with other Member States.

### Geodesy at the Science Summit at UN General Assembly

Science Summit UNGA79, 27 September 2024

This event in New York aims to elevate the global geodesy supply chain, align geodetic science with policymaking, and advance research through multidisciplinary cooperation.

Central to the agenda is integrating the African perspective to address unique challenges and contributions.

Key topics include the 1st Joint Development Plan for Global Geodesy, aiming to accelerate progress towards the Sustainable Development Goals.

### New video about the importance of geodesy

A new video about the critical role of the geodetic terrestrial reference frames was presented by GGOS of the International Association of Geodesy. This short film illustrates how these reference frames are essential to both science and society:

<https://www.youtube.com/watch?v=zfqq-0d2txk>





PHOTO: ANNE JØRGENSEN

**STRONGER. TOGETHER.** The supply chain will only be strengthened if Member States, the UN-GGCE and partners all take responsibility to lead, collaborate and deliver together.

**CALL TO ACTION**

# First Joint Development Plan for Global Geodesy

To strengthen the global geodesy supply chain, the United Nations Global Geodetic Centre of Excellence (UN-GGCE) team has been hard at work translating the needs of the Member States identified in the Global Geodetic Needs Assessment into activities in the 1st Joint Development Plan for Global Geodesy.

The plan includes proposed activities for the UN-GGCE, Member States and partners (e.g. industry, academia, science organizations etc.) to achieve together.

“The activities of the plan are beyond the scope of any single group to tackle alone. The supply chain will only be strengthened if Member States, the UN-GGCE and partners all take responsibility to lead, collaborate and deliver together,” says Nick Brown, UN-GGCE

**Three phases of the joint development plan**

1. Avoid further degradation of the global geodesy supply chain
2. Robust global geodesy supply chain
3. Next-Generation global geodesy supply chain

**Consultation**

The first draft of the Plan was sent out on 14 June 2024 for consultation. Consultation will continue until late September 2024 in various forms including in-person meetings (including the 14th Session of the UN-GGIM Committee of Experts) and online sessions in August and September (dates yet to be confirmed).

The UN-GGCE envisages finalizing the Plan with our partners in October 2024.

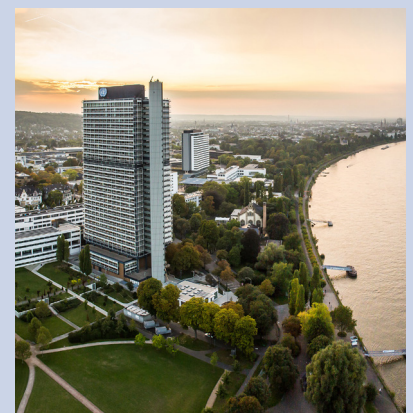
## The UN-GGCE team is growing

In May and June 2024 the United Nations Global Geodetic Centre of Excellence (UN-GGCE) in Bonn welcomed two new UN staff members; Ms Liubov Poshyvailo-Strube and Ms Walaa Allahham respectively.

The UN-GGCE team is composed of three personnel internationally recruited by the United Nations and four secondees from Member States.

“I am very proud and excited to come to work every day and work with this diverse, intelligent and dedicated group of people. As we strive for a future where all countries have strong support for geodesy, I feel like the team in the UN-GGCE is well positioned to support Member States and partners.”

Nick Brown, Head of UN-GGCE



UN Campus. Photo: UN BONN, VOLKER LANNERT

**The UN-GGCE team:**

- Personnel recruited by the United Nations: Nick Brown, Liubov Poshyvailo-Strube and Walaa Allahham.
- The personnel seconded to the UN-GGCE: Jan Dostal (seconded from Germany) and Sarah Kowal (seconded from Germany).
- The personnel virtually seconded to the UN-GGCE: Anne Jørgensen (seconded from Norway) and José Carlos Rodríguez Pérez (seconded from Spain).

More information:  
[ggim.un.org/UNGGCE](http://ggim.un.org/UNGGCE)

