

# How can a gravimetry mission support climate change monitoring?

## *Factsheet 1 : February 2024*

### **What's a gravimetry mission?**

Embark on a journey with gravimetry missions ! These missions dive deep into studying Earth-related phenomena, uncovering mysteries and revealing vital insights into our planet's dynamics. Imagine satellites circling overhead, generating global-scale gravity field maps, continually updating to depict shifts in mass both above and beneath Earth's surface.

### **How can it help monitor climate change?**

From tracking the melting ice caps, detecting changes in groundwater storage to monitoring shifts in ocean currents, gravimetry missions are at the frontline of Earth observation, providing scientists with crucial data for understanding and better monitoring climate change. With their insights, policymakers can craft strategic adaptation plans to safeguard our planet's future.

To date, only **4** space missions designed to measure the gravity field have been launched. The first of these was launched in **2000**

### **What's the link with our project, the CARIOQA Pathfinder Mission Preparation?**

CARIOQA programme unlocks a tremendous progress in gravity missions. With its quantum interferometer technology deployed to onboard a satellite mission, it's set to drastically improve our ability to monitor climate phenomena with unprecedented accuracy. CARIOQA isn't just a technological demonstrator—it's the path toward a better understanding climate change !

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