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## Resources for teachers on the “Ocean and Cryosphere in a Changing Climate”

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The essential role of education in addressing the causes and consequences of anthropogenic climate change is increasingly being recognised at an international level.

The Office for Climate Education (OCE) develops Climate Change Education (CCE) resources that support teachers and education systems in developed and developing countries to mainstream climate change education in their respective contexts. The OCE organises capacity building/professional development workshops worldwide for educators. It has also initiated and coordinates a large network of stakeholders to scale up their actions towards climate change resilience.

Drawing upon the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, the OCE has produced a set of educational resources and tools for students to understand climate change in the context of the ocean and the cryosphere. These cover the scientific and societal dimensions, at local and global levels, while developing students’ reasoning abilities and guiding them to take action (mitigation and/or adaptation) in their schools or communities. These resources include:

- Ready-to-use **teacher handbook** that (i) target students from the last years of primary school to the end of lower-secondary school (aged 9 to 15), (ii) include scientific and pedagogical overviews, lesson plans, activities and worksheets, (iii) are interdisciplinary, covering topics in the natural sciences, social sciences, arts and physical education, (iv) promote active pedagogies: inquiry-based science education, role-play, debate, project-based learning.
- **Summaries for teachers** of two IPCC Special Reports (“Ocean and Cryosphere in a changing climate” and “Global Warming of 1.5°C”). They are presented together with a selection of related activities and exercises that can be implemented in the classroom.
- A set of **10 videos** where experts speak about a specific issue related to the ocean or the cryosphere, in the context of climate change. These videos can be used either to initiate or to conclude a discussion with students on their specific topic: urban heat islands, glaciers, ocean

acidification, tropical cyclones, marine energy, sea ice melt, thermohaline circulation, El Niño, mangroves, sea level rise.

- A set of **4 multimedia activities** offering students the possibility of working interactively in different topics related to climate change: sea level rise, food webs, carbon footprints and mitigation/adaptation solutions.
- A set of **3 resources for teacher trainers**, offering turnkey training protocols on the topics “greenhouse effect” and “ocean”, as well as a methodology for producing locally-relevant education projects.