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This outline is an outcome of a workshop held in Hamburg in February 2020 and subsequent discussions of an extended task team (see author list). For more details see the [full Hamburg report](#). The outline is provisional.

WCRP Academy

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Description of the activity

The WCRP Academy will be WCRP's training and knowledge dissemination/exchange activity. Its purpose is to develop and deliver climate science training and capacity exchange activities around the world. The activity will be both *inward* and *outward* facing.

Inward it will deliver training activities for the next generation of climate scientists and enhancement of climate science capacity around the world. These are envisaged to be wide-ranging, including online training of basic climate science, broad scale training courses (e.g., on the use of climate models, regional climate information, or best practices in observation), all the way to detailed expert summer schools (e.g., on stratospheric dynamics or the parametrization of clouds). The goal is to ensure that the knowledge associated with WCRP experts is shared globally and passed on to the next generation.

Outward it will cater for a large range of target audiences ranging from the general public to business and government users of climate information. This will be achieved through a range of activities, ranging from targeted online material to the delivery of training courses. The goal is to ensure that the expert knowledge within WCRP is translated for and shared with a broader community.

Given the wide range of existing training activities both within WCRP and across its major sponsors and partners, the main role of WCRP in leading this activity is likely one of coordination, compilation, raising awareness, and improving access and sharing best practice. Partnerships with existing groups within WCRP and the climate community, science communication organizations, and groups representing users of climate information will be critical to the success of the Academy. As climate information needs vary significantly across different regions of the world, an inclusive and distributed approach will have to underpin the governance and execution of the activity. The Academy should also aim to act as a knowledge broker, identifying training gaps and opportunities to fill those gaps.

Form of activity

The main role of the activity is to develop and deliver a climate science training and knowledge dissemination/exchange program that faces both *inward* and *outward*. Given the wide range of existing activities in the education space, the first implementation of the activity will focus on coordination, partnership-building and stock-taking. This will be followed by the development and implementation of a long-term strategy based on partnerships across the world both within and beyond the WCRP community.

Training in the 21st Century is delivered using an ever-wider range of methods, from passive online material, to online courses, to in-person training and public lectures. The WCRP

Academy will embrace all forms of knowledge delivery and will develop new approaches to effectively deliver information that grows climate science competency around the world.

Training needs and capabilities vary widely across the globe. The Academy will embrace this in its governance model by placing continental and/or regional hubs that entrain local climate science and science communication experts at its core. They will be supported by a central steering group that coordinates the Academy and ensures the sharing of experience and material across all activities.

What will it deliver and/or achieve?

- A highly visible, well-coordinated, climate science training program underpinned by the most authoritative group of climate scientists - WCRP.
- A next generation of climate scientists that is ready to face the science challenges ahead, with the leadership and professional skills required to address those challenges.
- A vehicle for WCRP climate scientists to actively contribute to the training of the next generation of scientists, as well as users of climate information, and sharing the knowledge of WCRP with the public.
- A worldwide climate science community that has the capacity to respond to local and regional climate science demands.
- A climate-information user community that is well connected to climate science and that recognizes WCRP as the go-to partner for training on how to use climate science outputs.

Relation to the World Climate Research Program Strategy, including as appropriate any aspect that is new or novel.

- It is a direct contribution to WCRP's mission "to develop, share, and apply the climate knowledge that contributes to societal well-being," as the sharing of knowledge requires the training of and by those we wish to share it with.
- It is a direct contribution to WCRP's engagement strategy. In fact, the Academy should be the flagship program that implements this vision.
- The Academy directly contributes to all strategic objectives.
 - Objectives 1-3 require a thriving and well-educated climate science community that is truly global and that freely shares knowledge and experiences. The Academy's specialist training and capacity exchange programs will be vital to build that community.
 - Objective 4 aims to connect our science to society. This will require a broad understanding of climate science issues by both the general public and users of climate information. The Academy aims to train and communicate with those communities. Engaging communities not traditionally connected with WCRP, like those working primarily in the social sciences, will be critical to deliver this objective.
- It is envisioned that the Academy will work together with core activities across WCRP, including other Lighthouse Activities, to ensure that an integrated approach is taken to the delivery of climate science training and capacity exchange activities.

Science requirement; including new science and how this draws upon the core research expertise of the WCRP community.

- The Academy will unite WCRP climate scientists with science training and communication experts and providers across the world to deliver innovative and impactful training content both within WCRP, to its partners, and to the wider community.

- The Academy will provide the WCRP research community with an outlet to communicate their expertise in various contexts, from expert summer schools to public lectures.

Partnerships needed to do this Activity; including if WCRP will be the lead or if it will be a jointly-lead Activity (and if so, who are the key partners).

The success of the WCRP Academy will critically depend on partnerships with training and science communication providers across the world. A key part of planning the activity will be to ensure that there is a viable commercial model for training providers to participate in the Academy. The regional hub approach will enable those partnerships to be meaningfully driven at the regional level. Facilitating two-way interactions between the regions and the overall WCRP community will be the main role of the central Academy steering group.

As training is part of many national and international research programs, a close collaboration of the WCRP Academy with the activities of our major sponsors (WMO, IOC and ISC) and partners (e.g., Future Earth) will be vital and must be facilitated at both the central and regional level.

Specific partnerships will likely emerge from the stocktake that the science team must undertake immediately after its formation. Plans to engage with major international academic training providers (e.g., UCAR, ICTP), universities and national professional bodies must be developed in the establishment phase of the Academy.

Other relevant information

It is unlikely that this activity can be carried out without some dedicated resources. As a minimum, one would expect that a full-time coordinator as well as a graphic/web designer will be required to coordinate and sustain the activities carried out by the volunteer army that is the WCRP community and to produce online material and maintain the Academy website, which will change frequently. This needs to be further discussed and fleshed out as part of the full science plan development.