

WORLD CLIMATE RESEARCH PROGRAMME

My Climate Risk

Explaining and Predicting Earth System Change

Digital Earths

Safe Landing Climates

WCRP Academy

WCRP

WCRP Lighthouse Activities

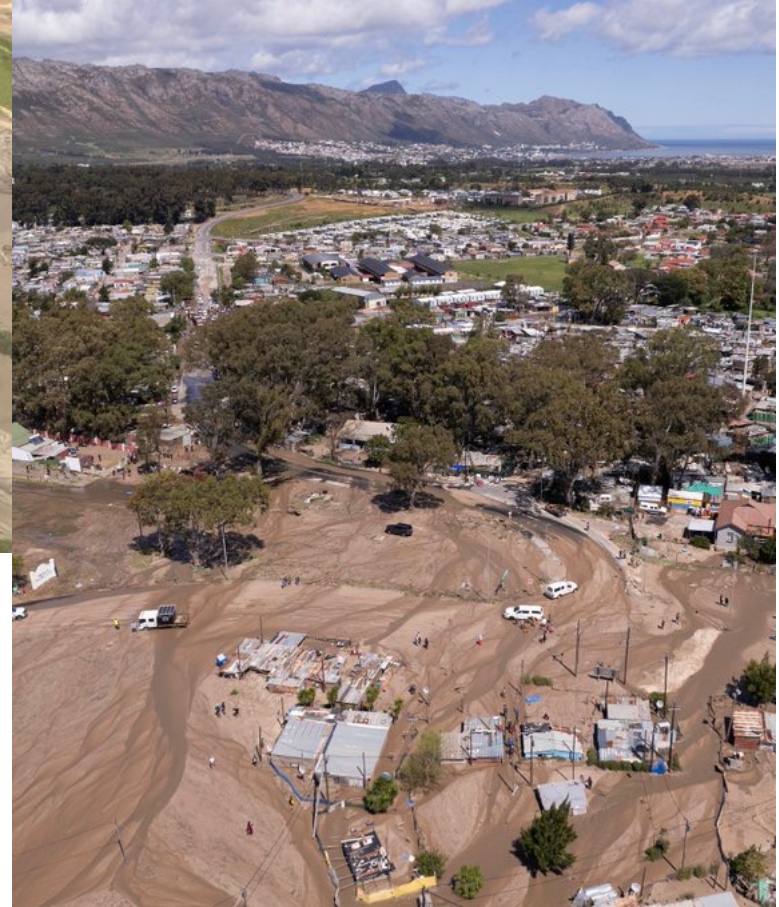
WCRP Academy
Lighthouse (?) Activity
Chris Lennard
Melissa Hart



INTERNATIONAL COUNCIL FOR SCIENCE



Motivation



INTERNATIONAL
COUNCIL
FOR SCIENCE



Motivation – training for climate science

Now, more than ever, the world needs climate experts. Climate expertise is particularly needed in countries most vulnerable to the negative impacts of climate change.

Although there is a large amount of excellent climate science training available, **coordination of access to this training** would benefit those looking for it.

Provision of climate science training could be made more efficient and sustainable by better connecting providers and consumers of training.

<https://www.wcrp-climate.org/academy>



INTERNATIONAL
COUNCIL
FOR SCIENCE



Motivation – training for climate science

No one institution can provide the complete training that modern climate scientists require.

Climate science training could be made more useful if designed with the impact of climate variability and change on society in mind.

Barriers to climate science training

Training at the scale and quality required for the next generation of climate scientists will require delivery both online and in-person.

Barriers to access to training are primarily geographical and financial not a lack of prior learning or desire for training.

Delivery of climate science training needs governmental, institutional and philanthropic grants and paid for training.

WCRP Academy LHA – Key Idea

Facilitate the training future generations of climate scientists;

**WCRP ACADEMY
KNOWLEDGE PORTAL**

Timeline
Set up: 2 years
Horizon: 10-15 years



**International
Science Council**



WCRP Academy structure and roles

Chairs:

- Consulting with WCRP and partners
- Comms and outreach

WG1: Stocktake

Aim: Design mechanism to understand what training is available and what is needed.

Long-term: How to operationalize this function.

Current work: Stocktake survey

WG2: Identity and portal

Aim: Establish value-proposition and brand

Develop web-portal

Long-term: Guides development of platform

Current work: Portal requirements

WG3: Finance

Aim: Establish business model

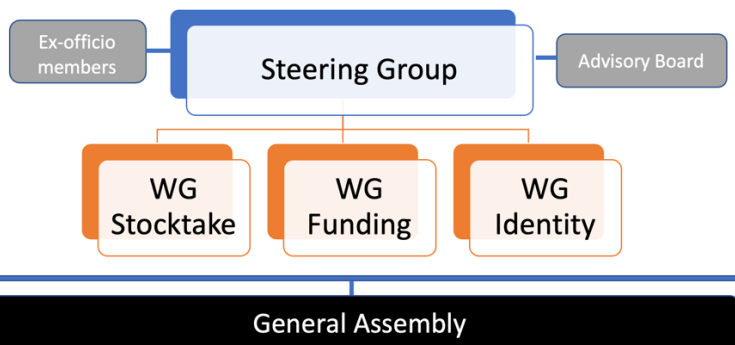
Build proposal and options

Long-term: Financial sustainability and mechanisms

Current work: funding sources.

WCRP Academy working groups and roles

WCRP ACADEMY

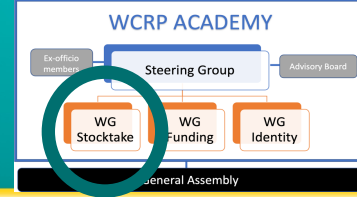


WCRP Academy Steering Group

Name	Organization	Country
Melissa Hart (co-chair)	University of New South Wales	Australia
Christopher Lennard (Chair)	University of Cape Town	South Africa
Ayman Batisha	International Sustainability Institute, Cairo University	Egypt
Pablo Borges de Amorim	University of Santa Catarina	Brazil/Germany
Clifford Darah Chuwah	Springer Nature	Netherlands/Cameroon
Qingyun Duan	Hohai University	China/USA
Feba Francis	University of Hyderabad	India
Dorcas Kalele	Cooperative University of Kenya	Kenya

What have we done so far?

(1) Stock take survey

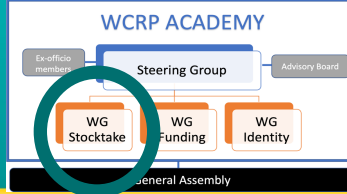


First stock take survey has been completed – more than 400 complete and unique responses

This should give a lot of insight into current training provision and gaps – lots to learn and good coverage internationally with some notable exceptions (China in particular)

Beginning analysis now – with aim of publication in e.g., BAMS

SURVEY OVERALL



Survey respondents

Global North	198
Global South	216
Total	414

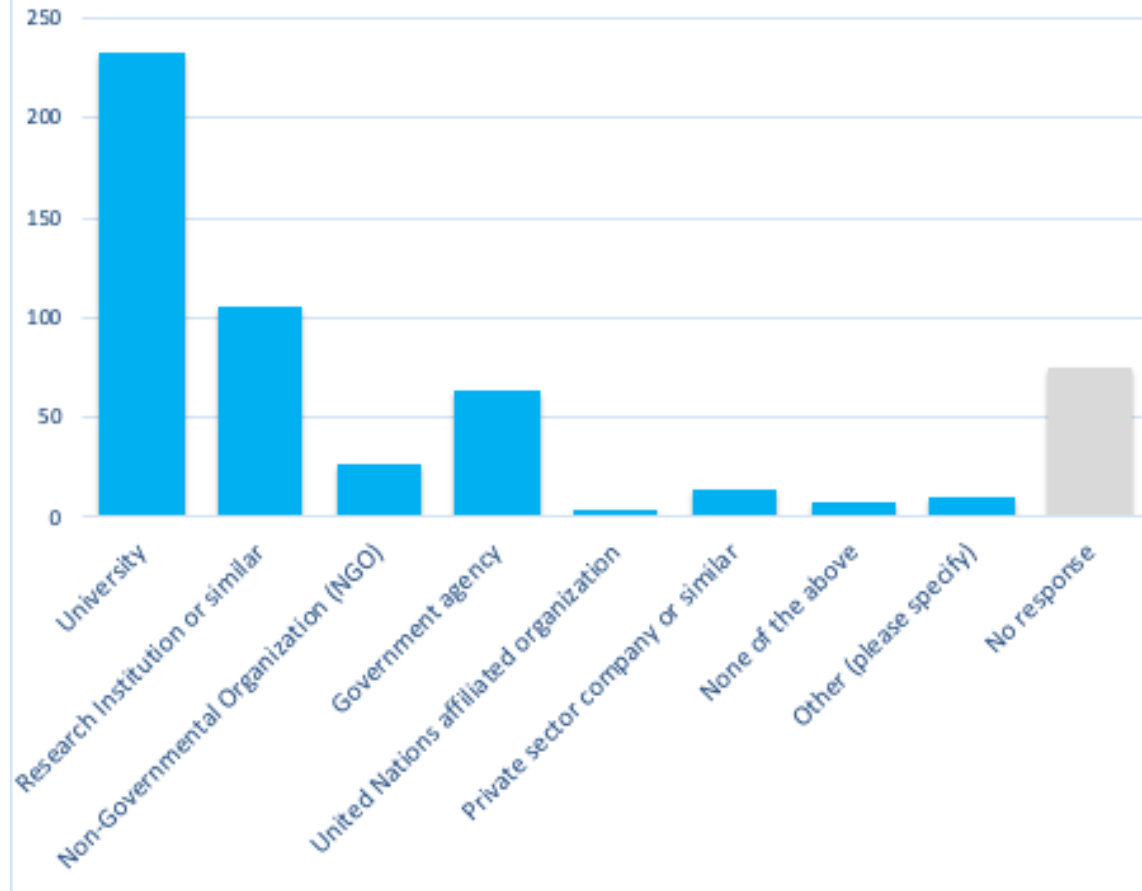
Gender

Man	222
Woman	180
Non-binary	6
Prefer not to say	6

Top 10 respondent countries

Brazil	50
United States	35
United Kingdom	35
Australia	24
Germany	22
India	21
Nigeria	20
Peru	14
Argentina	14
Norway	11

Affiliation of respondents

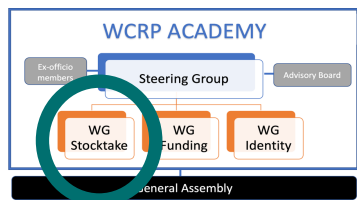
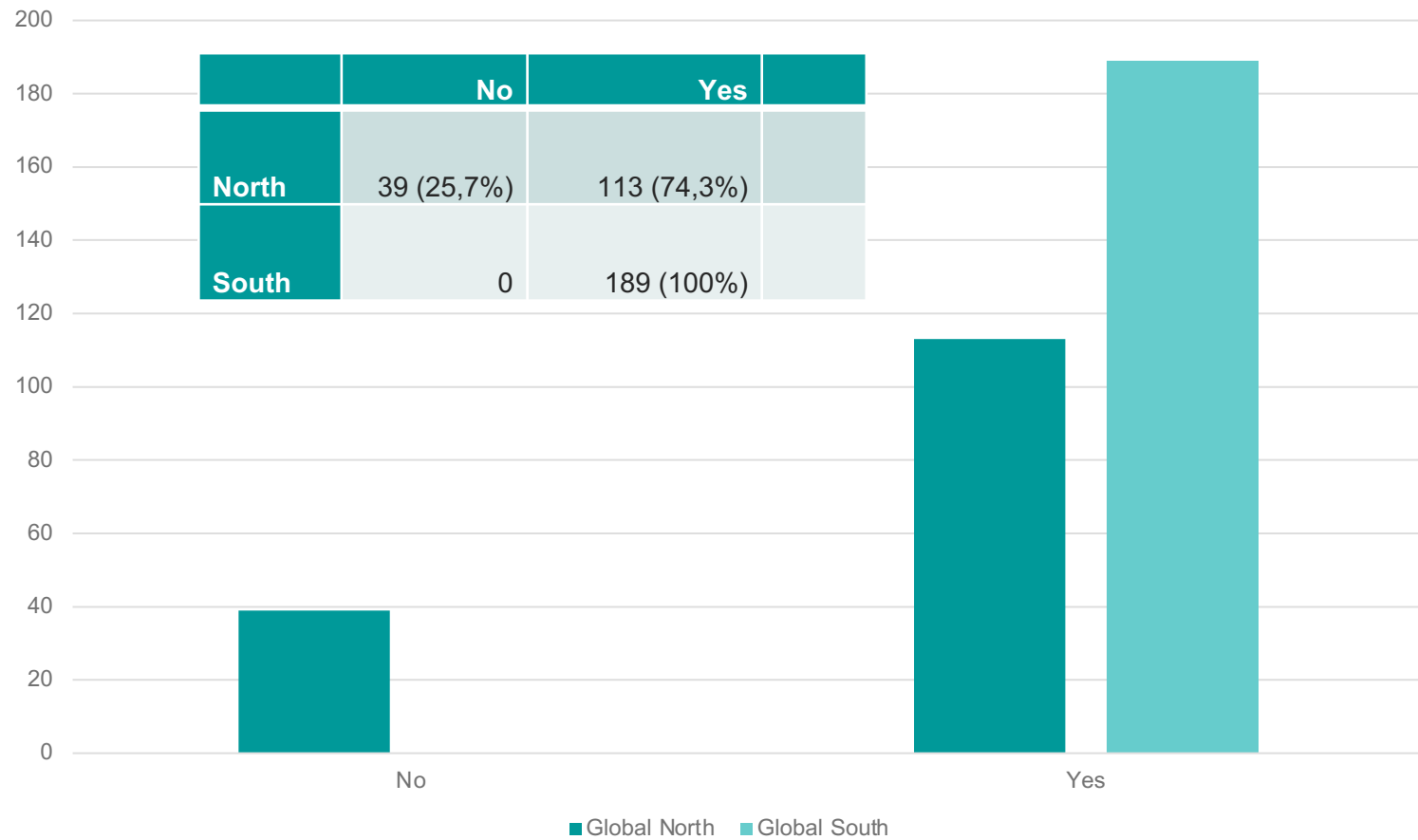


International Science Council



COMPARING GLOBAL NORTH AND SOUTH

Would you like access to additional climate science training or education?



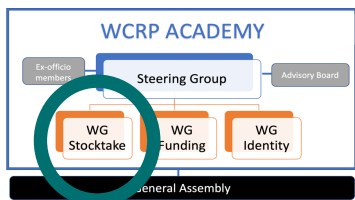
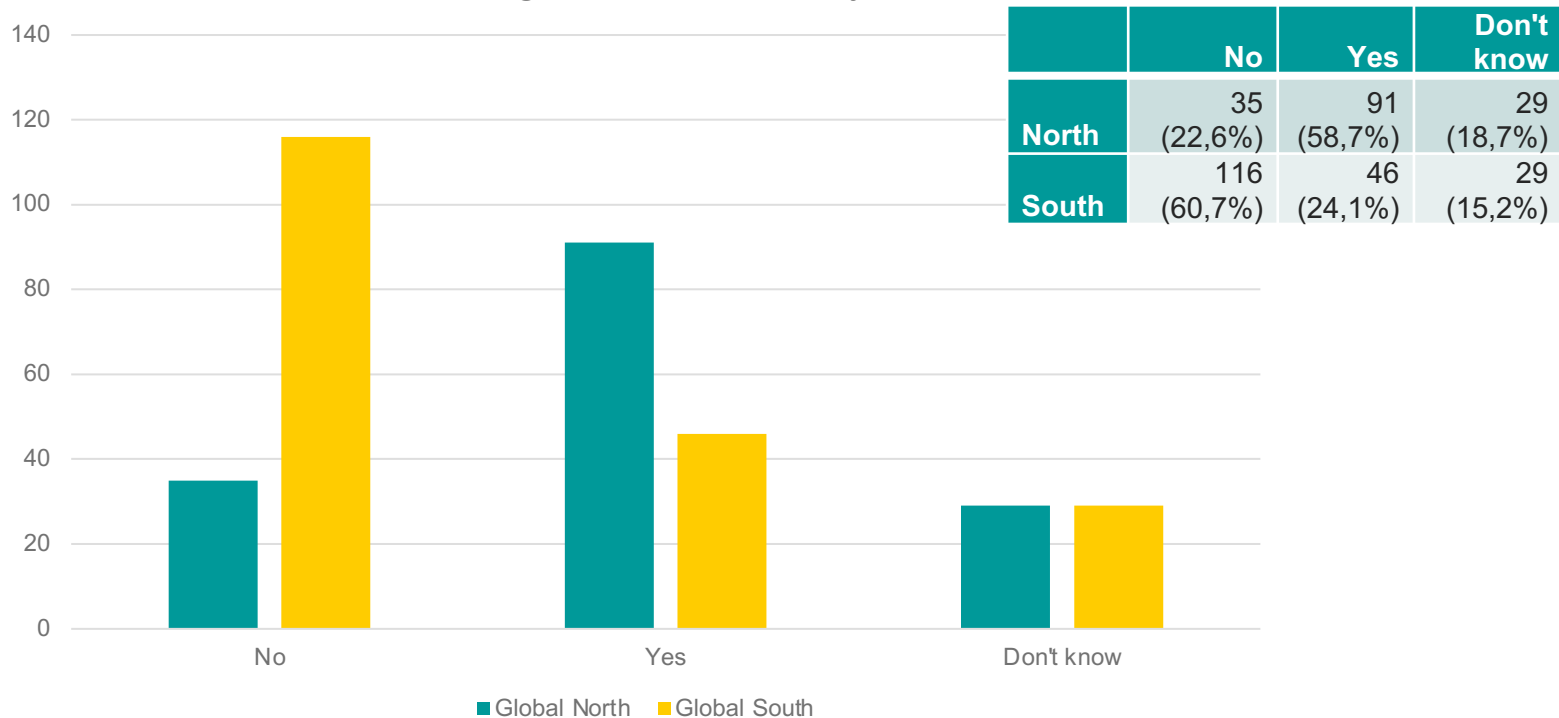
International
Science Council



COMPARING GLOBAL NORTH AND SOUTH

In your opinion, is the climate science training and education available in your country adequate to allow researchers to work effectively on climate change science and associated fields?

Perceived adequacy of climate science education and training available in country



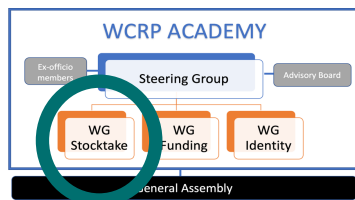
International
Science Council



TRAINING NEEDS IN THE GLOBAL SOUTH

What are the most important climate process-based training areas (in any field associated with climate) that climate scientists need to address current climate science challenges and emerging challenges (respondents could choose multiple)?

Analysis of model results other than model evaluation	70
Development of systems for providing forecasts and projection	50
Collecting observations (in-situ, field-studies, remote-sensing, ...)	49
Analysis of observations	49
Verification of forecasts and projections	49
Model development	44
Construction of observational research data sets	38
Model evaluation	38
Model experimentation	26
Laboratory studies	20
Collection and/or analysis of paleoclimate proxy records	18
Theoretical studies	14
Create a biological database (human, plant or animal) to study temporal and spatial changes in growth	11



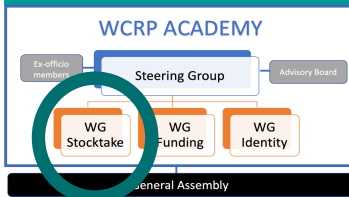
International
Science Council



TRAINING NEEDS IN THE GLOBAL SOUTH

What are the most important general training areas that climate scientists need to address current climate science challenges and emerging challenges ? (Respondents could choose multiple)

Coding/Programming	73
Capacity development/exchange	73
Science Communication (journals, grants, proposals)	67
Geographic Information Systems (GIS)	55
Qualitative methods (e.g. qualitative statistics, interviewing methods, etc.)	54
Graphics and data visualisation	51
Governance / Policy	43
Media and outreach communication	38
Indigenous knowledge	19
Other	2



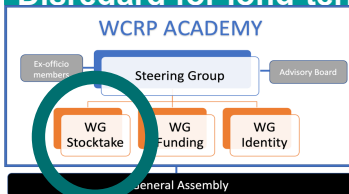
International
Science Council



BARRIERS TO TRAINING IN THE GLOBAL SOUTH

**Obstacles to the provision of adequate climate science training and education in your country
(respondents could choose multiple)**

Financial barriers	112
A lack of local expertise	74
Technical limitations (computer capacity, etc.)	60
Training available but limited to formal studies	58
Limited knowledge of available options	54
Limited face to face training available	47
Limited internet access	41
Limited online training available	39
Language barriers	35
Training not available formally or informally	21
Limited (or no) help for people with disabilities (physical, behavioural, learning etc.)	17
No physical access to educational facilities (due to distance/transport,...)	15
Ethnic group biases	12
Gender biases	7
Disreard for long-term problems	6

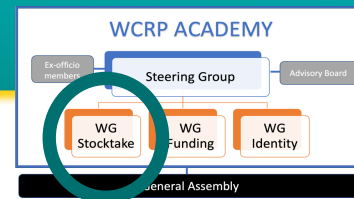


International
Science Council



What have we done so far?

(2) Interviews



Survey 1b

Interviews of Survey 1 participants (2022)

*Fourteen in-depth interviews with survey 1 participants in the **Global South***

Climate training opportunities currently available are inadequate, particularly in the Global South

Local experts, studies and datasets are also limited in the region

Strong preference for short courses, seasonal schools, and expert webinars

Interest in **topics** such as climate impacts, climate extremes, adaptation, risk and mitigation

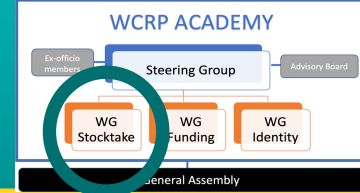
Call for **more inclusion of indigenous and local knowledge** in the training

Lack of funding was stated as the important barrier to accessing climate training opportunities.

Noted that there is much free online training – difficult to find & navigate

What have we done so far?

(3) Survey training within the WCRP



Survey II

2. Global Survey targeting *training providers* only (2023)

23 training providers (Research institutes, WMO centres and government)

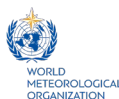
Global North (57%) - Global South (43%)

Formats offered: Short courses, seasonal schools and expert webinars

Target Audiences: practical users of climate science and information (practitioners, decision-makers)

Themes include: climate prediction, interpreting weather information, climate projections, climate downscaling, remote sensing, ensembles, permafrost, marine heatwaves, risk assessments, data assimilation, climate finance and tools and software

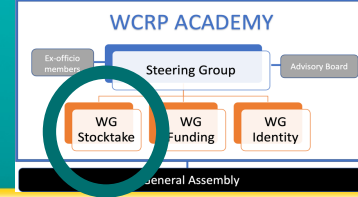
Almost all organizations surveyed offered training in English, two in Spanish



International
Science Council



Conclusion from the surveys.....



Conclusion:

- *There is a good match between training recipients and providers in terms of the type of training that can be made available through the Academy*
- *But there seems to be a mismatch in terms of the number of opportunities available (wider scope of training required than looks to be provided)*

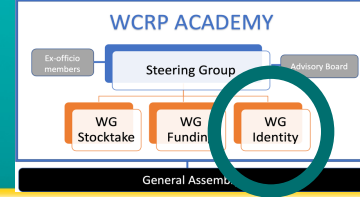
How can we solve this.....



International
Science Council

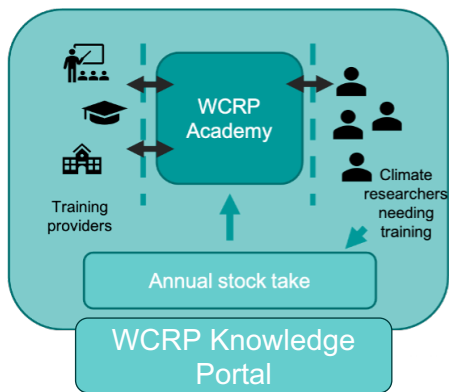


WCRP Academy Knowledge Portal



Advancing Climate Science for a Sustainable Future

WORLD CLIMATE SCIENCE ACADEMY



How to access training

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Test 2

Catalog

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

FAQ

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Become a Training Provider

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Additional Resources

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

About us

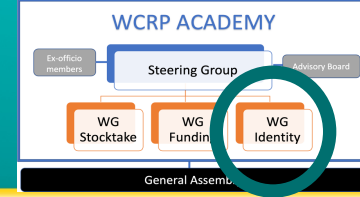
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Web site launch at OSC



International Science Council





WORLD CLIMATE SCIENCE ACADEMY



How to access training

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
Test 2



Catalog

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



FAQ

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



Become a Training Provider

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



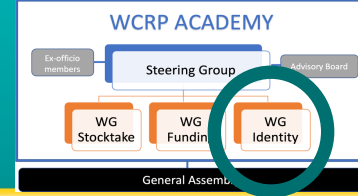
Additional Resources

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



About us

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



How to access training

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Test 2



HOW TO ACCESS TRAINING

Online catalogue and how it can be searched

The online catalogue features various climate training events and opportunities contributed by our registered training providers as well as our partners. It is therefore regularly updated, especially as new opportunities become available.

Aspiring climate scientists and other interested individuals may search the catalogue for relevant training opportunities by entering keywords on the search bar or by applying filters such as category and type of training. Advanced search filters may also be applied such as mode of learning, language, and cost. The search results may be displayed in tile, list and month view for the user's convenience.

Quality control/vetting

WCSA reserves the right to be prescriptive and selective in the content it curates, showcases or endorses in order to ensure that its brand is synonymous with rigour and quality.

External activities will be reviewed by experts within or outside the WCRP community to ensure scientific and pedagogical rigour. If recommended, then the activity will be added to the catalogue, curated and showcased. WCSA is transparent where it employs prescriptive and selective processes. Such processes are reviewed regularly to ensure that a balance between inclusion and quality is maintained.

Charging policy

The provision of WCRP training activities is free of charge. External activities included in the catalogue, on the other hand, will be either free of charge or subject to costs, in which case, the amount and payment method will be clearly stated in the description of the activity.

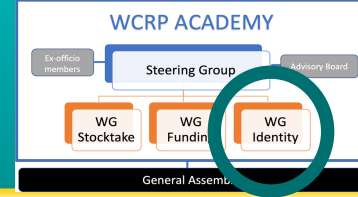
Last Updated: 08 September 2023



International
Science Council



WCRP Academy Knowledge Portal



Catalog

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



Find a course

- All categories - - Type of training - - Mode of learning -

Use the Search page for past events

By Year | By Month | Jump to month

25 Sep 2023
29 Sep 2023

ICRC-CORDEX 2023: INTERNATIONAL CONFERENCE ON REGIONAL CLIMATE

CORDEX

The next International Conference on Regional Climate (ICRC)-CORDEX conference will focus on discussions and ideas for the way forward and CORDEX contributions to the WCRP Open Science Conference in October 2023. The conference will also focus on specific ...

Categories: Physical Science Basis of the Climate Change



02 Oct 2023
06 Oct 2023

ADAPTATION FUTURES CONFERENCE 2023

World Adaptation Science Programme (WASP)

The Adaptation Futures Conference series is the premier international conference devoted entirely to climate change adaptation, bringing together researchers, policymakers, practitioners, industry representatives and communicators to present their work in ...

Categories: Climate change impacts adaptation and vulnerability



16 Oct 2023
27 Oct 2023

GAWTEC 41: WORKSHOP FOCUSED ON AEROSOLS

GAW Training and Education Centre in Germany

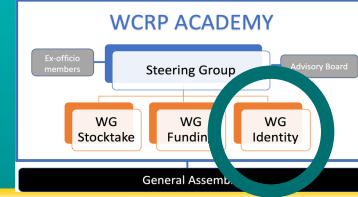
GAWTEC, the GAW Training and Education Centre in Germany, announces its 41st training session to be held from October 16th – 27th, 2023. GAWTEC 41 is going to focus on Aerosols. GAWTEC, operated through funds from the German Environment Agency and the Ba ...



International Science Council



WCRP Academy Knowledge Portal



Catalog

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



Synoptic and Mesoscale System Analyses 2023

- 📍 EUMeTrain
- 📅 23 October 2023 – 08 December 2023
- 👥 Short course
- 🌐 Hybrid

At this course, we will work through seven essential meteorological topics in live sessions as well as asynchronous learning in between the live sessions. You will learn to use the satellite imagery in combination with other meteorological data sources in order to interpret mid-latitude cyclones, fronts, frontal sub-structures, mesoscale features in cold air, summer convection, atmospheric wave phenomena and shallow clouds.

📧 For further queries:

The online phase of the course will run 23 October - 3 December. Selected participants will continue to the residence phase of the course, taking place at EUMETSAT Headquarters in Darmstadt, 4-8 December.

Other details

Costs / Fees	No
Funding Opportunity	Yes
Certificate of Completion	Yes

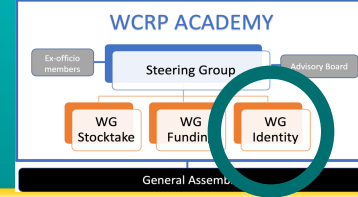
[Official Link](#)



International
Science Council



WCRP Academy Knowledge Portal



Become a Training Provider

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.



BECOME A TRAINING PROVIDER

The WCRP Academy invites all research and expert groups, academic and research institutions, government agencies and non-government organizations who provide climate science training and education to register as a training provider and contribute to our online training catalogue.

When you register as a training provider, you can directly share information about your upcoming climate science training events and activities through our online training catalogue.

Feature your training opportunities on our online training catalogue and connect with WCRP and the climate science community!

[Register as a training provider](#)

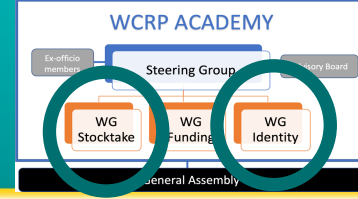
Last Updated: 08 September 2023



International Science Council



Conclusion

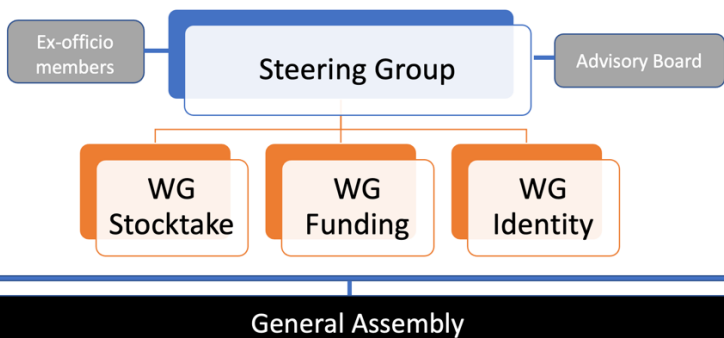


Conclusion:

- *There is a good match between training recipients and providers in terms of the type of training that can be made available through the Academy*
- *But there seems to be a mismatch in terms of the number of opportunities available (wider scope of training required than looks to be provided)*
- *But we hope you will register on the Knowledge Portal to mitigate this mismatch*

Thank you.....

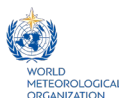
WCRP ACADEMY



WCRP Academy Steering Group

Name	Organization	Country
Melissa Hart (co-chair)	University of New South Wales	Australia
Christopher Lennard (Chair)	University of Cape Town	South Africa
Ayman Batisha	International Sustainability Institute, Cairo University	Egypt
Pablo Borges de Amorim	University of Santa Catarina	Brazil/Germany
Clifford Darah Chuwah	Springer Nature	Netherlands/Cameroon
Qingyun Duan	Hohai University	China/USA
Feba Francis	University of Hyderabad	India
Dorcas Kalele	Cooperative University of Kenya	Kenya

<https://www.wcrp-climate.org/academy>



International Science Council

