**YESS and HIW webinars**

# *Exploring the role of citizen science in weather, climate, and related projects*

## 1- Background

High Impact Weather (HIWeather) is a 10-year research project established in 2016 by WMO (World Meteorological Organization)'s WWRP (World Weather Research Programme). HIWeather aims to achieve dramatic improvements in the effectiveness of weather-related hazard warnings, following recent advancements in numerical weather prediction at km-scale and in disaster risk reduction.

Citizen science is a broad term, which encompasses a variety of different types of projects where the public (citizens) work with various public and private organizations, including academic researchers, to undertake scientific research.

In this context, the Young Earth System Scientists (YESS) community and HIWeather hosted the first edition of the citizen science webinar series between September and November 2020. The webinar series aimed to enable further discussion on this topic and bring together scientists, stakeholders, and  Early Career Researchers (ECRs). The webinars looked to foster an  understanding of resilience to high impact weather, worldwide, through improving forecasts for different timescales and enhance their communication and utility in social, economic and environmental applications.

The webinars and all discussions were open to the public. In addition, this project showed particular examples of how to reduce carbon footprint and enable interaction across regions and cultures through a fully online event.

# 2- Event description and format

This project consisted of a series of webinars conducted by experts from various disciplines (see below the list of speakers). The talks lasted 30 minutes each, followed by 30 minutes of discussion. The first session introduced the series by discussing the overall concept of citizen science. The succeeding sessions of the webinar series covered existing or past citizen science projects. The speakers discussed their experiences with citizen science and how it has impacted their areas of research and interests. The last session covers a special topic on citizen science and weather education. The presentations are in English. The different sessions are as follows:

1.  **Introduction** – The initial session introduced the series and talked about the definition of citizen science, benefits, and some high-level considerations of running citizen science projects.
    **Speaker:** Lisa McLaren (Massey University, New Zealand)
    **Topic:** Citizen Science 101: What is Citizen Science?
    **Date:** 17 September, 7am UTC (7PM NZST)

2.  **Citizen Science Project 1: Contribute** – The second session looked into a citizen science initiative that investigates weather and people's experience with pain in the United Kingdom.
    **Speaker:** Prof. David Schultz (University of Manchester, United Kingdom)
    **Topic:** Cloudy with a Chance of Pain: A Citizen Science
    **Date:** 1 October, 9am UTC (10AM BST)

3.  **Citizen Science Project 2: Crowdsource** – The third session covered crowdsourcing and how internet-savvy citizens have contributed georeferenced data rapidly after weather-related disasters in the Philippines.
    **Speaker:** Richard Ybanez (University of the Philippines, Philippines)
    **Topic:** Crowd-sourced Hazard Maps: Contributions of Internet-savvy Citizens in Documenting the Geospatial Effects of Weather-Related Disaster Events
    **Date:** 15 October, 8am UTC (4PM PST)

4.  **Citizen Science Project 3: Predict** – The fourth session discussed a project based in the west coast of India. The session will cover how the Center for Citizen Science in Pune India developed a system for predicting landslides associated with heavy rainfall.
    **Speaker:** Dr J. R. Kulkarni (Center for Citizen Science - Pune, India)
    **Topic:** Landslide Prediction System by Center for Citizen Science (CCS), Pune, India for landslide events over western parts of India
    **Date:** 12 November, 8am UTC (130PM IST)

5. **Special Topic 2: Education** – The final session will cover citizen science that engages with pupils. The session will discuss how engaging with students has helped them understand and use weather forecast and warnings.

**Speaker:** Dr Henning Rust (Freie Universität Berlin, Germany)
**Topic:** Build, measure, understand - Citizen Science for Weather Education
**Date:** 26 November, 9am UTC (10AM CEST)

## 3- Platform and Outreach

For this project, YESS provided the platform for the webinars (Zoom webinar) and supported the event dissemination. HIWeather's team identified speakers, coordinated with speakers and formally invited speakers. Together, HIWeather and YESS supported advertising the event and will elaborate short reports of two pages summarizing the discussion after each online session.

**Organizing team**

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