

# Memorandum of Understanding

## Indian Meteorological Society& Earthwatch Institute India

### as Knowledge Partners in Eco Weather Watch

Citizen Science and Transformational Learning based on field experience is a subject that is gaining wider recognition. Participatory field research programmes provide an unforgettable and invaluable educational experience.

Indian Meteorological Society (IMS) and Earthwatch Institute India (EWI) share a common vision of engaging people in scientific field research & education to promote the understanding in regard to weather and meteorology, application of meteorological science in relation to blue and green spaces, pollution monitoring, climate & weather forecasts; agriculture and land use, conservation of biodiversity and natural resources.

IMS and EWI have significant experience and knowledge pool to initiate the Eco Weather Watch programme. Both the institutions aim to work together to create a space for participation and rekindle exploratory spirit in weather and meteorological science, while bringing valuable awareness for sustaining the life supporting nature around us. Blue (lakes, water bodies and rivers) and Green (parks, trees, urban forests etc.) help significantly towards ecosystem services and ecological balance of the region, also help in providing much needed oxygen and fix carbon dioxide and thus rescue city and town from becoming heat island.

Eco Weather Watch programme willprovide experiential learning opportunities to young people using citizen science approach, so they can participate in field based monitoring of weather and meteorological data and to understand the significance ofblue and green spaces in our cities and towns.

#### Institutional Overview

### Indian Meteorological Society IMS

- The objectives of the IMS are:
- Advancement of Meteorological and allied sciences in all their aspects.
- Dissemination of the knowledge of such sciences both among the scientific workers and among the public.
- Application of Meteorology and allied sciences to various constructive human activities, such as, agriculture and land uses, irrigation and power development, navigation of sea and air, engineering and technology, medicine and public health etc.
- To achieve the above objectives the society takes the following concrete steps:
- Encourages research activity.
- Organizes lectures, meetings, symposia, discussions etc.
- Arranges to publish suitable pamphlets, books, periodicals, brochures etc.
- Promotes Co-operation in scientific work.
- Encourages the members to foster common interests of the Meteorological professions.
  Popularisation of Meteorology and Atmospheric Sciences.

The IMS has more than 3300 life members at different chapters located at about 29 different locations in most of the States capital.

#### Earthwatch Institute India EWI

EWI is a premier scientific research, experiential learning and skill development institution working in the field of nature conservation, environment, water, energy and sustainable development with considerable experience of working with world class institutions in India, UK, USA, Australia and Japan. EWI has niche in citizen science and its field projects are in the field of ecology and biodiversity, water, sustainable agriculture, ecosystem services, climate action and sustainable technology solutions.

EWI works with technologists, scientists, educators, facilitators and trainers to implement various projects and programmes. EWI scientific research and experiential learning initiatives have provided engagement opportunities for various stakeholders. The community based and skill development programmes have provided engagement opportunities for farmers, youth, teachers and students on environment friendly solutions and diverse range of knowledge gain, skills and motivation needed to take responsibility for the environment. EWI's unique model of citizen science and engagement was showcased at CBD COP 11 and also during 100th Session of National Science Congress and at the World Agriculture Conference.

EWI focuses on applied research that aligns with our national priorities, where we can most effectively make a significant difference. The Institute has collaborations with Indian Institute of Science (IISc) and with G B Pant Institute of Himalayan Environment & Development and several other academic & research institutions andcentres of excellence in developing projects and programmes. EWI projects are aligned with national missions and priorities such as Skill Development, Swacch Bharat Mission, Smart Cities and Digital India.

To start with,IMS and EWI will collaborate at key locations such as Delhi NCR, Bengaluru, Hyderabad, Mumbai, Kolkata andPune. This coincides with EWI's Water Academy and Blue and Green Spaces programmein a couple of locations as part of water and sustainability focus in urban and peri-urban areas and to harnesses growing interest by general public, students, teachers and executives, using citizen science. The collaboration will also expand to Leh and Port Blair where EWI is planning to expand citizen science projects and programmes. EWI is keen to integrate weather information as part of the water academy projects, focused on freshwater, lakes and urban forests. IMS and EWI can work together to develop educational programmes on weather watch, water quality, hydrology and micro-climate in these locations.

IMS and EWI as part of the Eco Weather Watch project will bring together students and scientists / meteorologists at a field site such as water body and green space to run a day long citizen science programme. The Eco Weather Watch will provide learning opportunities for people – catalyzing behaviour change and fostering a life-long commitment to nature conservation. Eco Weather Watch will also provide a framework for catalyzing innovative thinking among participants on the role they could play in providing solutions to sustainability issues.

At the core of the programme will be an empowering and unforgettable experience of being part of a team with weather & meteorology scientists. Student teams would be accompanied by EWI expert facilitators and IMS Scientists whose role would be to guide participants through learning sessions and field activities. The programme will impact participants' hearts and minds— inspiring passion and commitment and turning ideas into plans for action when they return to home. Eco Weather Watch will also encourage use of digital field guides as mobile apps as an experiential learning opportunity. The apps will assist as scientific field guide to observe nature, weather and the changing environment and seasons. EWI uses digital tools as part of its citizen science programmes. EWI initiative in the field of Digital Innovation and Mobile Application has been recognized by Times Network — Digital India Summit and Awards 2016; Mobile for Good Award by Vodafone Foundation in collaboration with NASSCOM Foundation and ICT for Mountain Development Award for Innovative Android Application to Enhance Ecosystem Services (Pollination) and Safeguarding of Bees and Butterflies by International Centre for Integrated Mountain Development (ICIMOD). EWI will provide all the digital tools and mobile apps for the Eco Weather Watch programme with IMS. IMS-EWI ma also develop new mobile apps on Weather and Meteorology in the future as part of the collaboration.

This understanding / agreement is made and entered into by and between - Indian Meteorological Society (IMS) and Earthwatch Institute India (EWI)

- 1. This agreement is non-monetary in nature hence it does not entail any financial liability on either party.
- 2. As part of this collaboration, IMS and EWI will work as knowledge partners.

This agreement can be altered / modified by mutual consent of IMSand EWI at any time.

The agreement is valid for the period 1 September 2017 to 31 July 2020.

President

**Indian Meteorological Society** 

Earthwatch Institute India

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