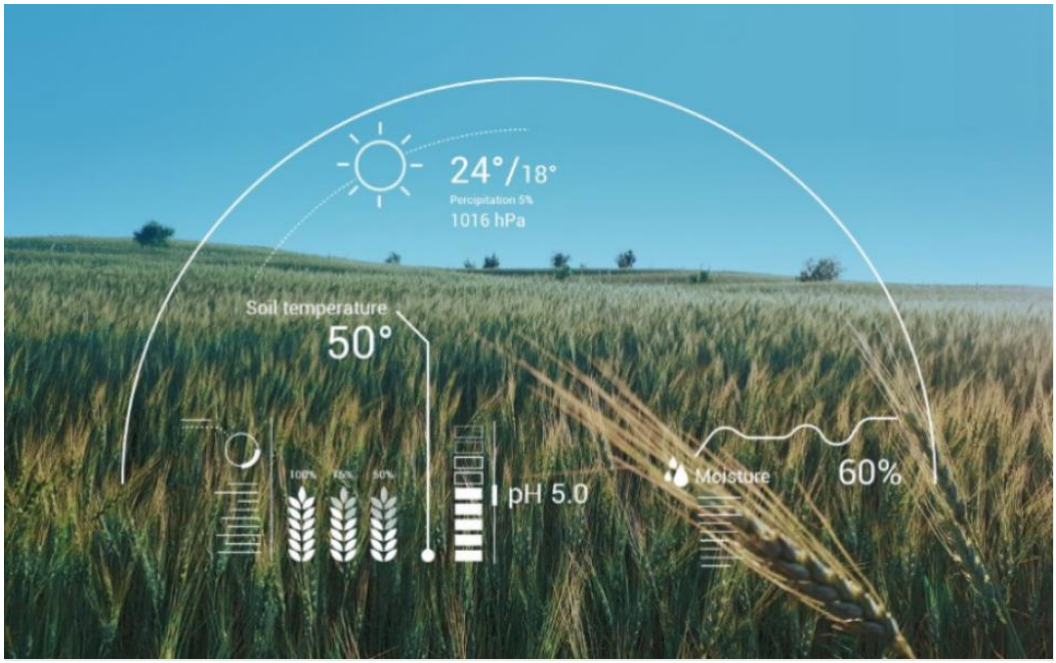

CLIMATE DATA HACKATHON

themed on

Climate Resilient Agriculture

20 April - 7 May 2022

Program partners

Challenge Partners

Ecosystem partners

Office of the Principal Scientific Adviser to the Government of India

PROGRAM REPORT

Data solutions have proven to be powerful catalyst for change. New technologies, such as the Artificial Intelligence (AI), Big Data, Internet of Things (IoT) and applied data science in general, have shown their potential to effectively address climate change. These can be used to bring about innovations such as forecasting solar power production, optimising building heating and cooling systems, pinpointing deforestation from satellite imagery, and analysing corporate financial disclosures for climate-relevant information. We now need to tap the talents and ingenuity of data practitioners and students in India to leverage data science to create innovations that lead us to the sustainable world we all want.

Climate Data Hackathon, a platform of **Climate Collective**, aims to develop the capacity of a large number of data practitioners and students to solve real-world sustainability problems, build a pipeline, and catalyse influx of data-driven climate solutions across different domains like circular economy, climate change, adaptation and resilience, etc. With the introduction of these hacks for the first time in India, we also aim to bridge the gap of non-availability of data for better decision making across various platforms for effective policy and decision making for climate change.

In April 2022, in partnership with **DAV Data Solutions and Indo Data Week**, we launched a new edition of Climate Data Hackathon that focused on **Climate Resilient Agriculture**. During the three-week design sprint, the selected teams designed data-driven solutions to identify climate resilient farming practices, soil parameters, vulnerable farmlands, crop diversity, etc., while exploring a business case for the same.

This report summarizes our methods, achievements, and learnings for all the stakeholders who were a part of the hackathon and for our future funders.

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Objective of Climate Data Hackathon

This data challenge aimed to bring together the youth currently studying across various institutions (undergraduates, graduates and PHD Scholars), from different disciplines, in order to build data-focused solutions for Climate Resilient Agriculture. Through this unique hackathon that focuses on problem solving through the lens of entrepreneurship, we aimed to -

1. Develop the capacity of university students to learn how to innovate to solve problems in the sustainability space
2. Develop the entrepreneurship skills of those students with innovative ideas interested in developing them further into a climate tech startup

Executive Summary

Applications	
# of team applications received	31
# of individual applications received	39
# of total applications received	70
Selection	
# of selection interviews conducted	16
# of teams selected for the hackathon	20
# of teams who dropped-out	8
# of teams that pitched at the finale	12
Capacity Building	
# of business training sessions conducted	4
# of technical training sessions conducted	2
Mentorship	
# of business mentors onboarded	5
# of technical mentors onboarded	3
Total # of business mentorship sessions conducted	24
Total # of tech mentorship sessions conducted	5
Winners	
Winning teams	• Rank 1 – Team-11 Climate Crew • Rank 2 – Team-16 Bhoomi • Rank 3 – Team-18 Inditech
Teams who will be supported through Climate Ready for Students accelerator program to further build their startup	• Team-1 FarmFinX • Team-2 HeathCliff • Team-4 Eco-Climate Warriors • Team-10 Planet Merra • Team-11 Climate Crew • Team-16 Bhoomi • Team-19 Easy Farm-AeroBiotech
Teams whose solutions will get onboarded to UNDP DICRA Platform	• Team-11 Climate Crew • Team-4 Eco Climate Warriors • Team-10 Planet Merra • Team-19 Easy Farm - Aero Biotech

Hackathon Overview

This edition of Climate Data Hackathon was a three-week design sprint to solve for "**Climate Resilient Agriculture**". The challenge was organised in partnership with DAV Data Solutions and Indo Data Week. The problem statement was provided by **UNDP** and **Telangana Government**.

- The call for application was launched on 9 March 2022
- We ran a social media campaign on our handles and did a targeted outreach to university students through our ecosystem partners at the office of Principle Scientific Advisor to Government of India, Youth for Sustainability and Invest India.
- We received total 70 applications out of which 31 were teams and 39 were individual applications
- We then conduced 2-day intensive teambuilding sessions where all teams and individual participants found complementing team members.
- Once the teams were formed, we conducted quick brainstorming session for them to come up with the specific problem they want to work on during the course of the hackathon. The teams were also asked to connect at their end to structure the problem.
- We then conducted short interviews with all the teams to understand the problem statement of their choice, the work distribution amongst the members, and the proposed solution.
- The top 20 teams who should diligence and seriousness were shortlisted for the Hackathon.
- These 20 teams went through Technical Bootcamp and Business bootcamp where they were taught ethics for using technology for public good and basic business principles for product design from customer point of view.
- The teams were also provided 1:1 business and tech mentors to work closely with them while they designed their solutions.
- All teams were provided support to create their pitch decks for the finale.
- At the finale, 12 teams pitched in front if the jury panel out of which 3 winners were chosen to compete at Indo Data Week.

Hackathon format

The format of the hackathon was as below

- Duration – 3 weeks
- Theme – Climate Resilient Agriculture
- Team structure
    - Each team was expected to have 3 to 5 members
    - Each team was expected to have at least one member from Data Science, Agriculture/Environment Science and Management background to have a well-balanced team
- Support provided
    - Business and tech trainings
    - 1:1 mentorship
    - Pitch preparation sessions
- At the end of the hackathon the teams were expected to
    - Have a Product Design (prototype not mandatory)
    - Business Case Presentation

Overview of the key activities

Outreach

The Hackathon was launched on 09 March 2022 with four levels of promotion:

1. We ran an e-mail campaign to target all relevant academic institutes. We reached out to engineering colleges, design colleges, management institutes, colleges which offered courses on Environmental Science, Agriculture, and Sustainability.
2. We ran a social media campaign to engage the target audience on Facebook, Instagram, Twitter and LinkedIn. The campaign included social media posts with catchy graphics and captions giving details about the hackathon, such as, the problem statement, winner incentives, important dates and event timeline, partner organization introduction, etc.
3. CCF has an online community of 6k entrepreneurs and aspiring entrepreneurs. We also reached out to the Climate Collective community to spread the word.
4. We received great support from our ecosystem partners; Office of Principle Scientific Advisor to Government of India and Youth for Sustainability. They helped spread the word in their vast network of students.
5. We also published details of the hackathon on Invest India portal and other hackathon portals to generate leads.

The application window for the hackathon was closed on 17 April, 2022.

Selection Process

We received 70 applications, out of which 31 were team applications and 39 were individual applicants.

The application form used can be accessed here.

- Screening
  The first round of screening was done through a simple evaluation form where we did basic checks to make sure the applicant matched the participation criteria and how serious their application was.
- Team building
  We conducted 4 team-building sessions for participants to join a team or recruit more members in their existing teams. These sessions were based on the following criteria:
  - Session 1: For PhD/Master level students
  - Session 2: For solutions focused on Crop Management
  - Session 3: For solutions focused on Water/Soil Management
  - Session 4: For solutions focused on Spatial Analysis and Climate Modeling
- Team interviews
  For the second round of screening, we conducted interviews with teams and briefly discussed their ideas and their clarity on the same.
  - The teams had to come prepared with the outline of the problem they wanted to work on
  - Post the interviews, the teams were asked to submit a small writeup that included – Problem, Solution, and team member details.

The final team brochure with details of all teams who participated and their respective ideas can be accessed on this link.

Capacity Building

Upon final acceptance, the participants were given two self-paced learning courses designed to address basic concepts of business and domain knowledge. The courses can be accessed at the links below

- Basic Business Concepts
- Introduction to Climate Change and Climate Resilient Agriculture

Over the course of the three weeks, the teams went through various business and technical training sessions where they did hands-on exercises and interacted with the trainers to shape their idea into a feasible solution. The training sessions conducted were:

- **Business Training Sessions**
    - Problem Tree (Trainer: Neha Naikwade, CCF)
    - Customer Research and Customer Persona (Trainer: Pratap Raju, CCF)
    - Customer Value Proposition (Trainer: Nalin Agarwal, CCF)
    - The Deal (Trainer: Neha Naikwade, CCF)

- **Technical Training Sessions**
    - Principles for Digital Development for Public Good (Trainer: Parvathy Krishnan and Mahdi Fayazbakhsh)
    - Storytelling with Data (Trainer: Parvathy Krishnan and Mahdi Fayazbakhsh)

Mentorship Sessions

In the second week of the Hackathon, the teams went through 1:1 mentorship sessions with their respective mentors where-in they discussed the solution in detail and got inputs from the mentors on both-business and technical aspects of their solution. Each team had two rounds of business mentorship and one round of technical/domain mentorship.

The mentor profiles can be accessed here.

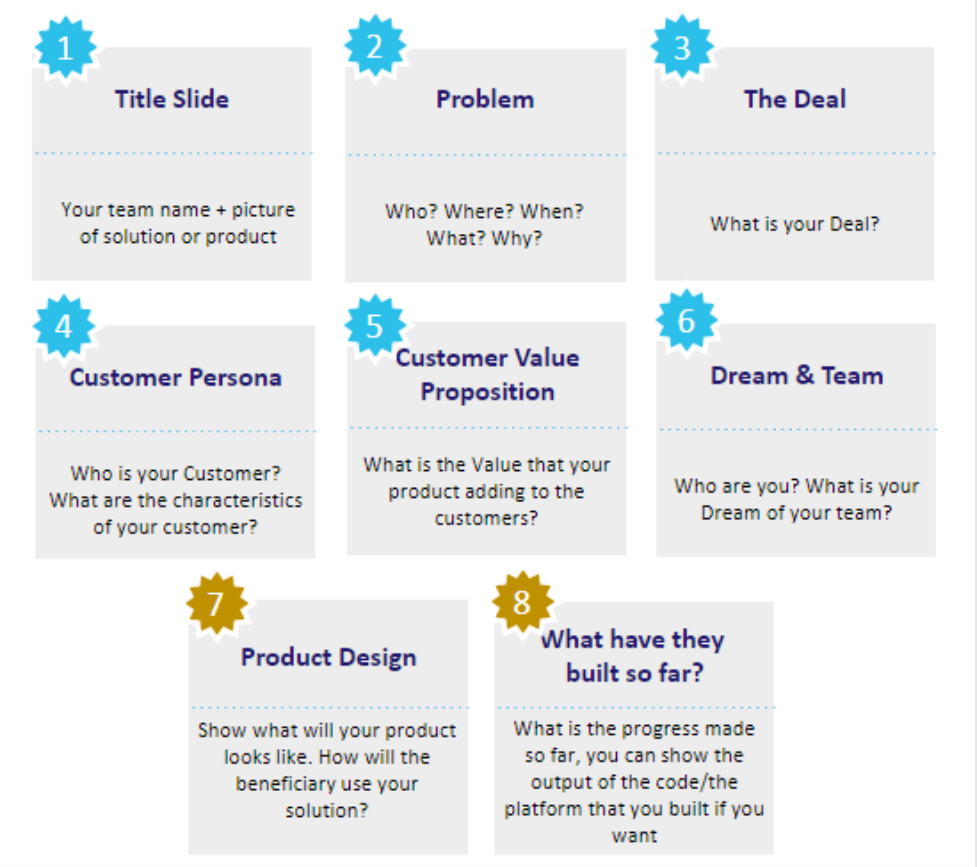
Format of the mentorship sessions:

The aim of these mentorship sessions was to instill the entrepreneurship mindset and make the teams think how they can create scalable solutions keeping the customer/beneficiaries in mind. The session was structured in the following way:

- Mentor-team introduction
- The teams were asked to present the problem that they are solving and the solution they plan to design
- Mentors were asked to structure their feedback as –
    - Do they understand what their product is?
    - Do they understand who their customer is?
    - Do they understand what value they are adding to the customer?

Pitch Preparation

To keep the pitches uniform, the teams were given an 8-slide format to prepare for their pitch. The format is as follows:



The teams were asked to pre-record their pitch presentation for the finale. We gave 5 mins to each team for the pitch. To help them gain more clarity, our trainers also organized a pitch feedback session where-in they gave improvement points and input to the teams. Our pitch feedback trainers were:

- Neha Naikwade, CCF
- Rishi Nair, New Energy Nexus India

Finale

Date: 07 May 2022

At the finale, 12 teams pitched their solutions in front of the jury panel. The format of the pitch was as follows –

- 5 mins pitch (pre-recorded)
- 7 mins Q&A by the jury panel

Jury Panel -

The jury for this edition of Climate Data Hackathon was:

1. Swetha Kolluri, Head of experimentation at UNDP India
2. Gaurav Sharma, Advisor on AI, "FAIR Forward: AI for All" (Global Program) by GIZ
3. Sivakumar Palaniswamy, CEO at MABIF (Madurai Agribusiness Incubation Forum)

Judging Criteria:

Sr. No.	Judging criteria	Weightage
1	Problem identification, relevance to challenge area	25 %
2	Clarity of solution / business idea	20 %
3	Understanding potential customers and CVP	20 %
4	Product design (Feasibility, Functionality etc.)	25 %
5	Team Strength	10 %

The jury was given a detailed guide that included the details of the hackathon like important dates, pitch format, agenda and also a detailed description of the scoring criteria.

Before the pitches began, the jury was given a score-sheet and the overall scores of teams were calculated.

Winners:

Winners of Climate Data Hackathon

The below teams immerged as winners of Climate Data Hackathon post the finale –

1. Team-11 Climate Crew
2. Team-16 Bhumi
3. Team-18 Inditech

These three teams will compete at Indo Data Week. The winners of Indo Data Week will get a chance to visit Netherlands to participate in Hackathon for Good - all expenses paid for (subject to visa approval).

Some additional special awards were also declared under the following categories given to –

Most Entrepreneurial solutions

- Team-1 FarmFinX
- Team-2 HeathCliff
- Team-4 Eco-Climate Warriors
- Team-10 Planet Merra
- Team-11 Climate Crew
- Team-16 Bhoomi
- Team-19 Easy Farm-AeroBiotech

These teams will get entry into our Climate Ready for Student pre-accelerator program to help them build their startups.

The solutions of the below teams will be onboarded to UNDP DICRA Platform –

- Team-11 Climate Crew
- Team-4 Eco Climate Warriors
- Team-10 Planet Merra
- Team-19 Easy Farm - Aero Biotech