2025 Youth Hackathon

"ONE HEALTH" Hackathon jointly organized by FAO China and CAAS CIAR

Background

Global challenges

The current global population is persistently increasing, with an estimated projection of 9.7 billion by 2050. This necessitates the production of more food and other agricultural products on limited land and water resources, which, therefore, poses significant challenges to agricultural production and resource management.

One Health

The One Health approach recognizes the **intrinsic interdependence** of human, animal, plant, and environmental health. It advocates for integrated, **cross-sectoral collaboration** to address complex, transboundary challenges such as **zoonotic diseases, antimicrobial resistance (AMR), and ecological degradation**.

Accelerated by human-induced pressures — including deforestation, intensive agriculture, and wildlife trade — these threats demand systems-based solutions. Under its **Strategic Framework 2022-2031**, the Food and Agriculture Organization (FAO) has designated One Health a core pillar of its **"Better Production"** priority. The BP3: One Health initiative advances early warning systems, biosecurity protocols, and AMR mitigation to enhance global food and health system resilience.

Firmly aligned with the Sustainable Development Goals — particularly **SDG 3 (Health), SDG 12 (Sustainable Consumption and Production), and SDG 13 (Climate Action)**—One Health offers a forward-looking paradigm for safeguarding planetary and population health. It is both a scientific necessity and an innovative governance approach for sustainable development.

Key initiatives

To evoke the creativity and activeness of young people in One Health and to encourage young generations to exchange their ideas with their peers from all over the world, the 2025 Youth Hackathon is devoted to inspiring young people in contributing their wisdom to improve agricultural sustainability by adopting innovative and inclusive methods.

Instructions for participation

Topics and tracks

New Technology explores cutting-edge tools such as AI, IoT, and biotechnology to strengthen One Health systems. This includes innovations like disease forecasting across species, mobile diagnostic kits for field use, smart nutrition guidance based on microbiome data, and sensor-driven monitoring of livestock waste and health. These technologies aim to improve early detection, prevention, and response.

New Pattern focuses on institutional innovation and collaborative governance. It supports models such as DAO-based AMR regulation that incentivize responsible antibiotic use, and integrated platforms that connect health, agriculture, and climate sectors. The goal is to break silos and enable coordinated decision-making across disciplines.

New Service promotes inclusive, community-centered approaches to health education and engagement. Examples include short-video campaigns for youth, redesigned antibiotic packaging for behavior change, AR tools for AMR learning, and AI-enabled rural radio that delivers localized, voice-based health information to underserved populations.

Tournament rules

Team members would ideally be between **18 and 40 years old and of any nationality**. Students may have their mentors as part of the project team. Their mentor's role in the project must be highlighted. All proposals and presentations shall be **conducted in English.**

This Hackathon will consist of the three stages: **Preliminary Selection, Training Session and Final Competition**.

Tentative timeline and key points

- March – August: Application
- August: Preliminary selection
- September: Announcement of shortlist teams
- September: Training Session (Online)
- October: Final Competition (Online)
- November: Award Ceremony

Application materials

- You will complete the application as a team and send the requested materials to ciar@caas.cn and cc ypardchina@outlook.com.
- **An Application Form** will be filled in to introduce your team
- **Innovation Solution** includes a project proposal and a PowerPoint Presentation
- **Video Presentation** for 5 minutes to visually elaborate your innovative ideas

Scan and follow for Hackathon updates

Youth Hackathon Highlights

Over the past three years, the Youth Hackathon has gathered young innovators worldwide to address global challenges through cutting-edge solutions. In 2022, teams from 9 countries tackled Food Loss and Waste (FLW), with **Agrotech+Fresh, Completing Mushroom, and Clear Plate** winning across three tracks. In 2023, Low-Carbon Agriculture (GLCA) innovations shined, with **Cropfix, Low-Carbon Rice Catcher, and Lucky Elephant Solar Irrigation** leading the way. In 2024, Urban Agriculture (UA) solutions took focus, with **MeteoShield, VertiFarm, and Making the Urban Free from Soil Shortage** standing out. Youth Hackathon continues to drive global collaboration and sustainability-focused innovation.

Youth Hackathon in Numbers

Total of 400 participants

In total there were 400 participants from all walks of life who joined in Youth Hackathon till now.

Received 160+ proposals

During the application phase, we received 160+ proposals worldwide.

From 35+ countries

Participants come from 35+ countries have contributed their innovative thinking.

Supported by 60+ organizations

Over 60 organizations, institutes and companies have supported the Hackathon through financial, personnel, and in-kind approaches.

FAO China

Food and Agricultural Organization of United Nations, Representation in China

Tel: 010-65322835   Email: FAO-CN@fao.org

CAAS, CIAR

Chinese Academy of Agricultural Science, Center for International Agricultural Research

Tel: 010-82101024-8001   Email: CIAR@caas.cn