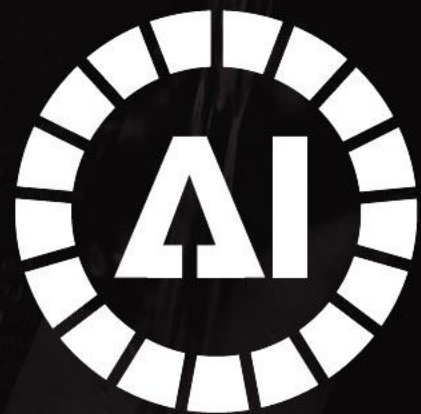


ITUEvents



AI for Good

*Accelerating the United Nations
Sustainable Development Goals*

ALL YEAR
ALWAYS **ONLINE**

aiforgood.itu.int

Andrea Manara
International Telecommunication Union

GeoTalk, 28 March 2024



38 UN PARTNERS





AI for Good | ITU – Committed to connecting the world

193

MEMBER STATES

+1000

PRIVATE SECTOR ORGANIZATIONS

+150

ACADEMIA MEMBERS

3 Sectors



ITU Radiocommunication (ITU-R)

Coordinating radio-frequency spectrum and assigning orbital slots for satellites



ITU Standardization (ITU-T)

Establishing global standards



ITU Development (ITU-D)

Bridging the digital divide





**THE leading action-oriented,
global & inclusive United Nations
platform on AI**

ALL YEAR, ALWAYS ONLINE



Organizer



40 UN Orgs



Co-convener



**AI can help
solve
humanity's
greatest
challenges**





AI for Good

Accelerating UN SDGs

17 Goals and 169 targets creating
the blueprint to achieve a more
sustainable future for all by 2030

Adopted by all United Nations
Member States





Identify

Practical applications
of AI



Scale

Solutions for
global impact



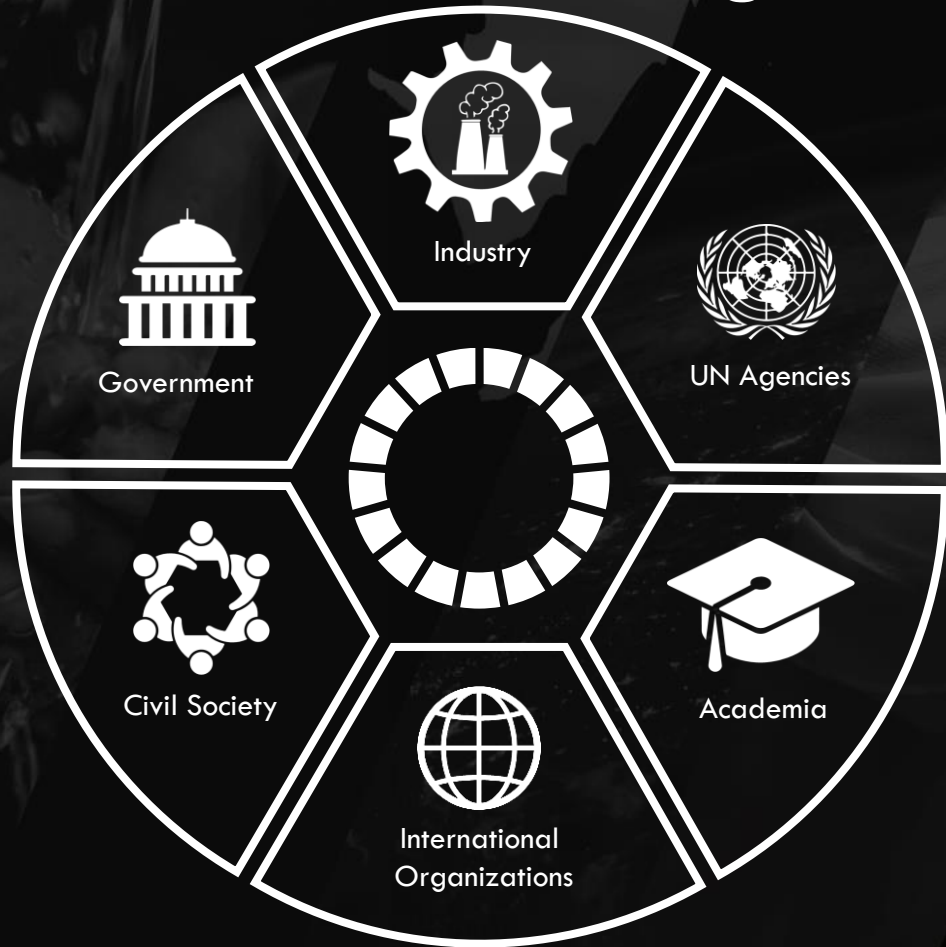
Accelerate

Progress towards the
UN SDGs

AI for Good | 40 UN Organizations

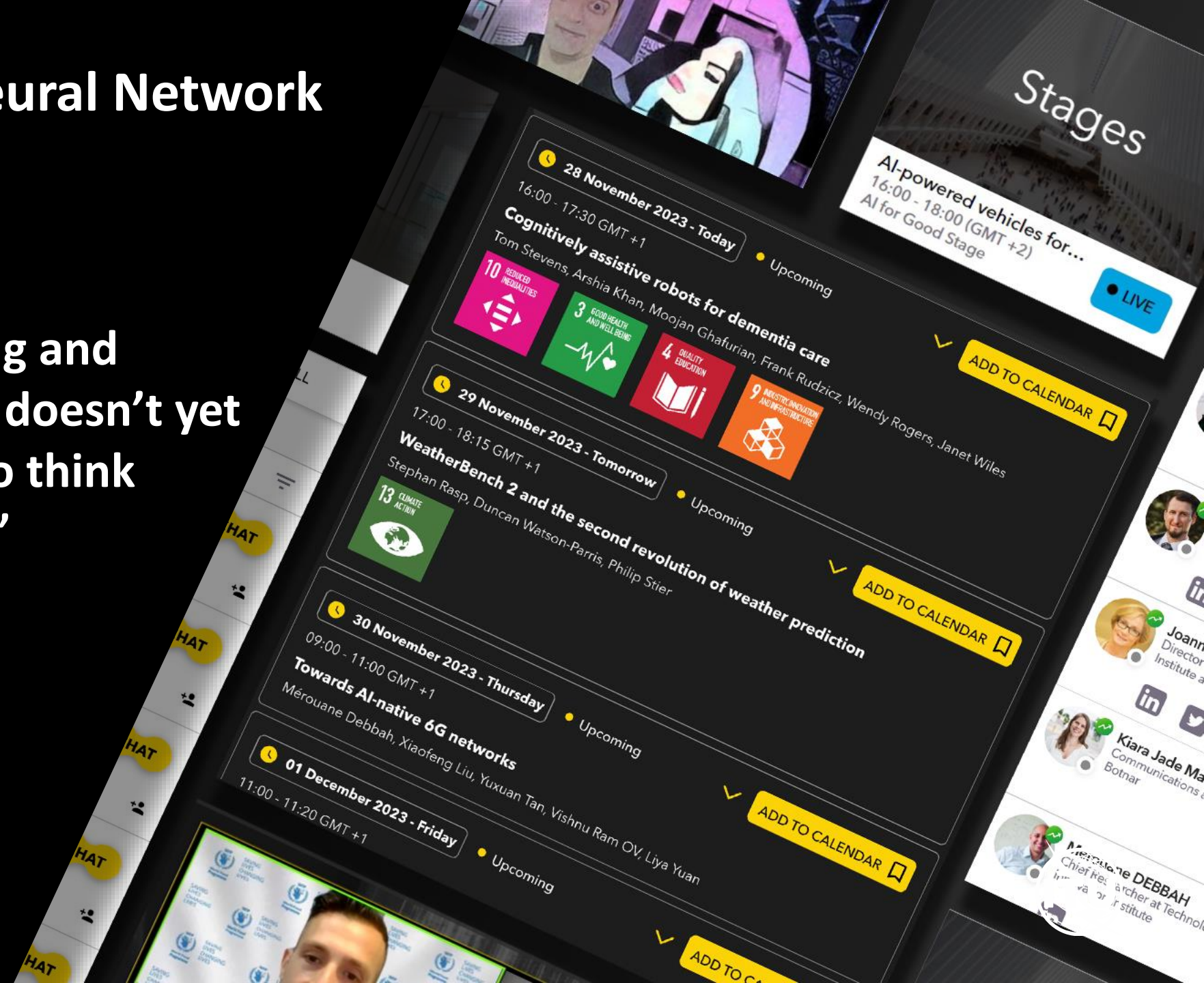


 AI for Good | Multi-stakeholder
Interdisciplinary
Inter-generational



“This is a truly amazing and original platform that doesn’t yet exist. You may want to think about copyrighting it.”

Philippe Jegou - AWS,
UN Account Manager



AI for Good | Products

Learn



Build



Connect



Behind the rise of geospatial AI

- Increased availability of geospatial Earth Observation data
- Advancement of AI
- Availability of massive computational power

AI for Good | GeoAI activities

GeoAI Discovery

Channel on GeoAI applications, highlighting its relevance to the Sustainable Development Goals.

GeoAI Challenge

Competitions aimed at providing solutions for collaboratively addressing real-world geospatial problems by applying AI and ML.



Maria Antonia Brovelli
Politecnico di Milano



Nadine Alameh
Open Geospatial Consortium



Barbara Ryan
World Geospatial Industry



UN GEOSPATIAL NETWORK
UNITED NATIONS COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL INFORMATION MANAGEMENT



UN-GGIM
ACADEMIC NETWORK



UN Open GIS
INITIATIVE





AI for Good | GeoAI Discovery Channel

GeoAI and Health

🕒 16:00 - 17:30 CEST, Geneva | 10:00-11:30 EDT, New York | 22:00-23:30 CST, Beijing

💡 Andrea Manara (ITU), Nadine Alameh (OGC), Ajay K Gupta (HSR.health)...

⚙️ Discovery - AI and Health, Discovery - GeoAI

[VIEW DETAILS](#)

The future of GeoAI for Good with Google Earth Engine

🕒 17:00 - 18:00 CEST, Geneva | 08:00-09:00 PDT, California | 11:00-12:00 EST, New York | 23:00-00:00 CST, Beijing

💡 Barbara Ryan (WGIC), Rebecca Moore (Google), Maria Antonia Brovelli (Politecnico di Milano)...

⚙️ Discovery - GeoAI

[VIEW DETAILS](#)

Spatial Digital Twins and AI: Racing into the Future

🕒 16:00 - 18:00 CEST, Geneva | 10:00-12:00 EST, New York | 22:00-00:00 CST, Beijing

💡 Peter Atalla (VoxelMaps, Inc), Nicolaus Hanowsk (ESA), Omar Maher (ESRI)...

⚙️ Discovery - GeoAI

[VIEW DETAILS](#)

📅 21 September 2022

GeoAI and the digital transformation of agriculture, water and food systems

🕒 16:00 - 17:30 CEST, Geneva | 10:00-11:30 EDT, New York | 22:00-23:30 CST, Beijing

💡 Andrea Manara (ITU), Maria Antonia Brovelli (Politecnico di Milano), Zhongxin Chen (FAO)...

⚙️ Discovery - GeoAI

📅 12 July 2022

Deep Earth Query: Information Discovery from Big Earth Observation Data Archives

🕒 16:00 - 17:30 CEST, Geneva | 22:00-23:30 CST, Beijing | 10:00-11:30 EST, New York

💡 Andrea Manara (ITU), Maria Antonia Brovelli (Politecnico di Milano), Begüm Demir (Technische Universität Berlin)

⚙️ Discovery - GeoAI

📅 28 June 2022

Launch of the ITU GeoAI Challenge

🕒 15:30 - 17:30 CEST, Geneva | 09:30-11:30 EST, New York | 21:30-23:30 CST, Beijing

💡 Andrea Manara (ITU), Zhongxin Chen (FAO), Do-Hyung Kim (UNICEF)...

⚙️ Discovery - GeoAI



AI for Good | GeoAI Discovery Channel

Hands-on workshops and Education series

Geospatial Foundation Model series

ITUEvents **794 replays**



AI for Good
GeoAI Discovery

GeoAI Solutions for Sustainable Development: The Handbook of Geospatial Artificial Intelligence (GeoAI)

Friday, 23 February 2024
16:00-17:00 Geneva (CET)
10:00-11:00 New York (EST)
23:00 - 00:00 Beijing (CST)
aiforgood.itu.int



ITUEvents **392 replays**



AI for Good
GeoAI Discovery

Geospatial Frontiers: Navigating the Future with Generative AI and Foundational Models

Friday, 1 March 2024
15:30-17:00 Geneva (CET)
09:30-11:00 New York (EST)
22:30 - 00:00 Beijing (CST)
aiforgood.itu.int



ITUEvents **> 8200 replays!!**



AI for Good
Webinar Series

Workshop: satellite data analysis and machine learning classification with QGIS – part 1

Tuesday, 27 April 2021
14:00 - 16:00 Geneva
aiforgood.itu.int



Grid of four video thumbnails for AI for Good events:

- Top-left: Blagoj Delipetrev, ALL YEAR ALWAYS ONLINE
- Top-right: Andrea Manara, ALL YEAR ALWAYS ONLINE
- Bottom-left: Maja Branković, ALL YEAR ALWAYS ONLINE
- Bottom-right: Rohini Swaminathan, ALL YEAR ALWAYS ONLINE




AI for Good | Building a foundation for geospatial AI: defining a syllabus and body of knowledge



 5 July 2023 ● In person and Online

**Building a foundation for geospatial AI:
defining a syllabus and body of knowledge -
updated on June 15th**

 14:00 - 17:30

 **Maria Antonia Brovelli** (Politecnico di Milano),
Andrea Manara (ITU), **Andrew Zolli** (Planet)...

 Workshop

Four working group (WP) established on Nov 6th

- WP1 – GEOAI Syllabus for developers
- WP2 – GEOAI Syllabus for appliers
- WP3 – GEOAI Syllabus for decision-makers
- WP4 – GEOAI Body of Knowledge



AI for Good

Navigating GeoAI: Plotting the course for future education

	Speaker	time (mins)
Welcome and Intro (UN GGIM AN)	Maria Antonia Brovelli	10
WG1	Andrea Nascetti?	30
WG2	Ali Mansourian?	30
WG3	Parvathy Krishnan Krishnakumar ?	30
WG4	Celine Rozemblat?	20
break		15
UN GGIM	Paloma Merodio	20
UN Geospatial Network + AI For Good	Andrea Manara	10
UN Open GIS	Maria Antonia Brovelli	5
UN GGIM PS	???	5
UN GGIM Geospatial Societies	???	5
GEO	Wembo Chu ?	10
ISPRS Student Consortium	Laxmi Thapa	10
open discussion	Rohini moderating	30
Conclusion	Maria Antonia Brovelli	10

To replace with final one





Geospatial AI is helping to tackle the world's greatest challenges

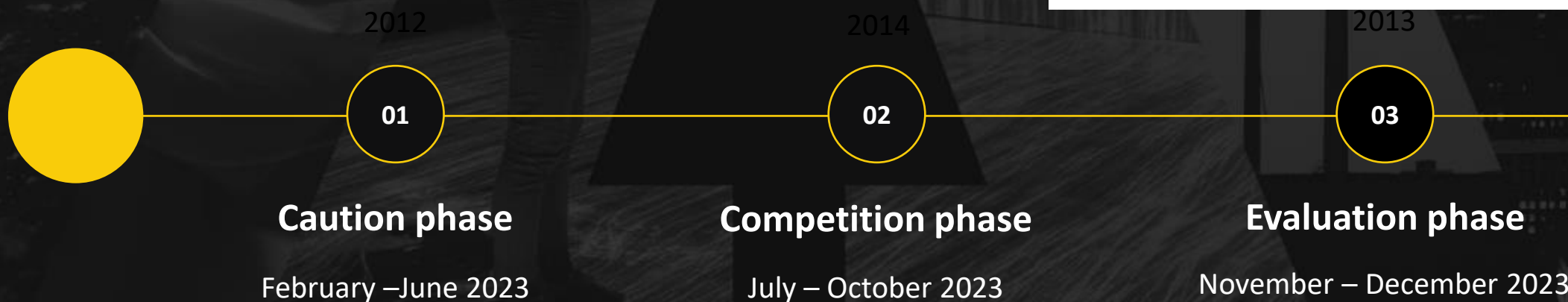
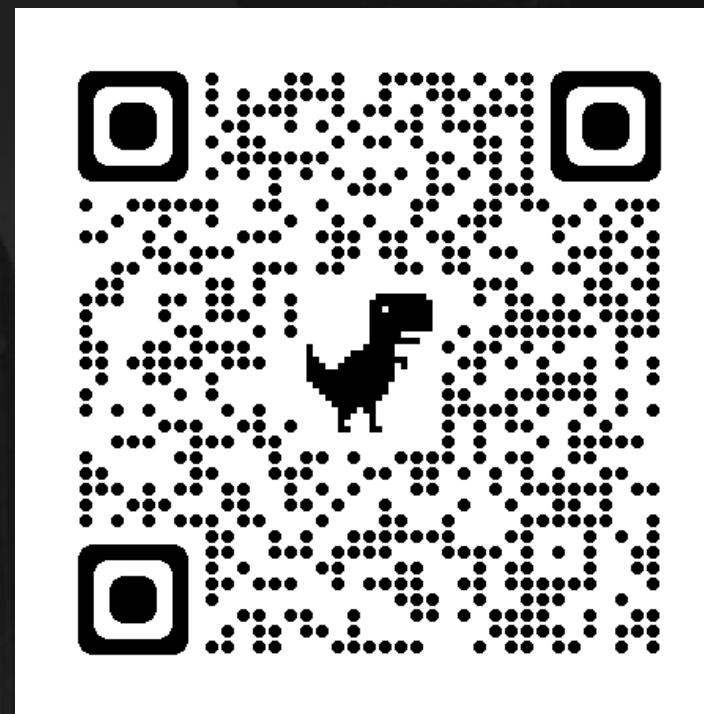
aiforgood.itu.int

Everything happens somewhere – Applying machine learning to geospatial analysis

To solve real-world geospatial problems by applying AI and ML to advance the UN SDGs

<https://aiforgood.itu.int/about-ai-for-good/geoai-challenge/>

GitHub Repos





AI for Good | ITU GeoAI Challenge 2023

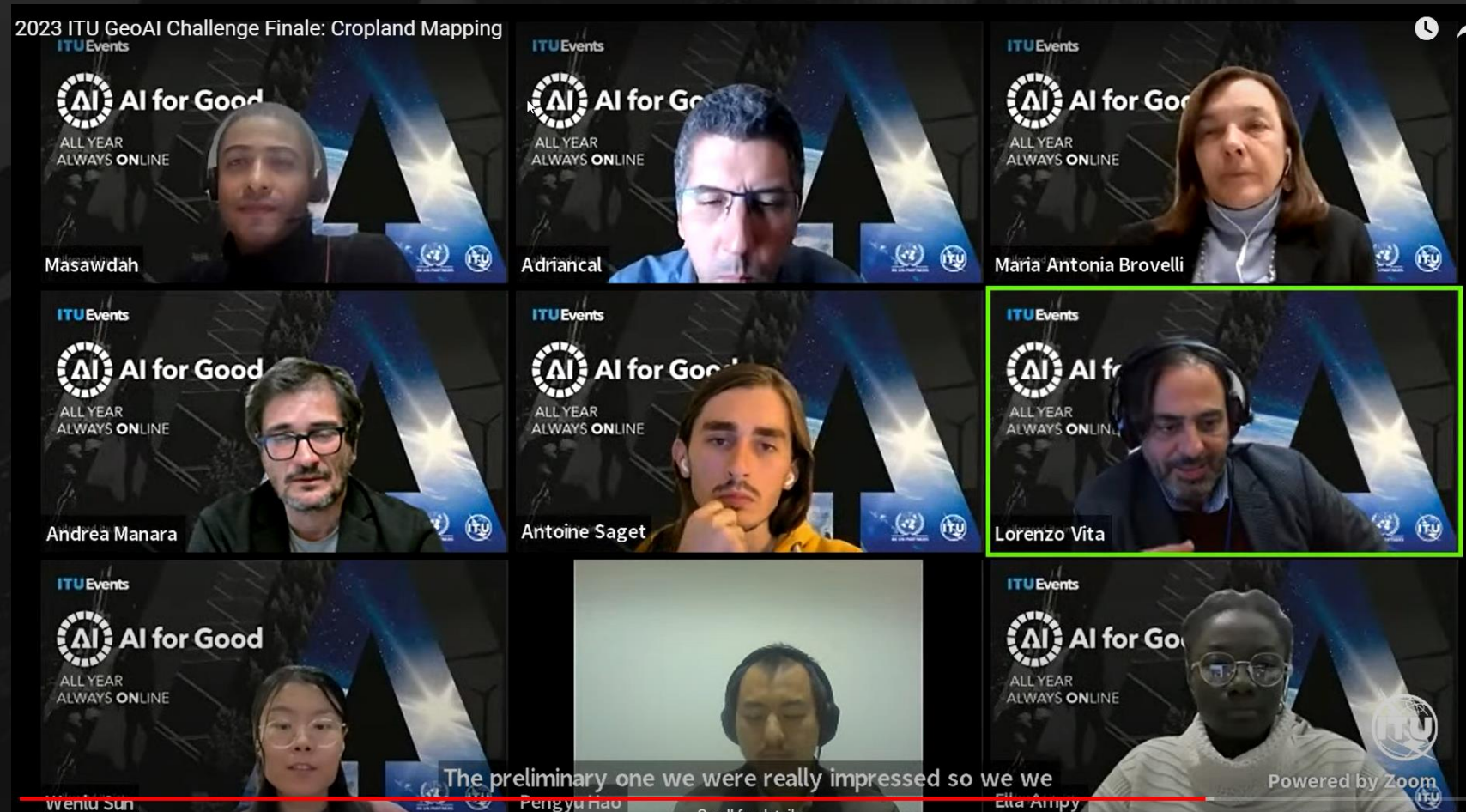
Problem statement	Organizations	Participants (Submitted)	Total Submissions	Countries (Africa)	Prize
<u>Cropland Mapping</u>	FAO, UNODC, UN Open GIS	333 (74)	2264	60 (23)	4'000 CHF
<u>Air Pollution Susceptibility Mapping</u>	<u>Geolab</u> (Politecnico di Milano)	210 (35)	225	40 (20)	1'000 CHF
<u>Landslide Susceptibility Mapping</u>	<u>Geolab</u> (Politecnico di Milano)	202 (20)	309	46 (20)	1'000 CHF
<u>Estimating soil parameters from hyperspectral images</u>	ESA <u>Φ-lab</u> together with <u>KP Labs</u> , and partner <u>QZ Solutions</u>	207 (62)	612	40 (19)	1'000 CHF
<u>Location Mention Recognition (LMR)</u>	QCRI (Qatar Computing Research Institute), QU (Qatar University), and Qen Labs Inc.	138 (28)	549	35 (21)	1'000 CHF

AI for Good | ITU GeoAI Challenge 2023



UN Open GIS

Problem statement	Organizations	Participants (Submitted)	Total Submissions	Countries (Africa)	Prize
Cropland Mapping	FAO, UNODC, UN Open GIS	333 (74)	2264	60 (23)	4'000 CHF



FAO and UNODG proposal discussed and finalized in the Working Group 5 "GeoAI and Analytics".

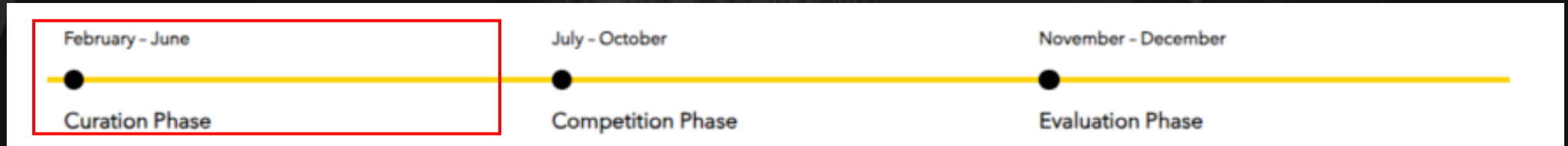
Special thanks to UNODG for allocating 3000 CHF for the prizes!





AI for Good | ITU GeoAI Challenge 2024

[GeoAI Challenge guidelines](#)



Problem statement

Organizations

Plastic mulched field mapping with satellite imagery

FAO

Droughts and water shortage prediction in sub-Saharan Africa

United Nations Global Service Centre

Mapping clandestine runways in the Peruvian Amazon

UNODC

Mineral mines detection

UNODC

ICT infrastructure mapping

ITU

Estimation of ground-level NO₂ concentrations using remote sensing data with machine learning approach

Sapienza University of Rome, Department of Civil, Building and Environmental Engineering
University of Padua, Interdepartmental Research Centre in Geomatics (CIRGEO)





ITU Journal

Future and evolving technologies

FREE | FAST | FOR ALL

Special issue

Geospatial AI to advance the United Nations Sustainable Development Goals



DEADLINES EXTENDED

- ▶ Paper submission: **30 June 2024**
- ▶ Paper acceptance notification: 30 September 2024
- ▶ Camera-ready paper submission: 30 November 2024

Leading Guest Editor



Maria Antonia Brovelli, Politecnico di Milano, Italy





AI for Good | Outlook

Interested in participating in AI for Good?

- Summit 30-31 May 2024
- Online events → all year round

Geospatial AI activities:

- Navigating GeoAI: Plotting the course for future education May 30th AI for Good Summit
- Ongoing episodes on GeoAI Discovery
 - Foundation Models
 - GeoAI and Education
- GeoAI Challenges related to the SDGs
 - Sponsor, Problem statement owner, Participant

ITUEvents



AI for Good

Global Summit

*Accelerating the United Nations
Sustainable Development Goals*

30-31 May 2024
Geneva, Switzerland

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