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**G20 GLOBAL
LAND INITIATIVE**

G20 Global Land Initiative START Summit x Hack 2025

ST. GALLEN, SWITZERLAND
19-21 MARCH 2025

The emergence of a Land Restoration Industry

Contents

START GLOBAL

FOREWORD

Rather than a traditional foreword, we invite you to hear directly from those who participated in the START Summit x Hack. Their words capture the impact, challenges and aspirations that define our collective journey in this event.

Boy Heemskerk

Founder, Bambouku (Netherlands)

Bambouku is honored to have joined Start Summit through the G20 Global Land Initiative—an event that sparked valuable relationships and opened exciting door.

Chimka Munkhbayar

CEO, Nomads Agritech Innovations (Mongolia)

At the START Summit, we connected with investors, accelerators and inspiring startups, all working toward a more sustainable future. The energy, ideas and partnerships formed here are invaluable as we push forward in better solutions in sustainability and land restoration.

Claire Cantor Rice

Video producer and editor, G20 Global Land Initiative at UNCCD

Attending START Summit was a very lively and exciting experience, filled with so many inspirational start ups. Getting the chance to watch early stage companies (especially our YECO's) pitch their businesses in such an thrilling environment was very thought provoking.

Deborah Bolujoko

Youth and trade consultant, International Trade Centre (ITC)

START Summit was absolutely incredible! Seeing so many early-stage startups all in one place was beyond inspiring. The chance to connect, whether with investors, experts, or fellow entrepreneurs across the globe was game-changing. It really shattered the usual barriers startups face and opened doors to meaningful conversations. More than just an event, it was a space to build real connections and get a glimpse of the exciting future ahead for entrepreneurs.

Devashree Niraula

Research and Outreach Specialist, G20 Global Land Initiative at UNCCD

At this year's START Hack, we explored the complex social and climatic challenges affecting land in the Sahel. It was inspiring to see young hackers not only understand the depth of the issue but also present innovative solutions. Even on our second visit, the experience was nothing short of fascinating.

Ebenezer Attua Odoi

GIS Developer, G20 Global Land Initiative at UNCCD

This year's START Summit x Hack showcased the hope we have in young minds. It was nothing short of exciting to see multiple approaches to solving complex real-world problems.

Felicitas Belker

Youth Engagement Consultant, G20 Global Land Initiative at UNCCD

Bringing the YECOs to START Summit felt like opening a door—for their ventures, for their voices and for the global restoration movement. The conversations sparked and connections formed here will fuel impact far beyond the event.

Guadaluna Chear

CEO, LUXEED Robotics (Lebanon)

START Summit was highly relevant to our industry and stage, we found many interested investors that we wouldn't have found otherwise. It was a great event to connect with likeminded entrepreneurs, especially YECO ecopreneurs and to listen to advice from more experienced entrepreneurs in fundraising.

Hannah Van den Brink

Intern at the International Trade Centre (ITC), Youth & Trade Team

START Summit was truly inspiring! Seeing so many early-stage startups tackling real challenges to create positive change was incredible. Above all, it was especially exciting to connect with our YECOs and see them in action, pushing sustainability forward with their ideas.

Julia Mensa

CEO, Nunatak Bio (Argentina)

START Summit gave me the chance to meet 15 investors in person and offered a unique opportunity to better understand the European ecosystem and its potential. Coming from South America, accessing a space that concentrates so much entrepreneurial talent and investor interest was a unique chance to not only learn, but also show the value we bring - with microbial science and extreme nature - to the rich and dynamic European ecosystem.

Manuel Olmos Munevar

COO, Ecosystem Carbon Conservation (Colombia)

St. Gallen's START Summit 2025 provided an electrifying platform to connect with fellow pioneers, forge crucial partnerships and amplify TECC's mission on a global stage. The energy and collaboration here have been truly transformative.

Mercedes Gavilán Galisteo

Intern, G20 Global Land Initiative at UNCCD

It was super inspiring to be surrounded by so many innovative startups like the YECOs, all full of sustainable ideas and big ambitions. Being part of the team helping them improve their businesses was a really rewarding experience!

Milena Niehaus

Associate Programme Management Officer, International Trade Centre (ITC)

With YECO, we are scaling successful youth-led ventures that are delivering real solutions to our planetary crisis. START Summit provided a powerful opportunity to accelerate their growth—through direct access to investors, peer startups and the wider European innovation ecosystem.

Paula Padrino Vilela

Programme Management Officer, G20 Global Land Initiative at UNCCD

This year the G20 GLI introduced to the START Summit how the land restoration economy is a trillion-dollar opportunity waiting to be unlocked. My favorite highlight was seeing our YECOs connect with investors, building relationships and gaining support for their impactful ventures. Overall, reaffirming the potential of technology and entrepreneurship in creating a more sustainable world.

Qoane Mothibeli

CEO, JuliGerm PTY LTD (Lesotho)

In just one week with YECO and G20 GLI in Switzerland, I gained more insights and connections than in most of my startup journey. Through the Start Summit, I met founders pushing the boundaries of frontier tech and investors who have shaped my company's trajectory, making it investment-ready. YECO and G20 GLI have validated a young founder from an 'unknown' country in Southern Africa, reigniting my belief in my dreams.

Tonthoza Uganja

Founder, Sustainable Farming Solutions (Malawi)

Being invited to the Builder stage by Paula, it was the highlight of my summit experience as I got to telly my story but I have an experience that I can build on for pitches and also speeches that will propel my business forward.

Willie NG

Managing Director, Global Cerah Sdn Bhd (Malaysia)

START Summit was an inspiring experience—meeting passionate founders, investors and business partners in such a dynamic environment. The mix of insightful conversations, spontaneous networking and the overall startup vibe has been truly energizing!
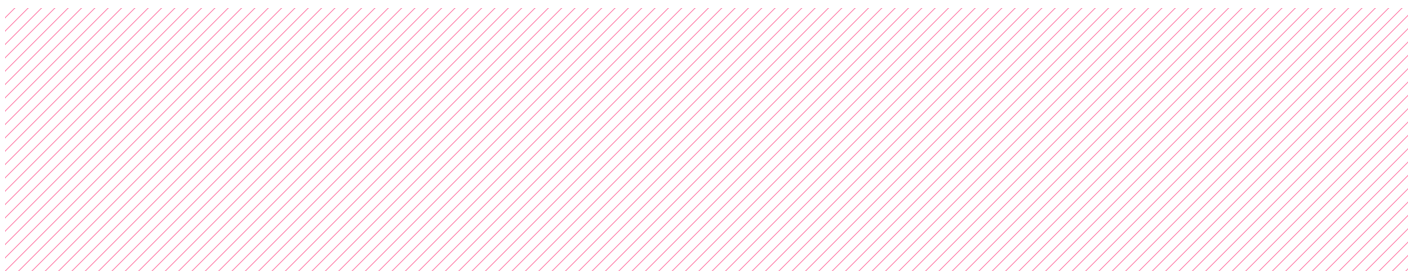
1. INTRODUCTION

The G20 Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats (G20 Global Land Initiative or G20 GLI) was established by G20 leaders in 2020 to reduce degraded land by 50% by 2040. Achieving this ambitious target requires action at scale and a broad coalition, encompassing government, civil society, academia and critically, youth and the private sector.

To amplify this mission and engage emerging global talent, the G20 GLI participated in START Summit x Hack 2025, Europe's largest student-run conference and hackathon on entrepreneurship and technology. Hosted annually in St. Gallen by START Global, the START Summit convenes over 7,000 founders, investors, corporate leaders, policymakers and developers for high-impact dialogue and innovation. This event launches cutting-edge business ideas, while START Hack provides a collaborative space for over 600 top students to tackle real-world challenges with tech.

This year, the G20 GLI brought its mission to life through a two-fold engagement. At START Hack, the initiative presented a high-impact challenge focused on creating data-driven solutions for land restoration in the Sahel. With 29 hack teams choosing the challenge—making it the most popular—the case highlighted how restoration and climate issues resonate with emerging technologists. Over 36 hours, participants used real datasets to prototype innovative, scalable tools for restoration. The results showcased not only the technical talent but also the enthusiasm and creativity of youth when addressing meaningful, global challenges.

In parallel, the G20 GLI emphasized at START Summit that land restoration is both an environmental necessity and a profitable business opportunity. Through workshops, stage time, strategic meetings and networking, it delivered the message that investing in land restoration high returns in jobs, climate resilience and sustainable development. Together, the hackathon and summit offered two complementary ways to mobilize youth—through technology and entrepreneurship—toward a more sustainable planet.

2. START SUMMIT

A key G20 GLI focus is fostering youth-led innovation and strengthening the entrepreneurial ecosystem behind the growing global restoration economy. The Youth Ecopreneur Program (YECO), developed with the International Trade Centre (ITC), is a flagship initiative supporting young entrepreneurs developing innovative business models that promote land restoration and sustainable growth. By equipping ecopreneurs with tools, networks and investment access, the G20 GLI supports a broader shift toward sustainability-driven economic growth.

The G20 GLI team was joined in Switzerland by 8 YECO 2024 ecopreneurs, who showcased their ventures on an international stage and connected with the startup ecosystem. During pre-summit meetings in Zurich and at different G20 GLI engagements at START Summit, YECOs accessed new entrepreneurial ecosystems and brought visibility to the business side of land restoration—proving youth-led startups are not just visionary but investment-ready.

YECO delegation, ITC and G20 GLI team on the main stage of START Summit with a START sign

2.1 Pre-Summit Meetings in Zurich

From 17 - 19 March, the G20 GLI, ITC and YECO teams held curated meetings in Zurich to connect ecopreneurs with renowned institutions in restoration and entrepreneurship. These meetings helped position YECOs within investment and entrepreneurial networks and provided firsthand experience in pitching and stakeholder engagement.

One highlight was a visit to Google's Zurich office, where the delegation learned about the Startups for Sustainable Development Program, which now offers YECOs preferential access. The group explored how Google supports innovation, strategic goal setting and startup support and discussed using digital tools for sustainability. Google later committed to hosting a webinar for YECOs on AI tools and SEO optimization. YECO participant Julia Mensa, CEO of Nunatak Bio, said:

YECO in Zurich

Legend: G20 GLI event · To be Confirmed · Free Exploration Time · Mandatory Attendance · Suggested Events

	16.03	17.03	18.03	19.03
Booth 9:00 - 13:30		/	/	/
9:00 - 10:00	Arrival in Zurich	9:30 Google Offices Location: Europaallee 20, Zürich (Everyone)	08:30 - 12:00 Elea Foundation Wiesenstrasse 7, 8008 Zurich (Everyone)	
10:00 - 11:00				
11:00 - 12:00				Travel to St Gallen
12:00 - 13:00				
Booth 13:30 - 18:00		/	/	/
13:00 - 14:00	Arrival in Zurich	Lunch break	Lunch Break - Migros restaurant	Set up booth in the Summit
14:00 - 15:00		14:00 - 16h00 Brainforest Location: 25hours Hotel Zürich Langstrasse (Langstrasse 150, 8004 Zürich) (Everyone)	14:00 - 15:30 Innovate4Nature Opera House (walking tour) Falkenstrasse 1, Zurich (Everyone)	
15:00 - 16:00				Set up booth in Summit and visit the START Hack
16:00 - 17:00			16:00 - 18:00 Restor + Crowther Lab Hohlstrasse 186/188 8004 Zurich (Everyone)	
17:00 - 18:00				
Evening Programme	20:00 Welcome dinner Location: Ribeli Restaruant (in 25 hours hotel)		19h00 Fondue dinner	20:00 - tbc Investor Night Location: Soho Bar (Paula, Julia, Willie, Tontho, Qoane)

YECO agenda Pre-Summit Meetings in Zurich

> **Visiting Google's office and getting an inside look at how the company works gave me powerful insights and inspirations for building my own company.**

Group photo at Google office

The delegation in front of the Google Office

The group also met with Thomas Gmainer, Chief Venture Officer, and Camille Accolas, Senior Program Manager at Brainforest. This Switzerland-based venture-builder focuses on forest and biodiversity conservation. The session explored Brainforest's model and its connections to impact investment. The Brainforest team also advised YECOs on how to approach Swiss investors and build nature-based solutions.

At the elea Foundation for Ethics in Globalization, an impact investor, YECOs pitched directly to the investment team, receiving tailored feedback on their business models, investment readiness and funding potential. The session included a value creation workshop and an overview of Switzerland's impact investing landscape, equipping participants with practical strategies for scaling their ventures sustainably. One YECO called it the most valuable experience of the trip. In the post-summit survey, the elea Foundation was rated the most impactful session, ranking first in overall usefulness and meeting experience.

Delegation at the elea foundation office

The YECOs with Dr. Philipp Staudacher in Zurich

The group also toured Zurich's sustainability scene with Dr. Philipp Staudacher of Innovate 4 Nature, learning about regenerative business models on the ground.

The final Zurich meeting was to Restor and Crowther Lab, where discussions focused on the intersection of data science and ecological restoration. Experts from both organizations shared insights into how open-source platforms can strengthen restoration strategies and offered feedback on how YECOs might integrate science-driven approaches into their ventures. YECOs learned to use the Restor platform to showcase their restoration work and attract global partners and investors. This was particularly relevant as Restor aims to build an ecosystem linking credible land restoration efforts with funding opportunities. Crowther Lab—a global network of scientists researching biodiversity and climate relationships—also emerged as a valuable contact for YECOs working in science-driven fields, offering promising opportunities for collaboration, data exchange and research-based partnerships. YECO participants later emphasized the value of learning how to combine science with entrepreneurial practice.

Thomas Elliott, CEO of Restor, Ian Brettell, Policy Director at Crowther Lab, having discussions with YECOs

Overall, the Zurich trip was highly rated by all YECOs for networking, business strategy and investor exposure. Here are some testimonials from YECOs: Julia Mensa, CEO of Nunatak Bio, reflections:

> *These exchanges helped me reflect on how to communicate our ideas more effectively and with greater impact.*

> " Qoane Mothibeli, CEO of JuliGerm PTY LTD, summarized his experience in Zurich with the following:
>
> *Words can not fully capture what YECO and G20 GLI have done for an African founder like me. Before YECO, stepping into Google's offices and learning directly from Google engineers felt like a distant dream. Also, as a founder in the Geospatial AI space, meeting the team at Restor was a game-changer—there's reading about an organization, there's hearing about it and then there's the unparalleled experience of engaging with its people firsthand.* "

YECO group photo in Zurich

These pre-summit engagements laid a strong foundation for the YECOs ahead of START Summit, helping them refine their pitches, expand their networks and establish key contacts to support their growth beyond the event.

2.2 A Land of Opportunities Booth at the START Summit

At START Summit, the G20 GLI team maintained a high-impact presence as a primary partner of the 2025 edition, hosting a 25-square-meter booth within the Sustainability Lounge. The booth showcased the G20 GLI's wide range of activities, featuring the YECO Programme and its cohort of startups working at the intersection of entrepreneurship and land restoration. It was designed for visibility, engagement and exposure, with branded materials including custom cubes, posters, flyers and a central bookshelf displaying each YECO participant's solutions.

The booth included interactive elements such as a quiz on land restoration facts and a popcorn machine, which incentivized booth visits and social media interaction. These activities contributed to a 276 follower increase across G20 GLI's online platforms during the event. To foster deeper conversations and strategic networking, the booth included a lounge area with seating and tables. This setup created a welcoming space for one-on-one conversations with investors, stakeholders and founders. Positioned in a high-traffic area and co-branded as a leading partner of the Summit, the G20 GLI booth became a focal point of the Sustainability Lounge, regularly drawing attention from investors, founders and policy stakeholders.

Each YECO participant was introduced through individualized displays, allowing visitors to learn about their ventures. Participants also rotated staffing the booth, using it as a base for networking and presenting their solutions.

> One participant reflected:
>
> *Having a booth helped because some investors had a packed schedule, and they would come looking for us at the booth.*
>
> Another YECO noted,
>
> *It was a great opportunity to explain our venture in more detail, especially when people stopped by and wanted to know more about our story." YECO fellow Guadaluna Chaer remarked: "Having a booth is highly convenient in such events. Investors don't have time sometimes, and throwing a word about where we are proved to be effective in having conversations at the booth with investors.*

Overall, the G20 GLI booth was not just a visibility tool but a platform for strategic engagement, amplifying the YECOs and the G20 GLI's mission to build a global restoration economy powered by youth innovation and private sector collaboration.

G20 GLI Booth at the Sustainability Lounge

2.3 Unlocking the Trillion-Dollar Restoration Economy: Entrepreneurship, Technology and Innovation

A standout moment of the G20 GLI's presence at the Summit was a visionary speech by Paula Padrino Vilela, Programme Management Officer at the G20 Global Land Initiative, titled *"Unlocking the Trillion-Dollar Restoration Economy: Entrepreneurship, Technology and Innovation."* Paula invited attendees to imagine a future where restoring land is not only an environmental necessity but also a thriving economic opportunity. As she noted,

> *Restoring land is not just about fixing the past. It's about building the future.*

The keynote opened with a screening of *Imagine Land 2040*, an AI-powered short film co-produced by Tomorrow in Focus, the G20 GLI and UN Volunteers. The film transported the audience into a future envisioned by young changemakers, using AI-generated storytelling to advocate for large-scale land restoration. Paula then built on this momentum to introduce the concept of a new "Restoration Economy," where entrepreneurship, innovation and policy converge to regenerate ecosystems, create jobs and drive sustainable development. "For every dollar invested in restoring degraded land, we can generate up to $30 in returns," she explained, underlining the sector's untapped potential.

Movie Screening of the AI movie "Imagine Land 2040" on stage at START Summit

Her remarks underscored the G20 GLI's ambitious goal to restore one billion hectares of degraded land by 2040 and unlock an estimated $1.5 trillion in economic value. She emphasized that restoration is no longer the sole domain of governments or nonprofits; it is an emerging business sector that young entrepreneurs and investors should look to for growth and purpose. She also spotlighted the Youth Ecopreneur Programme (YECO), a joint initiative of G20 GLI and the International Trade Centre. To bring this message to life, she introduced one of the programme's leading voices, YECO ecopreneur and Founder of Sustainable Farming Solutions Tonthoza Uganja from Malawi, who shared her powerful journey and her mission to restore land and empower smallholder farmers through data-driven, inclusive solutions. In her speech, Tonthoza emphasized:

> **Imagine if every farmer had the resources to restore the land beneath their feet. Imagine if every tree planted meant financial security for a family. Imagine a future where land restoration doesn't just happen—it thrives.**

Paula's keynote reframed land as a dynamic enabler of economic transformation, urging the audience to reimagine it as a "land of opportunities." Her call to action resonated with founders, students and investors alike, positioning the G20 GLI at the forefront of global restoration and next-generation entrepreneurship.

Paula Padrino Vilela giving her keynote speech "Unlocking the Trillion-Dollar Restoration Economy: Entrepreneurship, Technology and Innovation"

2.4 Swiss Sustainability Award Finale

The Swiss Sustainable Impact Award (SSIA) 2025 was one of several pitching competitions at START Summit, focusing on businesses in the green sector. 12 projects presented their ideas to a distinguished jury of industry experts. Paula Padrino Vilela represented the G20 GLI as a jury member in the final round, evaluating the 6 best startups based on a pitching round followed by a Q&A session. The event awarded a 10,000 CHF prize and 30,000 CHF in legal services to the winner, upgrain, a Swiss-based company transforming spent brewer's grains, an industrial byproduct, into sustainable, high-protein, high-fiber flour. By upcycling a commonly discarded ingredient into a valuable food source, upgrain tackles both food waste and climate impact, contributing to a more circular and resource-efficient food system. Their work exemplified the G20 GLI's mission to spotlight ventures combining environmental sustainability with tangible business potential.

Paula Padrino Vilela introducing the mission of the G20 GLI on stage during SSIA

Winner of the SSIA pitching competition with jury members and organizers on stage

2.5 Workshops

As part of its official programming at START Summit 2025, the G20 Global Land Initiative (G20 GLI) hosted two workshops.

The first, "*Investing in Tomorrow: Scaling Green Ventures,*" co-hosted with ITC, brought together students, early-stage startups and impact investors to explore challenges and opportunities for young entrepreneurs in the green economy.

The session opened with a keynote by Felicitas Belker, who introduced land restoration as an emerging investment frontier and positioned the YECO Programme as a critical pipeline for developing green entrepreneurial talent worldwide. Milena Niehaus (ITC) then outlined the workshop's structure, emphasizing its collaborative format and the opportunity for participants to learn from diverse perspectives.

The session began with a high-energy icebreaker, where participants paired off in facing lines for rapid-fire networking. Thought-provoking questions, ranging from business inspiration to partnership goals, sparked conversations and established common ground among investors, entrepreneurs and students.

Icebreaker round between participants at the "Investing in Tomorrow" Workshop

Julia Mensa, CEO of Nunatak Bio, writing down Challenges in Accessing Finance that are discussed in her group

Attendees then rotated between three discussion groups covering Challenges in Accessing Finance, Opportunities and Strategies for Securing Investment and Future Trends in Green Entrepreneurship. Each round, moderated by the G20 GLI and ITC teams, explored sub-topics such as risk perception in green entrepreneurship, funding tips and how future economic systems might adapt to circular business models.

In the final segment, YECOs shared key takeaways from each group. Milena Niehaus summarized cross-cutting themes and encouraged attendees to build on the connections formed.

Qoane Mothibeli, CEO of JuliGerm PTY LTD, presenting the findings of the topic Opportunities and Strategies for Securing Investment

The workshop fostered dialogue around scaling green ventures and amplified the role of the YECO Programme as a platform connecting youth-driven solutions with capital, mentorship and global ecosystems.

The second workshop, "*Lens on Tomorrow*", organized with Tomorrow in Focus, explored AI-generated storytelling as a tool for sustainability advocacy. The session promoted the film Imagine Land 2040, an AI-powered short film produced by Tomorrow in Focus with the G20 GLI and UN Volunteers. The workshop introduced attendees to emerging communication technologies with a focus on accessibility, scalability and impact.

The session opened with Gus Boettcher, director of *Imagine Land 2040*, presenting the film's vision and the goal of using cinematic narratives to drive environmental action. William White, Director of AI Research and Production at Tomorrow in Focus, followed with an in-depth overview of the creative and technical process—from concept to post-production—highlighting the AI tools and methods used to produce high-quality, cost-efficient video content for impact campaigns.

The workshop culminated in a live Q&A featuring Gus Boettcher, William White and Professor Ole Molvig, Director of the Emerging Tech Lab at Vanderbilt University's Wond'ry Center.

Lens on Tomorrow successfully demonstrated how creative technology can elevate sustainability messaging, reinforcing the G20 GLI's commitment to innovation, youth-led storytelling and inclusive advocacy in the global land restoration movement.

Gus Boettcher, director of Imagine Land 2040, William White, Director of AI Research and Production and Professor Ole Molvig, director of the Emerging Tech Lab at Vanderbilt University's Wond'ry Center, during the Q&A session of the workshop "Lens on Tomorrow"

2.6 Side Events

YECOs also participated in exclusive side events, including Investor Night, organized by START Global and Swisscom Ventures. This invitation-only event connected selected founders with investors in an informal setting, allowing candid conversations on investment strategies and funding prospects. Julia Mensa later remarked:

> *Investment is all about building relationships, that's why being part of one-on-one conversations during events like Investor Night was so valuable.*

Further networking opportunities included Founders Day Zero, where YECOs Julia Mensa and Qoane Mothibeli joined an early-stage founder workshop, and Founders Night, hosted by Cherry Ventures and Northzone, which facilitated direct interactions with prominent venture capitalists and startup leaders. Paula Padrino Vilela also participated in the START Forum, which gathers 250 leading minds from Europe's entrepreneurial ecosystem and is accessible by personal invite only.
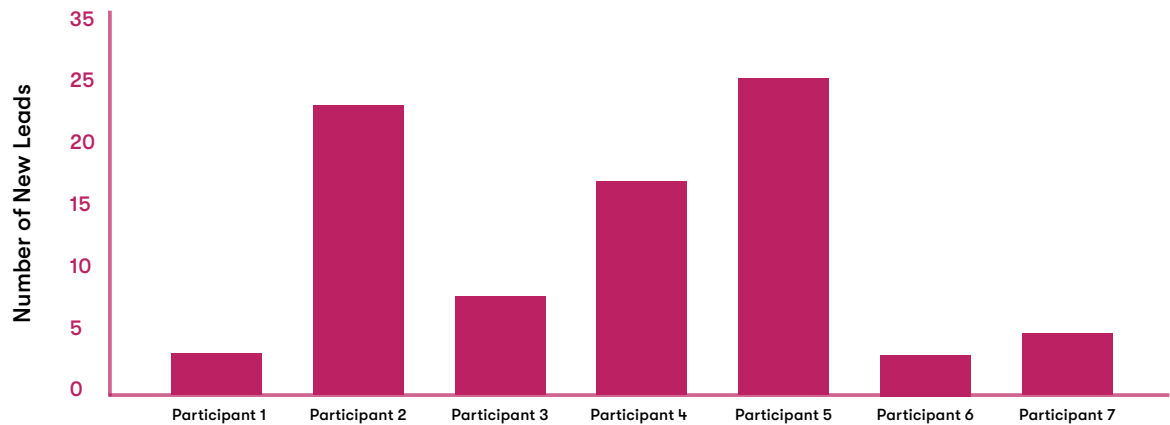

YECOs participating in the Investor night

2.7 YECO Engagement Impact Survey

To assess the YECO engagement programme's impact during the Zurich and START Summit delegation, a post-engagement survey was conducted to evaluate knowledge gained, connections built and the overall value of the trip. Seven out of eight participants completed the survey.

Lead Generation and Business Development Outcomes

A key outcome was the generation of tangible new leads. Participants reported between 3 and 25 new leads each, including potential clients, partnership opportunities and investor referrals. The average was 10–12 new leads per participant, with several reporting interest from pre-seed or Series A investors. All respondents expected tangible improvements in revenue growth, financing opportunities and access to strategic partnerships.

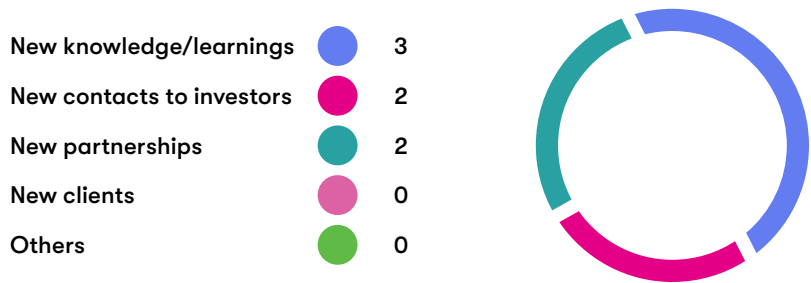**Graphic 1: Distribution of New Business Leads per Participant**

100% of the ecopreneurs responded that they expect improvements in their businesses as a result of their participation.

Areas of Highest Benefit

When asked where they benefited most, 43% of participants cited new knowledge and learning, followed by 29% citing new investor contacts and 29% new partnerships. No respondents selected "new clients," indicating that the trip primarily fostered investor and partner engagement rather than client acquisition.

New knowledge/learnings	●	3
New contacts to investors	●	2
New partnerships	●	2
New clients	●	0
Others	●	0

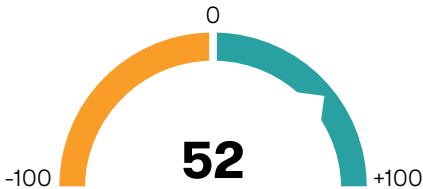Graphic 2: In which area did you benefit the most?

Qualitative Highlights

Participants emphasized the value of informal exchanges with fellow YECOs, G20 GLI representatives and institutional partners. Several highlighted the significance of having their personal stories recognized. Others said that even without immediate deals, the exposure positioned them for follow-up investment and collaboration.
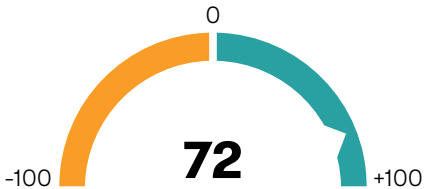
Some responses:

- *"This summit has inspired me to do much more for my startup and build our revenue streams."*

- *"I learned how to frame my USP better to investors and make my value proposition more concrete."*

- *"Getting carbon removal contracts and referrals has been a direct outcome. Investment is a nice to have, but I now have leads."*

Event Suitability and Strategic Alignment

Most participants (6 out of 7) strongly supported YECO's continued presence at START Summit, especially if more UN- or sustainability-focused elements are integrated. One participant noted that while START is tech-oriented, it remains valuable for exposure and validation.

52

-100   +100

Graphic 3: How Impactful was START Summit to you?

72

-100   +100

Graphic 4: Would you recommend returning to START Summit?

A LAND OF OPPORTUNITIES

DISCOVER THE DATA, TRACK THE PROGRESS, AND JOIN THE GLOBAL MISSION TO RESTORE OUR PLANET

3. START HACK

This year, the G20 GLI participated in the START Hack from March 19–21 in St. Gallen, Switzerland. The hackathon challenge was to analyze potential causes, patterns and anomalies influencing land restoration to foster data-driven, interdisciplinary solutions supporting global initiatives like the G20 GLI.

Hackathon Highlights

600+ Hackers joined forces

9 Partner Organizations presented real-world challenges

Each partner shared a unique case & dataset

Most Popular Case: GLI Attracted 29 Teams Involved ~76 Hackers

Participants were drawn not only by the case's technical depth but by its human impact. Hackers found the dataset and context unique and challenging, requiring an understanding beyond standard data science problems. Many saw the work to support better decision-making for Sahil and his team, who empower communities at the grassroots level. This real-world purpose drove the overwhelming interest in the GLI case, reflecting the participants' desire to apply their skills to causes that truly matter.

3.1 About the hack case

The hackathon case presented this year was, "Innovating for Sustainable Land Management and Restoration in the Sahel," addressed critical challenges in Africa's Sahel region—an area of rich ecological and cultural diversity now facing severe environmental and socio-economic pressures. Increasing conflicts among farmers, herders and pastoralists—driven by competition over dwindling natural resources like land and water—are exacerbated by climate change, prolonged droughts and desertification. These factors threaten traditional livelihoods and deepen community vulnerabilities. For more about the hack case visit the pitch video, here.

Participants used Earth observation data and advanced technology to explore sustainable land management strategies, examining land cover trends, climate dynamics, population growth and infrastructure impacts to identify key drivers of ecological change and conflict. The ultimate aim was to develop solutions that align with global restoration efforts.

Hackers diving into their challenges at StartHack!

3.2 Hackathon data and expected outcome

The hackathon provided participants with curated high-quality datasets and flexible technological tools for comprehensive analysis. Teams accessed global datasets including: MODIS Land Cover Type for tracking 20-year deforestation and urbanization patterns, CHIRPS rainfall estimates for climate impacts, administrative boundaries for regional analysis, WorldPop for population-ecology correlations and road network data for infrastructure influences. To process this data, participants used GIS platforms (QGIS, ArcGIS, Google Earth Engine), multiple programming languages (Python, JavaScript, Java, .NET) and various APIs/SDKs. The recommended hardware was a minimum of 4GB RAM (8GB ideal) and an i3 processor. This robust yet flexible framework allowed teams to focus on innovative solutions without technical constraints.

By the hackathon's end, participants were expected to deliver actionable insights and tools addressing global land cover challenges. Key outputs included interactive dashboards visualizing 20-year trends in land and forest cover changes, helping stakeholders grasp the scope of environmental shifts. As an option, the teams could produce comprehensive country profiles analyzing national and sub-national land cover evolution, providing critical context for restoration planning. Through detailed trend identification, they highlighted patterns in vegetation productivity, degradation and deforestation, pinpointing both at-risk areas and zones of recovery. Additionally, participants were guided to develop tailored land restoration recommendations, offering science-backed strategies to inform policy decisions and ecosystem rehabilitation. Leveraging data science and environmental research, the hackathon produced valuable contributions to global restoration efforts, with the potential to inform sustainable land management and drive meaningful ecological impact worldwide

Key criteria for the solution:
- Logical flow from data to tools
- Concise presentation of all key details
- Technical accuracy
- A user-friendly, structured interface

Devashree Niraula, Research and Outreach Specialist at the G20 Global Land Initiative, presented an overview of the initiative along with a brief introduction to the hack case, addressing hackers, mentors and partners.

3.3 Event Flow

The event followed a structured three-day format beginning on Tuesday, March 18, 2025, with morning setup activities including construction and delivery, followed by afternoon participant accreditation and onboarding. The official program commenced with the first partner briefing, an opening ceremony and the case presentation video and pitch. Teams then joined two deep dive sessions and selected their preferred cases before the hacking phase officially began at 20:00, along with the first partner interaction slot.

On Wednesday, March 19, hacking continued throughout the day alongside multiple partner engagement slots, a halftime shows and technical workshops supporting project development. A second partner briefing closed the day's formal agenda. On Thursday, March 20, final project submissions were due by 08:00, followed by the third partner briefing. The day continued with case pitches, winner submissions and culminated with the corporate award ceremony, announcement of the five winners and Hack Grand Finale, wrapping up the high-energy innovation event.

Devashree Niraula and Ebenezer Odoi from the G20 GLI, giving a deep dive presentation to explain the case, data and the background of GLI in detail. These breakout rooms were pivotal for the hacker to select GLI as their hack case.

3.4 Winning case

The participating hackers dedicated an intense 36-hour stretch to developing innovative solutions for their selected cases. In the final hours, teams presented a diverse range of high-impact ideas, demonstrating both technical depth and creative thinking. Solutions ranged from language accessibility tools and predictive models to chatbots, vulnerability mapping, and hotspot analysis. Many teams harnessed the power of artificial intelligence and machine learning—particularly in the context of predictive modeling—to offer data-driven insights and decision-support systems. The judging panel was thoroughly impressed by the breadth and ingenuity of the submissions. Each team brought a unique perspective and technical approach, making the selection process highly competitive. While every project showcased exceptional effort and potential for real-world application, only one winner could ultimately be chosen. The decision was incredibly difficult, underscoring the high caliber of talent and innovation demonstrated throughout the hackathon. **The hackers won a drone as a winning prize in addition to an experience to visit the G20 GLI team in an international event.**

The winning team was Cipher Circle, the team developed a tool called Addex. The team stood out as the hackathon winner due to their innovative and well-executed solution that addressed the core challenge with clarity, creativity, and impact. They demonstrated a deep understanding of the problem statement and used data effectively to build a solution that was both technically sound and practically applicable. Their user-centered approach was evident in the way they identified real pain points and tailored their tool to directly support decision-makers on the ground. The flow of the presentation was clear, structured, and compelling, showing their ability not just to code, but to communicate value—a crucial aspect in real-world applications.

What further set the team apart was their strategic thinking and vision for scalability. They didn't stop at solving the immediate issue; they also considered the long-term sustainability and potential for expansion of their solution. Their use of visual storytelling and thoughtful UX design made their prototype not only functional but engaging and intuitive. The judges were likely impressed by their strong teamwork, the high level of polish in their delivery, and their clear passion for creating impact. Overall, Addex delivered a standout performance that blended technical skill with meaningful purpose—key factors in securing their win at the hackathon.
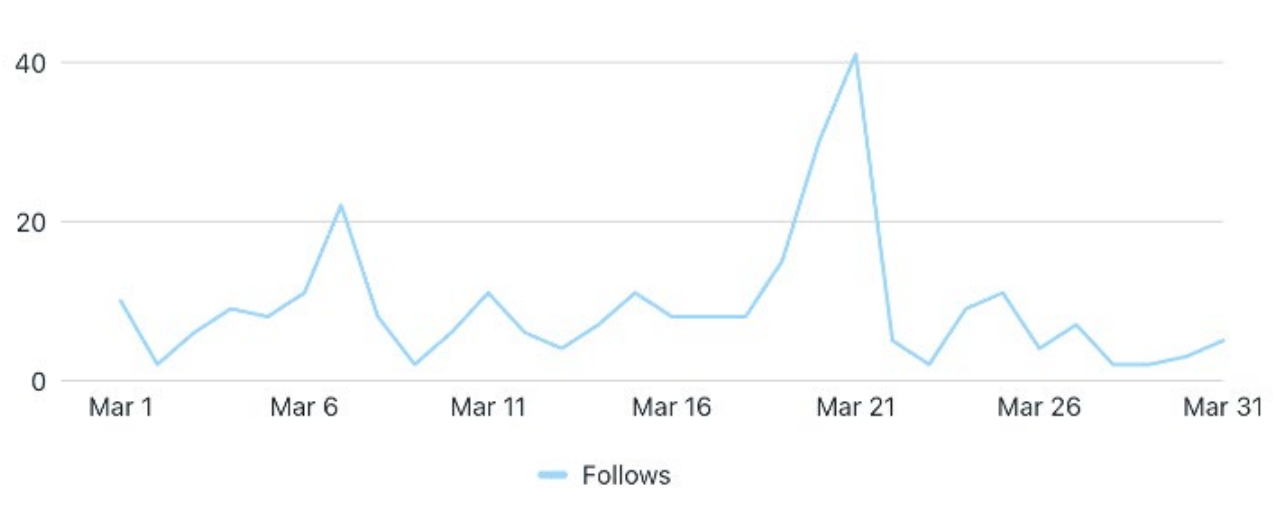

G20 GLI team announcing the winners and handing them the winning prize at the award ceremony

4. COMMUNICATION IMPACT

The G20 GLI's presence at START Summit x Hack 2025 was amplified by a robust communications campaign, resulting in a significant boost in visibility and engagement across platforms. The communications team focused on high-impact storytelling, social media coverage and multimedia content to highlight the G20 GLI's activities, the Youth Ecopreneur Programme (YECO) and the broader mission to support sustainable land restoration.

From March 17 to 21, G20 GLI gained 276 new followers across social media platforms: +95 on Instagram, +168 on LinkedIn and +13 on Facebook. This engagement reflected the quality and relevance of the event coverage, which included daily posts, stories, reels, interviews and founder highlights.

Graphic 6: graph showcasing the Instagram following increase between 17 and 21 March

On Instagram, six posts showcasing the G20 GLI booth, Paula Padrino Vilela's keynote and YECO engagements collectively garnered over 8,000 views. The top-performing content was a carousel post introducing the individual YECOs, which achieved 3,660 views and 233 engagements. On LinkedIn, a post highlighting takeaways from the pre-Summit Google Zurich meeting reached over 1,400 impressions and 550 engagements. These results underscored the effectiveness of story-driven, human-centered content in engaging professional audiences and amplifying the G20 GLI's mission.
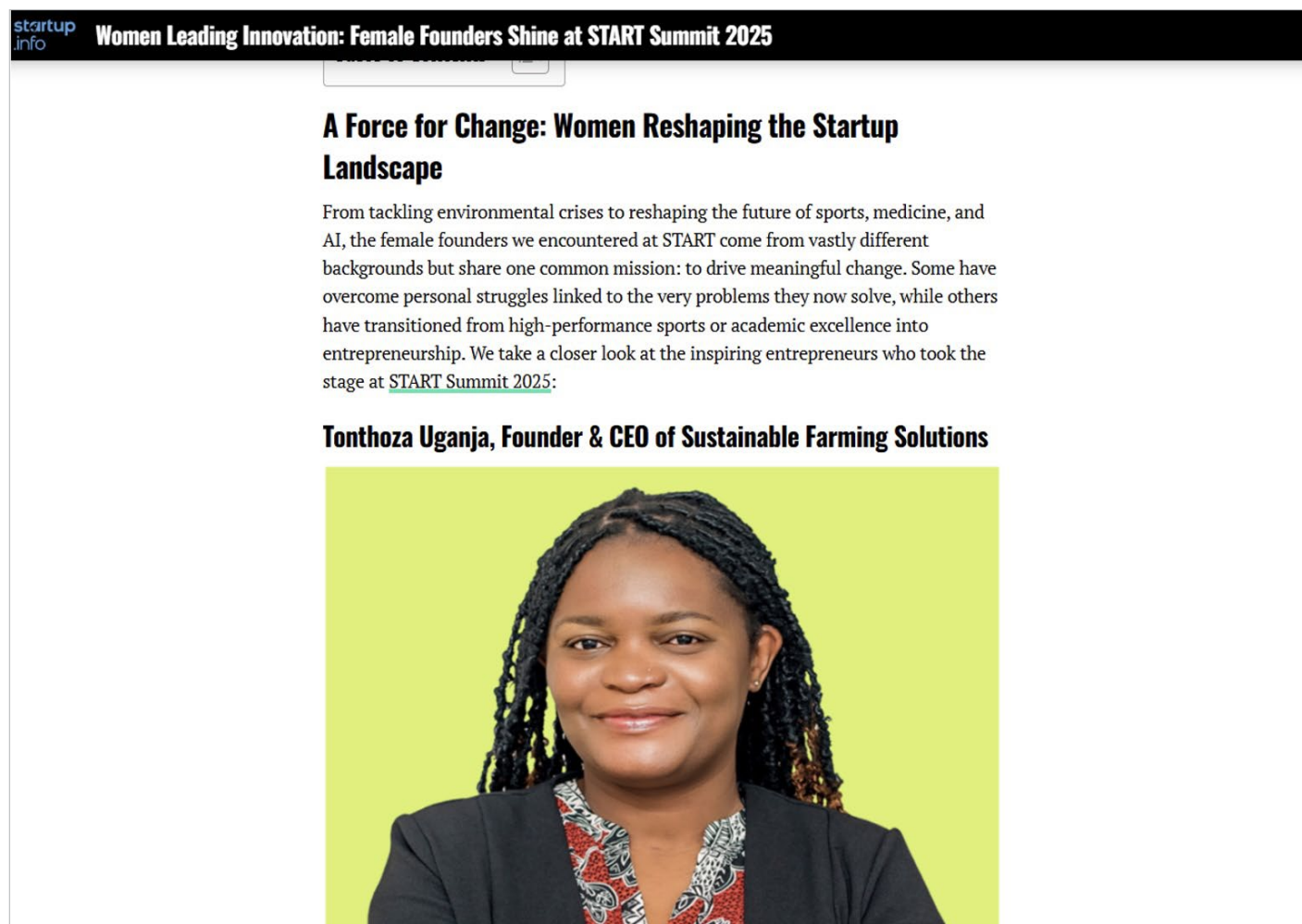

*Screenshot of the top-performing content posted on social media introducing
in a carousel the individual YECO ecopreneurs, starting with Julia Mensa*

Beyond social media, the G20 GLI communications team collaborated with ITC to produce a range of multimedia assets, including short reels ("Meet Our Ecopreneurs," "POV: You Just Walked into Europe's Largest Startup Summit") and behind-the-scenes footage from workshops and booth activities. A dedicated YouTube playlist is in development to host longer videos, such as Paula's full keynote and YECO interviews.

Additionally, following her participation at START Summit, YECO Programme member Tonthoza Uganja was featured in Startup.info's coverage of female founders at START Summit 2025.

Screenshot of Tonthoza Unganjas picture, featured in the article of startup.info

To maintain momentum, the communications team has planned several post-event deliverables, including a highlight reel, a feature blog and targeted content on the winning Hackathon project. Moving forward, the strategy will focus on leveraging START Summit materials to reach new audiences, deepen partnerships and continue promoting land restoration as a profitable, scalable solution.

5. CONCLUSION & THE WAY FORWARD

Some key learnings and big conclusions

START Summit x Hack 2025 provided a unique opportunity for the G20 GLI to mobilize youth at two critical frontiers of innovation: entrepreneurship and technology. The hackathon demonstrated how science, technology and social insight can converge to address urgent environmental challenges. By turning Earth observation data into actionable solutions, participants contributed to the global movement for sustainable land management and climate resilience. The outcomes not only support restoration efforts in the Sahel but also established a replicable framework for other regions facing similar environmental pressures. Additionally, the hackathon provided a great way for introducing these problems and engaging youth with capacity building.

The START Summit reaffirmed G20 GLI's role in advancing sustainable entrepreneurship, fostering high-impact partnerships and shaping investment landscapes for land restoration ventures. Looking ahead, the G20 GLI team will continue working with partners identified at the START Summit to advance collaborative work, support the ongoing development of YECO ventures and expand outreach to the broader startup and investment community.

Future efforts will also focus on strengthening investor relationships and leveraging content produced during the event to reinforce messaging on the economic viability of land restoration. The insights gained from this year's participation will guide future engagements, ensuring that the G20 GLI continues driving meaningful impact in the years ahead. Stay tuned! Hopefully one of the YECOs will become the next unicorn!

Conclusion

The hackathon served as a powerful demonstration of how science, technology, and social insight can converge to address urgent environmental challenges. By turning Earth observation data into actionable solutions, participants contributed to a global movement toward sustainable land management and climate resilience. The outcomes of this event not only support restoration efforts in the Sahel but also establish a replicable framework for other regions experiencing similar environmental pressures. **Additionally, the hackathon provided a great way for introducing the problems and engaging youths with capacity building.**

YECO ecopreneur Qoane Mothibeli riding the unicorn ride at START Summit

United Nations
Convention to Combat
Desertification

United for land