



Airbus Foundation annual activity report 2023

Enabling positive change worldwide

Supporting humanitarian efforts, the next generation and the environment

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2023: Strengthening strategic partnerships in a world of growing uncertainty

The Airbus Foundation provides access to Airbus' unique portfolio of high-tech products, services and know-how to help address some of the world's most pressing problems.

“ The Airbus Foundation is committed to continue providing essential support to people affected by humanitarian crises, by helping to understand and address environmental challenges, and by inspiring and supporting the next generation. We hope you enjoy reading more about the Airbus Foundation's work in 2023.

Rachel Schroeder
Managing Director, Airbus Foundation

Key figures for 2023

● Satellite footage provided (km²)

42,070

● Children reached through Youth programmes

20,275

● Tonnes of aid delivered

379

● NGO partners

28



Our three strategic pillars

The Foundation is focused on three strategic pillars of activity: Humanitarian support, Youth Development and Environmental Action. Our work centres around building capacity and sharing knowledge with NGO partners. We also engage with the wider Airbus organisation to raise awareness of the Foundation among employees.

Our goals and actions are rooted in the core principles of neutrality, impartiality and operational independence. Each strategic pillar of activity is supported by its own Advisory Council, made up of external experts in their field. Advisory Councils guide the Foundation's activity to ensure it meets the most pressing humanitarian, youth and environmental needs.



Humanitarian aid

Supporting the work of disaster relief and emergency responders through the use of Airbus products, services and people.



Youth development

Inspiring and helping young people to develop a curiosity to learn, to want to stay in school and to contribute as constructive global citizens.



Environment

Working with NGO partners to address climate change through mitigation, monitoring, adaptation and disaster prevention; contributing to the protection of biodiversity; and addressing the negative impact of humans on the environment.

Capacity strengthening and raising awareness

Providing training, knowledge sharing and capacity strengthening to all NGO partners and raising awareness of the Foundation with Airbus employees to encourage engagement and support.



2023: Strengthening strategic partnerships in a world of growing uncertainty
continued

Our global impact

In 2023, the Foundation carried out Environmental, Youth and Humanitarian work in 48 countries all over the world.



Humanitarian support



Youth development



Environmental action



Spain
Inspiring high school students
Helping inspire more than 1,500 Spanish 12-16 year olds discover STEM subjects with Foundation's Discovery Space programme.
[Read more on page 25](#)

● Jordan

Empowering refugee children
Co-designed and delivered a course to spark interest in STEM subjects among young students in Za'atari, the largest refugee camp in Jordan.
[Read more on page 19](#)



Papua New Guinea
Protecting endangered species
Used satellite imagery to help protect endangered tree-kangaroos in YUS Conservation Area.
[Read more on page 34](#)

● Brazil

Mapping forest restoration
Helped map and independently verify reforestation efforts in Sao Paulo state, Brazil.
[Read more on page 37](#)



Somalia
Alleviating flood damage
Provided 7,800 km² of satellite imagery to support the UNFAO's flooding surveillance programme in Somalia.
[Read more on page 16](#)



● Turkey and Syria

Delivering aid to earthquake victims
Transported 114 tonnes of aid to people in Turkey and Syria, following one of the strongest ever earthquakes in the region.
[Read more on page 9](#)



2023: Strengthening strategic partnerships in a world of growing uncertainty
continued

Message from the Chair of the Board

Following a year that saw geopolitical turmoil, natural disasters exacerbated by climate change and crises affecting communities across the globe, the need for more agile responses, increased resilience and holistic approaches is ever more apparent.

Airbus has always been at the forefront of driving innovative technologies that enable global connections, and these technologies have proven to be an important asset in humanitarian and environmental response. With logistical support from our partners, the Airbus Foundation is in a distinctive position to mobilise Airbus products to deliver critical aid and technology solutions where they are needed most.

In 2023, the Airbus Foundation provided over 21,441 km² of satellite imagery to support biodiversity projects and delivered 379 tonnes of humanitarian aid to communities affected by geopolitical and natural disasters. In the following pages of the Annual Report of the Airbus Foundation, I invite you to learn about how the Foundation is making an impact across its three key pillars: Environment Action, Humanitarian Response and Youth Development.

It is clear that the interconnected crises we are seeing today will require integrated relief efforts. In the face of these crises, I am proud that the Airbus Foundation is among the many organisations responding to the call to action.

Julie Kitcher

Airbus Chief Sustainability Officer and
Communications & Chair of the Airbus
Foundation board



“ The Airbus Foundation is in a distinctive position to mobilise Airbus products to deliver critical aid and technology solutions where they are needed most.

2023: Strengthening strategic partnerships in a world of growing uncertainty
continued

Q&A with Rachel Schroeder

Managing Director, Airbus Foundation

Q How are wider world events shaping the Foundation's strategic priorities?

We are in an age of “polycrisis”, as some have called it, where multiple, interconnected crises – economic, political, geopolitical, social and ecological – are happening all at once.

We see this in our own work – an increase in interconnected crises across all three of our strategic pillars of activity – Environment Action, Humanitarian Response and Youth Development. Climate change-related disasters such as earthquakes and floods as well as man-made conflict lead to the displacement of people and a greater need for humanitarian aid.

The interconnected nature of these crises underlines the need for more coordinated, integrated action across the three pillars of the Foundation, as well as in cooperation with other organisations.

Global humanitarian crises hit record levels in 2023, with nearly 300 million worldwide needing humanitarian assistance. Increasingly, many of the humanitarian aid requests the Foundation receives originate from regions that have disappeared from the headlines, as their crises have transitioned from acute to chronic. In 2023, we increased our support in such areas of protracted crises, and this will continue to be a focus area going forward.

Q What were the key highlights for the Foundation in 2023?

We've had our busiest year yet. We've significantly ramped up our humanitarian response, providing 22 relief flights and delivering 379 tonnes of aid – more than twice the amount of 2022.

In 2023, our Youth programmes reached 20,275 children as we developed new educational content and expanded the reach of our programmes. Working in this collaborative and trustful way, we can have more impact. Throughout this year's report, I'm pleased we can share our partner's words directly with you, sharing our joint contribution.

We also added resources to our Environmental initiatives as we expand our work in this vital area. Over the past year, we helped the International Union for Conservation of Nature map and verify forest restoration in the entire São Paulo state of Brazil. Together with Connected Conservation Foundation, we enabled transformational biodiversity conservation projects in Namibia, Thailand, Papua New Guinea and Kenya.

We want to make sure our programmes always address the most pressing humanitarian, youth and environmental needs around the world. To do that we need external, impartial advice.

That is why I am pleased that in 2023 we completed the creation of Advisory Councils for each of the three pillars of the Foundation's activity. Made up of external experts in their field, Advisory Councils support and guide our work, helping us make a real impact.

I am also happy that Airbus renewed its commitment to the Foundation for a further five years, meaning we can keep up momentum on the important work being done.

Q Looking back, what are you most proud of?

I'm proud of the partnership relationships we continue to develop and strengthen. We work together in a trustful way and build on successful collaboration to be able to develop new programmes that respond to pressing humanitarian, youth development and environmental needs.

Working in this collaborative and trustful way, we can have more impact. Throughout this year's report, I'm pleased we can share our partner's words directly with you, sharing our joint contribution.

The whole team at the Foundation is extremely committed – I can't say that enough. Everyone is passionate about what they do. That is hugely valuable and reflected in the unsolicited feedback we get from partners and external stakeholders.

The sheer volume of needs around the world can make it feel like anything any one organisation does is a drop in the ocean. But we are constantly reminded by partners that our support is invaluable – and that it can be literally lifesaving – as our commitment and speed of response mean they can rely on us in times of true need. In sum, our aim is to be increasingly targeted, innovative, and more effective than ever before.

“ Global humanitarian needs hit record levels in 2023, with nearly 300 million worldwide in need of humanitarian assistance.





Humanitarian support

Providing relief and vital support

Supporting disaster relief and emergency responders across the world by providing access to transport and monitoring assistance.



Summary

Humanitarian support

The Airbus Foundation works to establish itself as a respected and recognised partner in emergency response within the humanitarian relief community. The Airbus Foundation supports disaster relief and emergency responders across the world by providing access to transport and monitoring assistance to NGO partners.

The support provided includes air transport with Airbus flight test and charter aircraft, and helicopters for emergency relief flights and goodwill ferry flights; Airbus satellite imagery for assessment before, during and after major natural disasters and crises worldwide.

Key partnerships 2023

8 International Federation of Red Cross

9 Turkey and Syria

10 Malawi
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Key figures for 2023

● Satellite imagery delivered to humanitarian partners (km²)

20,629

● NGO partners

10

● Countries supported

32

● Requests for satellite imagery

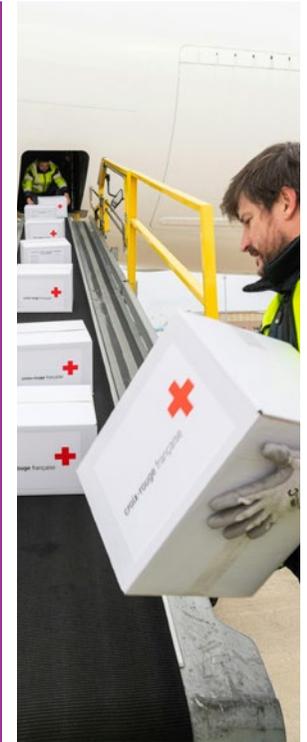
149

● Flights carried out

22

● Tonnes of aid delivered

379



Partnership deep dive



International Federation of Red Cross and Crescent Societies (IFRC)

The Foundation has been working with the IFRC since 2012 to provide in-kind support – facilitating, organising and managing air transport flights, providing satellite imagery, and other products and services such as training.

Together, the two organisations explore how the Foundation's services and expertise in innovative technology can be adapted to the Federation's needs and further expanded to the broader humanitarian community.

In 2023, the Airbus Foundation supported the IFRC with 5 relief flights and 7 helicopter missions, transporting food, medical supplies and other aid to help alleviate humanitarian crises in Turkey, Syria, Malawi, Sudan and Libya.

About the IFRC

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world's largest humanitarian network. They are an international membership organization that unites 191 Red Cross and Red Crescent Societies and supports them through a global secretariat, bringing together more than 16 million volunteers. The IFRC acts before, during and after disasters and health emergencies to meet the needs and improve the lives of vulnerable people.



“Successful partnerships are those that yield significant and tangible outcomes, driven by a genuine desire to help those in need. Airbus Foundation exemplifies this.”

Alessandro Fedele
Global Head, Private Sector Unit, IFRC

International Federation of Red Cross and Crescent Societies (IFRC)
continued



Turkey and Syria



In early February, a 7.8 earthquake struck southern and central Turkey and northern and western Syria. This earthquake was the largest in Turkey since the 1939 quake of the same magnitude, and jointly the second-strongest recorded in the history of the country, after one in 1668.

The Airbus Foundation joined forces with multiple partners, including the IFRC to transport humanitarian aid to Turkey.

On 23 February, an A321neo was loaded with 8-tonnes of relief goods provided by HUMEDICA, on its delivery flight from Hamburg to Istanbul. It included goods such as baby diapers, sleeping bags and tents to the disaster areas.

Two days later, in association with the Airbus Foundation, 20 tonnes of medical relief supplies provided by the WHO (World Health Organization), and UNFPA (United Nations Population Fund) partnering with hulo.coop – the first humanitarian cooperative connecting actors and pooling resources to optimise logistics & supply chains – arrived in Istanbul on an A350-900 delivery flight from Toulouse. These supplies were delivered directly to the earthquake zone.

In the continuing efforts to provide aid to the people of Turkey and Syria, the Airbus Foundation chartered an A330-200F flight from Kuala Lumpur to Istanbul on 27 February, carrying 52 tons of relief goods – kitchen sets, tarpaulins (large tents) and jerry cans – provided by the IFRC. One day later, in association with the French Red Cross, the Airbus Foundation transferred 28 tonnes of relief material (hygiene kits) to Istanbul from Toulouse on board an Airbus A330 Flight Test Aircraft.

Satellite imagery and Helicopter hours were also provided by the Foundation. On March 14, the Foundation and Mavi Air, with an Airbus Helicopter H130, collaborated with the IFRC and the Turkish Red Cross for assessment and the transportation of emergency teams, volunteers and small cargo to remote locations and in difficult terrain.



“ In early February, a 7.8 earthquake struck southern and central Turkey and northern and western Syria.

Key stats:

Total amount of aid the Foundation helped deliver to Turkey and Syria

114 tonnes

International Federation of Red Cross and Crescent Societies (IFRC)
continued

Malawi



Tropical Storm Freddy, which circulated for five weeks between February and March 2023 was one of the deadliest tropical cyclones on record, causing widespread damage and devastation and the loss of more than 1,000 lives in Malawi.

The Airbus Foundation, in association with the Crisis Centre of the French Ministry of Europe and Foreign Affairs (CDCS – Centre De Crise et de Soutien), chartered an A330-200, to support the Malawi Red Cross (MRCS) in the wake of the storm.

The charter flight transported 27 tonnes of relief material including blankets, kitchen kits and shelter toolkits to people in affected areas. The IFRC supported the Malawi Red Cross to meet urgent shelter, health, water, sanitation and hygiene needs to help 160,000 affected people recover in a safe and dignified manner, and help them improve their resilience to future shocks.

The items delivered with an A330-200F, consisted of kitchen sets, shelter tool kits, medical kits and tarpaulins.

The Humanitarian aid provided assisted Chad Red Cross Society (SRCS) to support the population impacted by the ongoing conflict in Sudan. The SRCS, supported by IFRC and partner national societies, has been able to import and distribute food, essential household items and much needed medical supplies to the most vulnerable families across the country.

Libya



Storm Daniel hit north-eastern Libya on 10 September, bringing strong winds and sudden heavy rainfall which led to massive flooding and devastation.

IFRC and the Airbus Foundation brought 41 tonnes of relief items for Libya, including blankets, hygiene kits, kitchen sets, tent and mask respirators.

Delivered on an A330-600F, the goods supported the population impacted by the heavy floods that caused thousands of deaths and injuries in the country.

Sudan



The ongoing conflict in Sudan has led hundreds of thousands of people – many of whom are women, children and older people – to flee the country to find safety across borders. Those arriving in neighbouring countries have experienced dire humanitarian conditions.

Many have been caught in the crossfire and struggled to access food, water, and health services for some time.

Together with IFRC and in coordination with the Crisis Centre of the French Ministry of Europe and Foreign Affairs (CDCS – Centre De Crise et de Soutien) we airlifted 50 tonnes of humanitarian relief items to Sudan.



Key stats:

Relief material supplied in Malawi

27 tonnes

Humanitarian relief items to Sudan

50 tonnes

Relief items for Libya

41 tonnes



Successful partnerships are those that yield significant and tangible outcomes, driven by a genuine desire to help those in need. Airbus Foundation exemplifies this.

For 12 years they have provided vital in-kind support, improving disaster response by sharing their knowledge, technology and know-how. In 2023, their unwavering commitment in facilitating air transport, helped the IFRC deliver vital aid, supporting populations trapped in humanitarian crises in Turkey, Syria, Malawi, Kuala Lumpur, Sudan, and Libya. Thank you for your invaluable support.

Alessandro Fedele
Global Head, Private Sector Unit, IFRC



Partnership deep dive



World Food Programme, Logistics Cluster (WFP-LC)

The Airbus Foundation and the Logistics Cluster joined forces in 2022 to support humanitarian logistics, the backbone of emergency response.

In 2023, the Foundation facilitated two humanitarian relief flights to Gaza and provided satellite imagery to support humanitarian response in Cameroon, Egypt, Israel, Libya, Malawi, Mozambique, Palestine, Syria and Turkey.

About WFP Logistics Cluster

The Logistics Cluster is a UN World Food Programme-led community of partners, whose purpose is to support global, regional and local actors in overcoming logistics constraints to the delivery of global humanitarian assistance. The Logistics Cluster provides transport, facilitates storage space, collects and shares vital information to ensure humanitarian organisations make informed decisions and coordinates hundreds of humanitarian actors to deliver aid to communities in need.



“Throughout 2023, the partnership proved invaluable, as the Airbus Foundation supplied critical satellite imagery for crises in Libya, Malawi, Mozambique, Turkey, Syria, and Palestine.

Maïlin Fauchon
Logistics Cluster Coordinator

World Food Programme, Logistics Cluster
continued



Satellite support in Chad and Cameroon

Long-term political instability, economic pressures and escalating conflict in Sudan have left almost 25 million people – more than half of the country’s population – in need. 1.7 million have fled to neighbouring countries, with Chad hosting the majority (37%) of arrivals according to the latest UN figures.

Most of the humanitarian aid delivered into Chad comes in via the Douala – Ndjamena – Abéché transport corridor which gets incredibly busy and congested. The Foundation used 30cm resolution Pléiades Neo satellite imagery to monitor traffic patterns, analyse disruption and help predict and better plan the situation at border crossings between Chad and Cameroon. It helped Kühne Foundation, one of the partner organisations of the Logistics Cluster understand when, where and why there were particular pinch points with supply chain routes between the Cameroon ports and the humanitarian operations area in the Abéché region. Ultimately it helped them plan and deliver humanitarian aid more effectively.



Gaza relief flights



According to a December 2023 update on the emergency from the UN relief coordination office (OCHA), tens of thousands of people were “in desperate need of food, water, shelter, health and protection”.

Airbus Foundation and WFP-LC joined efforts in December to transport 75 tonnes of ready-to-eat-nutritional supplements. The aid was successfully dispatched through UNHRD via Airbus Foundation charters to Al Arish (Egypt). This collective effort showcases the power of collaboration, efficiently consolidating existing needs on the ground in Gaza.



● Key stat:

Ready-to-eat-nutritional supplements

75 tonnes



Throughout 2023, the partnership proved invaluable, as the Airbus Foundation supplied critical satellite imagery for crises in Libya, Malawi, Mozambique, Turkey, Syria, and Palestine. This imagery provided information on logistics access and constraints, improving the ability of organizations to respond to crises effectively, and readily support affected communities in their recovery efforts.

In December, amidst Gaza’s acute food insecurity crisis, the Foundation promptly airlifted 75 metric tons of ready-to-eat-nutritional supplements helping approximately 45,000 displaced pregnant and nursing mothers and children under five.

Additionally, the partnership prioritized capacity-building through Airbus Beyond, equipping 48 humanitarian logisticians with vital knowledge management and project management skills which are essential for leading effective responses and ensuring sustained support for communities in crisis.

Mailin Fauchon
Logistics Cluster Coordinator



Partnership deep dive

**hulo**

In 2023 the Airbus Foundation partnered with hulo (Humanitarian Logistics) to improve how humanitarian actions are assessed and coordinated in response to disasters.

The cooperation focuses on providing access to aircraft and helicopter flights and to satellite imagery. The Airbus Foundation also provides training and technical support where needed to onboard the hulo team.

In September 2023, hulo and the Foundation worked together on two humanitarian missions – in Burkina Faso and the Central African Republic.

About hulo (Humanitarian Logistics)

hulo is the first humanitarian cooperative to optimise supply chain and logistics by connecting aid organisations with the resources they need. hulo's objective is to increase the impact of humanitarian aid by strengthening links and solidarity between different aid organisations and pooling logistics, resources, and expertise.



“ Our mission is to build an international network of humanitarian actors in order to enhance the impact of humanitarian aid.

Jean-Baptiste Lamarche
CEO, hulo

hulo
continued

Burkina Faso



The crisis in Burkina Faso is one of the fastest-growing humanitarian crises in the world, as well as being one of the world's most neglected displacement crises. An estimated 4.7 million people across the country are now relying on humanitarian assistance – over 20 per cent of the country's population. Violence and conflict have also destroyed critical infrastructure and impacted state services and institutions, including in conflict-affected areas.

Due to security issues and degradation of key road infrastructure, many areas in need of humanitarian assistance are inaccessible by road. Air transport is critical to delivering aid to those most in need.

The Foundation partnered with hulo to provide 5 helicopter flights to transport ten tonnes of aid including food, medication, medical supplies, gender-based violence kits and school supplies. This aid supported around 7,000 people in the Kompienga, Pama and Diapaga communities.



Burkina Faso
20% of the
country's
population rely
on humanitarian
assistance



Central African Republic



Due to the underlying socio-political crisis in the Central African Republic (CAR), a large portion of the population continues to face a humanitarian crisis with severe aid needs, particularly in areas outside of urban centres. Conflict and insecure circumstances have led to the internal displacement of populations within the country. Further, access to basic services, such as health and education, as well as to livelihoods, including agriculture, continue to be limited due to enduring insecurity and accessibility challenges within the landlocked country. Access to basic services, such as water and healthcare, is very poor, while food insecurity is among the most severe issues in the country.

The Airbus Foundation, hulo, and hulo's partners, the International Committee of the Red Cross (ICRC), Médecins du monde (MDM) and Solidarités International (SI), joined forces to transport medical supplies, orthopaedic material, and IT equipment to the CAR with an A330-900 Airbus flight test aircraft.

The goods supported the civilian population who continues to pay a heavy price, in a country ravaged by conflict and violence for over a decade.

hulo
continued

Q&A with Jean-Baptiste Lamarche

CEO, hulo

Q Why did you create hulo? What is its mission?

hulo was created in 2021 at the initiative of nine logistics managers across different NGOs wanting to find new and better ways to coordinate their work. We realised that there was an opportunity for humanitarian organisations to manage their logistics more effectively. We all seek to help communities affected by crises across the world, and joining together to manage our supply chains ensures that we are supplying the best quality support possible while providing cost and time savings to NGO partners.

Our mission is to build an international network of humanitarian actors in order to enhance the impact of humanitarian aid. In the field, we facilitate flights for the European Humanitarian Air Bridge and coordinate Joint Initiatives aiming to support procurement, human resources, environment, and transport projects. We also develop Digital Solutions, such as supply chain management software and applications, to help logisticians and humanitarians better manage their activities. Finally, we conduct business analytics and research to understand how resource pooling can help humanitarian actors save time, money, and resources.

Q Why did you decide to partner with the Airbus Foundation?

One of our member organisations, Action Contre La Faim, has had a fruitful and ongoing partnership with the Airbus Foundation for many years. When hulo was created, we wanted to make this partnership available for the hulo community. The support provided by Airbus Foundation is a key asset for the humanitarian sector as it faces challenges in financing costly but essential international transport operations.

In many of our countries of intervention, access to communities and people in need is a challenge. Some populations are in remote or hard-to-reach areas, making the delivery of medical supplies, nutritional supports, and other materials nearly impossible. Additionally, chartering ad hoc flights to deliver aid supplies across the world can be extremely expensive for small or emerging humanitarian organisations. Partnering with Airbus Foundation has allowed us to better address these challenges and to collaborate with a leading transport provider.

Q What has the partnership enabled you to achieve in 2023?

For remote areas, our joint helicopter operations helped us provide supplies to communities that were not accessible by road routes. One key operation was a series of helicopter flights in Burkina Faso. In October 2023, we were able to deliver medical supplies and equipment to inaccessible communities thanks to the support and coordination from the Airbus Foundation.

The Foundation's expertise was also crucial in organising flights to deliver cargo for multiple humanitarian organisations. In November 2023, Airbus Foundation and hulo coordinated a flight to Bangui, Central African Republic, to deliver humanitarian cargo for three participating humanitarian organisations. This crucial support allowed us to successfully deliver supplies in the field that would not have been otherwise provided without this partnership.

Q What next for the partnership?

We would love to expand our work together in the coming years to support humanitarian response and operational continuity where it is needed. In early 2024, we are already coordinating a new cargo flight to Bangui and a second helicopter operation in Burkina Faso, building upon our work the previous year. We expect to continue and increase operations to support our humanitarian partners and to find ways to improve these collaborations to better serve people in need.

“ We would love to expand our work together in the coming years to support humanitarian response and operational continuity where it is needed.



MSF

Satellite imagery support

Médecins Sans Frontières (MSF)

In 2023 the Foundation provided satellite imagery to Médecins Sans Frontières to alleviate humanitarian crises in 20 countries.

Access to clean water is a major challenge for the hundreds of thousands of displaced people in makeshift camps located on the outskirts of Goma, Democratic Republic of Congo. Médecins Sans Frontières (MSF) helps to provide water treatment and distribution in the area. The Foundation partnered with MSF to provide satellite imagery and create a Digital Elevation Model which helped with the installation of a water treatment plant and pipeline network to supply clean drinking water to the displacement sites.

In Chad, recurring torrential rains have led to significant damage and the displacement of people. The Foundation provided MSF with a five-metre resolution digital terrain model to enable accurate flood risk modelling and help build community resilience for the future.

In 2023 the Foundation also provided nearly 8,900 km² of satellite data for MSF to better evaluate situations of critical importance to the MSF movement, like the extent of displacement in hard-to-reach locations or the target population for a vaccination campaign. The imagery provides accurate, up to date data that helps MSF and other humanitarian organisations better respond to the needs of vulnerable populations.

The Food and Agriculture Organization of the United Nations (UNFAO)

The Foundation provided 7,800 km² of Pléiades Neo (50cm resolution) satellite imagery to support the UNFAO's flooding surveillance programme in Somalia. Real time image delivery and coordination were needed to repair river breakages in anticipation of El Niño affecting this part of the world with heavy rains and floods. After visual interpretation of the images, the technical teams produced maps with the identified locations needing intervention. This information enabled a team of engineers in the field to proceed to reinforce riverbanks, deploy sandbags, and rehabilitate canals where needed.

**Vatry France**

Loading of humanitarian goods on an Airbus A330neo test aircraft



Youth development

Inspiring the next generation

Helping young people develop a curiosity to learn
and contribute as constructive global citizens.



Summary

Youth development

The Foundation inspires and helps young people develop a curiosity to learn, to want to stay in school and to contribute as constructive global citizens.

We deploy education programmes for underserved children aged from 8 to 18 years, from around the world. We rely on partners and NGOs to provide awareness and local knowledge to help implement Airbus Foundation Discovery Space (AFDS) programmes, supported by Airbus employee volunteers when possible. Through these programmes, children have the opportunity to enhance their soft skills or STEM (Science, Technology, Engineering and Mathematics) skills. The Foundation also provides inspirational STEAM (Science, Technology, Engineering, Art and Mathematics) materials and tools that can be used by the partners or found on its AFDS platform. The AFDS platform is open-access and available in four languages.

By partnering with key stakeholders like ESA on the Moon Camp Challenge, opportunities are presented to teams of young people across the world to enter a global STEM challenge.

According to Education Cannot Wait (the UN global fund for education in emergencies), 222 million children are in active need of education due to armed conflicts, forced displacement, climate-induced disasters and protracted crises, and 78 million of them remain out of school. These children are being robbed of a proper education and a better future.

Key partnerships 2023

- 19 Phoenix Space:**
Empowering refugee children in Jordan
- 21 Q&A with Alevtina Nepomniachtchikh,**
Co-Founder and CEO, Phoenix Space
- 22 CIEDS:**
Inspiring disadvantaged children in Brazil

- 24 Cruz Roja Juventud:**
Engaging high school students in Spain
- 25 Airbus Foundation Discovery Space**
- 26 The guide to becoming yourself**
- 26 Working with Airbus volunteers**

Key figures for 2023

● Children directly reached through Foundation programmes

20,275

● Locations in 16 countries

34

● NGO partners

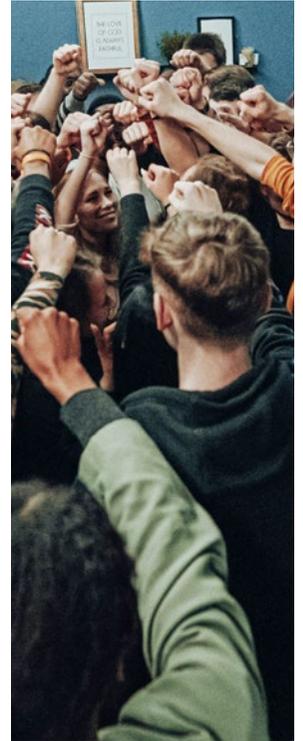
15

● Volunteer employees

323

● Moon Camp challenge: 5,300 students from 39 countries submitted more than 2000 projects

5,300 students



Partnership deep dive



Empowering refugee children in Jordan with Phoenix Space

According to UNHCR, the UN Refugee Agency, since the start of the Syrian crisis Jordan has taken in almost 650,000 Syrian refugees fleeing violence – around half of them children.

In 2023, Phoenix Space and the Airbus Foundation partnered to co-design and deliver the STEM Spark course in Za'atari, the largest refugee camp in Jordan.

The course was tailored to address the unique challenges faced by refugee children and aimed to spark interest in STEM among young students aged 9 to 13 years old. The course, implemented by local partner Alchemist Lab, provided 44 refugee children with an introduction to fundamental concepts of STEM in an engaging, accessible and culturally sensitive manner.



Jordan
Addressing
challenges
faced by
refugee
children

About Phoenix Space

Phoenix Space is an organisation that works with partners in academia, corporate and humanitarian sectors to provide displaced and underprivileged children globally with cutting edge STEM educational programmes and tools to develop their scientific literacy, improve their life chances, and empower their communities. The global humanitarian crisis has disrupted the education of millions of children, depriving them of quality learning opportunities and impeding the development of essential skills required in today's technology-driven world. In response, Phoenix Space has developed a distinctive methodology centred around the acquisition of skills and competencies predicted to be in high demand by employers worldwide over the next decade.



By leveraging Airbus Foundation's expertise and resources, we've significantly amplified the impact of our STEM Spark educational programme, particularly among disadvantaged children.

Alevtina Nepomniachtchikh
Co-Founder and CEO, Phoenix Space

Empowering refugee children in Jordan with Phoenix Space continued

The course was intended to instil a scientific mindset and teach problem-solving methodologies.

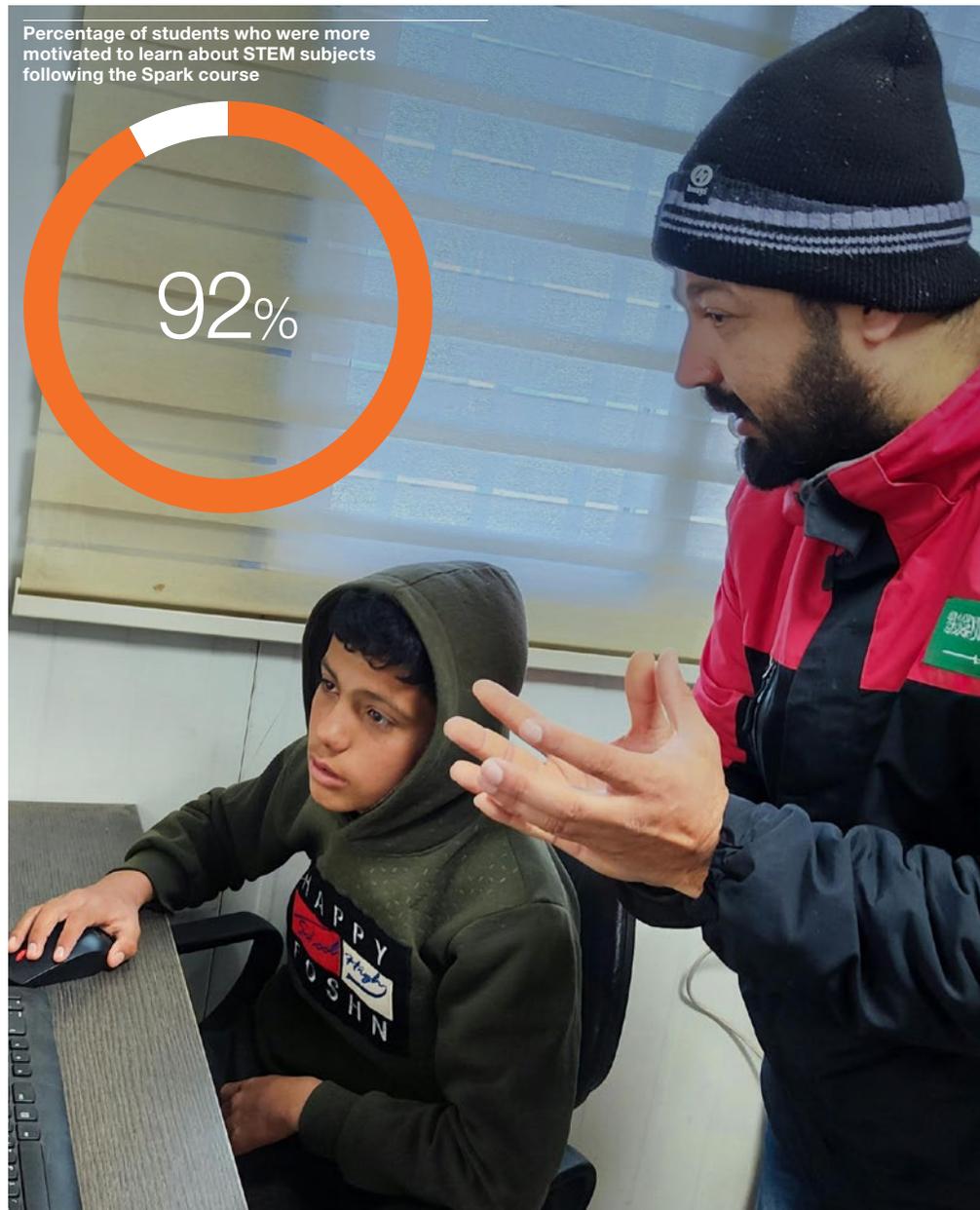
The lessons included an introduction to algebra, geometry, Newtonian mechanics, programming, space science, design and analysis of scientific experiments. The course also aimed to encourage the development of creativity, collaboration, critical thinking skills and evidence-based thinking. It incorporated written and [video material](#) created by the Airbus Foundation.

Some of the participants do not attend school at all, so it was an opportunity to access STEM education in a less formal way. Due to the migration and local context, some of the students have significant gaps in their education. This partnership helped bridge or at least reduce this gap.

The results were encouraging. Following the completion of the programme, students showed a greater interest in science and technology and an increased self-confidence.

- 92% of students were more motivated to learn about STEM subjects following the Spark course.
- 90% of them believe they can figure out anything if they try hard enough.
- 81% think that they are good at finding solutions to problems.

Following the successful pilot programme, we plan to scale the project to a bigger cohort of students (from 44 students in 2023 to 150 in 2024), and launch another programme with Phoenix Space in Turkey with 60 students aged 13-17.



Percentage of students who were more motivated to learn about STEM subjects following the Spark course

92%

PHOENIX
SPACE

What the students said

“

This is the best course I've ever attended and now my dream is to become an astronaut.

Raafat M
Age 13

I was amazed by the Airbus zero-emission airplane and how it flies with low fuel inside of it.

Deema F
Age 11

My favourite part of the course was the hands-on experiments, like when we combined different substances to create a strong composite material.

Yara F
Age 10

I will have great achievements this year in physics class thanks to the STEM Spark course.

Mohammed Tareq M
Age 13

Empowering refugee children in Jordan with Phoenix Space
continued



Q&A with Alevtina Nepomniachtchikh

Co-Founder and CEO, Phoenix Space

Q What are the unique educational challenges faced by refugee children, and how do you plan to address them?

Upon arrival in their new “home”, refugee children sadly face a myriad of obstacles: language barriers, mental and emotional trauma from displacement, significantly disrupted education – just to name a few. Shockingly, only 41% of refugee children are enrolled in secondary education, and just 6% are enrolled in university. This leaves millions of children at the risk of becoming a ‘lost generation’. Phoenix Space was established to bring quality education to the most vulnerable and marginalised communities to improve scientific and technological literacy and prepare them for the jobs of tomorrow.

Our unique programmes for children are created around the inspirational theme of space science, making learning about STEM concepts as fun and engaging as designing a space mission to Mars. We always tailor our programmes to local contexts and ensure that resources are in place to increase accessibility, making it as easy as possible for children to participate and families to support their education. By creating a flexible learning environment and tailoring our programmes to overcome the unique challenges faced by refugee children, we want to offer sustainable, long-term solutions to educational needs in humanitarian crises. Our goal is to empower the most marginalised individuals with future-proof education, improve their life chances and create a more equitable future for all.

Q Why did you partner with the Airbus Foundation?

We partnered with the Airbus Foundation because of our shared commitment to promoting STEM education and inclusivity, and their drive to support us in our mission to empower the most vulnerable and underserved communities. From the very first conversation in 2021, it was clear that the Airbus Foundation embodies our vision of a future where all young minds – regardless of background – have the opportunity to explore and excel in the fields of Science, Technology, Engineering, and Mathematics. Through this collaboration with the Airbus Foundation, we are working towards breaking down barriers for displaced children in host communities around the world, and together we are creating a more equitable, diverse and inclusive educational landscape. By combining our strengths and passion for empowering youth, we aim to pave the way for a brighter tomorrow, where every child has the chance to thrive and succeed.

Q What makes Airbus Foundation Discovery Space content well suited to your programmes?

Airbus Foundation Discovery Space content is a perfect match for our programmes due to its captivating space-themed approach, making learning engaging, inspiring and most importantly – fun! It covers various aspects of space exploration, including physics, astronomy, rocket propulsion, and engineering principles, which mirror the immersive learning style of our programmes.

Furthermore, being able to design our programmes with Airbus’s aerospace expertise means that our programmes are uniquely authentic and credible, enhancing their value for education, inspiration and future employment.

Q What has the partnership enabled you to achieve?

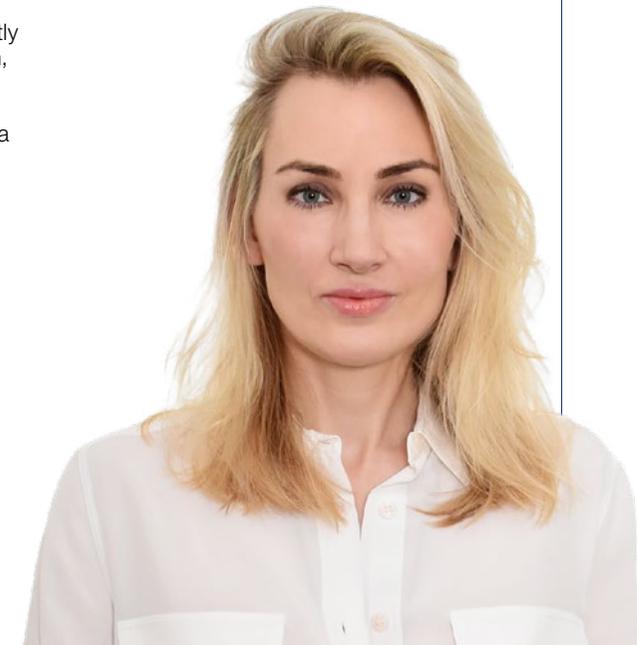
By leveraging Airbus Foundation’s expertise and resources, we’ve significantly amplified the impact of our STEM Spark educational programme, particularly among disadvantaged children. Together, we crafted a programme that integrates Airbus Foundation learning materials, which continues to inspire and empower multiple cohorts of underserved children in the Middle East and around the world.

Our first cohort consisted of 44 students aged 10-13, all of whom were Syrian refugees currently residing in resettlement communities in Amman, Jordan. Over the course of 5 days, these students delved into 12 lessons of immersive learning. Our main objective was to encourage a scientific mindset and cultivate problem-solving skills in our students. To achieve this, our curriculum introduces students to fundamental STEM topics including geometry principles, essential physics concepts, and introduction to programming. We also developed hands-on experiments that emphasise evidence-based thinking, ensuring an engaging, culturally sensitive, and accessible learning experience.

Q What is next for the partnership going forward?

Building on the joint success of our pilot programme, we plan to continue working closely with Airbus Foundation Discovery Space to develop a customised curriculum tailored to the needs and challenges of refugee students in Kilis, Turkey and Zaatari Camp, Jordan. This involves selecting specific modules and resources that address foundational concepts in STEM subjects, while considering the unique circumstances and backgrounds of the learners.

“ We want to offer sustainable, long-term solutions to educational needs in humanitarian crises.



Partnership deep dive



Inspiring disadvantaged children in Brazil

Airbus Foundation has worked with CIEDS since 2019 to expand and improve education opportunities for 300 underserved children in the Itajubá municipality of Brazil.

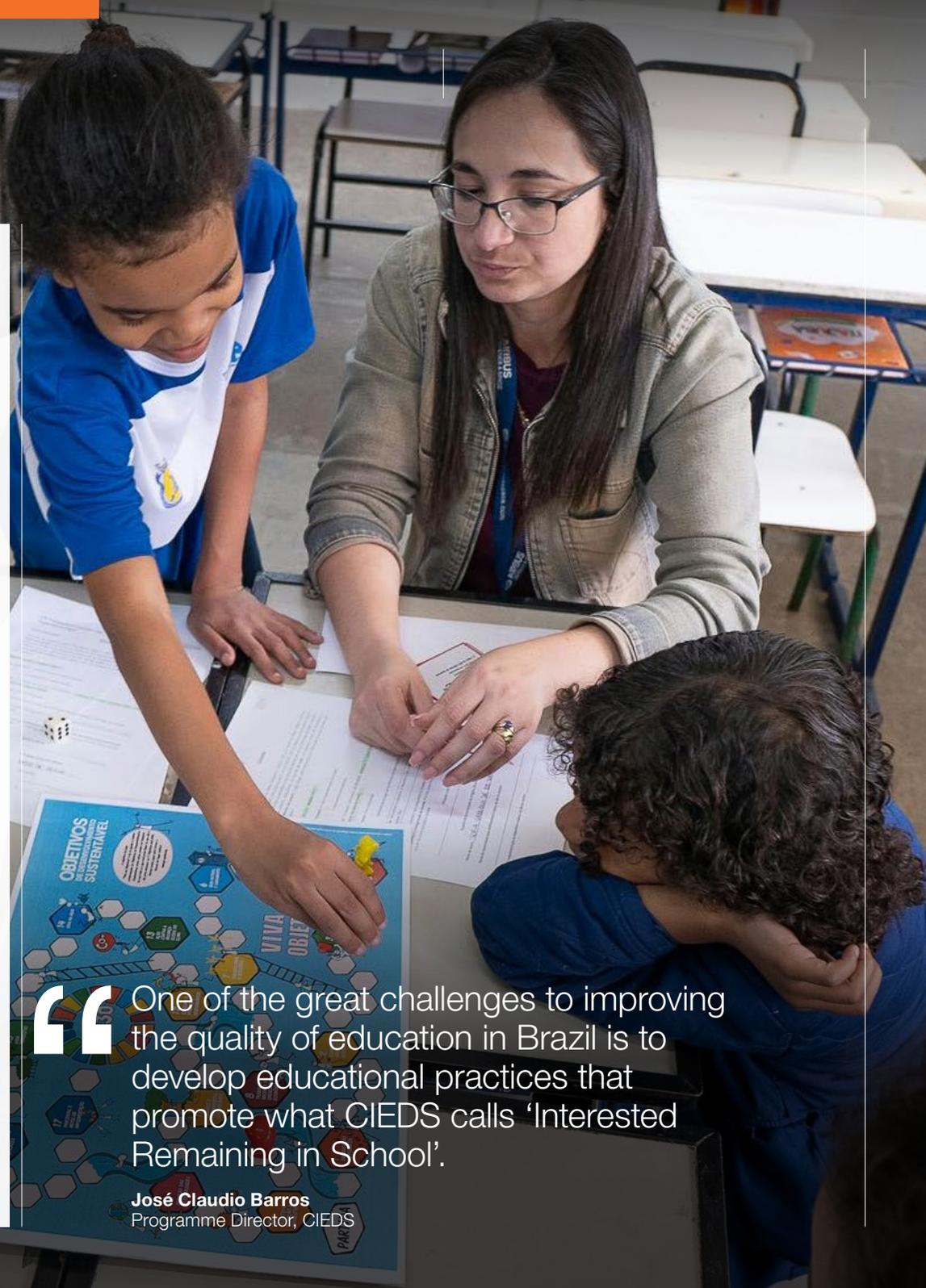
These students, aged 7 to 11, attend 3rd-5th grades at the Francisco Pereira Coutinho Municipal School and are the focus of the Discovery Space project.



**Itajubá
municipality,
Brazil**
Improving
education
opportunities

About CIEDS

The Center of Integrated Studies & Program of Sustainable Development (CIEDS) promotes social solutions that generate support via health, better education and greater confidence in the future. It aims to develop networks and integrated solutions so communities are more inclusive, educative and entrepreneurial, where the residents are more confident about the future.



One of the great challenges to improving the quality of education in Brazil is to develop educational practices that promote what CIEDS calls 'Interested Remaining in School'.

José Claudio Barros
Programme Director, CIEDS

Inspiring disadvantaged children in Brazil continued

The project's goal is to engage young learners in aerospace-themed science education using a playful approach rooted in the STEAM methodology, which integrates Science, Technology, Engineering, Art, and Mathematics.

Living in a socially vulnerable neighbourhood, the children participating in the project generally have no access to educational opportunities other than the regular education offered by the Municipal School. The project's activities aim to inspire and expand their educational horizons.

The curriculum uses content from the Airbus Foundation Discovery Space website and includes three modules: "Science of flight"; "Mission to the Moon" and "Designing the sky of the future".

The classes blend education with entertainment to deliver an engaging learning experience, a method relatively underutilised in Brazil. The workshops of the Airbus Foundation Discovery Space project foster creativity and investigative thinking among the participating children.

Learning environments have been tailored to enhance students' understanding, critical thinking, listening, negotiation, argumentation, and socio-emotional skills.

Courses are offered outside of regular school hours and participation is optional. Local institutions, teachers, and parents have been engaged since the project's inception to ensure its success.

In 2023, 116 students from 7 classes at Francisco Pereira Coutinho Municipal School participated, with gender equity maintained – 60 girls (52%) and 56 boys (48%). Seven students were neurodiverse or had a disability.

The workshops consisted of 8 sessions lasting 50 minutes each, supplemented by 5 hours of extra activities held once a week from May to June. Fourteen volunteers from Airbus Helibras, the local subsidiary of Airbus Helicopters, contributed to the programme's execution. Neurodiverse and disabled students had the support of the teaching assistant and volunteers to ensure they could fully participate in all the activities.

Feedback from parents and children has been overwhelmingly positive, with an average of 90% of the students reporting to have enjoyed the three modules and participated with enthusiasm.

“The project's activities aim to inspire and expand their educational horizons.



Average percentage of students who reported to have enjoyed the three modules and participated with enthusiasm

90%



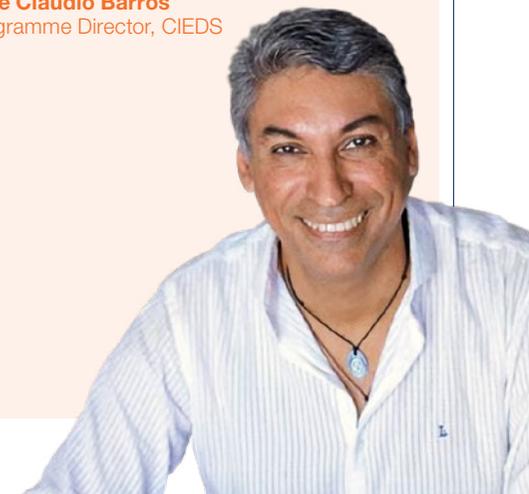
“

One of the great challenges to improving the quality of education in Brazil is to develop educational practices that promote what CIEDS calls 'Interested Remaining in School'. This means awakening in children and adolescents the pleasure of discovery and the desire to learn.

The partnership with Airbus Foundation is fully aligned with this perspective as it promoted creative interest of the students in subjects previously seen as boring; it awakened new perspectives and learning in the relationship between earth and space; expanded knowledge about different professions in the aerospace world and contributed to future life project designs.

It is also important to highlight the immeasurable positive impact of the influence of Helibras and Airbus volunteering on young people as a practice of engagement, solidarity and commitment to the common good.

José Claudio Barros
Programme Director, CIEDS



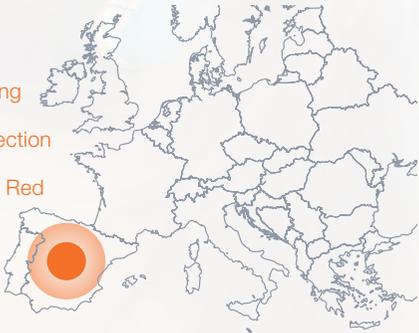
Partnership deep dive



Engaging high school students with the Spanish Red Cross

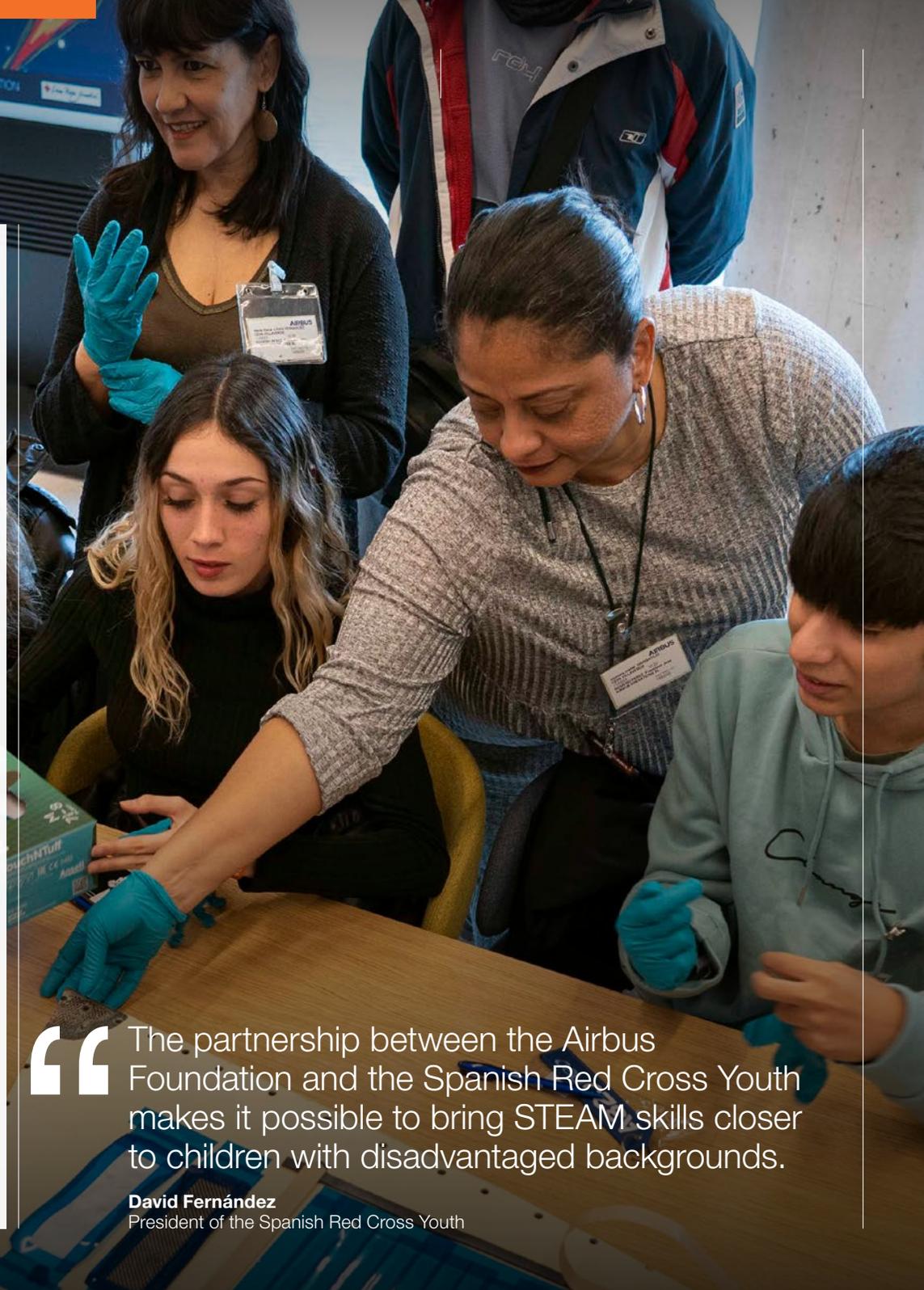
Cruz Roja Juventud, the Youth section of the Spanish Red Cross, has been a partner of the Airbus Foundation since 2017. For the last 2 years, it delivered the programme 'Airbus Foundation Discovery Space' which aims to promote STEAM skills among high school students. Along with the development of soft skills such as teamwork, creativity, critical thinking, communication skills or conflict resolution, the importance of equal opportunities and diversity is also shared with the students.

Spain
Partnering
with the
Youth section
of the
Spanish Red
Cross



About Cruz Roja Juventud

Cruz Roja Juventud is the youth section of the Spanish Red Cross, aimed at children and young people between the ages of 6 and 30. It works to widen educational opportunities to underprivileged children and empower young people to contribute as constructive global citizens.



“The partnership between the Airbus Foundation and the Spanish Red Cross Youth makes it possible to bring STEAM skills closer to children with disadvantaged backgrounds.

David Fernández
President of the Spanish Red Cross Youth

Engaging high school students in Spain continued



Airbus Foundation Discovery Space

For the Discovery Space programme, different pedagogical resources have been designed that are based on project-based learning and learning by doing, following a creative methodology that invites students to continue researching and learning from the contents worked in each workshop.

Through different activities, booklets and audiovisual resources, different themes have been worked on such as the role of women in STEAM disciplines, hydrogen, flight mechanics, environmental impact, vocations, the importance of mathematics. In 2023, new content has been developed on the topic of "Sustainability". This content is delivered in class through specific workshops conducted by Airbus volunteers, from all the Airbus sites in Spain.

Students can also ask the volunteers about their professional and academic career, as well as their experiences and knowledge of the different skills needed for the world of work.

In addition to the workshops, all the resources designed for the project are hosted by the Spanish Red Cross on an open-access website, to make it easier for schools to have access to the project materials throughout the academic year and to better plan the workshops to be held with students.

84 volunteers from Airbus factories of Getafe, Illescas, Albacete, San Pablo, Tablada and Cádiz participated as part of the workshop teams.

All the materials are also available on the [Airbus Foundation Discovery Space website](#).

In 2023, there were also four visits to the Airbus factory in Getafe with the participation of 72 young people from Madrid. Each visit lasted an average of five hours, during which different STEAM experiments could be carried out, and a tour of the factory and various inspiring talks with Airbus employees took place.

A total of six educational centres are participating in the programme. Thanks to their involvement, more than 1,500 students from 12 to 16 years of age were able to enjoy this educational opportunity.

The Spanish Red Cross Youth also carried out a mass dissemination to schools in all the provinces of Spain so that they could learn about and register for this programme. Achieving an enrolment of 54 high schools and an estimated participation of more than 5,000 students.



The partnership between the Airbus Foundation and the Spanish Red Cross Youth makes it possible to bring STEAM skills closer to children with disadvantaged backgrounds. Through the activities carried out by Airbus volunteers, they discover the applications that these disciplines have in our day-to-day lives.

In addition, through this programme, we have also managed to reduce the digital divide caused by social constraints and promote the visibility of the role of women in the scientific, technological and aerospace sectors.

David Fernández
President of the Spanish Red Cross Youth



Key stats:

Students reached
aged 12 to 16 in 2023

1,500

Airbus
volunteers

84

High schools and 5,000 children registered
online to use the materials in their classes

54

Youth programmes

The guide to becoming yourself

Mental health issues following the Covid pandemic, the growing presence of disinformation, new questions raised by the rapid development of AI are some of the many challenges facing teenagers today. Given the complexity of these challenges, children cannot be expected to handle them alone.

Educators need new resources, approaches and partnerships to help young people surmount these challenges. The Airbus Foundation teamed up once again with Dee Laval, their pedagogical expert, to publish a self-development book for teenagers called "The guide to becoming yourself".

The guide is designed to help young people explore their strengths and weaknesses, develop their self-awareness and learn how to thrive in a changing world. It covers topics such as:

- Self-care: How to take care of your physical and mental health
- Empathy: How to understand and connect with others
- Cognitive biases: How to spot and overcome common thinking errors
- Online safety: How to stay safe online and spot disinformation
- Civic engagement: How to form your own unique and powerful voice

Those are just a few of the topics covered. Each chapter contains different activities to put the ideas into practice, alone or with friends and family.

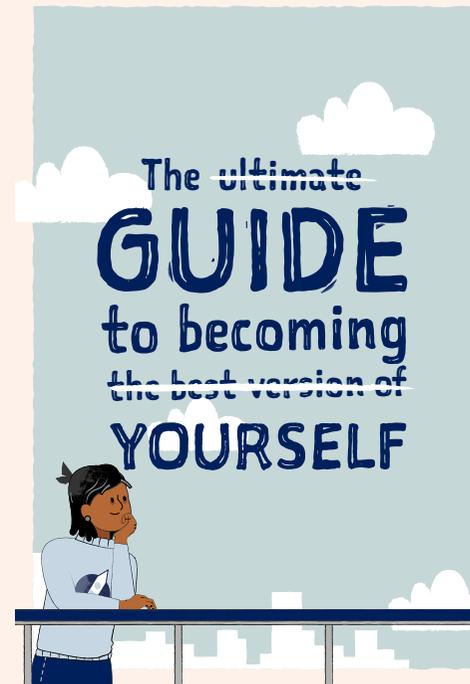
The youth programmes supported by the Foundation aim to inspire young people and give them confidence in their future. The booklet is readily available to participants of Foundation-supported programmes around the world.

The guide is also freely [available online](#) in English, French, German and Spanish and was downloaded 2,200 times from July 2023 when it was published to the end of the year.

The Foundation is in discussion with several science centres, museums and educational organisations who facilitate workshops with teenagers and can help the booklet reach even more young people.

In 2024, the Foundation plans to release additional new content to accompany the booklet – a new series of videos and activity sheets to help young people explore some of the themes in more depth.

“ The youth programmes supported by the Foundation aim to inspire young people and give them confidence in their future.



Working with Airbus volunteers

The Foundation's 2023 Youth Development work wouldn't have been possible without the hundreds of volunteer Airbus employees (323 in 2023 to be exact, versus 259 in 2022).

Wherever possible, we rely on Airbus volunteers to support NGO partners with implementing the local programmes, and running the workshops – sharing with the children their experience, inspiring them and giving them ambition for their future.

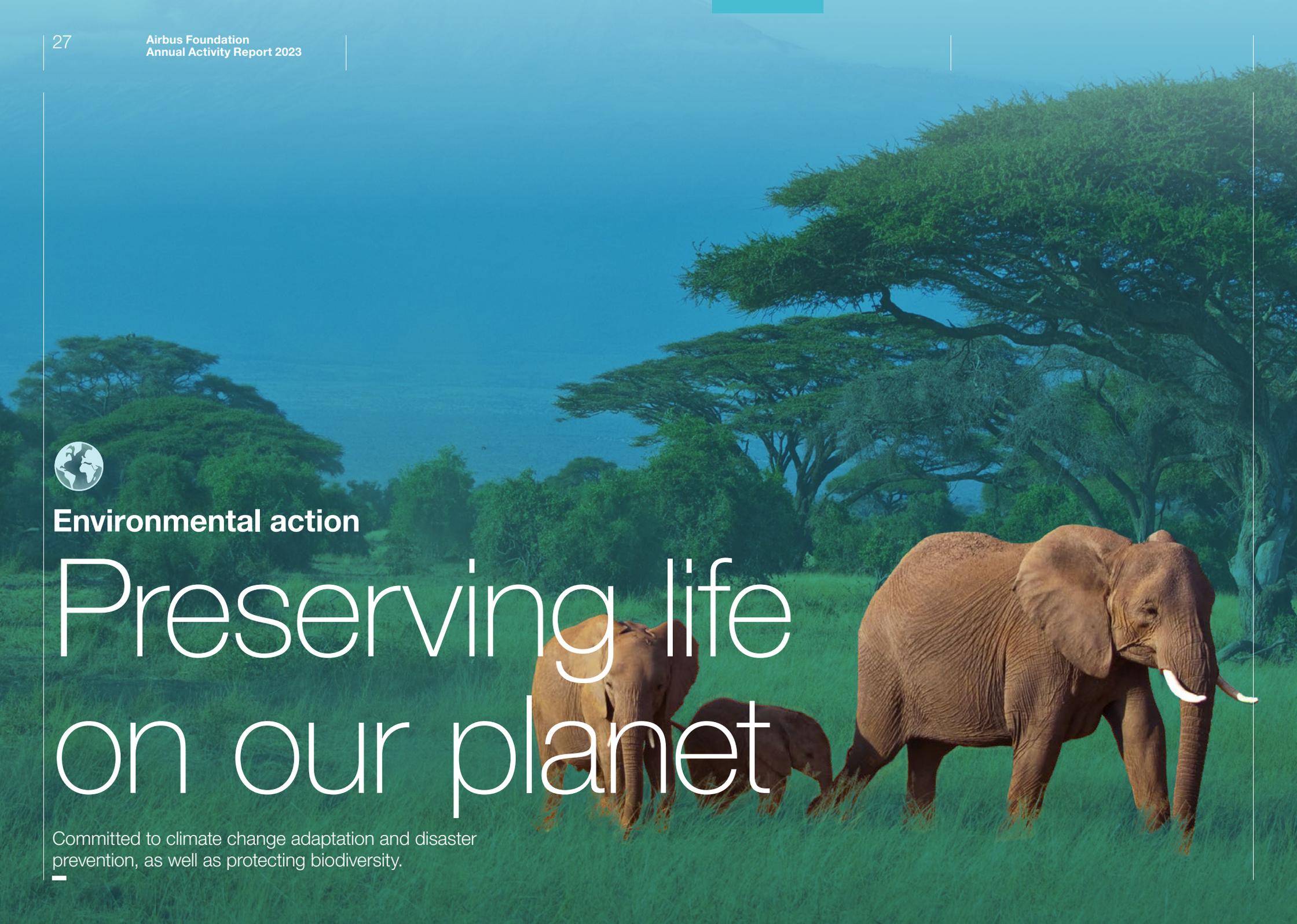
Our Youth Development partners:



Environmental action

Preserving life on our planet

Committed to climate change adaptation and disaster prevention, as well as protecting biodiversity.



Summary

Environmental action

The Airbus Foundation works with NGO partners to support climate change mitigation, monitoring, adaptation and disaster prevention; to contribute to the preservation of biodiversity; and to address the negative impact of humans on the environment.

We partner with Connected Conservation Foundation and the International Union for Conservation of Nature by providing satellite imagery that helps protect endangered species and their habitats across protected areas, while also supporting the mapping of forest restoration progress.

Through its environment partnerships, the Foundation strives to help partners develop innovative solutions to safeguard the environment. Current products and services provided to organisations include Airbus

satellite imagery, to help map and monitor ecosystems, as well as technical data and project management services. Additional capabilities that could potentially fit project needs are under assessment.

The Foundation has also recently started working with Association Océan Polaire on the Polar POD, a maritime expedition that will collect environmental and climate data in the Southern Ocean to research and better understand global environmental and climate dynamics.

Key partnerships 2023

29 Connected Conservation Foundation: Protecting biodiversity from space

30 Q&A with Sophie Maxwell,
Executive Director, Connected
Conservation Foundation

31 Satellites for Biodiversity Award
The Elephant-Human Relations Aid
(Namibia)
Asian Institute of Technology (Thailand)
The Tree Kangaroo Conservation Program
(Papua New Guinea)

37 International Union for Conservation of Nature: Mapping forest restoration in Brazil

38 Polar Pod:
Supporting the Polar POD expedition

Key figures for 2023

● Working with 4 NGO
partners in

● Satellite imagery provided
to partners

6 countries 21,441 km²

● Volume of satellite imagery provided to Connected
Conservation Foundation rose threefold compared to 2022

Threefold

● Mapped to monitor forest restoration progress –
equivalent to the entire Sao Paulo state of Brazil

248,000 km²



Partnership deep dive



Protecting biodiversity from space

More animal and plant species are currently facing extinction than at any time in human history. Around one million species are thought to be currently under threat.

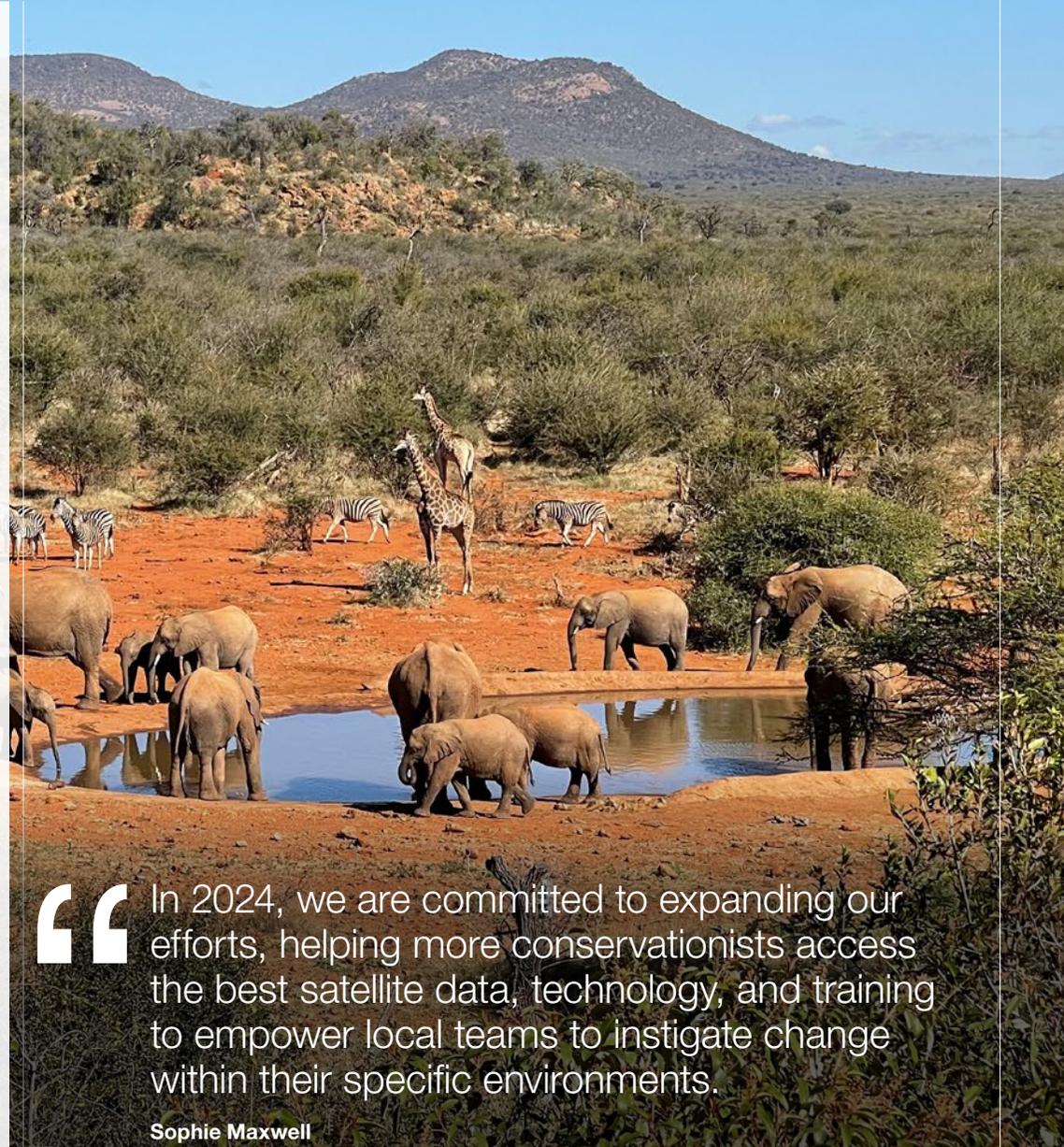
To address this challenge, in 2021, the Airbus Foundation joined forces with the Connected Conservation Foundation (CCF) to protect wildlife and preserve ecosystems with the help of Airbus Defence and Space satellite imagery.

Executive Director of the Connected Conservation Foundation, Sophie Maxwell, gives an update on CCF's partnership with the Airbus Foundation.

About Connected Conservation Foundation

Connected Conservation Foundation is a nonprofit organisation that works with local conservation teams and communities to understand their needs and help them harness technology to enhance conservation efforts. Uniting private technologies companies and link them with urgent needs on the ground to donate as much of this equipment, capabilities, data and services for profound and lasting impact.

Through technology, they aim to assist protection and restoration of 20 million hectares by 2030, conserve 50+ threatened species and empower community-led conservation and education.



“ In 2024, we are committed to expanding our efforts, helping more conservationists access the best satellite data, technology, and training to empower local teams to instigate change within their specific environments.

Sophie Maxwell

Executive Director, Connected Conservation Foundation

Protecting biodiversity from space
continued

Q&A with Sophie Maxwell

Executive Director, Connected Conservation Foundation

Q Sophie, tell us how the partnership is going?

In the past two years, our partnership has made significant strides in protecting wildlife and natural ecosystems. Satellite data, alongside on-the-ground sensors and digital infrastructure has emerged as a vital tool for turbo-charging the monitoring and restoration of protected areas.

Our partnership has pursued innovative projects that use new 30cm resolution data from Airbus Pléiades Neo satellites to solve a variety of conservation challenges. These include the monitoring of wildlife and natural resources ranging from vegetation, harmful human activities to fostering coexistence between wildlife and

local people. The use of this data shows how conservation efforts can be scaled up through cutting-edge technology and advanced analysis techniques.

Q How has CCF benefitted from Airbus Foundation satellite imagery?

In the last two years, Airbus Foundation has donated 9,610 km² of high-resolution imagery. This includes 7,000 km² for our joint Satellite for Biodiversity Award and 2,000 km² of Pléiades Neo imagery of the Lorian Swamp Ecosystem to the Northern Rangelands Trust (NRT) in Kenya.

NRT has used this valuable imagery for habitat mapping, wildlife corridor planning and natural resource management. This data now serves as a baseline for long-term conservation efforts and plays a crucial role in raising awareness locally of the threats, pressures and challenges at hand.

High-resolution data also serves as evidence to build a case for the designation of a new protected area. Currently, only 15% of our planet is classed as protected, but the UN has a goal to increase this to 30% by 2030. Pléiades Neo imagery is helping NRT make the case for the Lorian Swamp Ecosystem in achieving this designation.

“ We are witnessing a remarkable expansion in the utilisation of satellite imagery within conservation. The integration of artificial intelligence has rapidly evolved into a standard analytical tool. By adopting a full ecosystem approach and empowering local partners through satellite data, training and technical support, we can achieve impactful conservation at a wide scale.

Q What have been the highlights of the collaboration between CCF and the Foundation in 2023?

The challenges confronting our planet and the intricate network of life it supports are immense and cannot be addressed by any single organisation. In 2023, we continued to work together to stop rhino poaching and contribute to rewilding initiatives in Madikwe Game Reserve, South Africa.

Madikwe is now equipped with high-resolution satellite imagery from Airbus Foundation as well as on the ground cameras and network sensors. Since the start of the project in 2021, these tools have helped arrest 16 suspected rhino poachers, compared to no arrests in 2020. The project is saving critically endangered black rhinos from harm, in both this reserve and beyond.

As well as enhancing the security of wildlife and local communities, the satellite imagery also contributes to the reserve's overall rewilding and restoration plans for 750 km² of wilderness.

Another 2023 highlight is the implementation of the winning projects from the first round of our Satellites for Biodiversity Award. We were blown away by the number and quality of applications from around the globe, with seven transformational partnerships receiving imagery, funding, training and technical support.

Together, these projects are helping conserve Asian elephants, Namibia's last population of desert elephants, giant pangolins, Matschie tree kangaroos, eastern long-beaked echidnas and nearly 5,000 fauna and flora species in Papua New Guinea's YUS Conservation Area.

Q What's on the cards for the Foundation and CCF partnership in the coming years?

In 2024, we are committed to expanding our efforts, helping more conservationists access the best satellite data, technology, and training to empower local teams to instigate change within their specific environments.

We are excited to scale our collaboration with the second round of the Satellites for Biodiversity Award, doubling the number of fantastic applications and global reach of conservation projects.

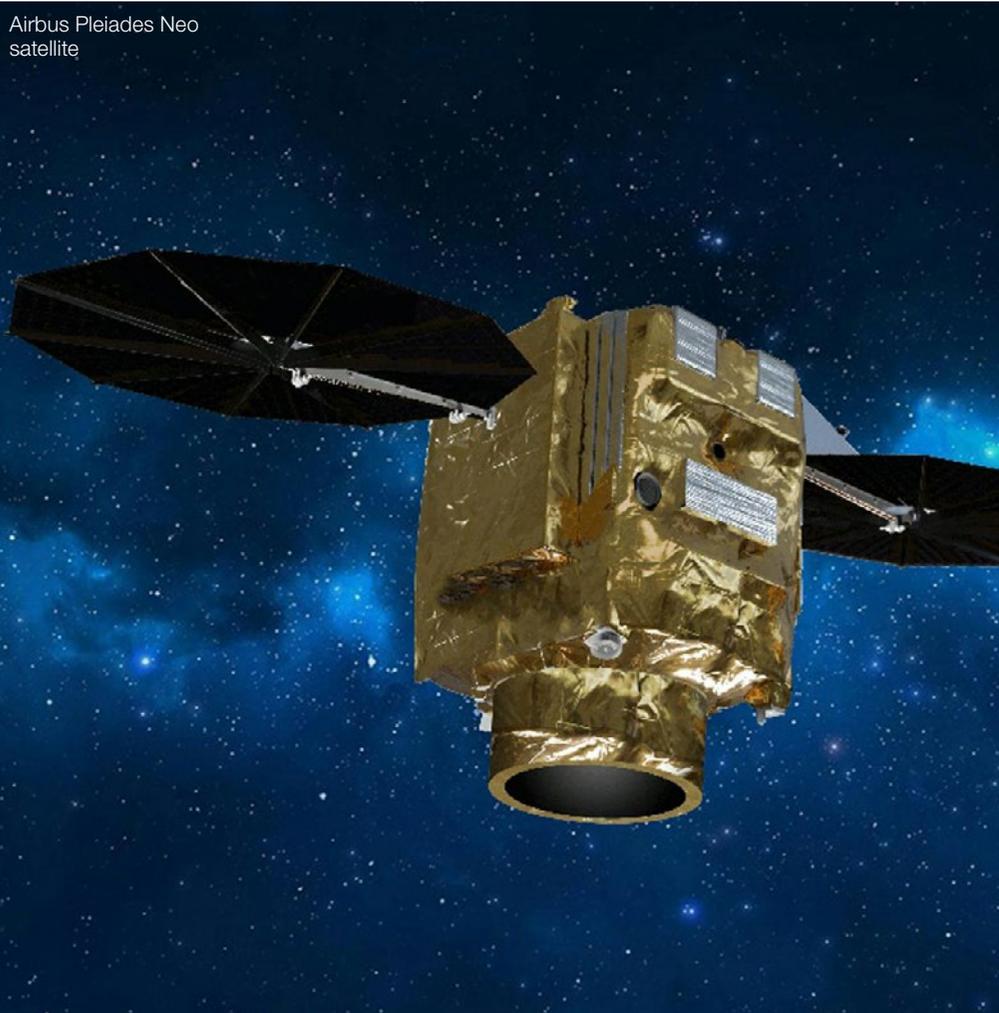
In parallel with the award, Airbus Foundation is continuing to support CCF's work to integrate satellite data with on-the-ground technology solutions to holistically monitor wildlife and tackle escalating human-wildlife and tribal conflicts over depleting natural resources. This challenge, driven by climate change, is a priority across many protected areas. Alongside this, further innovative projects will use Pleiades Neo 30cm imagery for species and ecosystem protection and restoration.

We are excited for what's to come!



Protecting biodiversity from space continued

Airbus Pleiades Neo
satellite



Key stats:

Satellite imagery provided

7,000 km²

Animal conservation organisations supported

7



Satellites for Biodiversity Award

In 2023, the Connected Conservation Foundation and Airbus Foundation unveiled the winners of the inaugural Satellites for Biodiversity Award. The Award aims to highlight where high-resolution satellite data can improve species and nature conservation, support communities and underpin effective protected area management.

In a further commitment to conservation, the Foundation and CCF established the Masai Mara Satellite Sandbox. This initiative will provide 30 cm resolution Pléiades Neo Mosaic satellite imagery of the entire Masai Mara ecosystem, benefiting partners and other conservation organisations who operate in Kenya and face similar conservation challenges. The project will help safeguard endangered species and ecosystems in one of the world's most famous wildlife regions.

The Foundation and CCF were overwhelmed by the number and quality of applications. Seven transformative conservation projects are now receiving access to data from Airbus' latest generation high-resolution satellites. In addition, three finalists are also receiving funding for satellite data to help protect native plants, animals and their habitats, and improve human and wildlife coexistence.

With winners across Papua New Guinea, Thailand, Kenya and Namibia, this award is aiding local communities to use satellite data to ensure the long-term preservation of species and ecosystems across the globe.



“ We've used Sentinel 2 for imagery-based projects in the past, which has a much broader resolution, which has not really been suitable for detecting small objects. This imagery from Airbus Foundation is as great as it gets in terms of commercial imagery and will really help us capture the detail we need to mitigate threats to the critically endangered pangolin.

Ruari Bradburn

Senior Intelligence Capability Officer at Langland Conservation

Protecting biodiversity from space
continued

It can be extremely scary to be a community member being visited by an elephant, mostly at night. Elephants looking for water or food stored in houses. There is a huge amount of damage to properties. It costs a lot of money to live with elephants. Communities have asked us, is there not a way you can warn us if an elephant is approaching? And teach us more about their movements?

We want to find sustainable solutions from looking from above. This satellite imagery is absolutely invaluable to our understanding and data collection phase. We want to become the main human-elephant conflict management hub for elephants outside of national parks to be able to collaborate with all stakeholders to save elephants and people's lives.

Christin Winter

Conservation Program Manager,
Elephant-Human Relations Aid



2023 Finalist: The Elephant-Human Relations Aid (Namibia)

In the harsh and arid landscapes of northwest Namibia, there is ongoing human-elephant conflict, leading to devastating financial losses for farmers as well as tragically being the main cause of the declining elephant population. Only 21 desert elephants remain today. The EHRA is using the new satellite imagery and funding alongside direct surveys to map the movements and motivations of Namibia's desert elephants to find long-term solutions for human-elephant coexistence.

Progress in 2023

A comprehensive survey of a vast expanse measuring 1,991km² in remote wilderness has been successfully conducted, using Airbus Pleiades satellite imagery with 50cm resolution. This has resulted in the creation of an expansive image mosaic, seamlessly covering approximately 40 commercial farms.

EHRA has actively engaged with 40 rural communities, enabling residents to express their concerns and contribute innovative ideas. Currently, the team is layering the imagery, pinpointing crucial elements like road infrastructure, fences, water points and vegetation. This detailed analysis aims to unravel the intricacies of elephant movement, identifying motivating factors and mapping out corridors. Through this process, EHRA strives to enhance understanding and develop effective strategies for trouble-free coexistence.



● **Key stats:**

Satellite imagery provided

1,991 km²

Number of rural communities engaged with

40

Number of desert elephants remaining today

21

Protecting biodiversity from space continued

2023 Finalist: Asian Institute of Technology (Thailand)

The wild elephant population in Thailand's Sai Yok National Park has dwindled to 3,500 due to illegal poaching, habitat loss and human pressure. The transformation and fragmentation of once-continuous elephant habitats are causing significant disruptions to their migration routes and access to vital resources. This compelling shift is driving elephants into adjacent human settlements and farmlands, escalating the Human-Elephant Conflict – a critical challenge for elephant conservation in Thailand.

The Asian Institute of Technology led an innovative conservation project using AI and high-resolution satellite imagery, to help stop habitat loss. Using Airbus Pléiades 50cm satellite data and machine-learning algorithms, the project aimed to map changes in elephant habitat from 2012 to 2022. The primary goal was to assess habitat quality, identify risks and predict future changes. The mapping outputs are being shared with conservation and government organisations to aid in conservation planning and provide insights for policymakers, promoting elephant conservation through measures like invasive species removal, human elephant conflict (HEC) mitigation and responsible tourism in Sai Yok National Park.



Progress in 2023

These research results show land use changes from 2013-2022. Findings indicate a significant decline in habitat quality, attributed to increased cultivated land and decreased forest cover. The eastern boundary is identified as a potential risk zone due to expanding tourism, highlighting the urgency for conservation.

Expanding agriculture and deforestation activities, while benefiting local livelihoods, pose long-term threats to elephant habitats. The study recommends government support to uplift communities, reducing dependence on forest resources leading to habitat loss and mitigating threats to elephants. This assessment lays the foundation for addressing human-elephant conflict and anthropogenic pressures, fostering harmonious coexistence with positive impacts on both wildlife and communities.

The team has also investigated the application of artificial intelligence (AI) and deep learning (DL) with high-resolution Pléiades satellite data for land feature extraction. The Asian Institute of Technology is now working to submit them to journals and book chapters and has been invited to give a guest lecture at Jadavpur University, India, showcasing how it can serve as a model for best practices in conservation technology.



We extend our heartfelt gratitude to the Connected Conservation Foundation and the Airbus Foundation for their invaluable contributions and unwavering support in advancing research endeavours. Together, these organisations have played a pivotal role in our journey to unlock the potential of Pléiades data, propelling us closer to our goals of enhancing environmental conservation, expanding scientific exploration, and contributing to a brighter, more sustainable future.

Dr. Anirban Mukhopadhyay
Senior Researcher at the Asian Institute
of Technology



Protecting biodiversity from space
continued**2023 Finalist:****The Tree Kangaroo Conservation Program (Papua New Guinea)****Finalist 3: The Tree Kangaroo Conservation Program (TKCP)**

The lush and rugged landscape of Papua New Guinea is home to many endangered species, such as the Matschie's tree-kangaroo and the Eastern long-beaked echidna. With their populations dwindling due to habitat encroachment and illegal activities, these rare creatures desperately need help. Monitoring of this expansive habitat has been an uphill battle. Rangers can only patrol certain areas on foot and previously used existing satellite imagery is too low-resolution to meet the requirements of the community programmes.

The Tree Kangaroo Conservation Program (TKCP) is helping local communities use high resolution satellite data from the Airbus Foundation to protect vital habitats for nearly 5,000 fauna and flora species in Papua New Guinea's YUS Conservation Area, including the Matschie's tree-kangaroo and Eastern long-beaked echidna.

Progress in 2023

After winning the award in 2023, TKCP conducted training for six newly recruited Land Use Plan (LUP) monitors, each representing one of the six zones in the YUS Landscape. These monitors are collecting on-ground data using smartphones and SMART software, offering crucial insights into land use patterns and trends in the landscape. This is complementing and verifying the insights gleaned from the satellite imagery data.

Next, the team will focus on identifying human use and pressure hotspots in the landscape, including illegal timber harvesting and forest clearance. Conservation Officers and Ranger teams will be directed to these areas for on-ground assessments. The team will also identify natural hazard impacts, collaborating with communities on mitigation measures like reforestation.

Plans are also underway to leverage Airbus imagery to utilise drones for comprehensive 3D mapping of vegetation structure at the primary research site for tree kangaroos. The integration of Airbus imagery will improve the outcomes of drone mapping, offering an enriched perspective. This initiative is crucial to better understand how tree kangaroos navigate their habitat, playing a pivotal role in shaping ongoing and future land use planning and management strategies.

“

Now that we have access to high resolution satellite imagery, we are better able to understand the health of the environment and wildlife, and importantly the habitat of our flagship species – the Matschie's tree kangaroo and the long beaked echidna, as well as other unique endemic species. I would like to thank the Airbus Foundation and CCF, for believing in us and supporting us in implementing this conservation project in Papua New Guinea.

Danny Nane

Community Conservation coordinator,
Tree Kangaroo Conservation Program



“

The Airbus imagery through Connected Conservation Foundation is allowing Danny and the local YUS team to integrate high resolution imagery and local knowledge to best manage the YUS Conservation Area. I look forward to seeing all that can be accomplished to help protect the amazing biodiversity of this area and support sustainable land-use planning.

Lisa Dabek

Senior Director of the Papua New Guinea Tree Kangaroo Conservation Program



Protecting biodiversity from space
continued



Rhino conservation in Madikwe, South Africa

Sheltering both white and black rhinos, Madikwe Game Reserve in South Africa is a prime target for ruthless poachers. In the first six months of 2023 alone, 231 rhinos were lost to poaching in South Africa. With only 6,487 black rhinos left in all of Africa, the urgency to protect Madikwe's rhinos cannot be overstated.

Over the years, CCF has worked with the Madikwe Futures Company (MFC), a local conservation non-profit, to deploy a range of technologies such as long-range thermal cameras, camera traps, fence alarms, drones, and tracking devices to combat poaching. These can scan the environment 24/7 and raise alerts to security teams on incursions, threats and suspicious activities.

Thanks to the support of the Airbus Foundation, CCF has been able to complement ground sensors with 30cm Pléiades Neo satellite imagery in Madikwe, providing a holistic, 360-degree anti-poaching solution. In 2022, Pléiades Neo satellite imagery helped Madikwe identify a poaching incident. Two rhino carcasses were detected in the imagery, helping understand the time of death and assist criminal intelligence in the incident investigation.

In 2023, poachers began exploiting previously unmapped regions of Madikwe for their activities. The Foundation helped capture new imagery within four hours of a reported poaching incident, enabling Madikwe to identify blind spots and entry and exit routes used by the poachers to enhance their security response.

Airbus satellite imagery is also helping ground teams monitor and manage the impact of tourism on conservation, alongside security. Annual satellite captures are mapping the road networks across the park and creating up-to-date reserve maps. This will help the team understand where roads are encroaching into species strongholds, helping managers prioritise where to close off or repair roads to improve landscape connectivity.

To date, satellite imagery provided by the Foundation has enabled local authorities to arrest and apprehend 16 suspected poachers, contributing to a reduction in rhino poaching incidents in the game reserve and across South Africa.

As well as security, satellite imagery is aiding Madikwe's overall rewilding and restoration plans, including where to focus sickle bush removal and grassland enhancement for lions, wild dogs, hyenas and rhinos, offering a landscape-scale perspective crucial for conservation efforts.



Key stats:

Amount of satellite imagery provided by the Foundation since the start of the project

1300 km²

Amount of satellite footage provided in 2023

100 km²

Suspected poachers arrested in 2022-2023, compared to 0 in 2020

16



Poachers are professionals. They're very experienced. So it's extremely valuable seeing how the poachers are getting in and out of the reserve and how long it takes them.

Koos Potgieter
Manager at Madikwe Futures Company



Protecting biodiversity from space

continued



Protecting biodiversity from space

with Aviation Sans Frontières International

In 2023, Aviation Sans Frontières International (ASFI), another partner coming from the Humanitarian sector, also worked on a project related to the protection of biodiversity. The Foundation provided 13,500 km² of satellite footage to ASFI, to support a project to identify areas called “bowals” in the Comoé National Park, Côte d’Ivoire, in West Africa. Bowals are natural ferruginous plateaus which could potentially serve as natural airfields during field missions in the park. By utilising the natural bedrock, savannah regions are spared of being turned into airfields.

The objective was to identify them via SPOT satellite images covering the entire park and to list them. Some particularly remarkable sites have then been the subject of in-depth study using Pléiades images. Identifying natural airfields is critical to ASFI’s aerial activities in the park, as ASFI is developing both aerial surveillance to fight against poaching and gold panning, and aerial wildlife inventory.

Additionally, ASFI has used SPOT satellite images in Madagascar as part of the AFAFI South project in order to help generate land use maps for agricultural purposes, improving population agricultural resilience in the face of climate change, ultimately helping fight poverty as well as deforestation.

Key stats:

Satellite footage provide to ASFI

14,200 km²

Partnership deep dive



Mapping forest restoration in Brazil

The Airbus Foundation has been working with IUCN since 2022 to map and help independently verify forest restoration efforts in Sao Paulo state, Brazil.

The area is part of the Atlantic Forest ecoregion which runs along the eastern coast of Brazil, stretching inland into Argentina and Paraguay. This forest is also one of the richest natural areas on the planet, filled with iconic species like jaguars, sloths, tamarins, and toucans. Just one hectare of the Atlantic Forest can support 450 species of trees. Many of its plants and animals are endemic, meaning they don't exist anywhere else on Earth.

Despite the importance of this forest, it is one of the most threatened in the world. For the past 500 years, humans have changed the forest landscape with infrastructure development, agriculture, and tree plantations. Only roughly 12% of the original Atlantic Forest in Brazil is left, much of it in small, unconnected fragments. That's why conservation and reforestation efforts are so important.

About International Union for Conservation of Nature (IUCN)

Created in 1948, the International Union for Conservation of Nature (IUCN) is now the world's largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,400 member organisations and 15,000 experts. This diversity and expertise makes IUCN the global authority on the status of the natural world and the measures needed to protect it.



After establishing an intricate methodology for the project in 2022, in 2023 the Foundation helped IUCN map and track land use in the entire state of Sao Paulo (248,000 km²) using an AI machine learning algorithm. Images from 2016 to 2021 were analysed to build a land use map for each year and track where crop land has become newly planted forest.

In 2024, following the Sao Paulo state mapping completion, the Foundation will support IUCN in presenting the results of the pilot study to Sao Paulo authorities to aid with planning and progress tracking. Following this event, IUCN and the Foundation will explore the possibilities of replicating the project using this technology and methodology to other parts of Brazil and beyond.



“ It is crucial to monitor and measure the forest landscape restoration process to ensure we achieve our goals. The IUCN's collaboration with the Airbus Foundation delivers a practical solution for monitoring ecosystem restoration.

Muneeswaran Mariappan
Geospatial Analyst, Senior Programme Officer

Partnership deep dive



POLARPOD

Supporting the Polar POD expedition

Airbus Foundation has partnered with Océan Polaire to support both the Polar POD scientific programme and the operational phase of the mission.

The maritime expedition, driven by French explorer and scientist Jean-Louis Etienne's non-profit organisation, aims to better understand global environmental and climate dynamics. Running for several years, it will achieve this by monitoring the Southern Ocean using an innovative low-carbon vessel: the Polar POD. A vertical ship, reaching 100 metres, the Polar POD has no engine and will be propelled by the Antarctic Circumpolar Current, sails and wind power.

The aim of the Polar POD initiative is to measure air-sea exchanges to improve climate studies, detect man-made pollutants (such as microplastics, pesticides, etc.), and analyse the ocean's weather, waves, winds and colour.

During the mission, the Foundation will provide access to products and services such as Earth observation satellite data and iceberg detection support, as well as offering additional capabilities for reliable high-speed telecommunications.

In August 2023, the Foundation also supported Océan Polaire with a Pléiades Neo satellite image of Perseverance, the schooner that will act as a supply boat for the Polar POD. The boat was sailing along the coasts of Greenland on an exploratory trip mixing ecotourism, scientific observations and samples collection. The Foundation supported Océan Polaire with processing the image and developing their skills in this area.

The expedition will be launched in 2026. In the meantime, the team is focusing its efforts on the Perseverance and the three incoming expeditions that will be launched starting June 2024.

The Perseverance ship will host various equipment intended to serve on the Polar POD mission and that in the meantime require testing and calibration. The Foundation is assisting in this process, guaranteeing a smooth launch of the Polar POD expedition.



“ Thank you to the Airbus Foundation for contributing to this unprecedented and long-awaited maritime exploration.

Jean-Louis Etienne
French explorer and scientist

Search and Rescue
 2023 - 6 Airbus Helicopters Operators
 IFRC for Turkey earthquake
 KRCS (3) for season flooding / El Nino
 CONAF for Chile wildfire
 Hulo in Burkina faso due to terrorism situation



Preparedness

Delivery/ferry goodwill flights

2023 - 4 goodwill flights

2 with Turkish airlines and one with Pegasus (Turkey earthquake)

Viva Aerobus with ASF & MRC (hurricane in Acapulco)



Capacity building

Satellite training

Partnerships & Priorities

ASF and...

Capacity strengthening and raising awareness

Sharing knowledge and expertise

Training, knowledge sharing and capacity strengthening is a major part of the support provided by the Foundation to its partners.

Summary

Capacity strengthening and raising awareness

Training, knowledge sharing and capacity strengthening is a major part of the support provided by the Foundation to its partners.

Key figures for 2023

- Satellite imagery training provided to 6 humanitarian partners

6

- Helicopter Emergency Medical Training Service trainees

400

- Partners in Soft Skills training

10



Key activity 2023

41 Capacity strengthening

Heliborne Emergency Medical Training
Satellite Imagery Training
Soft Skills Training

42 Raising awareness

Airbus Foundation talks

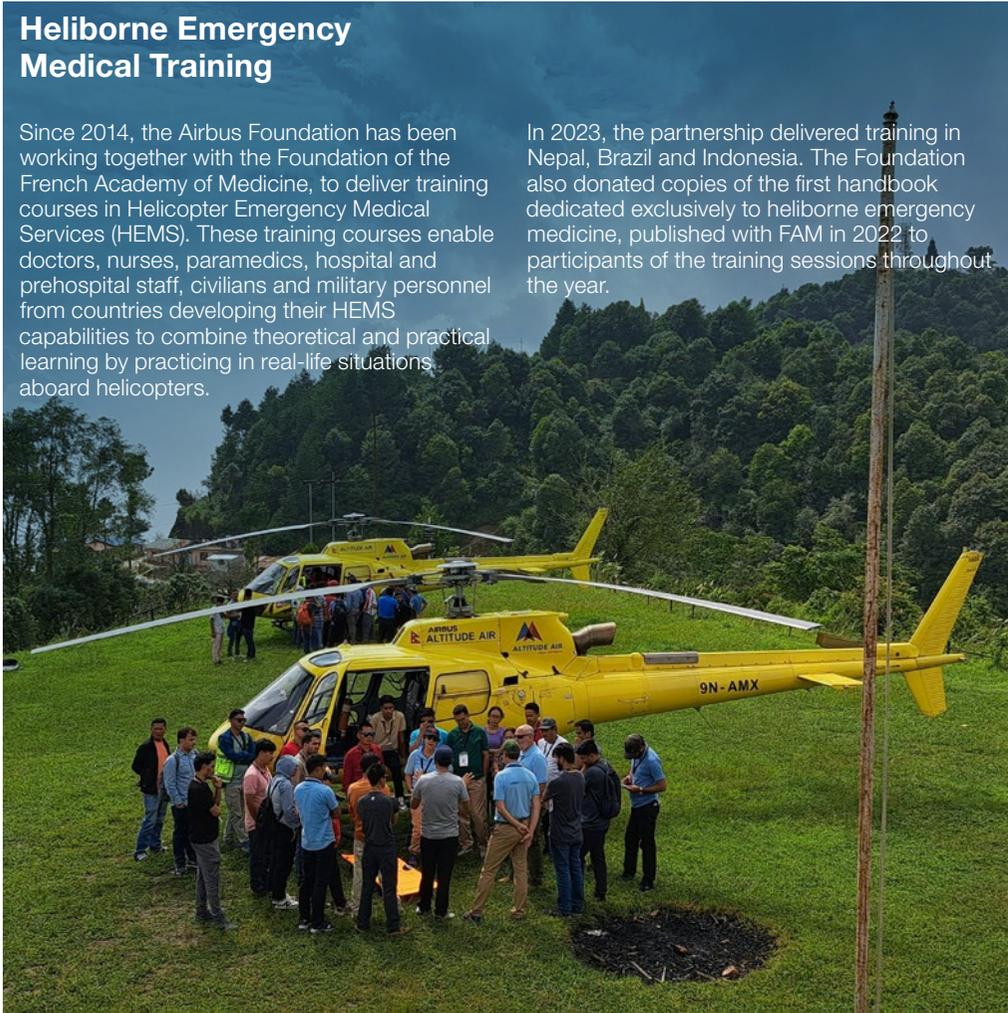


Capacity strengthening and raising awareness
continued

Heliborne Emergency Medical Training

Since 2014, the Airbus Foundation has been working together with the Foundation of the French Academy of Medicine, to deliver training courses in Helicopter Emergency Medical Services (HEMS). These training courses enable doctors, nurses, paramedics, hospital and prehospital staff, civilians and military personnel from countries developing their HEMS capabilities to combine theoretical and practical learning by practicing in real-life situations aboard helicopters.

In 2023, the partnership delivered training in Nepal, Brazil and Indonesia. The Foundation also donated copies of the first handbook dedicated exclusively to heliborne emergency medicine, published with FAM in 2022 to participants of the training sessions throughout the year.



Key stats:

HEMS guidebooks distributed

410

Helicopters

10

Satellite Imagery Training

In 2023, the Foundation provided training to the following humanitarian partners:

- Action Contre Faim (Action Against Hunger – ACF)
- The Centre de Crise et de Soutien (Crisis and Support Centre) of the French Ministry for Europe and Foreign Affairs (MEAE CDGS)
- The International Federation of Red Cross and Red Crescent Societies (IFRC)
- Aviation Sans Frontières International (Aviation without Borders International – ASFI)
- HumanitarianLogistic (hulo)
- The Kenyan Red Cross Society (KRCS)

For most of these organisations, the purpose of the training was to show how to use the OneAtlas portal – the Airbus platform for accessing satellite imagery.

The Foundation provided more in-depth training to Action Against Hunger (ACF), at their request. This involved two two-hour sessions teaching participants about satellite imagery analysis and products. The syllabus included an introduction to remote sensing. It also encompassed a presentation on the different types of Airbus Satellites they would have access to including SPOT, Pléiades and Pléiades Neo, their characteristics, orbits and resolutions as well as how to access the imagery they might need.



Soft Skills Training

The Foundation also offers a range of management and soft skills courses to its partners through Airbus Beyond. This includes management and leadership training covering topics such as knowledge management, project management and leading innovation sessions.

The courses mentioned above were completed by the following partners in 2023.

- The International Federation of Red Cross and Red Crescent Societies (IFRC)
- Action Contre Faim (Action Against Hunger – ACF)
- World Food Programme’s Global Logistic Cluster (WFPGLC)



Capacity strengthening and raising awareness continued

Raising awareness

The Foundation works to promote awareness and understanding of the causes it supports among Airbus employees. The goal is to encourage engagement and support of the environmental, youth and humanitarian partners and topics the Foundation addresses.

In 2023, it organised two talks with external experts to help spread awareness to Airbus employees worldwide. During the first talk in June, the French explorer Jean-Louis Étienne spoke to Airbus employees about Polar POD, an expedition to the Southern Ocean to conduct research and promote better understanding of the environment and climate change.

The second talk took place in December and was dedicated to the Foundation's Humanitarian activity, with the following external speakers.

- Alessandro Fedele, Global Head, Private Sector Unit, International Federation of Red Cross
- Bruno Vandemeulebroecke, Regional Director, West Africa, Kühne Foundation
- Mary Jelliti, Deputy Coordinator, World Food Programme, Global Logistics Cluster

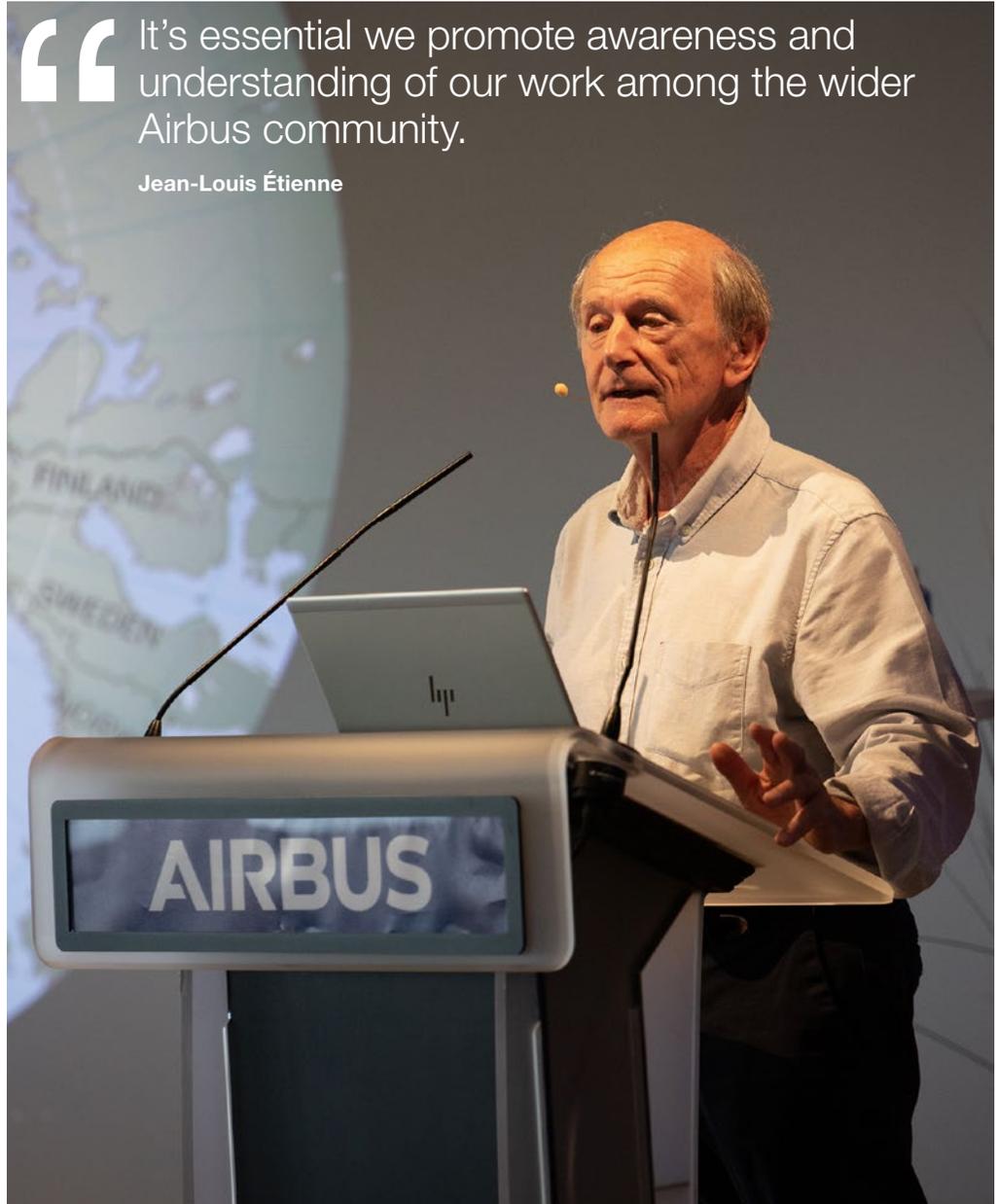
Airbus employees joined to hear about the work the Foundation is doing with these organisations and how they can contribute through sharing their own knowledge and expertise.



3,500 Airbus employees joined the #ConnectedAgainstHunger Challenge

The #ConnectedAgainstHunger employee sports and wellbeing challenge concluded on 9 June 2023. Through the participation of over 3,500 Airbus employees across more than 400 teams, the Airbus Foundation was able to raise €300,000 for Action Against Hunger (Action Contre La Faim – ACF) with further donations raised through the team fundraising pages on the Airbus +impact platform.

The unprecedented number of participants in 2023's #ConnectedAgainstHunger Challenge reflected the strong desire of employees to contribute to ACF's commitment to fight hunger and malnutrition.



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