

AIRBUS FOUNDATION

Annual Activity Report 2021



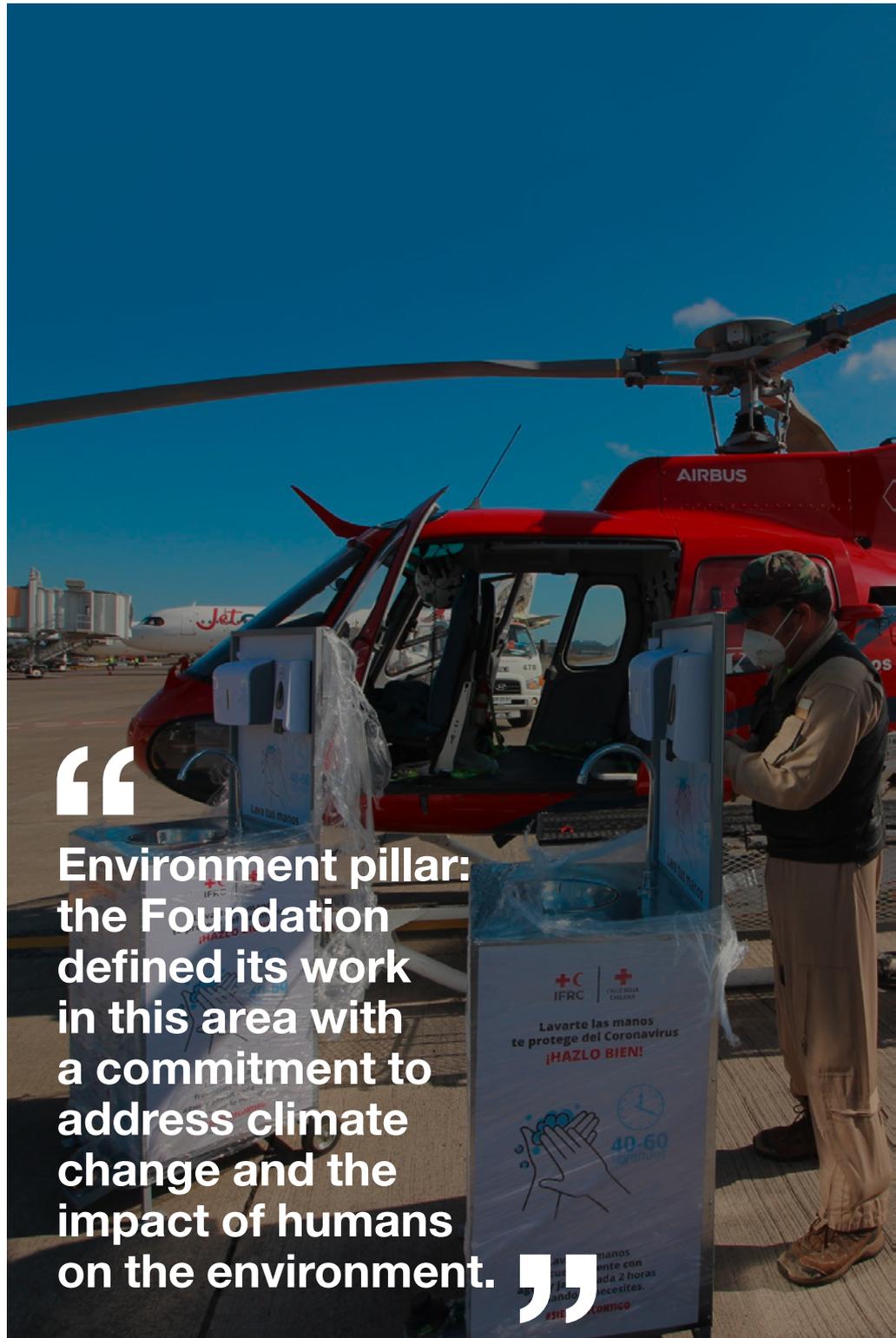
Executive summary

2021 was another year of achievements and challenges as the Airbus Foundation focused its missions around three core pillars: Humanitarian, youth development and Environment.

By continuing to adjust its response during the on-going COVID-19 pandemic, the Foundation successfully worked with existing and new partners to support activities that protected and saved lives, helped preserve the Earth's increasingly fragile ecosystem, and inspired the youth of today who will become the decision-makers of tomorrow.

The Foundation leverages Airbus products, services and people to address the challenges of today's society. During 2021, this involved a cross-section of Airbus businesses, built on the dedication of Airbus employees and the Foundation's management team.

Rachel Schroeder was named the Airbus Foundation Managing Director in 2021. One of her first priorities was to develop the newly identified **Environment pillar**. The Foundation defined its work in this area with a commitment to address climate change and the impact of humans on the environment. Airbus products and services in climate assessment and prediction – especially its Earth-viewing satellites – are powerful tools, and they were a valuable resource whose support ranged from the preservation of wildlife and ecosystems to assessment and monitoring.



“**Environment pillar: the Foundation defined its work in this area with a commitment to address climate change and the impact of humans on the environment.**”

Responses to natural disasters and the COVID-19 pandemic were key drivers for the Airbus Foundation's humanitarian response in 2021, **supporting missions in Africa, South America, the Caribbean and the Asia/Pacific**. Airlift missions performed with Airbus flight test aircraft and through the deliveries of new Airbus-built airliners to its customers carried tonnes of aid and equipment. Helicopter flight hours sponsored by the Airbus Foundation enabled the transportation of vital aid and material directly to areas affected by severe weather, floods, an earthquake, as well as to regions significantly impacted by the COVID-19 pandemic. The Foundation signed a cooperation agreement with the Global Logistics Cluster (GLC), solidifying the relationship and reinforcing a commitment to work together over the long-term.

The Foundation's youth development programmes continued to deliver initiatives, helping stimulate the imagination of young students to help them **stay engaged at school and prepare them to be constructive global citizens**.

The highly appreciated animated features of the Airbus Foundation Discovery Space – which cover various aerospace subjects in science, technology, engineering, and mathematics (STEM) – were complemented with new topics such as the “Flightpath to Hydrogen” or the “experience” videos, while the Moon Camp Challenge is once again motivating students to envision the future of space exploration.

Other developments initiated in 2021 included the **setting up of an Advisory Council for the Environment** that draws in additional support and advice, as well as challenges the Foundation to evolve. Also, an impact platform for employees is being developed for roll-out in 2022 to further the involvement of Airbus personnel in support of Foundation partners. Finally, the new Airbus Foundation Endowment Fund gives employees and people outside Airbus the opportunity to donate directly to the Foundation in support of its humanitarian response activities.

HUMANITARIAN ACTIVITIES

The Airbus Foundation coordinated **three humanitarian flights in 2021** (one relief mission and two goodwill flights) to three countries, carrying more than **16 tonnes of aid** to support key actors in global emergency response.

An A350-1000 was deployed on a relief mission to Nepal, delivering COVID-19 relief supplies requested by the French Ministry for Europe and Foreign Affairs' Crisis and Support Centre (CDCS), an Airbus Foundation partner based in France. The year's two goodwill flights, to Uganda and the Ivory Coast, were organized using an A320neo and an A330neo.

A total of **102 helicopter flight hours** (with H125, AS350B3e and H145 rotorcraft) were chartered in Chile, Haiti and Papua New Guinea.

Also in 2021, **93 requests for satellite imagery** were answered by the Foundation.



humanitarian flights in 2021



tonnes of aid



helicopter flight hours



requests for satellite imagery

Emergency relief flight

COVID-19 PANDEMIC RESPONSE

Nepal

A combined COVID-19 pandemic response mission during June used an A350 Airbus test aircraft to send seven tonnes of medical equipment from Toulouse, France to Kathmandu, Nepal. This outreach brought together the Airbus Foundation with Airbus India, the Indian Red Cross, and the CDCS. The relief equipment – provided by the CDCS, the French Ministry of Health and Visièrre Solidaire – consisted of masks, protection glasses and respirators, as well as antigen tests. The aid helped the Government of Nepal in managing the COVID-19 pandemic within the country. In parallel, Airbus India procured oxygen plants, ventilators, oxygen concentrators, breathing machines and mobile intensive care units to help address the second wave of COVID-19 in India.



Ferry flights

NEONATAL INTENSIVE CARE Uganda

In February, an A330neo for Uganda Airlines carried UNICEF supplies to support and enhance the capacity of neonatal intensive care units in Uganda. In a mission involving the Airbus Foundation with the assistance of Aviation Sans Frontières (ASF) and the Global Logistic Cluster (GLC), approximately five tonnes of medical supplies were carried aboard this aircraft, the second A330neo that Airbus delivered to Uganda Airlines.

These supplies included stethoscopes, waterproof thermometers, reusable suction bulbs, resuscitators and neonatal sets, and they were delivered to UNICEF-supported districts where they will enhance neonatal intensive care at health facilities across the country.



MEDICAL ITEMS AND TOYS Ivory Coast

Also in February, the first A320neo delivered by Airbus to Air Côte d'Ivoire was used to airlift toys and small medical items for non-governmental organizations (NGOs) in the Ivory Coast: Crescendo, Enfant sans Sida, Main d'Afrique and the Seber Fondation.

Helicopter missions

MEDICAL MATERIALS FOR THE COVID-19 PANDEMIC

Papua New Guinea

When Papua New Guinea was hard hit by the COVID-19 pandemic, the French Ministry for Europe and Foreign Affairs' Crisis and Support Centre (CDCS) requested assistance in collaboration with Australia and New Zealand – backed by coordination from the World Health Organisation (WHO) and with the support of our affiliates in the Airbus Australia Pacific offices. The Airbus Foundation, Airbus Helicopters and Airbus Australia Pacific worked together to support this humanitarian action to roll-out COVID-19 vaccines in Papua New Guinea. The initiative was launched to help deliver transport medical crews and vaccines to the rural Highlands Region that represented a difficult operating environment. It was the use of a helicopter that made it possible to bring such medical care to remote populations.

As part of the combined effort, the Airbus Foundation made a donation to contract Pacific Helicopters for approximately 30 hours of flight and crew time with their H145s. Meanwhile, Airbus Australia Pacific's civil helicopter team helped with coordination efforts from Bankstown in Sydney, Australia for the support of Pacific Helicopters, the French Embassy in Papua New Guinea and the Airbus Foundation.

The H145s facilitated the transport of medical teams for vaccination campaigns in hard-to-reach areas, and they enabled the vaccination of nearly 200 people out of the 800 identified in remote areas of the country while also raising awareness about vaccinations.



Helicopter missions



SUPPORT FOR FAMILIES AFFECTED BY COVID-19 Chile

When Southern Chile was significantly impacted by the COVID-19 pandemic, the Chilean Red Cross (CRC) requested assistance at a time when quarantines were being re-established and the country was facing the arrival of winter. The support enabled families of modest financial means to avoid using their limited savings in the face of the pandemic.

Support of the Airbus Foundation, Airbus Helicopters Chile, the Chilean Red Cross and the International Federation of the Red Cross (IFRC) enabled two airlift missions to be rapidly organised:

A flight with an AS350B3e from helicopter operator Servicios Aéreos Kipreos S.A. brought handwashing sinks to Santa María, delivering material essential for prevention and control of the pandemic. The availability of these sinks benefitted several thousand people. Seven flight hours were provided.

An H145 from operator Servicios Aéreos Santa María provided the Chilean Red Cross with food, hygiene kits, and warm clothing for the country's Los Ríos Region, offering aid for 148 families.

Helicopter missions

“ **Sophie Pignol**
Disaster Response & Operations Coordinator

During 2021, the Foundation responded to natural disasters and the COVID-19 crisis, supporting missions with its partners in Africa, Middle East, South America, the Caribbean and the Asia/Pacific region. ”



POST-EARTHQUAKE ASSISTANCE

Haiti

The Airbus Foundation supported the Haiti Red Cross Society (HRCS) and the International Federation of the Red Cross with helicopter flight hours during August and September in the wake of a 7.2 magnitude earthquake that was centered 80 miles south of the capital, Port-au-Prince.

Thousands lost their lives or were injured, and more than 60,000 homes were destroyed. The earthquake also damaged hospitals, roads, ports, bridges and schools. An estimated 579,000 people (equivalent to 40% of the overall population) required urgent humanitarian aid in the affected areas.

In quickly reacting after the earthquake, the Airbus Foundation, with the support of Airbus Helicopters Mexico, provided 60 helicopter flight hours, using an H125 from the Dominican Republic-based regional operator, Air Rotor Service A & P SRL.

During more than two weeks, this H125 assisted the HRCS and the International Federation of the Red Cross in performing rapid aerial assessments in the impacted areas, as well as delivering humanitarian relief to HRCS branches by transporting experts, medical doctors and logistics experts, along with IT and telecom equipment, first aid kits, water and sanitation systems.

Due to the damaged road infrastructure, as well as security challenges, travel by land was not feasible for emergency response teams.

The Airbus Foundation's support with these flights – sometimes performed multiple times per day – was essential for the relief team working with the HRCS to distribute humanitarian aid, and for the medical professionals' rapid and safe arrival in the earthquake-affected areas.

Satellite imagery and related services

Satellite imagery covering more than **43,000 square kilometers** was delivered during 2021, with the Airbus Foundation responding to **93 requests** that assisted its partners in disaster relief, assessment of drought impact, medical activities, the displacement of people and conflict resolution. These requests were for 24/7 Pléiades services, along with imagery from the Pléiades high-resolution optical Earth-imaging satellites and from the Pléiades and SPOT archives.

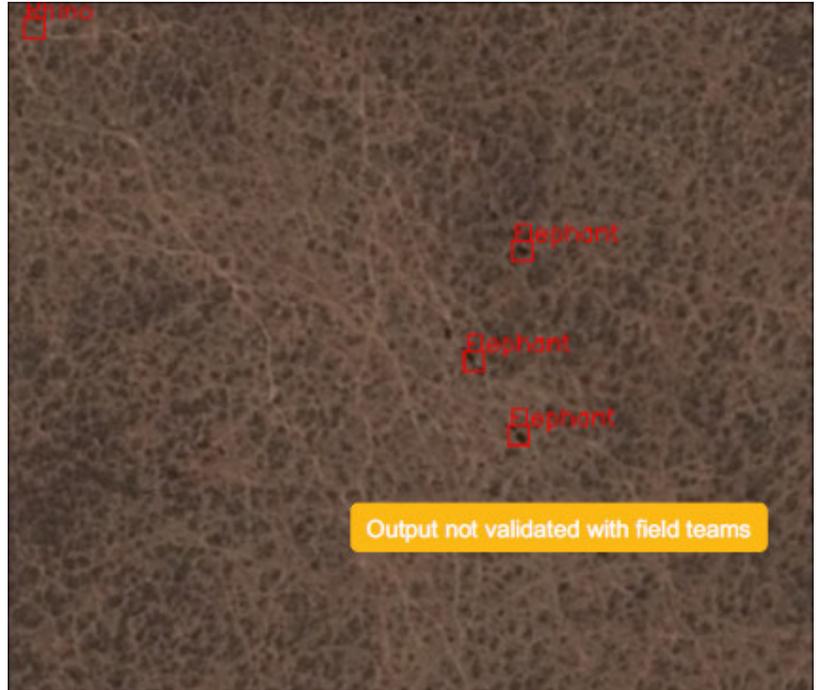
The IFRC requested imagery on behalf of Red Cross Red Crescent Movement actors covering Iraq, Syria, the Congo and Niger. Action Contre la Faim requested images for views of Madagascar and to track drought impact, as well as for the Democratic Republic of Congo after a volcanic eruption caused the displacement and evacuation of **450,000 people**.

The French Ministry for Europe and Foreign Affairs' Crisis and Support Centre (CDCS) sought imagery for its SWALIM (Somalia Water and Land Information Management) project in Somalia that also involves the Food and Agriculture Organisation of the United Nations.

Imagery delivered for the Global Logistic Cluster (GLC) provided coverage of Bangladesh, the Republic of South Sudan, Mozambique and Haiti in response to situations that included wildfires and displaced populations resulting from a burst dyke.

Also during 2021, the Airbus Foundation responded to the Global Logistic Cluster (GLC) with imagery for storms and flooding in Fiji and Sudan, for fires across Bangladesh and Sierra Leone, along with refugee monitoring and population displacement in Mozambique, Iran and Haiti.

In addition to these requests, the Airbus Foundation's 2021 activity enabled it to further build the working relationships with partners. One satellite imagery training session was held virtually with Action Contre la Faim, and strong interest is shown for new trainings in 2022.



CCF African animals detection



Comparative Rhoos December 2020



Comparative Rhoos December 2021



Madagascar Drought May 2018



Madagascar Drought May 2021

ENVIRONMENT

Climate change



Climate change is one of the **major challenges of our time**, and the Airbus Foundation's scope has been expanded to be aligned with Airbus' corporate sustainability strategy priorities. It includes support for environmental challenges tackled by existing and new NGO (non-governmental organisation) partners.

The objectives are organised around **three areas**:

- **Climate change mitigation and monitoring** – Supporting the impact assessment and evolution of climate change by monitoring the restoration of nature and biodiversity through means such as wildlife monitoring, forest monitoring and restoration;
- **Climate change adaptation and disaster prevention** – Supporting the assessment of areas prone to natural disasters, as well as the preparedness and capacity-building of vulnerable environments and societies, going hand-in-hand with the Foundation's humanitarian activities;
- **Minimising the environmental impact of humans** – Improving and monitoring resource management (with examples such as wetland monitoring, crop management, water use and anti-poaching).

Connected Conservation Foundation

In 2021, the Airbus Foundation joined forces with the Connected Conservation Foundation in a new partnership that aims to **help preserve wildlife and natural ecosystems through shared technologies and resources.**

Under the agreement, Airbus' high-resolution satellite imagery assists the Connected Conservation Foundation's on-the-ground digital technologies to help recover populations of threatened species and stop habitat degradation. The experimental roadmap's goal is to develop artificial intelligence-powered tools to help managers of protected areas improve wildlife monitoring, livestock management and overgrazing, as well as detect charcoal burning that leads to deforestation.

The addition of Airbus technology will expand the Connected Conservation Foundation's work to thousands more square kilometers. Using insights from satellite technology, it is hoped that teams on the ground will be able to improve conservation management in vast areas, thereby curbing habitat loss and degradation, stopping poaching and preventing human-wildlife conflict. This technology holds great potential to support decision-making and to validate conservation strategies.

The partnership's first project is focused on novel approaches, using artificial intelligence in examining high-resolution imagery – pixel by pixel – to detect large animals in Madikwe, South Africa, and in the Northern Rangelands Trust conservancies in northern Kenya.

“Supporting nature conservation is part of the Airbus Foundation’s environmental ambition. Using and developing new technologies, this partnership will help draw a future roadmap that will leverage the ever-growing portfolio of Airbus tools.”

Rachel Schroeder
Managing Director
of the Airbus Foundation

International Union for Conservation of Nature (IUCN)

An Airbus Foundation partnership with the International Union for Conservation of Nature (IUCN) will permit this international organisation to **widely monitor ecosystem restoration activities and benefits** over more than **40 countries** using a global framework called the “Restoration Barometer.”

The Airbus Foundation is providing satellite imagery, while Airbus Helicopters will make flight hours available via customers operating its rotorcraft, and UAVs. Training and technical support on technologies provided by Airbus also will be made available where needed for the IUCN, as well as to support field teams on solution rollouts.

All the reporting and associated indicators will be digitised and centralized into a geospatial portal to be deployed in the future. It will report globally on the restoration benefits of carbon sequestration, biodiversity impacts and socio-economic benefits.

The agreement between the Airbus Foundation and IUCN was signed in December 2021. Since that date, hundreds of images have been recovered and are being integrated into a processing chain that will feed the “Restoration Barometer.” The methodology and the development of this chain are refined in parallel with forestry experts with the goal of finalising indicators of the Barometer by the end of 2022. Two geographical areas will be explored to validate methodology and an expansion will be done after 2022.

IUCN is the global leader on the measures needed to safeguard the natural world. Its mission is to influence, encourage and assist societies to conserve the integrity and diversity of nature and ensure that any use of natural resources is equitable and ecologically sustainable.



A NEW APPROACH TO
YOUTH
DEVELOPMENT PROGRAMMES

Based on initial lessons learned from the COVID-19 pandemic's impact on youth development, the Airbus Foundation adapted its programmes in 2021 to support back-to-school activities – while staying mindful of the risks of new potential lockdowns.

While completing some of the programmes that were put on hold in 2020 due to the pandemic, the Airbus Foundation Discovery Space was enriched in 2021 with new videos and activities to support a relaunch of the youth programmes in **17 countries**. Overall in 2021, the Airbus Foundation's various programmes involved **210 Airbus volunteers**, reaching more than **6,000 students**, with the support of **30 partner organisations**.



17
countries



210
Airbus volunteers

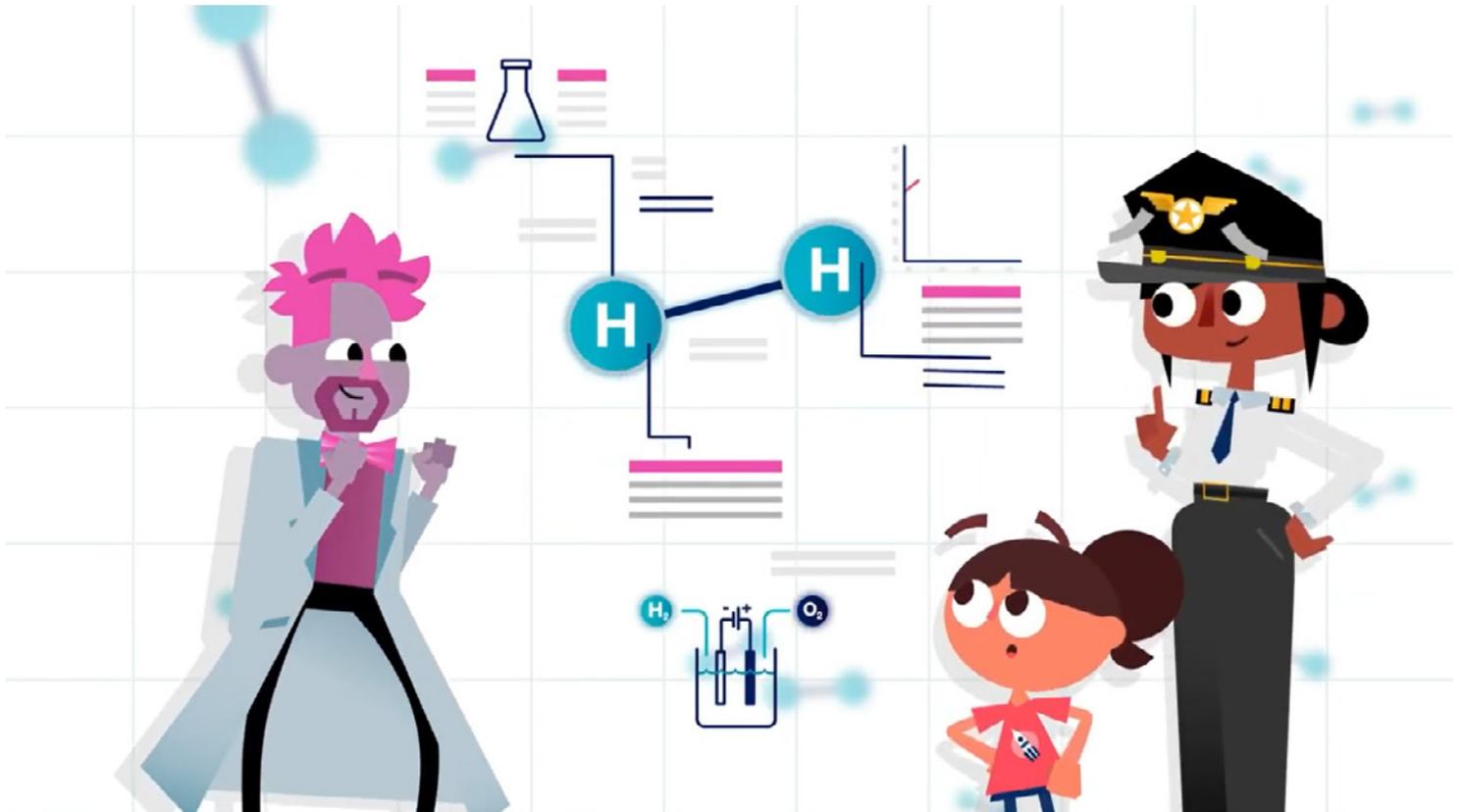


6,000
students



30
partner
organisations

A focus on hydrogen and the future of air travel



The Airbus Foundation Discovery Space already has a strong set of **more than 40 animated features** covering various aerospace STEM subjects for children between the ages of 8 and 12. Steps were taken in 2021 to complement this portfolio with new topics such as the **“Flightpath to Hydrogen.”**

This miniseries of four animated features outlines the promise and challenges of applying hydrogen technology for more planet-friendly air travel, with a presentation that is simple and understandable for all audiences.

A wider audience for the Airbus Foundation Discovery Space animated features

As accessibility is a key driver for youth development content and programmes, the Airbus Foundation Discovery Space animated features are being made accessible to a wider audience, through precise translations and dubbings from English into French, German and Spanish. **Forty-three videos were translated in 2021.**

Conscious of the feedback collected from various partners that are deploying the youth development programs around the world, the Airbus Foundation collaborated with pedagogical experts to create two video-animation series that are tailored for older children, **from 12 to 14 years old**, providing content for a more mature audience.

In the **“Experience Video”** series, made in collaboration with Traces (a not-for-profit association promoting the relevance of STEM), young students explore such key topics as composite materials, propulsion and airflow dynamics, with guidance through intuitive and hands-on activities.

Several booklets have been created to support parents or teachers in the explanations of these topics.

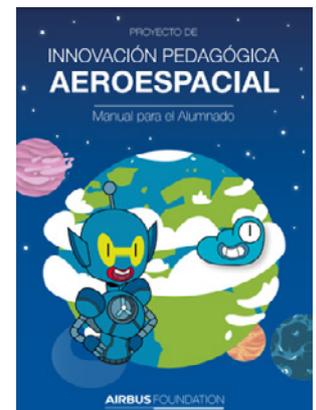
The **“Ventis & Fiu”** series is a set of six animations complemented by activity manuals for both teachers and students, made in collaboration with Spanish partner, Cadigenia. Teenagers can learn more about inspiring topics that include hydrogen, the environment, mathematics, along with female role models in aerospace.

To reach a third target audience - teenagers from 16 to 18 years old – the Airbus Foundation launched the creation of the Self-development Booklet. This booklet’s structure is based on a mix of tips and activities in 10 chapters, with aerospace as a common thread.

The booklet aims to inspire this younger generation prior to reaching adulthood, and can be used as a support for the volunteers who mentor teenagers.



An example of an activity sheet from the Self-development Booklet



CADIGENIA activity book, 2021



< TRACES booklet, 2021



The deployment of programmes by country and region



Airbus Foundation
@AirbusFdn

How do you maximise the reach of your #STEM content & #youthdevelopment programmes like #FlyingChallenge when in-person workshops are not possible? Marie Claire Certiat, Youth Programme Manager @AirbusFDN, explains our turn towards a more digital approach airbus.com/en/newsroom/st...



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Traducir Tweet



2021 was again a very special year considering the COVID-19 pandemic’s local impacts. Some classes remained closed for a significant portion of the year, although a clear “back to school” trend was observed.

A more hybrid approach to the youth programmes – with great support from the local partners – helped maintain certain activities in-situ where possible, for the greatest satisfaction of the children involved (and also of the Airbus volunteers who were supporting this work). This **hybrid approach** is also a good way to **bring content to the targeted audience** and to **counterbalance digital fatigue** due to the closure of schools.

French youth programs in Toulouse, Marseille and Paris Elancourt finished their transition. At all of these locations, the activities came back into the classroom during the second half of 2021, with the ambition of maintaining much-needed physical interaction between students and the volunteers. The goal was to support the post-COVID learning recovery that reinforces the best way possible in supporting the inequalities among young people.

With an uncertain forecast on school attendance in **Germany** due to the COVID-19 pandemic, most activities with students were performed digitally through roundtable discussions led by volunteers from Airbus sites, along with inspiring podcasts led by university students. Despite being digital, the strong focus on developing a dialogue between generations was very well received by all participants.

In the **UK**, local volunteers were able to finish the programme paused in 2020 with the vast majority of mentees. Despite facing a very challenging situation – where some young students suffered from isolation caused by school closures – the 20 mentees that made it through the entire Filton program now have improved their confidence, self-esteem and engagement in learning, according with feedback received.

The deployment of programmes by country and region

The youth programme deployed in **Spain** also finished its transition, supported by the Spanish Red Cross, and now provides completely free access to a set of STEM-based activities for students, teachers and parents. A specific focus was given to providing visibility to the role of women in STEM sectors as an element of activation in these vocations. Also included was a spotlight on environment and sustainable development topics, made accessible for children.

Across the Atlantic, the youth programmes followed their evolution, moving ahead in the best way possible when faced with local challenges caused by the COVID-19 pandemic.

In **Canada**, young students and volunteers provided positive feedback on the practical activities until the COVID-19 lockdown was imposed. Some lighter remote activities helped to avoid overwhelming what was an already busy digital daily routine for the students.

In the **U.S.**, through the use of Airbus Foundation’s Discovery Space content, Exploreum deployed summer camps for children aged between 9 and 14 years old, to develop a better understanding of the principles of flight.

In **Mexico**, **25 volunteers supported 164 children** with online activities about space to spark their interest in science. The involvement of families helped to keep the online attendance at a good level, despite digital fatigue.

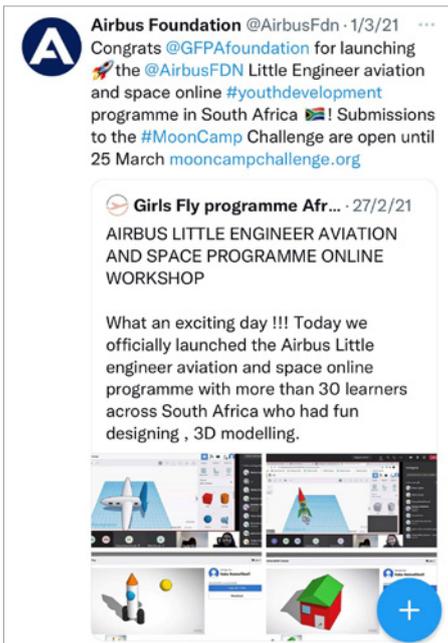
In **Itajuba, Brazil**, the program supported young students from the site’s neighborhood favela: a clear focus was done on the student’s essential needs, such as Portuguese and mathematics. This involved the support of local volunteers at the Airbus Helibras subsidiary, leading the weekly workshops with the Airbus Foundation Discovery Space content – delivered virtually or in-situ. Certain other skills related to collaboration, interpersonal relationships and self-confidence were developed through the year. Based on the previous years, outcomes of these programs show a positive correlation between the involvement of parents in both the introductory and final ceremonies with the diligence of their students at school.

In **Africa and the Middle East**, the robotics-based workshops needed to evolve into a remote format. These digital sessions became an opportunity for students to create projects focused on space and aviation in 3D with Tinkercad, based on the Airbus Foundation Discovery Space learning content. In 2021, **4,469 students from seven countries participated**.



The Moon Camp Challenge

The latest Moon Camp Challenge – sponsored by the European Space Agency, the Airbus Foundation and Autodesk – was initiated in September 2021. Participating teams, supported by a teacher or educator, use Autodesk’s 3D online modeling software to design a sustainable Moon camp settlement. It features preparatory classroom activities that focus on learning-by-design and science experimentation. The Moon Camp Challenge is divided in three separate categories featuring different levels of complexity: “Discovery” and “Explorers” use the Tinkercad design software, while “Pioneers” work with the higher-level Fusion **360 software**. Participation is open worldwide, and the deadline for Moon Camp Challenge entry submissions was in April 2022. During the Challenge in 2020-2021, more than **4,100 students** – supported by over **600 teachers** – submitted **1,823 projects from 53 countries**.



“The Foundation’s youth development programs continue to carry out initiatives that stimulate the imagination of young students to stay involved in school and become global, and constructive citizens.”

Marie Claire Certiat
Youth Programme Manager

CAPACITY BUILDING

Leadership Training

Leadership training was provided to the IFRC through the Leadership University in 2021, while the Kenya Red Cross Society benefited from bespoke innovation and strategy training developed by the Air Business Academy.

As the result of restrictions imposed by COVID-19, the training portfolio evolved at **Airbus' Leadership University** and in the **Air Business Academy**. More virtual courses are available, and bespoke training is now being developed to respond to specific partner needs.

Satellite imagery training also was provided for the Connected Conservation Foundation as part of the environment partnership developed in 2021.



Water purification

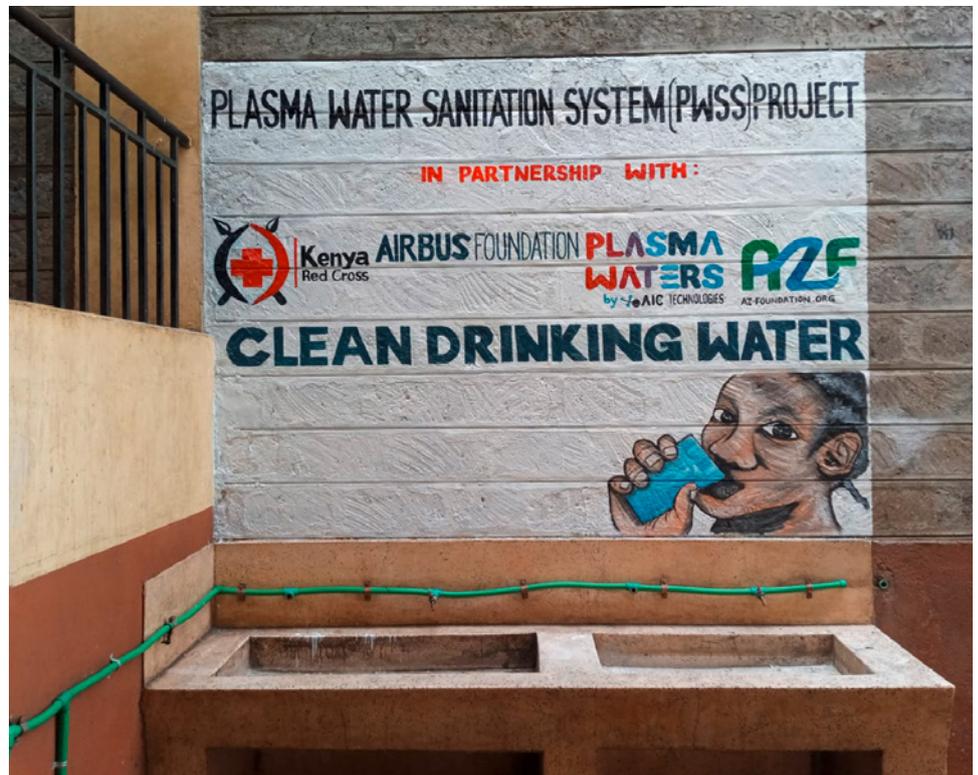


An innovative plasma water purification system, developed by inventor **Alfredo Zolezzi at Plasma Waters by AIC technologies**, has already delivered tangible results in Chile. The Airbus Foundation – in partnership with the Kenya Red Cross Society’s Innovation Lab, and administered under the International Centre of Humanitarian Affairs – supported the deployment of the system to make a difference in the lives of vulnerable children in Kenya.

Three units have already been deployed in Mukuru, which is an informal settlement in Nairobi, Kenya, with another four units to be deployed in 2022. The units are housed on public school premises for children to access safe and pure drinking water, as well as to carry some water home for use outside of school hours. The implementation programme includes installation, extensive community outreach and impact measurement. Provision of safe and pure water supports the reduction of waterborne diseases that also lead to children missing school, affecting their education in the long run, as well as health conditions.

These units have largely supported the community during the COVID-19 outbreak, as community members were given access to the water outlets during school closure periods. On average, each school has **1,000 students** enrolled in classes.

For the Airbus Foundation, this initiative builds on its mission to support communities, particularly in the context of youth development. It also enables the Airbus Foundation to demonstrate its commitment to taking an active role in “Partnership for the Goals,” a global expression of the United Nations Sustainable Development Goals, and a framework on which Airbus bases its sustainability contributions.



OTHER INITIATIVES

Give for Kids



Airbus Staff Associations and the Solidarity Society organized the “Give for Kids 2021” donation collection for children living in Toulouse, France. The Comité Social et Economique of Airbus in France (Airbus Operations and Airbus SAS) organised this initiative, and the Airbus Foundation provided its support. All employees in the Toulouse area were invited to help make a child happy for the year-end holidays by donating gifts.

In total, **some 10,000 books and toys were gathered**, which enabled many children in difficult situations to **receive presents at Christmas**.