

No. 123 - APRIL 2021

ROTOR

BY

AIRBUS HELICOPTERS

IN THEIR WORDS
**The H145: Madrid
is in safe hands**

MISSION
**Storm Eloise
can't dampen
Mozambique
spirits**

SERVICES
**NH90:
A transformation
plan for customer
support**

NH90, on the level



THE H175 FLEET REACHES 100,000 FLIGHT HOURS

In service since 2015, there are currently 45 H175s being used in 11 countries mainly for offshore crew change, law enforcement, search and rescue, and private and business aviation.

© J. Deulin

HCARE CONTRACT FOR AIR METHODS FLEET OF 80 H135s

Air Methods Corporation has signed another HCare® support contract with Airbus Helicopters Inc., this time to cover its fleet of H135 helicopters – the largest HCare contract signed with any civil customer to date. The order expands the number of Air Methods aircraft covered by Airbus support and services to 111, making Air Methods the largest HCare-covered single-operator civil helicopter fleet in the world. More customers are turning to Airbus to support their aircraft, with particular growth in the air medical segment, where operators are looking more and more to benefit from predictable costs, budget security and ease of management.

*HCare is Airbus' comprehensive support and service package.

Ready



© Air Methods



© ÖAMTC – Robert Schornsteiner



© Christian Keller

ÖAMTC AIR RESCUE STARTS FLEET RENEWAL WITH ORDER OF FIVE H135s

Airbus Helicopters and ÖAMTC Air Rescue have signed a firm contract for the purchase of five H135s. The delivery of the first helicopter in this contract is scheduled for early 2022. ÖAMTC Air Rescue operates 28 H135 helicopters from 17 permanent bases and four additional bases during the wintertime in Austria. In 2019, the operator performed more than 20,000 missions, with on average 52 missions per day. To date, more than 1,400 helicopters of the H135 family have been delivered around the globe with more than 5.6 million flight hours.

SEVENTH H145 FOR THE GERMAN ARMED FORCES' SEARCH AND RESCUE SERVICE

Airbus Helicopters handed over the seventh and last H145 for the Bundeswehr's search and rescue (SAR) service to the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) on time. The fleet's previously delivered helicopters are used for training and field testing and are available 24/7 at the Niederstetten and Nörvenich air bases for rescue operations. Operations with the new H145 LUH SAR will begin shortly, as planned, at the third SAR station in Holzdorf.

HÉLI-UNION TO PURCHASE TWO H160s

Airbus Helicopters and its long-standing partner Hélicoptères de France (Hélicoptères de France) have signed a contract for the purchase of two H160s to address a wide range of operations.

Hélicoptères de France currently operates a fleet of approximately 20 Airbus helicopters from the Dauphin, the H225, and the H145 families to provide support to various civil and military organisations around the world.



© Light & Shadows

Advanced



© Light & Shadows



© Christian Keller

SHELL SELECTS H160 FOR OPERATION BY PHI IN GULF OF MEXICO

International energy group Shell has selected the leading US offshore helicopter operator PHI to operate four Airbus H160s to service a support contract in the Gulf of Mexico. The contract marks the entry into the oil and gas market of the H160 with a wealth of design features promising new levels of safety, comfort and schedule reliability in offshore operations.

The three companies – Airbus, PHI and Shell – are cooperating in a unique partnership. In a pioneering move, Airbus will provide one H160 ahead of final deliveries to PHI and Shell for a year-long route-proving programme to enable the operator and the final customer to familiarise themselves with the new helicopter and mitigate the normal challenges around entry into service.

AIRBUS HELICOPTERS BOOSTS THE MISSION CAPABILITIES OF ITS H135 HELICOPTERS

The European Union Aviation Safety Agency (EASA) has certified a new alternate gross weight (AGW) for the latest version of the H135 family of helicopters. The new AGW enables operators to benefit from an increased maximum take-off weight of up to 120 kg (265 lbs) and useful load. This increase can also be used to extend the range by up to 75 NM or the endurance by up to 40 minutes under standard conditions. Additionally, Airbus recently certified a new single pilot IFR Helionix cockpit for its H135 helicopters. The modified cockpit enables customers to choose between removing the co-pilot side of the instrument panel to increase the field of view, or keeping it to install specific STC equipment. The H135's single pilot IFR cockpit will further boost the H135's capabilities in several missions, including aerial work, utility and law enforcement.



DRF LUFTRETTUNG TAKES DELIVERY OF THEIR FIRST FIVE-BLADED H145

The German air rescue operator DRF Luftrettung took delivery of the first of 15 five-bladed H145s at the end of 2020. The helicopter is deployed to DRF's air rescue station in Stuttgart. On top of this, the operator will upgrade 20 four-bladed H145s to the five-bladed version. DRF Luftrettung maintains 35 bases in Germany, Austria and Liechtenstein with a 100% H135 and H145 fleet of helicopters, performing more than 40,000 missions per year.

© Christian Keller

08

PANORAMA

Airbus Helicopters news and events by the numbers

22

UP ABOVE

The global NH90 fleet will achieve 300,000 Flight Hours in the near future

24

IN THEIR WORDS

Spain: Madrid is in safe hands

28

MISSION

Storm Eloise can't dampen Mozambique spirits

09

FEATURED ARTICLES

NH90, on the level



30

MISSION

Chile: Firefighting with the H215

32

SERVICES

A transformation plan for customer support

34

OFF THE BEATEN TRACK

Germany: A gift from the skies

Communication Director: Yves Barillé (Publication Director), Editor in Chief: Belén Morant (contact: rotor-magazine.ah@airbus.com), Director of photography: Jérôme Deulin, Translation: Airbus Translation Services; Amplexor. Published by: **because. la nouvelle** (Copyright Airbus Helicopters 2021, all rights reserved). Airbus Helicopters' logo and the names of its products and services are registered trademarks.



Don't miss out! Subscribe to receive the digital version of Rotor Magazine directly in your inbox.

Subscribe now



Bruno Even, CEO of Airbus Helicopters

“The NH90 has proven its worth not only during operational deployment in Afghanistan and Mali, but also on a daily basis back at home, saving lives.”

When the first NH90 prototype took to the air in 1995, few could have imagined how important this programme would eventually become. Today, after 444 deliveries out of a total of 597 orders in 14 countries, the NH90 has shown it is deserving of all that effort. It has proven its worth not only during operational deployment in Afghanistan and Mali, but also on a daily basis back at home, saving lives on the high seas, helping those most in need in the wake of natural disasters and even ferrying patients in the current COVID-19 era. Now, 25 years after its first official flight, the NH90 is an example of a success story. This swift, spacious rotorcraft with fully integrated digital avionics and mission systems made aeronautical history as the first fully fly-by-wire helicopter; it was the one that ticked all the boxes for NATO.

The NH90 still has many stories to tell.

It continues to evolve and we expect it to keep on flying at least until the 2050s, and judging by the praise received from its users – which you can read in our featured articles – it will continue

to provide support for all of the most demanding missions, wherever and whenever needed. However, we're also perfectly aware that the success of these missions is not solely dependent upon the helicopter's performance. The NH90 needs adequate support in order to bring out the best this helicopter has to offer. We know you expect a lot from Airbus Helicopters in this respect, and you have every right to do so.

That's the aim behind our NH90 support transformation plan, which contains 22 initiatives dealing with very concrete issues to improve the availability of NH90 fleets over the next two years. This plan focuses on main areas of work: reducing the maintenance load and improving the availability of repairs and spare parts. To find out more, read on in the following pages. We have a team of people who are motivated, committed and ready to carry out this transformation together with you, our customers. The NH90 still has so much more to tell and we're committed to ensuring that our customer support forms an integral part of this success story.

For more information www.airbus.com/Helicopters

Join us on [facebook/AirbusHelicopters](https://www.facebook.com/AirbusHelicopters)

Follow us on [twitter/AirbusHeli](https://twitter.com/AirbusHeli)

Join us on [linkedin/AirbusHelicopters](https://www.linkedin.com/company/airbus-helicopters)

Follow us on [youtube/AirbusHelicopters](https://www.youtube.com/AirbusHelicopters)

662

coronavirus missions performed by DRF Luftrettung in 2020.

1,000

Ecocopter is celebrating 1,000 flight hours with their H145.

2,644,000

FLIGHT HOURS

were reached by Airbus Helicopters in 2020. As of December 2020, the overall cumulative flight hours were 101,981,000.

6.26M€

was Airbus Helicopters' revenue in 2020.

In 2020, Airbus Helicopters signed **289 orders*** with 149 customers in 40 countries. The company **delivered 300 helicopters** and thus keeps its worldwide market share of 48% in the civil and parapublic market.

20,151

AIRBUS HELICOPTERS

have been built to-date and 11,700 Airbus helicopters are currently in service around the world.

2,400

HELICOPTERS

are enrolled with an HCare global support contract.

*289 gross orders (net: 268).

98%

of HCare Smart customers opt to renew their contracts.

1,500

HELICOPTERS

are sharing data with Airbus.

AROUND

400 km/h

is the speed that the RACER demonstrator could reach. While taking off and landing like a helicopter, RACER will also fly as fast as a propeller aircraft.

NH90, on the level

Twenty-five years after the maiden flight of its first prototype, the NH90 continues to enjoy significant industrial and operational success. With 444 aircraft currently operating in 13 countries, it proves its worth in combat every day.

Article: Alexandre Marchand



© Francisco Francés Torontera

Each day spent in the heat and dust of the Sahel demonstrates the value of the aircraft and how valid the technical choices that inspired its original design were. On an industrial level though, in a world turned upside down by the COVID-19 crisis, another battle is being fought.





1

© Francisco Francés Torromera



2020: A YEAR MARKED BY COVID-19

“The NH90 assembly line in Marignane was only shut down for two weeks last year, just enough time to implement protective health measures that would ensure a safe working environment,” states Nathalie Tarnaud-Laude, Head of the NH90 programme at Airbus Helicopters and President of NHI since 2019. “We quickly made up for those two weeks, as did the other Italian and German assembly lines, and delivered 28 aircraft last year, in line with our expectations.”

It’s important to highlight that customers gave their full support to the industry by taking deliveries of aircraft despite the circumstances. “By doing so, they brought us a kind of stability that was really



2

© Francisco Francés Torromera



3

© Anthony Pecchi

THE TECHNICAL AMBITION OF THE CAÏMAN STANDARD 2

The Caïman Standard 2 is a major evolution of the NH90 Caïman, providing the aircraft with new operational capabilities coupled with improved flight safety in poor conditions. The scope of the future standard includes new equipment and fittings that will enable commandos to board and exit the helicopter faster, as well as an increased digitalisation of the avionics. This last point will bring the most spectacular technical progress, with the introduction of the following equipment:

- The Euroflir 410 optronic ball, incorporating several sensors operating at different wavelengths, as part of the first Standard 2 development ‘step’;
- The Distributed Aperture System (DAS), providing better visibility in poor flight conditions (snow, dust, fog), by day and night, as part of the second Standard 2 development ‘step’; and
- A fully digital TopOwl helmet, capable of simultaneously displaying DAS and EOS images on the visor.

useful,” adds Nathalie Tarnaud-Laude. “Customers needed their aircraft for standard military operations, but also to tackle the pandemic. In coordination with our support teams, we very quickly developed solutions to transport patients while at the same time protecting those in the cockpit.”

NEW CONTRACTS

The industrial success of 2020, at a time when subcontractors were under tremendous strain from the impact of COVID-19, went hand in hand with considerable business success. The end of the year was marked by the signing of a contract for 31 additional NH90s for the German Navy, fitted with very high-tech mission equipment.

The second half of 2020 also saw some significant milestones, with the maiden flights of Qatar’s overland and naval NH90 variants, the first delivery to the Spanish Air Force and the signing of the Caïman Standard 2 development contract for the French special forces (see box). The contract signed with the French Armament General Directorate (DGA) provides for a first development ‘step’ by 2024 and the delivery of 10 aircraft of this standard between 2025 and 2026. Although France is currently the only country to have committed to the NH90

‘Special Forces’ programme, the objective is to ensure that this situation soon changes: “Other customers could easily join the contract, and sharing will be especially easy with nations that already fly the aircraft,” explains Nathalie Tarnaud-Laude. Finally, there is the issue of technical support, a focal point for the programme today: “Our availability rates do not meet our expectations or those of our customers,” admits Nathalie Tarnaud-Laude. “We are taking strong action to tackle this issue, a transformation plan that is both ambitious and practical.” Find the details of this critical plan on page 32.

1: 2020 was a year marked by great successes and the launch of an ambitious transformation plan to meet customers’ expectations.

2: Spanish NH90s are being prepared to take part in the European Union Training Mission in Mali in the near future.

3: The final batch of 10 NH90s ordered by the French Ministry of Armed Forces will be delivered directly in Standard 2 configuration at the beginning of 2025.



FRANCE Six years in the Sahel

The first two NH90 Caimans from the 1st Combat Helicopter Regiment of the French Army Light Aviation (ALAT) unit arrived in Gao in November 2014 to take part in Operation Barkhane. Since then, these aircraft have had an increasingly valuable role in a mobile war being played out in an extremely difficult natural environment.

Article: Alexandre Marchand – Photos: Frédéric Lert

Six aircraft are currently deployed in the heart of the Sahel. They are grouped into a tactical helicopter squadron that is part of a tactical desert air combat group (GTDA) which, until the beginning of 2020, included two other units: a reconnaissance and attack squadron made up of Gazelle and Tiger aircraft; and a mountain commando group that supplies commandos⁽¹⁾.

KEEP UP THE PRESSURE

“We are therefore totally independent in our management of air combat missions, with every tactical innovation opportunity that the Caimans offer,” outlines Lieutenant Colonel Brice, Chief of Operations and Instruction, 1st Combat Helicopter Regiment. “The use of commandos transported by the Caimans and support from the Tigers enables us to take aggressive action against an enemy that is difficult to locate. By manoeuvring very quickly day and night we can keep up the pressure on

(1) Since the beginning of 2021, commandos are no longer within the GTDA scope.

the enemy and force them to make mistakes.” Quick, reliable, with great autonomy and a large payload capacity even in the heat of summer (a dozen commandos despite temperatures above 45°C), the Caimans operate far from their bases. “With very little notice, on the basis of information received, we can deploy our Caimans to secure a suspicious area,” adds Lieutenant Colonel Brice.

SURPRISE THE ENEMY

Speed is an asset often mentioned by operators: the Caiman is capable of moving in harmony with the Tiger and surprising the enemy by coming in very fast and very low. The commandos are on the ground before the enemy has the time to understand where the threat is coming from. If necessary, the helicopters can pick the commandos up and drop them off again a few kilometres away in the blink of an eye, repeating the manoeuvre as many times as necessary. This leapfrogging makes it possible to outpace an enemy that often travels by motorbike and is renowned for quickly disappearing into the landscape.

BOTH DAY AND NIGHT

“The most remarkable thing is that the Caiman allows us to conduct these offensive actions in the middle of the desert, through the darkest of nights,” Lieutenant Colonel Brice adds. “The 4-axis autopilot, fly-by-wire flight controls and forward looking infrared (FLIR) piloting information in the TopOwl helmet-mounted display combine to deliver assault landing capacities unique to an aircraft of this category. In fact, we’re still learning to take full advantage of its huge potential.”

One target for action includes battlefield

digitalisation: today, the crew of a Caiman on their way to a combat zone can receive real-time updates of the tactical situation on their screens, then inform the commandos on board by intercom. The fluidity of the manoeuvre is already impressive, but in future, when commandos can plug their digital tablets directly into the onboard network to share information, it will be even more so.

“The use of commandos transported by the Caimans and support from the Tigers enables us to take aggressive action against an enemy that is difficult to locate.”

Lieutenant Colonel Brice, Chief of Operations and Instruction, 1st Combat Helicopter Regiment

1: The Caiman is capable of moving in harmony with the Tiger and surprising the enemy by coming in very fast and very low.

2: The French Army Light Aviation deployed its NH90s to Mali in 2014.

3: In the Sahel, helicopters are put to the test, especially because of fine sand and differences in temperature.



SPAIN

The Spanish NH90: ready for Mali

In September 2016 the Spanish Army received its first NH90 tactical troop transport helicopters (TTH). Since then, a total of 14 NH90s have been delivered in the Standard 1 and 2 configurations. Now that they are fully operational, these helicopters will be undertaking their first overseas deployment in the coming months to take part in the European Union Training Mission (EUTM) in Mali to support the Malian Army.

Article and photos: Francisco Francés Torrontera



The NH90s operated by the BHELMA III⁽¹⁾ of the FAMET⁽²⁾ will be tasked with providing tactical transport, support for special operations forces, combat recovery and combat SAR, electronic warfare, logistics support, medical evacuation operations and fire support with their two M3M MK3 12.7 mm machine guns.

GREATER CAPACITY FOR THE FAMET

Brigadier Francisco Javier Marcos Izquierdo, Commander of the FAMET, had the following to say regarding the incorporation of the NH90: "The improvements offered by this latest-generation helicopter (enhanced speed, range and navigation, all-weather capacity, more secure communications, greater load capacity at high altitude and in hot conditions, etc.) enhance our effectiveness when carrying out missions such as tactical transport, aerial assaults and other special operations in the most demanding conditions."

Over the last five years, the main focus has been on completing the training of pilots, specialists and on-board operators. More than 6,000 flight hours have been devoted to these tasks, while maintaining operational availability levels comparable to those of other fleets using this model.

New mission systems have been progressively incorporated to optimise its features (ballistics protection, roller loading system, 12.7 mm machine guns, electronic warfare system, rappel and fast rope systems and a cargo hook). Meanwhile, the Standard 2 configuration includes new equipment such as the ultra-long-range electro-optical/infra-red system, the IRIDIUM satellite telephone and a double rescue hoist.

FIRST OVERSEAS DEPLOYMENT

"We will receive new helicopters in the Standard 3 configuration for the Spanish NH90, which incorporates added improvements such as Mode 5 IFF capability and the DIRCM self-protection suite. In the future, all Standard 1 and 2 configurations of the Spanish NH90 will be upgraded to Standard 3," the Brigadier explained. In relation to its first overseas deployment, the Commander of the FAMET said: "In recent months we've been preparing a contingent of NH90 helicopters to take part in the European Union Training Mission in Mali.



1: The Spanish Standard 2 configuration allows helicopters to exchange tactical information between aircraft and with ground stations via Data Link, which will improve the ability to direct operations in real time.

2: In the future, all Standard 1 and 2 configurations will be upgraded to Standard 3.

This tactical group will carry out support missions for decentralised training activities by EUTM Mali on the bases of the Malian Armed Forces (FAMa)."

SIX NH90s FOR THE SPANISH AIR FORCE

The NH90 TTH also forms part of the Spanish Air Force fleet now, following the recent incorporation of the first two helicopters for the 803rd Squadron of the 48th Wing, operating from the Cuatro Vientos Air Base in the province of Madrid. The Spanish Air Force will receive a total of six NH90 (HD.29) helicopters.

"The arrival of the NH90 for the 48th Wing represents an important milestone for the 803rd Squadron," said Colonel Gonzalo Martí Regalado, Commander of the 48th Wing. "The unit has progressed from operating a second-generation helicopter (the HD.21 Super Puma) to a fourth-generation helicopter, with all the improvements and changes to operations this implies. As well as being much lighter and sturdier due to the use of carbon fibre and fibreglass in its construction,

"The 48th Wing is very keen to get started with the NH90. While we're fully aware of the effort required to implement a new weapons system, we also know it will be more than worthwhile due to the enhancement of our operational capacity."

Colonel Gonzalo Martí Regalado, Commander of the 48th Wing.

it's also equipped with fly-by-wire controls, which considerably improves the piloting experience. There can be no doubt that the squadron will significantly enhance its operational capabilities now. The NH90 is an all-weather helicopter capable of operating in adverse meteorological conditions, with integrated equipment such as a complete de-icing system (main rotor, tail rotor, horizontal stabiliser, windscreen and engines), FLIR thermal imaging, a weather radar and a greatly improved navigation system which allows take-off and landing in very low ceiling and visibility conditions."

IMPROVED OPERATIONAL CAPACITY

The 4-axis autopilot also provides invaluable assistance for pilots in critical situations, allowing manoeuvres which were previously restricted or very difficult to execute. Furthermore, the NH90's power plant expands the operational envelope beyond that of the HD.21. It offers cruise speeds of 150 knots compared to the 120 knots of the Super Puma with similar consumption, which reduces the time needed for missions and expands its radius of action. This and other features, such as the electro-optical system, the double hoist, the TACAN, an improved electronic warfare system, the folding blades of both the tail and main rotor, the rear ramp and hatch and the integrated TopOwl helmet, ensure the NH90 can operate in any scenario required by the Spanish Air Force, as well as allowing interoperability with the Spanish Navy. "The incorporation of the NH90 by the Spanish Air Force constitutes a major leap forward in terms of mission planning and execution. Its fully digital cockpit provides pilots with all the information they need, while the automatic mission planning system facilitates preparation of ground missions, easing pilot workloads by transferring information directly to the helicopter's systems. The 48th Wing is therefore very keen to get started with the NH90. While we're fully aware of the effort required to implement a new weapons system, we also know it will be more than worthwhile due to the enhancement of the 803rd Squadron's operational capacity for the execution of its key roles (personnel recovery, special aerial operations and SAR/MEDEVAC missions)," summed up Colonel Gonzalo Martí.

1- BHELMA III: 3rd Manoeuvre Helicopter Battalion.
2- FAMET: the Spanish Army Airmobile Force.

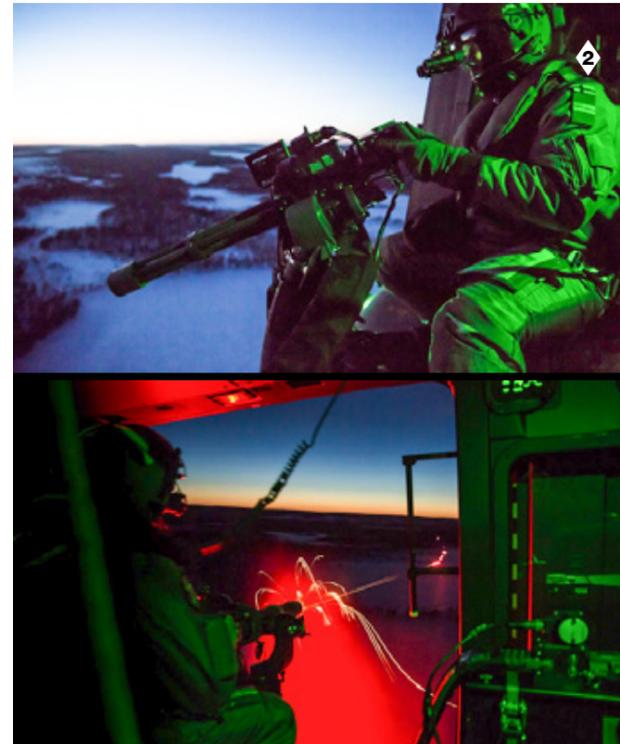
FINLAND

Where snow giants play

The Finnish Defence Forces use the NH90 in the country's cold, dark winters—proof it's able to take a beating.

Article: Heather Couthaud
Photos: Finnish Defence Forces

At minus-30° C, there's little room for waiting around. Either you're prepared or you suffer. Either your helicopter starts or you pack it in. It is the former for the Finnish Army, where wintertime in the northern latitudes promises below-zero temperatures, permanent snow cover, and less than six hours of daylight on the shortest days. In this unforgiving terrain, the army operates NH90 TTH helicopters from its base at Utti, near Finland's southern coast. In 2015, the Finnish Defence Forces received their 20th and final NH90 as part of a fleet replacement programme, retrofitting them over the next four years to become one of the first NH90 user nations with its fleet 100% at final operational capability. As the only armed forces branch with a helicopter regiment (the Border Guard also operates rotorcraft), the Finnish Army is called on for the



whole spectrum of missions. Special Operations Forces (SOF) make up the bulk, but they support all three branches as, for example, the Army with troop and cargo transport, the Air Force with search and rescue and, in a year's time, the Navy with tactical sea mine drops. On the civil side, the Army supports law enforcement, as well as the national health system doing medevac and search and rescue. Not to mention firefighting with the Bambi bucket.

WIND, SLEET, SNOW, AND ICE

But it's winter now, and the fleet is on its way to Lapland for its yearly cold weather training. "We leave the NH90 outside, and it might drop to minus -40° C," says Lieutenant Colonel Kimmo Nordberg, Chief of Army Aviation, who's flown 1,300 flight hours on the NH90. "Then we power it up over the course of an hour and start operating. We also use it to make deep snow landings. The northern forests can have more than a metre of snow." The NH90s are equipped for the cold with a de-icing system on the horizontal stabiliser and anti-icing on the windshield, rotor plates and the engine air intake. "We can fly in IFR inside the clouds, even if there might be medium to severe

icing. Beyond icing rain, which happens rarely, we haven't suffered with icing conditions; it flies very well," says Lt Col Nordberg. The Land of a Thousand Lakes also boasts exceptionally dark winters, for which the crew dons night vision goggles in the cockpit.

SHARP AND EASY TO FLY

Winter training with the special forces means transporting up to 15 troops* per helicopter, plus their equipment. It also means bringing along their snow mobiles with another NH90. "We can take those onboard or lift them up outside of the helicopter," says Lt Col Nordberg. Two powerful engines add an element of security not only in combat, but in the north's unique landscape. "Finland has 180,000 lakes. When you get airborne all you see is forest and lakes," says Lt Col Nordberg. "The NH90 is fast and you can fly a long time and a long distance without having to refuel." Deprived of the luxury of mild weather, the Army's pilots rely on an accurate 4-axis autopilot helped by a fly-by-wire system. Such precision is particularly useful in poor visibility or when doing a whiteout landing. "If you use your stick and take a 60° bank angle, the helicopter reacts immediately," says Lt Col Nordberg. "It's sharp and easy to fly, with a lot of systems we're continually improving in."

*The NH90's seats-out configuration allows the army to transport 10 to 15 SOF troops plus equipment. Two snow mobiles and up to four men fit in a second NH90.



- 1:** The Finnish Army is testing a new camouflage paint scheme for the NH90 in Finland's forests and snow.
- 2:** The Finnish Defence Forces practice nighttime live firing missions as part of SOF training.
- 3:** During mock-operational exercises, the NH90's crew have recourse to a rapid-fire door gun for self protection and self defense systems such as radar warnings, laser warnings, chaff and flares.

"We haven't suffered with icing conditions; the NH90 flies very well."
Lieutenant Colonel Kimmo Nordberg,
Chief of Finnish Army Aviation.

NEW ZEALAND The NH90 on every front

Intensive helicopter use: the NH90 enables the Royal New Zealand Air Force to meet a wide range of operational commitments.

**Article: Alexandre Marchand
Photos: Ned Dawson**

The Royal New Zealand Air Force (RNZAF) retired its fleet of UH-1H Iroquois in 2015 and now operates NH90s. The RNZAF was looking for a very versatile helicopter and that is exactly what it found with the TTH variant of the NH90. The eight aircraft purchased are being used today by No. 3 Squadron based in Ōhakea, on North Island. They are few in number, but their versatility enables them to handle a wide range of missions: from traditional military operations to support for different government agencies, including search and rescue as well as maritime operations, in the latter case with the NH90 embarked on the New Zealand Navy's multi-role vessel, HMNZS Canterbury.

"No. 3 Squadron is quite unique in the range of roles it undertakes with one unit and one helicopter type," says Air Commodore Shaun Sexton, Air Component Commander of the Royal New Zealand Air Force. "Therefore, broad utility and suitability for a wide range of environments was important. The RNZAF has found that the large NH90 cabin is suitable for its troop lift and cargo-carrying requirements and that the rear ramp can be useful in these roles. The full de-icing capability is useful when flying under instrument conditions during the New Zealand winter. The NH90 range and endurance, with its capacity to carry additional



1

1: The versatility of the NH90 enables the RNZAF to handle a wide range of missions.

2: In 2020, a detachment of New Zealand NH90s operated in New South Wales and the Australian Capital Territory in support of the Australian Bushfire Relief operation.

tanks both inside and outside the cabin, is also appreciated for its long-range over-water transit or when operating in remote regions without easy access to fuel. We have found the power and controllability advantageous when operating in New Zealand's mountains, which can be very turbulent."

SUPPORTING PEOPLE

Essential for military operations, the versatility of the NH90 is also a top tier asset when the aircraft is involved in supporting civilians, and there is certainly no lack of opportunities. In November 2016, No. 3 Squadron responded with its aircraft to evacuate several hundred people after the major Kaikoura earthquake. With roads rendered impassable, evacuation by air was the only way in or out.

Another important event was the evacuation of tourists and hikers who suffered burns during the White Island volcanic eruption in 2019.

A detachment of NH90s was also sent to Australia (another country using the aircraft) in 2020 to assist local firefighters in their battle against bushfires.

On every mission, across all terrains, the NH90 is prized for its qualities in flight, performance levels, the redundancy of its on-board systems and, as a result, its very high level of safety. "The NH90 was a two-generation step forward for the RNZAF rotary wing fleet," notes Shaun Sexton, "so it was normal that the air crew have found it easier to fly than the Iroquois, although the more complex mission systems require more of a mission management focus. They also appreciate the high levels of safety and redundancy in the NH90 design and certification. For example, the NH90 has proven itself capable of operating in a very wide range of environments, such as being embarked on the multi-role vessel, HMNZS Canterbury, and flying in New Zealand's mountainous regions."

A level of sophistication that has its benefits, as New Zealand pilots highlight, because besides the high level of performance, says Shaun Sexton, "the NH90 is an attractive recruiting tool as it offers a challenging and rewarding career choice, and the RNZAF has no problems recruiting staff to support the NH90."

THE RNZAF SHOWS SATISFACTION

No. 3 Squadron of the Royal New Zealand Air Force (RNZAF) has eight NH90s with 12 crews, each including two pilots and two loadmasters. Line maintenance is carried out by the unit's 61 technicians, while the 600-hour inspections are handled by a dedicated team of 13 people that includes both military personnel and members on contract from Airbus Helicopters. Although based in one of No. 3 Squadron's hangars, this team isn't directly attached to the squadron. The close relationship with Airbus Helicopters also makes it possible to benefit from efficient support and a very good level of availability, despite the geographical distance and small size of the fleet. Furthermore, the RNZAF is looking forward to the implementation of the transformation plan and management of obsolescence as a precursor to even closer support, for example by making greater use of regional maintenance solution providers.

2



NH90

The NH90 helicopter is a multi-role aircraft designed to meet the most stringent NATO standards. Developed in two versions – tactical troop transport (TTH) and NATO frigate helicopter (NFH) – the NH90 contains a unique, fully integrated mission system for operations in the most demanding conditions over land and sea, day and night.

-  Common platform for all missions
-  Highly survivable
-  Versatility and flexibility

Caiman Standard 2

Combat proven since 2010, the NH90 TTH can be rapidly reconfigured between missions including:

- | | | | | | | |
|--|-------------------------|--|---------------|--------------------------|--------------------|------------|
| Troop transport with a 20-seat configuration | Light vehicle transport | Casualty evacuation with 12 stretchers | Cargo airlift | Armed tactical transport | Special operations | Combat SAR |
|--|-------------------------|--|---------------|--------------------------|--------------------|------------|

DAS(distributed aperture system): Improves degraded visual environment conditions

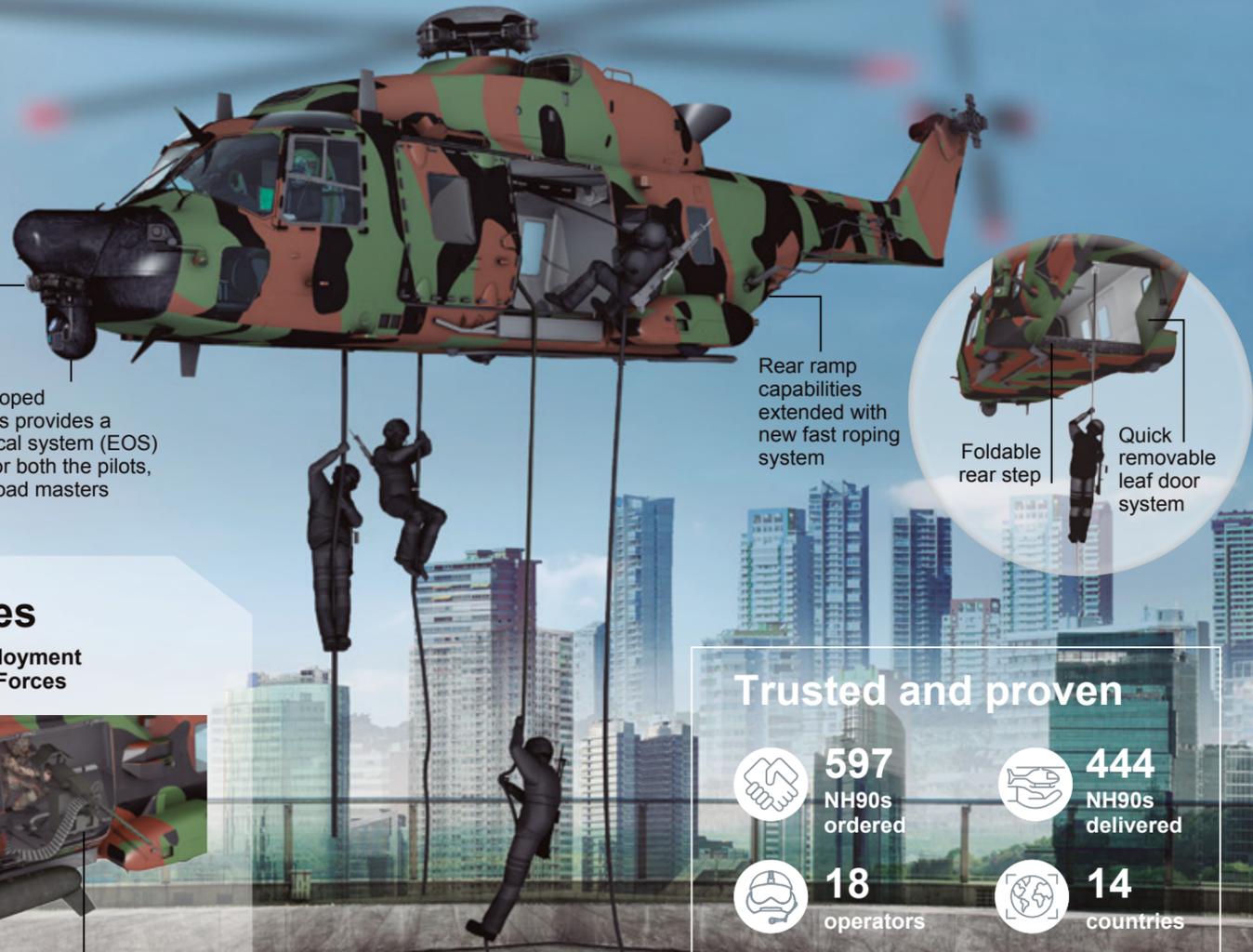
EOS: The Standard 2 developed for the French Armed Forces provides a new-generation electro-optical system (EOS) with displays and controls for both the pilots, commandos, gunners and load masters

Special Forces

Standard 2 will start deployment with the French Special Forces



Additional 500 kg external fuel tanks (EAFT)
2 M3M 0.50 machine guns from lateral doors



Rear ramp capabilities extended with new fast roping system



Foldable rear step
Quick removable leaf door system

Trusted and proven

-  597 NH90s ordered
-  444 NH90s delivered
-  18 operators
-  14 countries
-  291,900 flight hours accumulated

Search and rescue

Search and Rescue in the most demanding conditions is one of the main specialties of the NH90. It is equipped with state of the art sensors for good situational awareness in order to quickly locate and rescue people needing immediate assistance.



Day and night operations from frigate size vessels in strong winds and high sea states

- Single or dual rescue hoist
- Redundant fly-by-wire controls for increased flight safety
- Unobstructed cabin with a complete medical care suite

Disaster relief missions

Disaster relief missions have been carried out in the Philippines, Vanuatu, Timor, Fiji, the Caribbean, Italy and New Zealand.

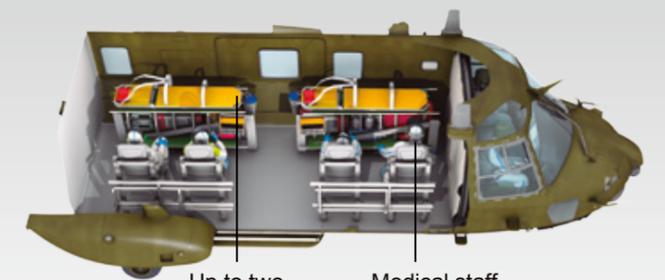


Operations in all weather and in nuclear, chemical and biological hazard environments

- Unrivalled level of versatility
- Wide modular cabin
- Large sliding doors

COVID-19 crisis

During the COVID-19 crisis, NH90 helicopters were used to evacuate patients from overwhelmed hospitals to less affected areas.



Up to two oxygenated patients
Medical staff (one or two doctors and two nurses)



The global NH90 fleet
will achieve 300,000 Flight
Hours in the near future.

SPAIN MADRID IS IN SAFE HANDS

Article: Belén Morant – Photos: Eliance

In November 2020, Eliance began providing helicopter emergency medical services (HEMS) under its contract with the SUMMA 112 service in Madrid, with two H145s replacing the AW109 and the Bell 412 previously in service. After four months of intense work, Guillermo Sáenz, chief pilot on the H145 and Contract Manager for SUMMA 112, recently told *Rotor* all about this new service.

“When it comes down to it, right now the two main platforms available on the market for HEMS operations are the H135 and the H145. For Madrid it had to be the H145 due to the high altitude and temperatures,” says Guillermo Sáenz, explaining the decision by Eliance to put forward their H145s in the tender announced by the Autonomous Community of Madrid’s emergency medical service, SUMMA 112.

“It’s a question of the helicopter’s performance: although it may come as a surprise, Madrid is located at a very high altitude and the temperatures soar in summer. Our base in Lozoyuela is located at 3,500 feet, while our second base at Las Rozas is at 2,400 feet, and the temperatures can easily top 30°C in summer. We needed a very powerful helicopter that met both the demanding requirements of our customer and European HEMS performance requirements, and all with the minimum possible sound levels given that these activities are carried out in Madrid. We saw the H145 as the way forward.”

EXACTING REQUIREMENTS

Another peculiarity of this contract with the SUMMA 112 service is the five-person crew



1: Efficient loading of stretchers through sliding side doors or rear clamshell doors facilitate patient comfort and safety.

2: Madrid is located at a very high altitude and the temperatures can easily top 30°C. In these circumstances, the power of the H145 is necessary.

**GUILLERMO SÁENZ,
H145 EMS PILOT FOR ELIANCE**



“We needed a very powerful helicopter that met the demanding requirements of our customer and all with the minimum possible sound levels given that these activities are carried out in Madrid.”

Guillermo Sáenz, H145 EMS pilot for Eliance

instead of the usual four. In addition to the flight paramedic and flight nurse, missions in Madrid also include a medical technician and a HEMS crew member, who assists the pilot by checking the safety of landing zones, watching for cables and ensuring the safe embarkation and disembarkation of medical personnel. The extra weight of this fifth crew member, together with the medical equipment on board, make adequate power a must.

“All the H145s are fitted with the Bucher AC70 medical kit directly from the factory, which greatly ...

After 17 years with the Spanish Air Force flying the H120 in the ASPA acrobatic patrol and the AS332 Super Puma for SAR/CSAR missions, including rescue operations in the Antarctic and Afghanistan, Guillermo Sáenz decided to make the switch to civil missions. However, he continued to work in the field of SAR and HEMS, which he considers to be his vocation. He previously flew an H135 with the Asturias Firefighting Rescue Unit, an H125 for wildfire responses and the Lama for high mountain missions in Argentina. Sáenz began flying the H145 in Madrid only four months ago. In total, he has amassed an impressive 6,560 helicopter flight hours.

In order to become a HEMS pilot, Sáenz completed mandatory basic first-aid training. “Sometimes we may be the only people who can take action in an accident situation and have to lend a hand, whether to immobilise the patient, insert the IVs or place a neck brace... It’s also important to have some basic medical knowledge later on during the flight. Depending on the patient’s condition, we may have to fly one way or another, perhaps at a higher or lower altitude or avoiding turbulence... The H145 is fantastic in this sense because it has very low vibrations. This greatly enhances patient comfort, especially in the case of multiple trauma.”

... facilitates the helicopter's ergonomics and includes all the equipment necessary for critical care. All the medical equipment we carry is stipulated in the contract with SUMMA 112 and it is also compatible with the equipment used in their intensive care units, meaning that they are interchangeable should the need arise," explains Sáenz.

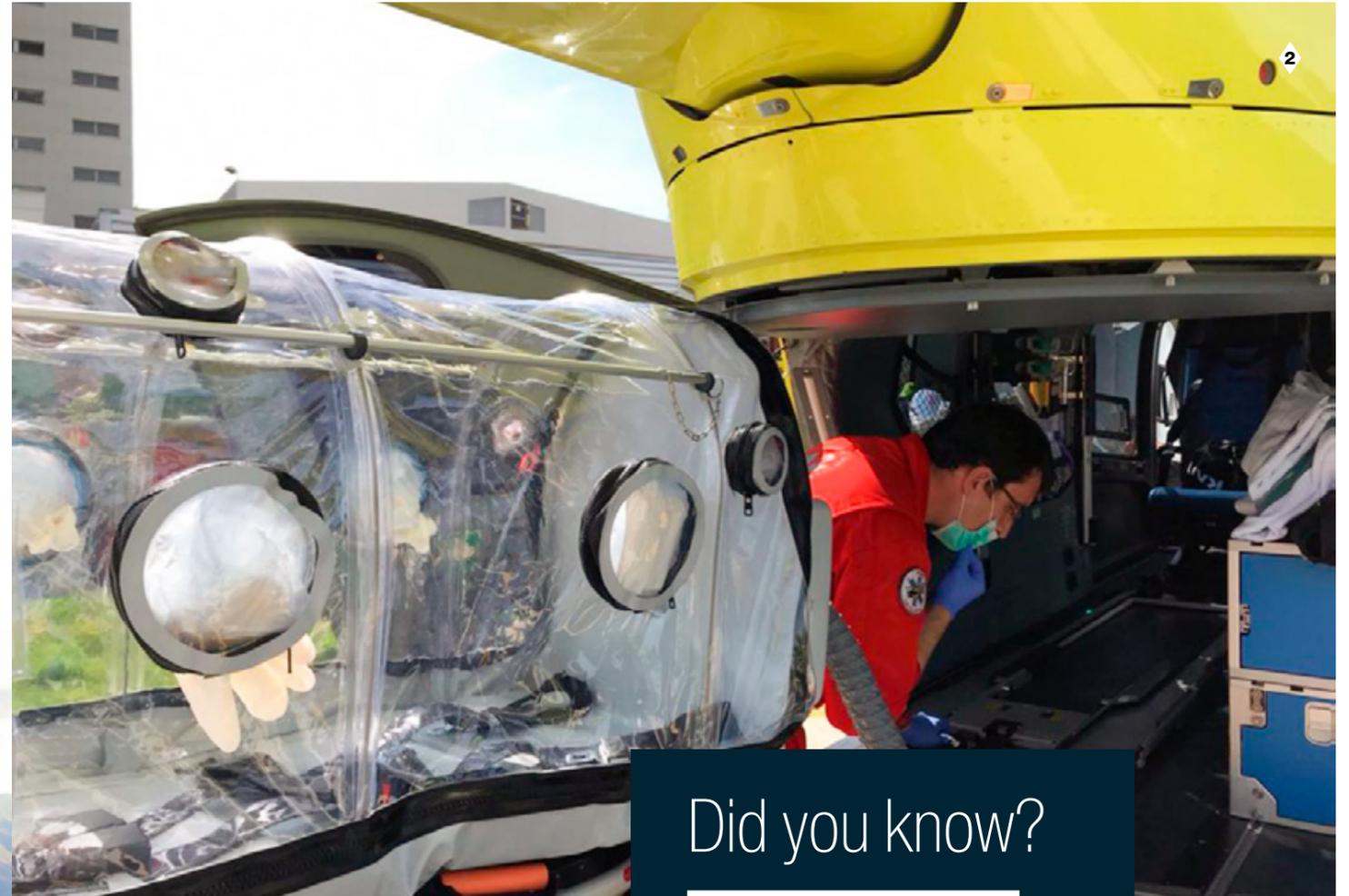
EMS DURING COVID

To date, the H145s have clocked 150 flight hours comprising both primary and secondary missions and periodic training of medical personnel, with a total of around 100 missions in Madrid. The new helicopters have been well received by the

population, especially due to their low sound levels. "So far, 98% of our operations have been primary missions.* On weekends, people get out to take advantage of the good weather and we have a lot of accident situations involving cyclists, hikers and mountain-sport enthusiasts. Meanwhile, on weekdays we mainly get called out for industrial accidents and situations in small towns and outlying areas when time is of the essence, such as seizures and heart attacks," says Sáenz. The Autonomous Community of Madrid has had to close its borders due to the COVID-19 pandemic, meaning that traffic accidents have decreased considerably. Inter-hospital patient transfers have also been reduced to the absolute minimum.

1: The new Helionix avionics suite allows safe and easy HEMS operation under challenging conditions.

2: SUMMA 112 has also been performing COVID-19 patient transfers due to a lack of hospital capacity in Madrid.



Did you know?

In all HEMS configurations, the paramedic must be in a position that allows them to access the patient's airways, except in the case of neonatal transport, when they must be able to monitor additional parameters such as the saturation levels, perfusion pumps and incubator temperature.

"We've been called on to perform COVID-19 patient transfers due to a lack of hospital capacity, but only in isolated cases," says Sáenz. A strict protocol is applied to carry these patients, including an anti-COVID-19 screen developed by Airbus that separates the cockpit from the HEMS cabin, personal protective equipment for all the crew and medical personnel, and above all, disinfection of the helicopter and equipment back at the base after completing the mission. "A couple of weeks ago we were called out by the emergency medical centre after a mountain biker suffered an accident late in the day as the sun was going down, in a location that ambulance services were unable to reach. We took on the mission, even though we knew we wouldn't have time to make the transfer to the hospital. It was in a low mountain zone and we made a partial touchdown

near the accident site to drop off the medical team so they could look after the patient until other resources could reach the zone. That person received medical assistance a matter of minutes after the call went out, something that would have been impossible without the SUMMA helicopter," Sáenz sums up with satisfaction.

* Primary missions are deployed at the site of the accident, while secondary missions consist of inter-hospital patient transfers.



MOZAMBIQUE STORM ELOISE CAN'T DAMPEN MOZAMBIQUE SPIRITS

Article: Heather Couthaud – Photos: Mercy Air

Mercy Air's H125 helicopter was one of the first aircraft on scene delivering supplies to victims of Cyclone Eloise in Mozambique. Below, *Rotor* tells the story.

“The dedicated work of our team made it possible to reach the Mozambique and Eswatini people in their hour of need.”

Matthias Reuter, helicopter pilot and Head of Mercy Air Helicopter Operations.

On 22 January, the inhabitants of Nhamasinguere in coastal Mozambique watched clouds black with rain roll in from the east. They hoped the storm would pass them by. Already, they'd had enough rainfall these past weeks that squelching through the mud in flip flops was becoming normal. They were lucky; areas further south were still flooded. But the storm gathered strength, making landfall in the night and filling the air with a flurry of rain and the sound of wind whipping the palm fronds. Roofs ripped off huts, sending families running through the eerie dawn to shelter with neighbours.

LEFT WITH NOTHING

In the morning, the devastation was shocking. Across Mozambique and Eswatini (formerly Swaziland), 80 mm to 100+ mm of rain fell during the worst of Cyclone Eloise, causing flash floods, landslides and widespread destruction. More than 300,000 people were affected in Mozambique alone, hundreds of classrooms and medical centres

were damaged, crops flattened and thousands left without shelter or food.

AID ON THE WING

Within the first days after the storm, help was already there. Mercy Air, a nonprofit humanitarian relief organisation, had been in the area earlier that week when Mozambique's National Institute for Disaster Management and Risk Reduction (INGD) had requested the organisation's aerial support in anticipation of the storm.

After sheltering their H125 helicopter and two fixed wing planes in a hangar to wait out Eloise, Mercy Air's crews got into the air. From 21 to 31 January, they flew assessment flights and supply drops for an area covering a 200-km radius from Beira to Eswatini.

Thirty-eight flight hours, on urgent aid missions. They transported personnel from disaster response teams and the World Food Program, who would set up accommodation centres and emergency food

MERCY AIR

Founded: 1991

Activity: Humanitarian, disaster and emergency response; medical, educational and agricultural community outreach

Bases: South Africa, Mozambique, Eswatini

Fleet: 3 H125 helicopters, 1 turboprop and 1 light-twin fixed wing aircraft

Regions of operation: Eswatini, Mozambique, Botswana, Namibia, Lesotho, Zambia, Angola, Malawi, Zimbabwe and South Africa



tents. They flew government authorities overhead to analyse the state of rivers, roads and bridges. They worked with INGD on aerial survey flights, which formed the basis for geo-tagged maps* that would be put online to help disaster response personnel to focus on the worst-hit zones. And they flew in food such as fortified maize meals and tarpaulins, some by external load. The work didn't stop.

The result was five accommodation centres set up and some 5,000 families lodged and fed within a week of the storm. “The dedicated work of our team made it possible to reach the Mozambique and Eswatini people in their hour of need. Mercy Air's H125 enabled relief in a region where distance and disabled infrastructure made other forms of access difficult,” says Matthias

1: Mercy Air regularly collaborates with government agencies and nonprofit organisations in the aftermath of natural or humanitarian disasters.

2: More than 300,000 people were affected in Mozambique alone.

3: From 21 to 31 January, Mercy Air flew assessment flights and supply drops for an area covering a 200-km radius from Beira to Eswatini.

Reuter, helicopter pilot and Head of Mercy Air Helicopter Operations.

WHEN ROADS DON'T SERVE

Mercy Air regularly collaborates with government agencies and nonprofit organisations in the aftermath of natural or humanitarian disasters. Their mission is to increase the “effectiveness, economy and impact” of assistance efforts. For this, the intermediate single-engine H125 is a model asset, bringing aid in a matter of hours—especially when, as during Eloise, washed-out roads and bridges make ground transportation impossible for days. The H125's 140-kt cruise speed and 1,400-kg sling capacity mean it fits Mercy Air's various tasks, from passenger transport to carrying supplies—not to mention a reliability that allowed it to land in soggy fields and keep up its solo work for ten days running.

READY FOR A SECOND ROUND

The team is multi-national. Two Swiss helicopter pilots, British and Swiss fixed wing pilots, a German mechanic, a Swiss flight assistant and a British operations manager work with four local Mozambique staff to coordinate flights, logistics and maintenance. Mercy Air's work continues as this issue goes to press, with a second intervention planned in the coming days, the familiar sound of rotors signaling that help is on the way.

*Geo-tagged maps were made by the Mission Aviation Fellowship from Nampula, Mozambique. They geo-tagged aerial images overlaid onto interactive “esri” maps.



CHILE

FIREFIGHTING WITH THE H215: A 365-DAY MISSION

Article: Renata Ahumada

Wildfires are a constant global threat nowadays, with only their severity varying depending on the seasons in each hemisphere. Air Lama, Horizon Helicopters and Heli Austria have now forged an alliance that spans the globe in order to carry out firefighting missions in Chile with the H215.

South America and Africa together account for two thirds of the total forest area destroyed by wildfires. These two regions suffered a combined annual rate of net forest loss of 6.5 million hectares in 2010-2020⁽¹⁾. Chile is one of the countries most severely affected by this problem. One of the worst wildfires on record in 2017 ravaged some 600,000 hectares of forest and killed 11 people. Now Chile is struggling with wildfires again, so they have brought in international help.

A GLOBAL FIREFIGHTING ALLIANCE

This year, two Super Pumas arrived in Chile through local operator Air Lama, one owned by Canadian company Horizon Helicopters and another by Heli Austria. Their aim: to pool their resources to carry out firefighting missions in Chile.

Heli Austria's H215 was the first to touch down in the country, while the "FireCat" operated by Horizon Helicopters arrived later on in February 2021 by boat. Both these helicopters are based at the Air Lama facility in Colina, located a few minutes from the capital city, Santiago de Chile. From there, they have been deployed in regions across the country to battle over 5,500 wildfires during 2020-2021.

THE SUPER PUMA: A TIRELESS WORKHORSE

"The national market in Chile doesn't have the capacity for operators to have a helicopter of this calibre year-round to battle the flames as this

affects profitability if it is only occupied for the season," explains Xavi Vilaró, CEO of Air Lama. The company opted to bring the H215s in from Canada and Europe. "In the heavy helicopter segment, the H215 clearly leads the field in terms of the number of firefighters it can carry and its 4,000-litre water discharge capacity. It also has the longest range in its category. Our customer, CONAF, is more than satisfied."

"The H215 is more cost-efficient compared to bigger helicopters like the Chinooks so our

1: Heli Austria already performs firefighting in Sardinia, Italy.

2: Air Lama has been actively involved during the 2020-2021 firefighting season with two H215s operated by Heli Austria and Horizon Helicopters, showcasing this helicopter's excellent mission performance and cost effectiveness.



1

© Air Lama



2

© Air Lama

In their words

"Working with the H215 on firefighting missions year-round allows us to make better use of the helicopter, particularly in the off-season for Europe."

Roy Knaus, CEO of Heli Austria.

"There's a great synergy between all three companies, and the country's geographical location in the southern hemisphere allows us to provide the essential services required by the Chilean government."

Cole Hodinski, Operations Manager, Horizon Helicopters.

"The H215 is a highly manoeuvrable helicopter with outstanding performance, so it handles adverse meteorological conditions such as turbulence particularly well."

Xavi Vilaró, CEO of Air Lama.

customer in Chile is very happy," explains Roy Knaus, CEO of Heli Austria, who has prior firefighting experience with the Super Puma in Sardinia. "We hope to use Super Pumas more for firefighting operations around the world on the back of our experience in Italy and Chile." "The Super Puma is a very fast and powerful multi-mission rotorcraft, making it highly effective for firefighting operations. It can be reconfigured quickly to handle any situation we may be tasked with," adds Cole Hodinski, Operations Manager at Horizon Helicopters. "We're proud to have this opportunity to work together to provide first-class firefighting services in Chile."

TWO HELICOPTERS, TWO HEMISPHERES

This is the first time that helicopters from Europe and Canada have worked together in Chile under the same operator to help fight wildfires in the country, an operation that proved particularly delicate due to the restrictions posed by the COVID-19 pandemic. "We had to ship the helicopters from Europe to Chile. The COVID-19 situation meant we had to overcome a number of hurdles, including quarantine restrictions and issues with work permits. The language barrier has been less of a problem because our partner Air Lama has excellent co-pilots," says Roy Knaus. "As for the logistics, we're quite used to operating the H215 off



3

© Horizon Helicopters

a main base. The big advantage with this rotorcraft is its excellent reliability."

"For the moment, there aren't enough flight hours for firefighting operations year-round, but we're also seeing growth in the mining and electricity sector, where the H215 is also an excellent option," conclude Xavi Vilaró.

3: The "FireCat" operated by Horizon Helicopters arrived in February 2021 by boat.

(1) Global Forest Resources Assessment 2020 – FAO.

A TRANSFORMATION PLAN FOR CUSTOMER SUPPORT

NH90 users are fully satisfied when it comes to the aircraft's performance level. They would, however, like to benefit from better availability. The programme's three industrial partners therefore came together in 2020 to prepare a joint situation report and outline a transformation plan, the only way to really overhaul the helicopter support concept.

Article: Alexandre Marchand

A PRIORITY FOR EVERYONE

The transformation plan and the global perspective it brings to the question of support is now a priority for NHIndustries and its partners. This can be seen in the significant personnel and financial resources allocated to ensure its success. "We are putting a lot of energy into dealing with support, with highly motivated teams and above all, a high level of commitment," stresses Nathalie Tarnaud-Laude, Head of the NH90 programme at Airbus Helicopters and President of NHI since 2019. The transformation plan has not only been given the green light by all manufacturers involved, but its progress is also being monitored directly by management teams. "The objective of the plan, which is to improve availability rates over the next two years, is shared and tracked closely at every level of the company," outlines Vanessa Schmidt, VP NH90 Program Support Office at Airbus and Deputy Head of Product Support at NH Industries.



© Anthony Pecchi



© Anthony Pecchi



NOTHING WILL HAPPEN WITHOUT THE CUSTOMER

Improving the repair cycle is of course an industrial objective, but it cannot be achieved without close cooperation with the customer, in the most practical way possible. Over the last few weeks, the objectives, initiatives and methods that have been established have been presented in a very transparent way to NH90 nations and end users. They are also kept informed on a regular basis of the progress that is being made. "Our customers want only one thing: concrete actions. We are therefore committed to delivering tangible results," concludes Nathalie Tarnaud-Laude.

WELL IDENTIFIED AREAS OF EFFORT

The transformation plan includes a total of 22 initiatives dealing with very concrete issues, along two main areas of work: reducing the maintenance load and improving the availability of repairs and spare parts. Reducing the maintenance load involves revising the entire process, improving the intervals both for standard maintenance and parts. "We are working on furthering existing potentials, for example by extending 600-hour inspections to 900 hours, and gearbox overhaul intervals from 1,200 hours to 1,800 hours," explains Nathalie Tarnaud-Laude. Increasing aircraft availability also involves reducing the time spent on retrofit work, which is sometimes deemed excessive. "We are also aiming to increase the volume of completed repairs with the support of our network and, when it makes sense, directly at the customer's premises," specifies Vanessa Schmidt. The availability of parts, and especially critical parts, is another essential aspect of the transformation plan. "We have implemented a close – week-by-week – follow-up of the availability of these parts," states Nathalie



© Anthony Pecchi

Tarnaud-Laude. "COVID-19 has put some of our suppliers in a very tough financial situation. We are standing by to help them through this difficult period."

GERMANY A GIFT FROM THE SKIES

It's early January 2021, and the COVID-19 pandemic has vast areas of the world held firmly in its grip. In the midst of lockdown, Sonja and Tobias Lammers from Mettingen, just north-east of Osnabrück in Germany, are expecting their first child. What they don't yet know is that they will be welcoming their son into the world earlier than expected – and in a particularly unusual place.

Article: Jörg Michel

The mother goes into labour several days early on 10 January. The parents-to-be speak to the hospital where the child is supposed to be born, and they are advised to contact the emergency services. "Ambulances and other emergency response vehicles as well as emergency response doctors are dispatched according to availability," explains Dr Andreas Küppers, an emergency response doctor at the non-profit ADAC air rescue service (ADAC Luftrettung) and part of the medical team at the Mathias-Spital hospital in the nearby town of Rheine. A decision was made to alert the Christoph Europa 2 air ambulance helicopter, an H135 from the ADAC air rescue service.

UNEXPECTED HELP FROM THE AIR

The deployment of the air ambulance helicopter, which landed in a field directly opposite their home, took Sonja and Tobias Lammers completely by surprise. A 'normal' ambulance also arrived at the same time. "However, we decided to take the mother to hospital in the helicopter," Küppers explained. According to Küppers, the helicopter only needs around five to seven minutes to fly from Mettingen to Klinikum Osnabrück hospital, while by road it would take around 25 minutes. "As we were taking off, I really wasn't expecting things to escalate so quickly – but in the end, that's exactly what happened. We helped to deliver the baby

in the helicopter. A team of midwives from the hospital were waiting for us when we landed at the hospital's helipad and cut the baby's umbilical cord." For mother Sonja Lammers, the birth was a beautiful experience. "I think we'd been in the air for around two minutes when it happened," she recalls. "It was over so quickly, and I didn't feel any pain at all. That was wonderful for me, and of course it's brilliant that it all worked out so well."

AN UNUSUAL PLACE OF BIRTH

Little Martin Timotheus kept the registration authorities busy, too; after all, they had to establish which place of birth should be recorded on his birth certificate. In the end, they decided on Osnabrück, the helicopter's destination.

"It's pretty unusual for a child to be born on board a helicopter. But it just goes to show how

1: Because of its proximity to the Dutch border, this helicopter received the nickname "Christoph Europa 2". The name is intended to make it clear that helicopters do not stop at national borders, instead ensuring care for patients in neighboring countries too.

2: For mother Sonja Lammers, the birth of little Martin Timotheus was a "beautiful experience".

50 YEARS SAVING LIVES

The ADAC air rescue, one of the world's oldest air-rescue organisations, celebrated its 50th anniversary last year. The operator launched its air-rescue services in Germany in November 1970 with a BO105 (Christoph 1) stationed in Harlaching, Munich. Today, ADAC air rescue operates more than 50 rescue helicopters located at 37 bases.

1

Did you know?

With more than 650 helicopters in operation, the H135 makes up around 25% of the helicopter emergency medical services (HEMS) fleet around the world, making it the global leader in this segment. Thanks to its compact build, versatile cabin design and high safety levels, the H135 is the first choice for operations where speed is key. Airbus offers two different innovative, low-weight floor designs that meet demanding HEMS requirements: the multi-functional floor allows for standard seating solutions or HEMS interiors, while the HEMS floor is fully optimised for dedicated HEMS use.

important it is to be equipped and well-prepared for any eventuality, however unlikely," says Stefan Bestle, an air-rescue expert at Airbus Helicopters. "Neonatal transportation with the help of transport incubators and specialised personnel is something that's required again and again on air ambulance helicopters." Jochen Oesterle, spokesperson for the ADAC air rescue service, agrees: "Since we were founded 50 years ago, it has been incredibly rare for an air ambulance helicopter to be transformed into a delivery room. The last case we documented in Germany was 28 years ago. That was in 1992 on the 'Christoph 1' air ambulance helicopter stationed in Munich. It's currently a very stressful time for everyone in the emergency services. The crews in particular are often confronted with a lot of suffering. So the birth of little Martin Timotheus in one of our helicopters is a beautiful gift and a wonderfully uplifting moment during the pandemic."



2

BEING FIRST ON THE SCENE NEEDS TOTAL SUPPORT BEHIND THE SCENES.



WE MAKE IT

Times may be challenging, but you can rely on our dedicated team to ensure every one of the countless individuals who depend on us, can rise to that challenge. Because the best air support deserves the best ground support. Our dedication, expertise and determination have contributed to over 100 million hours in the air. And it's this commitment to teamwork, that makes the team work.

Partnerships. We make it fly.