SAMI PAAKKARINEN / DAN EUROPE

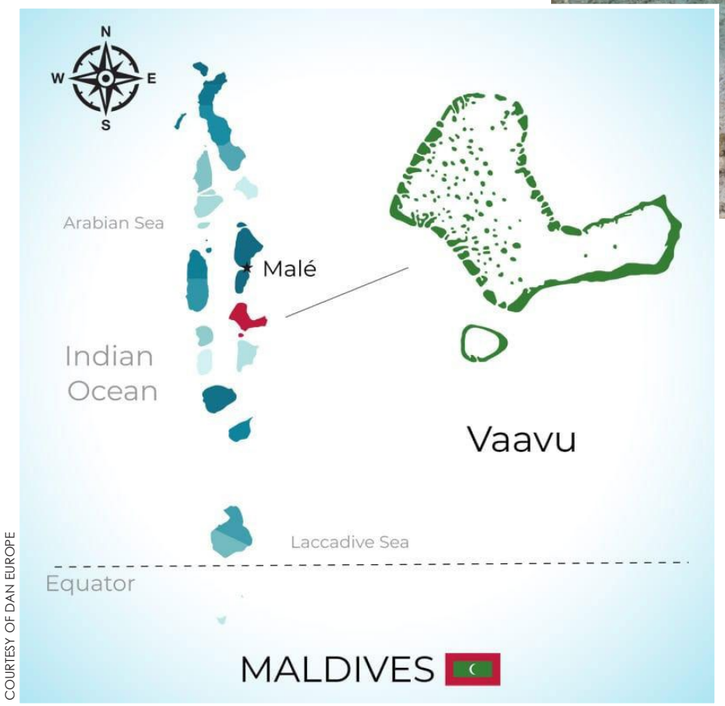
Maldives Recovery

Exclusive Interview With DAN Europe's Laura Marroni & Sami Paakkarinen

Text by Patrick Kranenbroek
Photos by DAN Europe
and Sami Paakkarinen

It made headlines worldwide. Five Italian divers died in a cave in the Vaavu Atoll in the Maldives. On behalf of *DUIKEN* magazine (the biggest diving magazine of the Netherlands and Belgium), editor Patrick Kranenbroek spoke with Laura Marroni, CEO of DAN Europe, and Sami Paakkarinen, a member of the Finnish recovery team.

A member of the Finnish recovery dive team conducting a search in the cave.



COURTESY OF DAN EUROPE

Location of Vaavu Atoll in the Maldives

Laura Marroni, CEO, DAN Europe

First of all, when DAN Europe became aware of the accident, what were the very first priorities in organising the rescue and recovery operation?

We first learnt about a potential accident on the same day, Thursday, 14 May. Our Alarm Centre was alerted that "a group of five divers was missing, as they had not resurfaced on time". As hours passed by, it became evident that something bad must have happened, even though it was still unclear what exactly. There were various theories, including the possibility that the divers had been carried away by the current.

Our first priorities were to understand the operational scenario, establish contact with our local team, the authorities, and determine whether DAN could provide meaningful support. Once it became clear that this was a complex, deep

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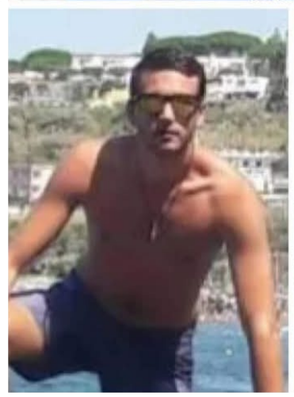
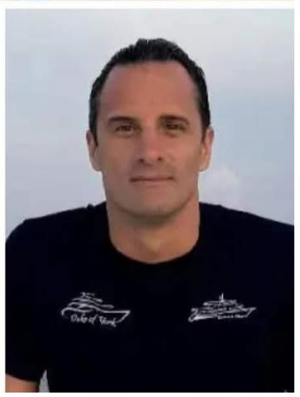
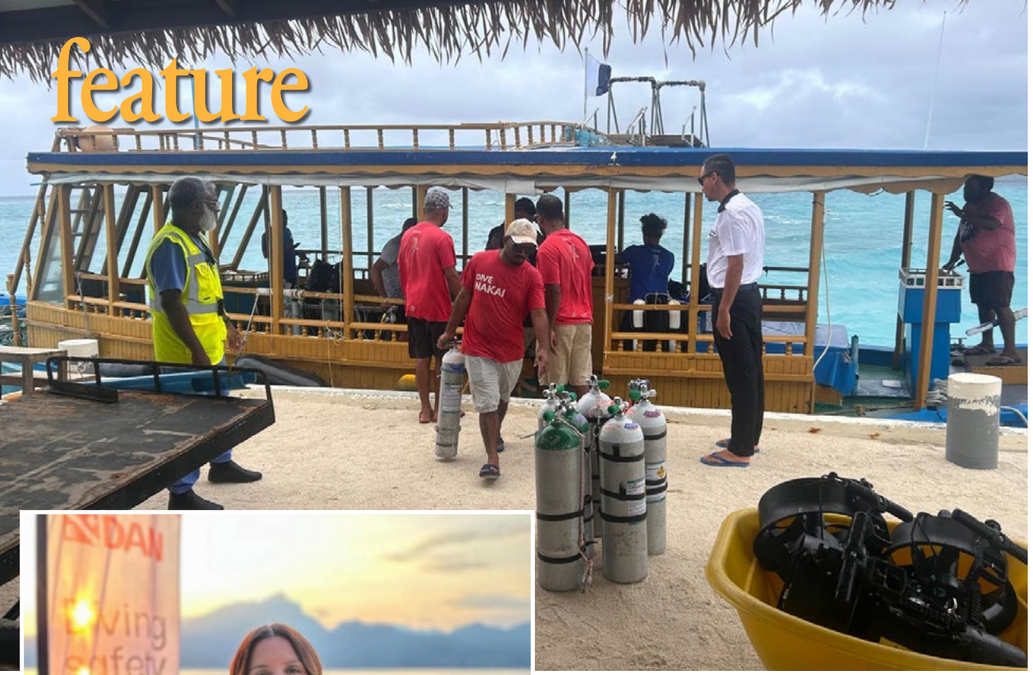




The team of five Italian divers who died in a cave in the Maldives included (clockwise) Monica Montefalcone, an associate professor of ecology at the University of Genoa, her daughter Giorgia Sommacal, instructor Gianlunca Benedetti, researcher Muriel Oddenino and marine biologist Federico Gualtieri.



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Laura Marroni, CEO, DAN Europe

cave recovery case, we focused on three things: identifying the right specialist team, supporting coordination with Maldivian and Italian authorities, and building a medical and operational safety framework around the mission. From the beginning, our approach was guided by two principles: the safety of the rescuers, and the utmost respect for the victims and their families.

Can you describe how the team prepared for a mission at approximately 60 metres depth inside a cave system, and what specific technical challenges such an environment creates compared to open-water diving?

Sami will probably be more specific here. In any case, a dive at 60 metres inside a cave is completely different from an open-water dive. The depth alone requires advanced gas planning, decompression management and tech gear. Then, the overhead environment also changes everything. The preparation includes cave navigation, team roles, gas redundancy, decompression planning, equipment checks, surface support, emergency response and medical readiness.

Which organisations, local authorities, military units, dive teams, or international specialists were involved in the operation, and how was coordination managed between all parties under such difficult circumstances?

The mission was carried out through close coordination between DAN, the Maldives National Defence Force (MNDF), the local Police Service, the Finnish rescue team, local logistics and diving support teams, medical partners, and the Italian Ministry of Foreign Affairs through the Embassy and Consular network.

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The recovery mission involved DAN, Maldives National Defence Force, local police, the Finnish rescue team, local logistics and dive support teams, medical partners and the Italian Ministry of Foreign Affairs through the Embassy and Consular network, said Laura Marroni, CEO of DAN Europe.

DAN coordinated the international search and recovery team, and provided medical, operational and logistical support. The Maldivian authorities remained responsible for the local operational framework and investigation.

From a safety and operational perspective, what were the greatest risks facing the rescue divers during the mission, both physically and psychologically?

When you deal with greater depth, decompression exposure, and overhead environment (including restricted passages, entanglement hazards, possible loss of visibility), things become more complicated from a safety perspective. Locating and transporting victims through the cave system, which presented narrower passages, added to this complexity.

From a psychological standpoint, recovery operations are emotionally demanding, even for highly experienced professionals. This is why we monitored not only physical fitness, hydration, fatigue and decompression-related concerns, but also the overall wellbeing of the team.

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In extreme underwater recovery operations like this one, how important are planning, redundancy and communication protocols, and were there moments during the mission where conditions changed unexpectedly?

In all tech dives, those elements are essential, all the more so when matched with a search and recovery mission. Every critical system must have a backup, and every diver knows exactly what the others are doing. For example, during operations, two divers would often carry out the work, whilst the third member documented the proceedings or assisted the other two.

Conditions also require continuous reassessment. For example, on the final operational dive (the fourth), wind and surface current made conditions more demanding, so the dive was delayed for safety reasons. The dive plan was adjusted accordingly.

Diving accidents in caves often involve highly complex decision-making. How do teams balance the urgency of recovery efforts with the need to protect the lives of the rescuers themselves?

The safety of rescuers always comes first: a recovery mission cannot become a second emergency. Even when there is strong emotional and public pressure, just like in this case (especially after the sudden death of the Maldivian rescue officer), decisions must be made conservatively.

What role did technology play during the operation—for example, mixed gases, rebreathers, underwater navigation systems, decompression planning, or remotely operated equipment?

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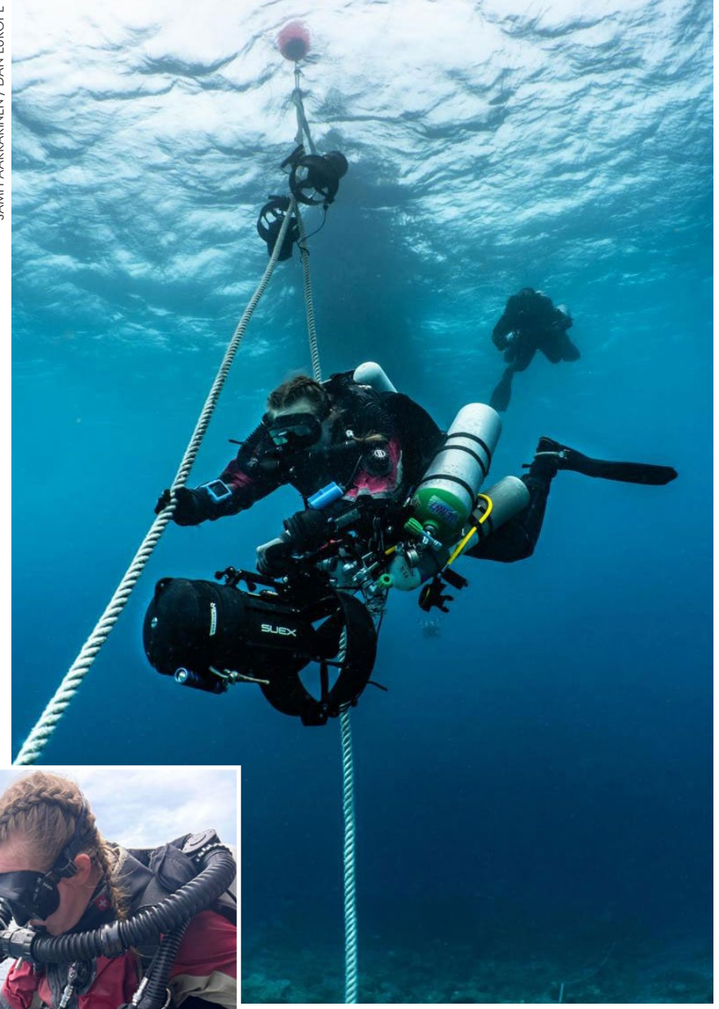

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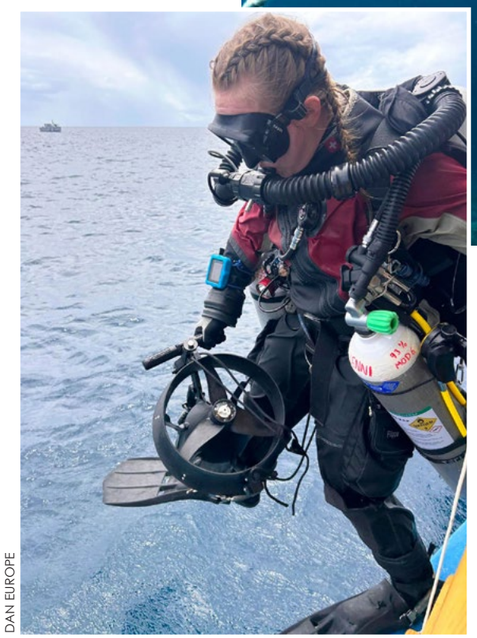
Closed-circuit rebreathers, DPVs and technical diving systems were used by the Finnish recovery team to search the cave.

Technology is almost always crucial in modern technical diving. The Finnish team used closed-circuit rebreathers, DPVs and tech diving systems designed for deep overhead environments.

CCRs allowed the team to operate for extended periods, while reducing gas consumption and optimising decompression. DPVs helped cover distance inside the cave, while reducing fatigue and physiological stress, especially when facing currents in the open water sections. However, technology alone is never enough, as it must be combined with training, procedures and teamwork.

Could you already share more about the cause and circumstances of the accident? There has been a lot of speculation regarding the equipment used by the Italian divers. What kind of equipment were the divers using when they entered the cave?

We understand the need for answers, and we share the diving community's wish to learn from the accident. However, the official investigation is being conducted by the Maldivian Police and the competent authorities. Some preliminary factual information has been shared and are pretty clear: we know that the cave system includes an entrance cavern, a tunnel leading to a second chamber without natural light, and an additional dead-end tunnel branching from that second chamber, where the missing divers were found. However, key evidence (equipment, cameras, dive computers and all recovered materials) has been seized by the authorities. At this stage, we cannot provide a full technical assessment or confirm all equipment configurations, breathing gases, certifications or decision-making factors.



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Looking back at the operation now, what lessons can the international diving community learn from this tragedy in terms of training, preparation, risk assessment and emergency response?

A first lesson is probably humility: the environments we love to explore so much can be unforgiving. Cave diving requires specific training, gear, and experience. Being an experienced open-water diver is not the same as being trained and prepared for an overhead environment. A cave changes the entire risk profile.

A second lesson could concern the importance of verified information. Our community can only learn properly from accidents if

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- Medical Information Line
- Access To Purchase DAN Dive Accident Insurance
- DAN *TravelAssist*® Benefits
- Online Safety Resources
- *Alert Diver*® Magazine
- Medical & Safety Consultations

DAN membership includes automatic enrollment in DAN *TravelAssist*® and this is only a brief description of the coverages available under that program. Refer to the DAN member benefit handbook for reductions, limitations, exclusions, definitions, and termination provisions. Coverage may vary by state or may not be available in all states. DAN membership alone does not provide coverage for costs of a dive accident; dive accident insurance must be purchased separately for each member.

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facts are collected, analysed and shared responsibly.

I believe this tragedy also showed the strength of the international diving community. Authorities, rescue divers, doctors, logisticians, volunteers and institutions came together in an extraordinary way. That does not erase the pain of what happened, but it reminds us of DAN's deepest mission: supporting divers, advancing safety, and helping the community learn.

Sami Paakkarinen, a member of the Finnish recovery team

When you were on the flight to the Maldives, knowing the complexity and seriousness of the mission ahead, what was going through your mind personally and professionally?

Unfortunately, this was a situation that was all too familiar to us. It was a difficult mission—one that nobody ever wants to face. However, our previous operations had prepared us well, both professionally and emotionally. We had already learned how to process and manage those feelings before arriving on scene, which allowed us to remain fully focused on the task at hand. During the flight, my priority was to concentrate on the mission, the team, and the work that needed to be done, ensuring that we could perform at our best when we arrived.

Before entering the cave system, what information did your team have about the conditions underwater, and how did you prepare mentally and technically for the dive?

Before entering the cave system, the information we had was quite limited and fragmented. We had received some reports about the currents in the area and a general idea of the cave's layout, but the details were unclear. It was only after we arrived and were able to interview the local rescue divers that we gained a better understanding of the conditions outside the cave. As for the cave itself, there was no accurate map available. During our first dive, we had to begin mapping the passages ourselves to build a clearer picture of the environment.

Throughout the mission, we maintained close communication with DAN Europe, whose support was invaluable. They helped us gather and verify information, providing an important source of expertise as we assessed the situation and planned our operations. Mentally and technically, we relied on our training, experience from previous missions, and a disciplined approach to managing uncertainty in a highly challenging environment.

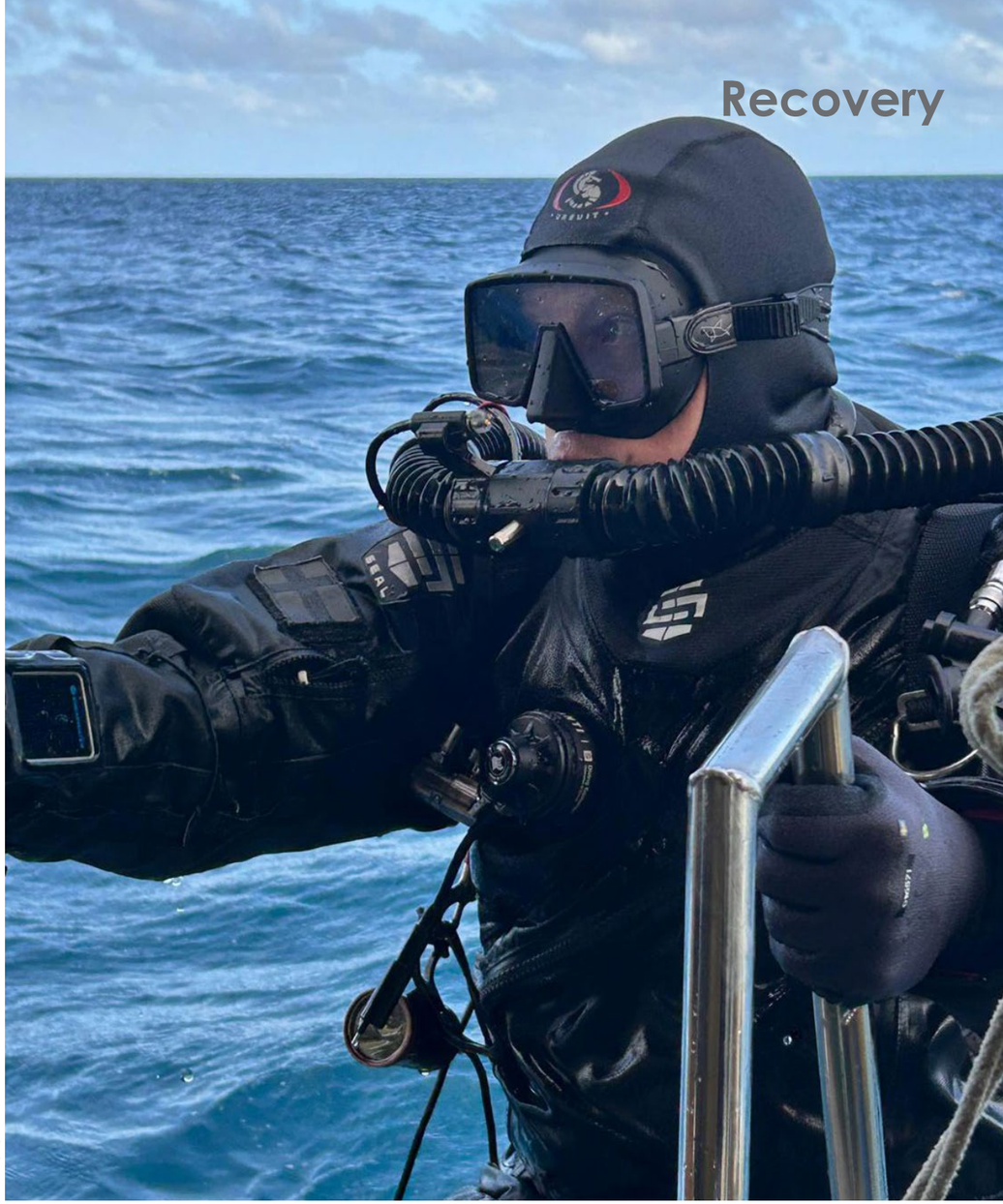
Can you describe the cave environment itself—the structure of the system, the depth, the visibility, the currents, and the specific challenges it created for the recovery operation?

The cave was a true underwater cave system with a complex and varied structure, making navigation both challenging and fascinating. Despite the circumstances of the mission, it was also an exceptionally beautiful environment.

Most of the work took place at depths of around 60–65 metres, with a maximum depth of approximately 70 metres. There was a moderate, outward-flowing current, which added complexity to the operation.

Visibility was generally very good, but any work on the bottom quickly disturbed fine silt, reducing visibility to near zero.

What was the actual descent and search like from your perspective, and at what moment did you realise you had located the missing divers?



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Sami Paakkarinen, a member of the Finnish recovery team (left and right)

The descent itself was relatively straightforward. We used DPV's to travel against the current to the cave entrance and then followed our own guideline into the system.

During the first dive, our primary objective was to map the cave and gain a better understanding of its layout. It was actually during the final ten minutes of our planned bottom time that we located the missing divers.

Finding victims in such an extreme underwater environment must be emotionally intense. What did you feel at that moment, and how do professional rescue divers cope with those emotions during the mission itself?

Even after many years of working on these kinds of missions, the moment of finding the victims always has an emotional impact. It never becomes routine.

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Paakkarinen prepares his equipment for a dive during the recovery mission (left and right).

In this case, the strongest feeling was relief. I had already considered the possibility that we might not find them, so locating the divers meant we finally had answers and could move forward with the mission.

How difficult was the recovery and extraction process at approximately 60 metres depth inside a cave system, and what were the biggest technical dangers during the operation?

Recovery operations like this are never easy. There are many people depending on a successful outcome, but the highest priority is always the safety of the recovery team. The worst possible outcome would be losing a rescuer during the mission.

The technical challenges came from the depth, the cave environment, and the need to work methodically without compromising safety. These factors require careful planning and strict adherence to procedures.

In many ways, the most difficult recoveries are those involving someone you know personally, because the emotional pressure can be immense. In this case, however, we were confident in our abilities, our plan, and our team's capability to complete the mission safely.

How did the cooperation with the Maldivian rescue teams, local authorities, and the international teams work in practice, especially under the pressure of time and difficult conditions?

The cooperation was outstanding, and the mission simply would not have been possible without the support we received from so many people and organisations.

A huge amount of credit goes to DAN Europe and the Embassy of Italy in Maldives, who did an incredible job coordinating logistics and arrangements. The Maldives National Defence Force and the Maldivian police provided invaluable operational support throughout the mission.

The volunteers on site also played a crucial role, managing gas supplies and equipment logistics that made the dives possible. And, of course, we were deeply grateful for the overwhelming support and encouragement we received through messages from around the world. Everyone contributed to making the operation a success.

Have you participated in similar deep cave recovery missions before, and where does this operation rank in terms of complexity and emotional impact compared to your previous experiences?

Unfortunately, we have been involved in similar recovery operations before. The most well-known was the 2014 recovery mission in the Plura Cave system in Norway, where we recovered two friends from a depth of 130 metres and more than a kilometre inside the cave.

That remains the most demanding and dangerous operation I have ever been part of, both technically and emotionally. However, that experience—and others like it—helped prepare us for this mission.

Thanks to those lessons, and the experience gained over the years, we were able to carry out this operation efficiently and safely, bringing the divers back to the surface from a deep cave environment.

After completing such a mission, what stays with you the most once you finally return home—the technical achievement, the emotional weight, or the responsibility towards the victims and their families?

The strongest feeling is satisfaction that we were able to help. In the end, that is what matters most—being able to provide answers and bring some form of closure to the families involved.

I am also still somewhat surprised by the amount of attention the mission has received and by the many messages and contacts we have received afterward. It is clear that this operation has touched people not only in Italy but around the world.

At the same time, I feel a sense of pride in what the team achieved. In a very short time, we were able to organise an effective response, and a truly international group of people came together and worked exceptionally well under challenging circumstances. ■

Underwater photographer Patrick Kranenbroek is an editor for the Dutch diving magazine Duiken. *For further info, see:* ***patrickkranenbroek.com***