The quiet stillness is broken only by the distant moaning of a bulldozer, intent on its wretched task of digging. The dust hangs heavy and through the fog a little boy clutches the hand of a rescuer as the two stumble over the broken soil. Nearby a woman sobs softly, her big eyes dazed as she hits herself with clenched fists.

The smell of death clogs the air. Hugh Price-Hughes pauses in his work. Slowly he removes the dust mask from his mouth and folds it in his hands. He nods to his team and, exhausted, they down their tools. He's been to three earthquakes and this is always the most difficult part. "I walked over to the father," explains the 32-year-old Johannesburg Emergency Management Services rescuer. "For two days he'd watched us search for his daughter. I think he understood she was dead but no being there gave him hope. I tried to explain that we couldn't reach her body – and even if we could there was nothing recognisable left of it. The dogs had sniffed out her smell on both sides of the room. But he was so desperate for something that he begged us for a hair, a tooth, a bone, anything of his daughter he could bury."

MASTERS OF DISASTER

BY PAULA SLIER PHOTOGRAPHS REUTERS & MARC HOBER

Mountains, rivers, oceans and deserts. Earth abounds with expeditionary opportunity. But when the earth's crust gets a little shaky, another kind of adventurer steps up to the plate

The Djoubert family had been eating dinner when, six days earlier, the Algerian city of Boumerdes had been hit by an earthquake measuring 6.9 on the Richter scale.

The family of five had just made it out of their third floor apartment when their 20-year-old daughter, Yasmien, had turned back to fetch a scarf to cover her hair. The last thing her father remembers are those heart-wrenching screams.

"We were working underground with three stories above and three below that had collapsed into the basement. The entire building had shifted three metres to the right. It was dangerous work and while we were there two massive aftershocks and 100 smaller ones hit the city.

"They cause without warning and dust just starts falling everywhere. I was a rescue squad leader and while I was never scared, knowing you're responsible for your guys and that there's a great chance of them being trapped in a secondary collapse, is frightening."

Price-Hughes is also responsible for deciding which of the country's rescuers are qualified to participate in these overseas missions. He runs an intensive eight-week urban search and rescue course in Johannesburg, training recruits in high angle, advanced rope, confined space and trench and structural collapse. The volunteers come from emergency services around the country where they work as fire fighters, paramedics, doctors and ambulance. As soon as an international call for assistance goes out, they're mobilised through "Rescue South Africa", a Section 21 company established five years ago to co-ordinate the South African government's official urban search and rescue response team. Affiliated to the United Nations, International Search and Rescue Advisory Group (INSARAG), Rescue South Africa relies mostly on sponsorship and has so far sent teams to Turkey, India, Algeria and Iran following their earthquakes, as well as providing assistance during the Mozambican floods and the volcanic eruption in Goma in the Democratic Republic of Congo.

"There's one moment in every rescuers life you never forget," reflects Price-Hughes. "For me, it was when the Algerian government troops wanted to start spraying pesticide on the site where this poor man's daughter lay dead. I'd just told him we wouldn't be able to get to her, but when he saw those soldiers, he went ballistic and started screaming at them that his daughter was under the rubble. I will never forget his heartbreak, his desperation, his pain."

It's tragedy mixed with the ultimate adventure, an adrenalin rush to the nth degree. Within hours the team is mobilised from around the country, given scant information and sent to a distant country that's in the midst of a natural disaster.

"People pay lots of money to do adventure sports, but we do it every day as part of our job," smiles Price-Hughes. "These missions are the ultimate challenge. People often forget that we're not there for an earthquake site-seeing experience. The fact that we get called means something really bad has happened. For us it's another day at the office: for someone else it's likely to be the worst day of their life."

"You go into standby mode," explains Trevor Glass, the 32-year-old chief operating officer of Netcare 911, who was holidaying with his family in Cape Town when he received a late-night SMS to say there'd been an earthquake in Iran.

"Although it wasn't yet confirmed that we'd be going, I was back in Johannesburg the following morning. At the back of your mind you're already working out the logistics, who'll be in the team, what to take. Because we usually deploy hours before the international television crews get to the disaster site, there's very little information available when we leave. You have to research on the Internet and anywhere else you can to find out what the weather conditions and health risks are."

When the call comes through, Hugh Price-Hughes is ready to drop everything

Rescuers like Moses Malebatso are trained in everything from fighting fire to emergency medicine

LIVING ON SHAKY GROUND

- The biggest recorded earthquake occurred on 22 May 1960, in Chile and measured 9.5 on the Richter scale. More than 2,000 people were killed, 3,000 injured and two million left homeless. On average about 7,000 earthquakes with intensities of 5.0 or greater are recorded each year. Great earthquakes (intensity 8.0 or higher) occur once every 1 million earthquakes (intensity 7.0 to 7.9) occur 18 times a year, strong earthquakes (intensity 6.0 to 6.9) 10 times a month, and moderate earthquakes (intensity 5.0 to 5.9) more than twice a day.
- The biggest quake so far the United States occurred in Prince William Sound, Alaska, on 28 March 1964. It measured 9.2 on the Richter scale and caused about $311 million in property loss, although it only killed 125 people.
- Earthquake forecasting is an emerging science with scientists now able to give reasonably reliable earthquake warnings. They're watching the San Andreas Fault, the strongest southern California, as well as southern Greece, Washington, the south of the Fiji Islands and the Kermadec Islands region. Most of the countries the South African team has responded to have fallen along a fault line through the Middle East. It's estimated that in 30 years time the entire city of Istanbul could be destroyed through a monster quake.

ESCAPE FROM AN EARTHQUAKE

- Rescue South Africa board member Tom Watson says it's imperative to get away from buildings as quickly as possible. "Try to find an open space," he suggests. "Avoid using lifts, escalators, anything mechanical."
- If that's impossible and you get trapped in a building, Trevor Glass advises trying to attract attention to yourself. "Screaming and shouting requires a tremendous amount of energy, so it's better to try and get a brick or a piece of metal and knock at something in regular intervals. The noise must be something out of the norm."
- According to Glass, people succumb because of exposure to extremes of temperature. "You need to stay warm and hydrated. You can go without food for longer than without water. It depends on your age, your fitness level, your individual make-up."
- Generally speaking a reasonably healthy person can survive for up to two weeks without food, but no more than three days without water. Climate is important and a colder temperature is preferable as it slows down a person's metabolism. But should it hit freezing point, hypothermia becomes a problem.
- Watson suggests using things around you to keep you warm – blankets, linen, jackets. "If you're trapped in a building, chances are there might be a broken pipe or tap nearby. Look for that, or for a fridge – anything to survive on."

When the team gets the go-ahead, they assemble at the Waterkloof Air Force base outside Pretoria. Their quickest deployment has been 72 hours from the time of the earthquake to them getting on site.

"You can better assess the situation once you start flying over the country," points out Price-Hughes. "It's mind-blowing to see entire villages and cities flattened. Unless you're there it's impossible to imagine. There's always the big question of whether you'll find someone alive and if you don't (the team hasn't yet found any survivors) whether the mission is really worth the expense and effort involved."

Most earthquake survivors are pulled out within hours by citizens. According to statistics, a further 20 percent are saved by local emergency personnel who are not specifically trained for earthquake rescue. Only about five percent are pulled out by international teams.

"We go to save that five percent," explains Price-Hughes. "And it's definitely worth our while. Us being there gives the locals a sense that they're not alone. They're always incredibly grateful that we've come. We've managed to pull out many, many bodies and it's extremely important for families to have that body to bury. It gives them a sense of closure. Us being in one area also frees up other teams to search elsewhere. Diplomatically, it's also important to be seen to be helping another country, and, experience-wise, it's very useful."

Once on site, the team is instructed by the UN where they must camp and conduct their search. "We divide into smaller teams and while some are working, others are setting up camp and watching over the equipment," explains 27-year-old fire fighter and emergency medical technician, Moses Malebatso.

The four South African Police Services search and rescue dogs are the first to go into an area: their scratching indicates a body, although they cannot differentiate between a live and dead one.

"We start digging with spades and picks," continues Malebatso. "We don't recommend the guys use their hands although sometimes you don't have a choice as you run the risk of going through the body if you use a spade. There was this one family sitting around a site we were working on, watching us, and crying. Their grandfather had lived there. "We asked them if the body was still trapped underground and they said no. It had already been removed. But they still sat there crying. It was very sad, almost as if they thought that by staying there their grandfather would come back."

For most of us the sight of a dead body can be a reality check, but for rescuers it's the norm.

"My reality check is an earthquake," admits Glass. "It forces me to look at the world around me and count my blessings. Walking through the two-and-a-half thousand-year-old city of Bam (Iran) was the first time I'd been exposed to humanity dating back so far. It's difficult to come to terms with the fact that it took just 30 seconds to completely destroy it. Being in an earthquake zone is the most humbling, while at the same time terrifying, experience. It gives you a greater appreciation for the vulnerability and fragility of human life and makes you realise just how insignificant we are in the bigger picture," says Glass.

He's haunted by the memory of three teenagers, crouched down in a little trench they'd dug for themselves, completely surrounded by sand. "The building they were searching had collapsed in on itself and they were digging into a big mound of rubble. We stopped and asked them what they were looking for. They said a family member. It was surreal. They had these blank expressions on their faces. There were no visible signs of emotion, anger, distress or anxiety. They were probably completely numbed by what they'd just lived through. Even if there was somebody trapped, there was no chance of that person being alive. But you can't stop to help because you've got to focus your search on those areas you're most likely to find survivors."

Shifts last upwards of 10 hours. The work is tiring and dangerous with rescuers working underneath structures that run the risk of collapsing again, dangling from ropes or working in trenches. A structural engineer is always the first to go into a building to assess whether or not it is safe for the team to follow.

"You have to treat the entire team," points out Price-Hughes. "A chain is only as strong as the weakest link. I trust each of the guys with my life."

Malebatso cautions against the dangers of being out by debris hidden dangerously under the rubble.

"There are often cars and glassware under the ground and it's easy to step on them. You need to check all the time where you're walking and make sure you're not drilling a hole through a weak floor. It's extremely important to ensure that you've secured everything wherever you're going in, or out of, a void."

Routine medical inspections are held each time the team returns to base. There's always bleach water for washing hands and a portable toilet brought from home.

"Personal hygiene is a problem and there're always guys suffering from diarrhoea and vomiting. The most common complaints are sinusitis, irritable eyes and upper respiratory tract ailments caused by the contamination in the air," says Glass. "It's good to bring isotonic drinks because the work is manually intensive and dehydration can become a problem in the heavy protective clothing."

The team usually brings over two tons of bottled water and six tons of food. Instant noodles, mashed potatoes, tins of bully beef and tuna are the staple diet. A lot of the food is also dehydrated so that it can be easily prepared. For Price-Hughes, the effect has been a self-imposed life ban on bully beef and tuna. But for Malebatso, the camping life was fun.

"It reminded me of my Scout days when you'd sleep in tents somewhere in the veld. But the loo takes some getting use to," he chuckles. "When you had to go to there, sit, and wall out with your stuff in a bag – that's difficult!"

Psychologically, it's important to make the camp as comfortable as possible. The larger teams like the Americans and Belgians bring their own chefs with them. The campsite also offers an opportunity to debrief on the day's rescue mission, although most rescuers resent official debriefing sessions.

"We cope by switching off when a call is over," explains Price-Hughes. "Debriefing sessions force us to switch on again. A recent study suggested that people are born with the ability to switch on and off – without it you're going to suffer."

In addition to mental endurance, physical fitness is imperative. Most rescuers watch what they eat, avoiding starch and fatty foods. The most popular options for keeping fit include circuit training, lifting weights, mountain climbing, spear fishing and river rafting. Touch rugby is another favourite and during one such game team members got their closest idea of what being in an earthquake is really like.

"It was late afternoon and our rescue operation was finished for the day," reflects Glass of the Algerian mission. "We were on the field when, without warning, we were all thrown to the ground. It was a massive aftershock, measuring 5.7 on the Richter scale – almost as strong as the initial earthquake. I was amazed that the earth could actually move like that.

"The field we were in was in a kind of valley and we could see the skyline and buildings collapsing one after another in the distance. There was dust everywhere.

"I'd often wondered before why people didn't get out of buildings faster during an earthquake. But I realised then that even if you're of sound mind, you won't be able to get out. A person doesn't stand a chance in an earthquake."

And for that reason the South African volunteers will continue to fly to wherever they're needed to do their bit to help find survivors.

Counselling shocked survivors is part of the job for Trevor Glass

SIGN UP FOR SERVICE

You need to be a certified technical rescue technician or paramedic although, according to RSA board member, Anita Tomlinson, they do make use of civil engineers and other specialities. "Lay people can join as domestic support members," he says.

To join, visit www.rescue-sa.co.za