The Edge: The Fragile Reef — Post Production Script

Timecode/Description		Script
10:00:00:00		Series Title Sequence
10:00:20 – Space station Music in: 10:00:20		
	10:00:22	**Narrator:** At the dawn of the 21st century science seems on the verge of exposing many of nature's most treasured secrets. Yet for all the spectacular successes, the vast realms of the oceans remain a mystery.
Earth from space		
10:00:36 Underwater images		Beneath the waves are worlds of immense richness and diversity, which we have only just, begun to explore. But as our understanding grows scientists have come to appreciate the appalling toll, which mankind's millennia of abuse have wrought upon this unknown world.
10:00:59 **Title: The Fragile Reef**		
	10:01:06	**Narrator:** Coral reefs are among the most spectacularly beautiful sights in the sea. They are also of huge economic and environmental importance, yet until the invention of scuba equipment in the 1940's they were unexplored and little understood.
Coral and divers		
	10:01:22	**Dr. Heather Hall:** Coral reefs are incredibly diverse eco-systems. They are often called the rainforests of the seas because literally millions of species of every kind and variety are associated with coral reefs.
10:01:23 **Caption:** **Dr Heather Hall,** **Curator, Zoological Society of London**		

Coral images 10:01:48 Mark Spalding to camera 10:01:50 **Caption:** **Dr Mark Spalding** **Author 'World Atlas of Coral Reefs'**	10:01:38	**Dr. Mark Spalding:** Corals are usually very tiny animals. They live in colonies often thousands, tens of thousands even millions of individual animals all living together. And they secrete a skeleton made of calcium carbonate, effectively limestone, and over years, decades, millennia they build up huge structures, physical structures which are what we call coral reefs.
Brain coral, branching coral, to illustrate comments	10:02:06	**Dr. Heather Hall:** Hard corals are extremely slow growing. Some of the massive corals, like brain corals for example, they only grow a couple of millimetres in a year. Some of the faster growing corals, like branching corals, can grow up to 15cm in a year. But all of that means is that means that coral reefs in general are very, very slow growing. So if we look at the fastest growing reefs, we're probably saying about 10 to 15 metres in a thousand years.
Coral with fish, shrimp, molluscs etc 10:02:54 Mark Spalding to camera	10:02:33	**Dr. Mark Spalding:** As with any ecosystem but particularly these mega diverse we're just on the tip of understanding the complexity. It's estimated that there could be 2 even 3 m species on coral reefs, so far we've described prob. 90000, of them so over 90% of the animals and plants on coral reefs have not even been described by scientists.
Fish shoals	10:03:04	**Narrator:** Coral reefs have been identified for centuries as rich fishing grounds and on naval charts as

Old charts
Earth from Space

navigational hazards. But no concerted effort had been made to produce an accurate global atlas detailing the distribution of reefs around the world.

10:03:20
WCMC Cambridge
Woman working on map on computer

In 1993, scientists working at World Conservation Monitoring Centre based in Cambridge in the UK, decided to embark on the task of pulling all the disparate information about reefs together. Eight years later they finally completed The World Atlas of Coral Reefs.

Rostrum Atlas

10:03:37 **Dr. Mark Spalding:** We were following in the footsteps of some pretty great people I suppose, Charles Darwin was the first person to produce a world map of coral reefs and he essentially followed the same method as we did, of gathering data from numerous different sources around the world and drawing them onto a map.

10:03:56 **Narrator:** To construct the atlas, scientist drew on a diverse range of material, from old British Admiralty charts to the latest satellite imagery. Drawing together information into a coherent global picture of the state of the world's coral reefs that goes far beyond the limitations of a traditional atlas.

Old Naval charts
Satellite images
Atlas rostrum

10:04:15 **Dr. Mark Spalding:** The maps not only show you where a reef is, a point in space, but they have linked info about the diversity in a country, about the protected areas that have been set aside to try and stem the rising tide of damage and threat to coral reefs, on a country by country basis.

Atlas images
Tables and articles

10:04:37

10:04:39
Caption: Dr. Ed Green
Author 'The World Atlas of Coral Reefs'

Dr. Ed Green: One thing that we confirmed is that there is actually less coral reef than we previously suspected, some 15% less and so we refined that particular estimate. We confirmed most peoples predictions that there are very very few coral reefs, if indeed none at all that haven't been impacted in some way by human activities, really there is no such thing as an untouched or pristine coral reef left.

10:05:01 **Dr. Heather Hall:** Coral reefs are a major conservation issue for us to be worrying about at the minute, and most of the impacts and pressures on reefs are human caused. We have really four main categories of problems facing reefs. Pollution, sedimentation, climate change and over fishing.

10 :05:20 **Narrator:** Tanzania on Africa's East coast is typical of many of the countries with large coral reefs. The Tanzanian people depend heavily on fishing as their major source of protein and as the population has grown, so too has its destructive impact on its reefs.

Map into fishing boats
Zanzibar fish market

The economic and ecological consequence of continued careless exploitation has awakened the Tanzanian government to the importance of saving their marine environment.

10:05:47

10:05:52
Dr.Jiddawi to camera
10:05:54

Dr. Narriman Jiddawi: Before 1990 we didn't have the environment policy to tell the people why it's important to conserve their resources. That the corals for e.g. are the homes of fish,

Caption: Dr. Narriman Jiddawi
Institute of Marine Sciences, Zanzibar

are the shelter and also a breeding ground for fish so when they destroy them then they will have no fish for the future generation. And that the corals are living resources, they're not stones like fishermen think.

10:06:14

Aerial Mafia Island
Fishing boats

Narrator: Situated off the Southern coast of Tanzania, Mafia Island is widely recognised as one of the most important fisheries in the country. And it was here in 1991 that the Tanzanian government in conjunction with the World Wildlife Fund established the countries first marine reserve.

10:06:30

10:06:32
George Msumi to camera
10:06:35
Caption:
George Msumi
Head Warden
Mafia Island Marine Park

George Msumi: The park actually came into being after a very long process here, a lot of consultation were carried out, especially with the local community. As you are aware, we've got a very big population, residing in the park, we've got about 18000 people living in the park, almost one third of the population on Mafia here.

10:06:56

WWF Patrol Boat

Narrator: As the first marine park in Tanzania, the World Wildlife Fund played an integral role in helping to develop legislation and management strategy. Jason Rubens is the World Wildlife Fund's representative in Mafia.

10:07:11

10:07:13
Caption:
Jason Rubens
Technical Adviser, World Wildlife Fund

Boat yard and fishermen

Jason Rubens: The marine park is around 820 sq km, which makes it the largest marine protected area in the Indian Ocean. The people that live in and around the marine park are poor communities; they're poor even by Tanzanian standards. And there are not so many options for many of the communities outside of fishing and

		harvesting marine resources on which they could depend.
Patrol boat 10:07:44 Dynamite fishing, explosions	10:07:37	**Narrator:** The challenges facing the marine park were numerous, but halting the process of environmental destruction was their first priority. The worst aspect of this was the prevalence of dynamite fishing.
Dynamited reef	10:07:52	**Narrator:** Dynamite fishing is not only indiscriminate, but causes massive damage to reefs. Structures, which have taken centuries to build, are destroyed in an instant, along with the habitats of future generations of fish.
10:08:08 **Caption:** **Said Mohammed Suleman** **Fisherman, Mafia Island**	10:08:07	**Said Mohammed Suleman:** In those days, up to seventy incidents of explosives could be heard in one day….Those fishermen were not from here. They came from Dar Es Salaam.
Jason on radio Patrol boat approaches dhow	10:08:20	**Jason Rubens:** The strategy that was used was to set up a network amongst the villages, specifically setting up a radio network, which enabled villages to report incidences of dynamite fishing. WWF also provided a high-powered, high performance patrol boat, which was essential in order to be able to chase down and make arrests when dynamite fishing was reported. So that collaboration between the marine park and the communities, with support from WWF was, yeah, critical.
Seine net fishing sequence	10:08:54	**Narrator:** The elimination of dynamite fishing was a major achievement for

		the park and an important element in winning the trust of the community. But it was by no means the only destructive fishing method.
	10:09:06	**Narrator:** The use of seine nets was widespread. Huge nets laid to form a loop effectively trapping every fish caught within its boundary.
Seine net sequence continues	10:09:15	**Jason Rubens:** The problem with seine netting is two fold, one if that the act of dragging a net through certain marine habitats is obviously destructive, especially if it's a coral reef environment. The second one is that the mesh size used is often very small even down to a quarter or half an inch, and that obviously takes out a lot of small juvenile fish and that affects the productivity of other fisheries. So it's effectively a self-defeating fishing method in the long term.
End of Seine net sequence	10:09:46	**Narrator:** Seine net fishing was also a divisive issue within the local community.
Caption: **Said Mshangama Mohammed** **Fisherman, Mafia Island**	10:09:52	**Said Mshagama Mohammed:** They have really affected me. Fish stocks are down in those areas where they use drag nets. In order to get fish now, I have to go far out to sea, which I can't do because I don't have a big enough boat.
Seized fishing gear Nets being repaired in boat yard	10:10:05	**Narrator:** Legislation banning the use of seine nets was enforced by the park, resulting in the seizure of the illegal gear. But the park also recognised the importance of offering viable alternatives to local fishermen –

establishing a fishing net exchange programme and offering low cost loans to buy alternative gears.

10:10:24 **George Msumi:** We've got a programme to try and exchange the destructive gears with gears which we think they are somehow consider the environment. Also we've got a soft loan scheme to enable the local fishermen who are not able to afford expensive gears in order to buy.

10:10:46 **Narrator:** In a bid to alleviate pressure on fish stocks from over fishing, the park has also tried to encourage a broader range of economic activities within the local community. Seaweed farming has been one of the success stories. Seaweed is used in the manufacture of cosmetics and pharmaceuticals, and is a high value crop in the local economy. This non-destructive activity has generated incomes for the villagers of Jibondo, which are significantly higher than the national average wage.

Seaweed farming sequence

10:11:16

10:11:19

Caption: Ali Rashid Mgeni
Community Development Assistant

Ally Rashid Mgeni: We reduce the number of people who are fully engaged in fishing, find alternative method of living. They can reduce also the hours they used to do fishing to promote this alternative is very good for the ecology and the survival of the marine park.

10:11:39 **Jason Rubens:** Our task is to work together with those communities, to develop effective ways in which they can still exploit the marine environment, they can still go fishing,

they can still collect marine organisms and so on but in a way that is sustainable.
I think if we get across that message successfully, there's no intrinsic reason why communities should not welcome the concept of a marine park in their area.

10:12:07

Map dissolves through to views of Chumbe Island

Narrator: Further north the island of Chumbe, off the coast of Zanzibar, is home to another chapter in the battle to save the reefs. A privately owned marine sanctuary funded by an eco-tourism resort, has been established to protect one of the last pristine reefs. The project is the brainchild of former German aid worker, Sibylle Riedmiller.

10:12:28

10:12:30
Caption:
Sibylle Riedmiller
Project Director
Chumbe Island

GV's of Chumbe

Sibylle Riedmiller: I'm a passionate diver and sailor and I have been diving around East Africa for 20 years and growingly desperate seeing coral reefs being blasted by dynamite fishing, which has been predominant for decades here. So I proposed to the government, to have this designated as a park and at the same time proposed that I would create a company and a small eco tourism operation, which would fund this.

10:12:58

Fishing boats on Chumbe reef

Narrator: Central to the Chumbe project was the establishment of a no-fishing exclusion zone to protect part of the reef. This move that was not greeted with enthusiasm by the local population.

10:13:09

10:13:12
Caption: Eleanor Carter

Eleanor Carter: Certainly in the initial days there was a lot of questions about that and 'well hold on, can't we just fish

Project Manager, Chumbe Island

there then', but a lot of that is awareness raising about what is coral reef, why should it be protected, how is it related to fisheries, if people don't understand the basic concept that a coral reef is the nursery ground for fish they're not going to understand the concept of why you're not letting them fish In a certain area.

Coral views

10:13:33 **Omari Nyange Ame:** In the beginning it was very difficult to work here on Chumbe, because fishermen came to fish around in this protected area and if we went to talk with them the fishermen they wanted to fight with the rangers.

10:13:35
Caption:
Omari Nyange Ame
Head Ranger
Chumbe Island

10:13:48 **Narrator:** Chumbe sought to win over the displaced fishermen by offering employment to the fishing villages most affected, and attempting to raise awareness of the benefits of protecting the reef as a breeding ground for fish.

Omari talks to local fishermen

10:14:04 **Narrator:** The viability of Chumbe is entirely dependent on funds generated by eco-tourism. And since the pollution generated by tourist resorts can often cause major problems for adjacent reefs, it was crucial to the success of the project that it should make zero impact on the environment. This philosophy is reflected in every aspect of the islands operation, particularly in the innovative design of its guest accommodation.

Views of the island and buildings

10:14:23
Eleanor talks to students

10:14:30 **Eleanor Carter Sync Dial:** …We have

seven bungalows on the island where people come and they stay in the bungalows and they pay money, and the revenue generated by visitors is the only money that funds the entire project. We totally depend on money from visitors to run the whole thing.

Eleanor's bungalow tour

10:14:48 **Eleanor Carter Sync Dial:** These buildings are really unique; they're 100% environmentally friendly. They generate their own water they generate their own energy, and they dispose of that environmentally sustainably. You can see the design is very unusual; you've got this huge roof area. Very, very high surface area, and that basically is designed to catch rainwater. So in the big rains in April and again in November, the rain comes down catches as much as possible on this huge roof area. And the rain comes down into these filters. So these funnels around the bungalow, collect the actual rainwater and funnel it straight into one of these and then is stored underneath the bungalow itself. So each bungalow is raised on these large platforms, as you can see, and inside these big platforms is 15,000-litre system. And that contains the rainwater collected each season.

Eleanor Interior bungalow

10:15:41 One of the biggest problems is sewage, sewage management and sewage waste. And for that we've actually designed these toilets. They look like a regular toilet, but instead of having a flush system, which is very bad for huge amounts of waste water, this kind of thing. We ask guests to thrown down a couple of scoops of compost after they've been to the bathroom.

Eleanor Upstairs	10:16:03	This is in the roof of the bungalow as you can see as it narrows up to the top. On the top outside you'll be able to see the photovoltaic panel . That's where we collect the energy and it comes down to a battery, which is stored here in the technic tower. And that battery provides electricity 24 hours a day for lighting. One of the best things up here is the view out to the area.
Liz Tyler and team on boat	10:16:30	**Narrator:** In order assess the effectiveness of the protection of the reef; Chumbe has strived to include a research element in the project. Marine biologists from around the world have come to Chumbe to study the reef. Liz Tyler, currently completing a PhD at Oxford University in the UK, is looking specifically at the health of the fish stocks.
10:16:52 **Caption: Liz Tyler,** **Marine Biologist, Oxford University**	10:16:30	**Liz Tyler:** I'm interested on the effectiveness of marine reserves in benefiting local fisherman, so how effective a protected area is in increasing the abundance of fish.
Liz monitoring sequence	10:17:05	I'm using underwater surveys to count and estimate the size of the fish both inside and outside of the reserve and that would be both snorkelling and diving depending on the depth and I'm also tagging fish to see how far they move and tagging fish inside the reserve, and I'll recapture them both using traps and by doing underwater surveys, re-sighting the tagged fish.
Liz tagging fish	10:17:32	**Narrator:** Liz's project is being carried out with the assistance of the Marine Institute in Zanzibar. If her results

		show that protecting Chumbe's reef from fishing has been beneficial in raising the level of fish populations, then they will play an important role in validating the whole Chumbe island project.
	10:17:54	**Haji:**This one. You've got this one..
Sync Dialogue Haji and Liz		**Liz:** Oh, I see, it had this marker on the fin, it's just the colouration very different. **Haji:** They've got, basically four colourations. There's the female one, and there are two colour phases of male, probably.
	10:18:10	**Narrator:** Chumbe is a unique hybrid, which has attracted much attention from around the world and won environmental awards. But while it offers a model of eco-friendly tourism, how many of its lessons can be applied outside of a niche market of the wealthy environmentally aware?
Views of Chumbe		
	10:18:27	**Narrator:** Further north in Egypt, at the tip of the Sinai desert, lie some of the most pristine reefs in the world. The area is sparsely populated with nomadic Bedouin and has been spared the depredations of over fishing. However, since the early 1980's it has begun to attract large numbers of tourist.
Dissolve through map to Bedouin Colourful Reef Busy beach at Sharm El Sheik		
10:18:49 Ras Mohammed sign		In an effort to pre-empt uncontrolled development the Egyptian government in conjunction with the European Union established the Ras Mohammed National Park.

10:18:55

10:18:59
Caption:
Alain Jeudy de Grissac, Project Manager, Ras Mohammed National Park

Views of coastline

Alain Jeudy de Grissac: When you decide to develop tourism in an area, you have two options. Or you let the developer think for you, they take the land for you; they take the land they think they are the owners of everything and they do what they want. Or you consider, that you have to manage the developers, this is what we have done, in this case you have something suitable. If you let the people all along this coast do what they want, you will have an hotel here, so after 20 years this place is totally destroyed so they go elsewhere.

10:19:26 **Dr Mark Spalding:** Tourism is a threat and a promise to reefs really. It has been a cause of some of the big problems tourist developments wanting to pick the last pristine beach on an island. Tourist developments so often pumping raw sewage into the waters just offshore. Sediments as they build the tourist developments cause a lot of problems.

10:19:30
Caption:
Dr Mark Spalding
Author 'World Atlas of Coral Reefs'

10:19:51 **Narrator:** The tremendous growth in tourism, which the reefs of Ras Mohammed inspired, was deliberately focused on the resort of Sharm El Sheikh. Here the government was able to impose stringent controls on tourisms impact on the environment.

Pan of Sharm beach

10:20:05 **Alain Jeudy de Grissac:** Zero discharge policy was the first step, is important to have no impact from the hotels themselves we could say. So zero discharge, everything is going to be retreated. Second thing, all the operators have been informed regularly

by the park of the rules. Don't touch, don't collect, don't disturb, do not do not do not, you could say, but when they understand they can sell 20 times the same products or 100 times the same products without any costs, the hotel would be full all the time because they do this kind of job, they do it.

10:20:43 **Narrator:** The principal focus of tourism at Sharm was the growing popularity of recreational scuba diving. Dive tourist now flock to the resort in their thousands. A far cry from its relatively modest beginnings in the early 1980's.

Dive operator montage

10:20:57 **Hassan Afifi:** In peak season you were talking about something between 200 and 500 divers a day. Now you're talking a bit different because you have 69 diving centres, you have 286 boats, most of them are for commercial use, for the diver centres, each boat can take up to 20 or 30 people. So you're talking about in peak season an average of 2000 to 2500 divers a day.

10:20:59
Caption:
Hassan Afifi
Co-ordinator, Sharm Diving Union

Dive boats loading up

10:21:24 **Narrator:** The reefs of Ras Mohammed currently generate an annual income for Sharm of $1 billion. This has created a mutual interest in their preservation amongst the diving operators.

Snorkelling over reef
Dive boat at sea

Pre-dive briefing for recreational scuba divers

10:21:37 **Nick Williams sync dial:** Now all these dives we'll doing this week are inside the National Park and there are certain rules and regulations we have

to adhere to. We're not allowed to use gloves here. Gloves can encourage people to touch the coral. Touching the coral will kill the coral, so we don't allow any touching whatsoever. No feeding the fish. Quite simply it ruins their natural habitat. We want them to feed on what they normally feed on, not boiled eggs and crisps and things like that. So please make sure, don't take anything into the water.

Divers exploring coral reefs

10:22:11 **Narrator:** To protect the reefs, 80% of Ras Mohammed is closed to diving, mooring lines are provided at approved dive sites to prevent the destructive use of anchors, and the dive sites are regularly rested to allow coral to recover. These policies have enabled to Park to remain relatively undamaged in spite of some sites having up to 45,000 divers per annum.

Divers exploring coral

10:22:39 **Narrator:** As the popularity of diving shows no signs of abating the Park authorities have continued to monitor possible adverse effects. Marine biologist are currently conducting video surveys of the reefs, looking at the health and diversity of the coral. For the moment their findings seem to bear out the success of the park's strategies.

10:22:47
Video survey footage

10:22:03
Caption:
Dr Virginie Tilot
Marine Biologist

10:23:00 **Dr. Virginie Tilot:** Definitely, the reefs in Ras Mohammed are much more preserved, definitely, there's no comparison with reefs for e.g. around Sharm El Sheikh. Some sites are totally destroyed within Sharm, sites that were beautiful before, but that's part of development. Sharm El Sheikh is only 2 percent of the whole Sinai,

Views of dead coral

and if everybody goes to the same places that means the other places are preserved.

10:23:25 **Hassan Afifi:** There is no person who does not affect the environment but there is somebody who affects it less than others. And we are trying to be that somebody who affects it less than the others.

10:23:38 **Narrator:** Typical of this commitment from the dive community has been the battle to save the coral from a natural predator. In recent years the reefs have been subject to plague like infestations of Crown of Thorns starfish. These creatures, which feed on coral, have cause massive destruction on the Great Barrier Reef in Australia and are a recurrent problem in Egypt.

Underwater shots of Crown of Thorns Starfish

10:24:00 **Hassan Afifi:** The Crown of Thorns is a special case because you cannot actually kill the sea star. If you cut it in two, then two crown of thorns are going to form, if you cut it in three, you have three Crowns of Thorns. So the only solution was to collect these sea stars and to get them out of the water.

Divers collecting Crown of Thorns

10:24:21 **Narrator:** Lacking the manpower or resources to deal with the Crown of Thorns, the Park relied heavily on the efforts of the dive centres. Dive instructors and volunteers collected over 50,000 starfish from the reefs in a single year.

10:24:49 **Narrator:** But while natural predators

like The Crown of Thorns represent a tremendous problem for afflicted reefs, there is an even greater threat to the global ecology of coral, and one, which has no easy solution. Global warming.

10:25:03 **Dr. Mark Spalding:** Corals are extremely sensitive to temperature changes and they exhibit a stress response, which is known as coral bleaching.

10:25:13 Corals have living within their tissues a microscopic algae and there's a very tight relationship between the coral and the algae. For some reason this relationship breaks down when the corals get too hot. They expel the algae they go bleached white colour, which is in fact their skeleton underneath, becoming visible, a white skeleton, and that's known as coral bleaching.

Bleached coral shots

10:25:36 **Narrator:** In 1998 in the wake of El Nino the world experienced at catastrophic coral bleaching event as pulses of warm water swept around the tropics and settled on the central area of the Indian Ocean for a period of several months.

Bleached coral shots

10:25:52 **Sibylle Riedmiller:** It was actually very demoralising for our rangers to protect individual corals against anchors being thrown on top of them or being broken by careless snorkellers, or being slashed by fishermen who want to chase fish out of the coral rocks, and doing this coral by coral really protecting reefs physically and then seeing the whole reef bleaching within a matter of weeks.

10:26:00
Caption:
Sibylle Riedmiller
Project Director, Chumbe Island

10:26:17 **Jason Rubens:** One or two reefs in particular were affected by coral bleaching in 1998, after the El Nino of 1997. Those reefs suffered very high coral mortality, even if you go there today you can see evidence of standing dead coral, which is still there but obviously dead.

10:26:22
Caption:
Jason Rubens
Technical Adviser, World Wildlife Fund
10:26:28
Dead coral

10:26:39 **Dr. Mark Spalding:** 5% of the world's coral reefs bleached and went on and died, 80-90% of the corals died from the Maldives, through the Chagos Archipelago and across the Seychelles. So this was a huge area, completely unprecedented, caught the scientists completely by surprise.

10:26:59 **Narrator:** Although reefs have shown some signs of recovery, the destructive potential of global warming still hangs over this most precious of natural resources and threatens to undermine the important work now going on the reverse centuries of ecological devastation. So what then can the future hold for the fragile reef?

Lush coral wall, coral garden

10:27:20 **Dr. Mark Spalding:** We have so many problems facing the world's reefs I think I'm probably quite pessimistic about the overall world of reefs but I think we have the knowledge now to protect at least some of them and so I'm hopeful that we're going to have some reefs for future generations, not as much as I would like. We're all extremely concerned about the impacts of climate change, which is hanging over us; it's a little bit of an unknown.

10:27:48 **Dr. Ed Green:** I think in the future we will still have coral reefs, I think over the entire planet they will exist in a state that is very different to that which existed some 20 or 25 years ago, we will undoubtedly lose a large proportion of the coral reefs that we have, indeed we have already lost a large proportion, there will be further losses."

10:28:08
Dead coral through to lush coral gardens

If an atlas Is written in 100 years time of the worlds coral reefs, it may be smaller, it will make great reference to the wonderful state that they existed in previously and it will also ask the question of why on earth wasn't anything done to prevent this decline.

10:28:27 End Credits

10:28:50 Infonation Logo

10:29:00 Ends

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Alain Jeudy de Grissac
Ras Mohammed National Park
Mourad El Essawi
Oonas Divers
Caroline Love
Khaled Mahmoud
Nicholas Williams

Archive

NASA
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UK Hydrographic Office
Ian Crosby Marine Archive

Camera	Paul Teverini
UK Sound	Eddie Taylor
Underwater Camera	Robert Johnson
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Assistant Producer	Sophie Collins
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MUSIC CUE SHEET

PROGRAMME TITLE: The Edge II

EPISODE TITLE: The Fragile Reef

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ORIGIN CLASS
X=Commissioned
P=Live Performance
V=Video
T=Soundtrack
C=Commercial
L=Library

USE
B=Background
F=Featured
S=Signature

TIME CODE	MUSIC TITLE	COMPOSER/ ARRANGER	PUBLISHER	PERFORMER		VIDEO LABEL AND No.		USE	DURATION M/s
10.00.24	Sirens	Steve Everitt	Atmosphere Music Ltd	Steve Everitt		ATMOS CD65	***L***	**B**	39s
10:01:07	Blissful State	Steve Everitt	Atmosphere Music Ltd	Steve Everitt		ATMOS CD65	***L***	**B**	1m 30s
10:10:45	Zen	Rogers/Shaw	Atmosphere Music Ltd	Rogers/Shaw		ATMOS CD65	***L***	**B**	30s
10:20:40	Use It Music Disc 3, Trk 9	Unknown	Use It Music	Unknown		Use It Music	***L***	**B**	16s
10:21:07	Use It Music Disc 3, Trk 9	Unknown	Use It Music	Unknown		Use It Music	***L***	**B**	30s
10:22:09	Blissful State	Steve Everitt	Atmosphere Music Ltd	Steve Everitt	ATMOS CD65	***L***	**B**		50s

10:28:09	Sirens	Steve Everitt	Atmosphere Music Ltd	Steve Everitt		ATMOS CD65	***L***	**B**	39s