

MICHAEL OTTO STIFTUNG
FÜR UMWELTSCHUTZ

STIFTUNG DES BÜRGERLICHEN RECHTS

per Fax: 001-902-494-2034

Dalhousie University
International Ocean Institute
Prof. Elisabeth Mann Borgese

RECEIVED APR 03 1997

COPY

☎ (0 40) 64 61-74 61

Hamburg, 02.04.1997/si-ros

Sehr geehrte Frau Mann Borgese,

vielen Dank für Ihr Telefax vom 21. März 1997 an Herrn Dr. Otto, in dem Sie uns um Unterstützung bezüglich eines Filmprojektes über die vier Ozeane bitten.

Dr. Otto hat Ihren Vorschlag mit großem Interesse gelesen. Wie Sie vielleicht wissen, hat Dr. Otto vor fünf Jahren eine Umweltstiftung ins Leben gerufen, die sich gezielt dem Schutz und Erhalt der Lebensgrundlage Wasser widmet. Ihr Antrag auf Unterstützung eines Filmprojektes soll auf der nächsten Kuratoriumssitzung am 10. April 1997 behandelt werden.

Ich werde Sie umgehend über einen entsprechenden Beschluß informieren.

Mit freundlichem Gruß



Dr. J. Merck

■ ADRESSE:

22179 Hamburg,
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Tel.: 040-6461-1372
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■ BANKVERBINDUNG:

Deutsche Bank AG.
BLZ 200 700 00
Kto.-Nr. 0 5147 45

■ GESCHÄFTSFÜHRER:

Dr. Johannes Merck

■ KURATORIUM:

Dr. Michael Otto (Vors.),
Jochen Fiasbarth, Detlev v. Livonius
Prof. Dr. Michael Succow, Carl-Albrecht v. Treuenfels,
Prof. Dr. Martin Uppenbrink

♻️ Aus 100% holzfreiem Altpapier



Dalhousie University

Germany General
or
10V / M-Ben

International Ocean
Institute

FAXED



FACSIMILE TRANSMISSION

To: Dr. J. Merck
Fax: 49 40 6461 7198

From: Elisabeth Mann Borgese
Fax: 1 902 868 2455

Date: April 4, 1997

Subject: Ihr Fax vom 3. April

Sehr verehrter Herr Doctor Merck,

ich moechte mich gleich bei Ihnen fuer Ihre ueberaus prompte und freundliche Antwort bedanken -- und ich warte nun mit Spannung auf den 10. April. Es ist jja wirklich guenstig, dass die Kuratoriumssitzung so bald stattfindet.

Inzwischen gehen die Vorbereitungsarbeiten gut weiter.

Mit allen guten Wuenschen,

Ihre

Elisabeth Mann Borgese

Elisabeth Mann Borgese
Professor



Dalhousie University

International Ocean
Institute



FAXED

FACSIMILE TRANSMISSION

To: Frau Dr. Angela Merkel ←
Minissterin fuer Umweltschutz
Fax: 49 228 305 3225

From: Elisabeth Mann Borgese
Fax: 902 868 2455

Date: August 23, 1996

Subject: Bonn Besuch

Sehr verehrte Frau Minister,

Am 29. Und 30. August (Donnerstag und Freitag) habe ich Gelegenheit, in Bonn zu sein. Donnerstag Nachmittag um 15:00 hat mein guter Freund Botschafter Tono Eitel Termine mit Ministerial Dirigent Professor Dr. Bohnet und einigen anderen fuer mich verabredet. Es handelt sich um Die Programme und Plaene des Internationalen Ozean Institutes sowie der Weltkommission fur die Meere.

Ich habe viel von Ihnen gehoert, und es waere mir eine Ehre und eine Freude, Sie gelegentlich dieses Besuches persoendlich kennen zu lernen. Waere es etwa moeglich, Sie am Freitag morgen zu besuchen? Am Mittwoch bin ich beim S. Fischer Verlag in Frankfurt -- und am Samstag muss ich nach Zuerich weiter, wo ich auch Termine habe, bis zum 3. September -- und dann habe ich eine Woche lang das Deutsche Fernsehen, hier in Halifax!

Wenn Sie mir hier in Halifax am Montag ein Fax durchschicken koennten, waere ich sehr dankbar. Ich fliege am Dienstag nach Frankfurt.

Mit allen guten Wuenschen,

Elisabeth Mann Borgese
Ihre Elisabeth Mann Borgese
Professor



Dalhousie University

International Ocean
Institute



FACSIMILE TRANSMISSION

To: Frau Dr. Angela Merkel ←
Fax: Minister fuer Umweltschutz 0 228 305 3225

From: Elisabeth Mann Borgese
Fax: 0 2132 92 20 12

Date: August 29, 1996

Subject: Bonn Besuch

Hoch verehrte Frau Minister Merkel

Ich bin nicht sicher, ob Sie mein Fax aus Canada bekommen haben, oder ob Sie ueberhaupt in der Stadt sind.

Ich bin eben angekommen, und bin im Hotel Steigenberger. Meine Zimmer Fax Nummer ist die obige, und ich bin bis morgen mittag hier. Heute nachmittag um 3 bin ich bei Professor Dr. Bohnet, 353 3751.

Sollten Sie hier sein, waere es mir wirklich wichtig, Sie zu besuchen. Sonst, hoffentlich, das naechste mal!

Mit allen guten Wuenschen,

Ihre

Elisabeth Mann Borgese

DR. ANGELA MERKEL, MdB
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Frau
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COPY

RECEIVED SEP 03 1996

Sehr geehrte Frau Professor Mann Borgese,

vielen Dank für Ihr Schreiben vom 23. August 1996.

Gerne hätte ich mich mit Ihnen in Bonn getroffen, doch konnte ich dies leider so kurzfristig nicht mehr einrichten, zumal ich an den beiden fraglichen Tagen nicht in Bonn war. Mein Büro hat dies Herrn Botschafter Eitel in New York mitgeteilt, doch konnte ich Ihnen in Deutschland leider keine Nachricht hinterlassen. So hoffe ich, daß mein Schreiben Sie in Halifax erreicht.

Für heute verbleibe ich
mit freundlichen Grüßen

Angela Merkel

Dr. Angela Merkel



Dalhousie University

International Ocean
Institute



FAXED

FACSIMILE TRANSMISSION

To: Frau Dr. Angela Merkel ←
Fax: 49 228 305 2046

From: Elisabeth Mann Borgese
Fax: 902 868 2455

Date: September 4, 1996

Subject: Ihr Fax from 3. September

Sehr verehrtr Frau Dr. Merkel,

Vielen herzlichen Dank fuer Ihr Fax from 3. September.

Es hat mir leid getan, Sie zu verpassen, aber ich hoffe es wird sich bald einmal eine andere Gelegenheit bieten.

Die Unterredung mit Herrn Professor Bohnet und seinen Kollegen ist ausgezeichnet verlaufen. Ich glaube fast, dass wir naestes Jahr ein IOI Operational Centre in Bremerhaven auf die Beine stellen werden. Das gaebe dann Gelegenheit zu guter Zusammenarbeit.

Mit allen guten Wuenschen,

Ihre

Elisabeth Mann Borgese

COPY

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FACSIMILE TRANSMISSION

To: Mr. Reimer Ochs
Fax: 49 69 60 62 370

From: Elisabeth Mann Borgese
Fax: 1 902 868 2455

Date: July 24, 1997

Subject: Your fax letter, just received

Lieber Herr Ochs,

Herzlichen Dank. Der Brief ist genau richtig, und sollte mein Problem loesen.

Mit allen guten Wuenschen,

Stets Ihre

Elisabeth Mann Borgese

FAXED



Dalhousie University

International Ocean
Institute



FACSIMILE TRANSMISSION

To: Dr. Michael Otto
Otto-Versand Hamburg
Fax: 49 40 64 61 85 71
From: Elisabeth Mann Borgese
Fax: 1 902 868 2455
Date: March 21, 1997

FAXED

Sehr verehrter Herr Doctor Otto,

Das Umweltbewusstsein Ihrer Firma ist ueberall bekannt, und dies ist der Grund, aus welchem ich mich heute an Sie wende.

Es handelt sich um einen Vorschlag, der viel dazu beitragen koennte, dieses Bewusstsein auf der Welt zu staerken. Ins besondere betrifft dieser Vorschlag das Weltmeer, dessen Bedeutung fuer die Entwicklung, den Frieden, die Lebensfaehigkeit unseres Planeten nicht ueberschaetzt werden kann, und dessen Erhalten ich die letzten 30 Jahre meines Lebens gewidmet habe..

Am 30. April, ich glaue um 19:30, laeuft fuer eine Stunde ein Programm am Beyrischen Fernsehen, ueber unsere Arbeit ueber das Meer hier, hauptsechlich in Halifax. Der Film ist aber eine Art Portrait von meinem ganzen Leben.

Der Producer dieses Film, Eberhard Goerner von Provobis in Berlin, will nun einen groesseren Film machen, ueber Vier Ozeane: Atlantik, Pazific, Indik, und Antarktik, mit dem Beyrischen Fernseh und anderen, auch im Ausland. Indien, China und Japan haben schon Interesse angegeben.

Der Film, zwei mal 45 Minuten, oder sogar 2 Stunden, soll in Lissabon, auf der grossen Ocean Expo uraufgefuehrt und dann auf der anzen Welt, auch in Hannover 2000 gezeigt werden.

Ich soll den Text fuer den *narrator* schreiben; Als Hintergrundmusik werden wir die *Ocean Symphony* benutzen, die Maestro Franco Mannino vor ein paar Jahren

geschrieben und mir gewidmet hat. Die bestand aus 3 Sätzen, Atlantik, Pazifik, und Indik. Er schreibt jetzt noch einen vierten Satz, ueber die Antarktik

Wir haben etliche Konkurrenz mit Ozeanfilmen, die fuer das Jahr der Meere, 1998, vorbereitet werden. Neulich habe ich zufaellig einen sehr schonen am ZDF gesehen, ueber Eismeere und Korallenriffe, und NBC macht eine ganze Serie -- aber unser Film wird anders Er soll nicht nur schoene, oder auch abschreckende Bilder der Natur zeigen (Fische und Verschmutzung) sondern, wie unsere ganze Arbeit, die Problematik von *Sustainable Ocean and Coastal Management*, die Zusammenhaenge von Natur und Kultur, und die ganze Neuordnung fuer die Meere, die ein Anfang fuer die Neuordnung der Welt fuer das naechste Jahrhundert sein soll, darstellen. Es soll ein Film zum *consciousness-raising* und Nachdenken werden.

Dies ist eine Deutsche Initiative, mit breiten internationalen Verbindungen. Die Totalkosten des Filmes sind auf DM600,000 angesetzt. Das Bayrische Fernsehen kann nur einen sehr kleinen Teil dieser Kosten uebernehmen, den Rest muessen wir selber auftreiben.

In Japan werde ich sicher Mittel dafuer finden. In China und Indien bekommen wir "*in kind contributions*," d.h., Arbeit, Apparate, und schon existierendes Material.

Ich schicke Ihnen hiermit den ersten Entwurf fuer die Struktur des Filmes, einschliesslich Areitsplan und Kosten. Es waere grossartig, wenn sich Ihre Firma an der Finanzierung dieses Projektes eteiligen koennte.

Anfang April bekomme ich einen detaillierten Plan von Indien. Die anderen werden auch im Laufe des April einlaufen.

Ich bin nun neugierig, wie Sie auf diesen Vorschlag reagieren, und wuerde mich freuen, so oder so bald von Ihnen zu hoeren.

Mit allen guten Wuenschen,

Ihre,

Erich Mann Borgesen
Professor



Dalhousie University

International Ocean
Institute



Four Oceans

Project outline for a two-hour feature film

by

Elisabeth Mann Borgese

INTRODUCTION

The world ocean, covering three-quarters of our planet, is one and indivisible. It is traversed by a system of immense rivers. Driven by winds, listing to the earth's rotation, acted on by chemical properties of the water at particular times and places, these rivers, meandering without river-beds or fixed boundaries, carry their water masses around the world: the Gulf Stream in the North Atlantic; the Japan Current in the North Pacific; the Brazil Current in the South Atlantic; the Agulhas in the Indian Ocean, and the East Australia Current in the South Pacific, to name some of the most important. *Panta rhei* -- everything flows, and an object thrown into the Antarctic may circle awhile in the Southern Ocean, be caught up by the South Equatorial Current, float into the Gulf Stream, pick up the North Atlantic Drift, and end up at the North Pole.

This process might be demonstrated by some beautiful opening ocean scenes (storm; waves; sun-set); and a sequence of animations.

The world Ocean is also traversed by an immense mountain range. The awesome spectacle of the Alps or even the Himalayas is puny by comparison. The Alps measure 680 miles in length and 80 to 140 miles in width. The highest peak, Mont Blanc, rises 15,781 feet from a ground elevation of 3,400 feet. But there is almost 40,000 miles of mid-ocean ridge system, and it averages 1,250 miles in width. The peaks rise 15,000 feet from the ocean floor.

It seems another planet -- a planet much larger than Earth, judging by the dimensions of this gigantic panorama. Its texture and shape are different: It is made of sheer volcanic basalt, and there are no such mountains on earth.

The ridge system's rugged crest is about 125 miles wide and lies at some points only about 10,000 feet below sea level.

Right through the middle of the entire ridge system runs a valley, eight miles wide at its narrowest, 130 miles at its widest. The Grand Canyon, one mile deep, four to eighteen miles wide, and 280 miles long, is modest in comparison.

Every forty miles or so the ridge is cut almost at right angles by a fracture line, or canyon, extending for thousands of miles on both sides of the ridge. With astounding regularity, each block of the ridge is displaced slightly to one side. The crest is covered by strange glass-encrusted pillows that are formed as the hot lava, welling up into the floor of the rift valley, is suddenly quenched by the chilling waters.

Around lies a landscape of seamounts, submarine mountains rising three miles above the abyssal plain.

The plain is smooth and even, covered with fine sediments such as red clay, of a type unknown on earth. It is, in fact, partly of unearthly origin, containing meteoric iron, nickel, and silicon, of which eight to ten tons arrive from outer space every year. Another component of the sediments consists of an accumulation of minute animal skeletons, the radiolarians, which represent a record of life on this planet during past geological ages. The abyssal plain covers about half the planet's surface and is its flattest plain.

The seamounts jut up incredibly steep and ragged, like the worn teeth of a gigantic carnivore. They reach to about 120 feet below sea level and are capped by coral reef and sands. Sometimes they break the water surface and appear as islands, as, for instance, in Bermuda.

Geological history, interacting with biological evolution, has generated different, interconnected ocean basins or seas and oceans, which are born and die. According to discoveries in the 1950s and '60s, which gave rise to the theory of plate tectonics and continental drift, oceans and continents are created and re-created in a continuous process. The whole ocean is virtually swept clean every 300 to 400 million years. The drama begins in the deep rift that halves the mid-

ocean ridges and from which molten basalt pours forth from the earth's mantle, enlarging the earth's crust on a spreading ocean floor. During a human lifetime the sea floor moves, roughly speaking, the length of a human body. Thus, oceans grow as continents are forced apart. The continents, whose granitic rock is lighter than that of the basaltic ocean floor, are forced apart, sliding on vast tectonic plates on the basalt ground. At present there are twelve major plates, some without continents on them. They separate, they clash. When continents clash, mountains rise, pushing submarine surfaces high up into the sky. Hence we find seashell fossils in the rocks of the Himalayas and reliefs of fish impressed into the walls of the Matterhorn.

We can trace the odyssey of continents for almost 200 million years.

About 190 million years ago, the Atlantic began to open in the Gulf of Mexico, and what is contemporary North America and Africa began to part. As the Atlantic rift expanded, South America, too moved away from Africa about 135 million years ago, and Antarctica, still joined to Australia, detached itself from the south. The separation of North America from Europe came later, followed yet more recently by the splitting of Antarctic from Australia. The Indian subcontinent traversed -- and destroyed -- the Tethys Sea, opening the Indian Ocean in its wake, about 90 million years ago and ran into Asia about 50 million years ago. So violent was the collision that it caused the Himalayas to splash high heavenward.

North America is still moving away from Europe and South America from western Africa. California is apparently approaching Alaska, and France and Italy will merge with North Africa. As North America slides away from Europe, it moves toward Asia. In this shifting of land masses some oceans, such as the Atlantic, are expanding; others, such as the Pacific and the Mediterranean Sea, are slowly disappearing, like the Tethys Sea. The expanding oceans do so from the centre, their floors spreading from the magma-spewing mid-ocean rift; the shrinking oceans shrink from the margins, where a system of deep trenches devours ocean floor faster than it is produced at the centre. It sinks into these maws, the earth quakes, and its molten core slaps over the rims of volcanoes all along island arches that accompany the deep trenches

A brief submarine journey along and over a portion of the Mid-ocean ridge system, over seamounts and the abyssal plain, amidst smokers and their unearthly fauna and flora could be combined out of scientific films and some animation.

The importance of the world ocean as a potential supplier of goods (food, fibre, metals, minerals) and services (trade routes, tourism), and energy, as a repository of national, regional and global security cannot be overrated. Above all, however, the world ocean is an essential part of the biosphere; it is a crucial element in the carbon cycle and a determinant of the planet's climate. It is a medium different from the earth: so different, in fact, that it forces us to think differently. Fundamental concepts evolved over the millennia on land, like sovereignty, geographic boundaries, or ownership, simply will not work in the ocean medium where new political and economic concepts are emerging which eventually will act on the social, economic, and political order of the next century.

All these issues will come to the fore in 1998, the year declared by the United Nations as the Year of the Ocean. This film should be a contribution to a better understanding of the importance of the ocean during the Year of the Ocean.

I. THE ATLANTIC OCEAN

The Atlantic Ocean is a relatively narrow basin, separating Europe and Africa, on the one side, from the Americas on the other and linking the Arctic and Antarctic Oceans. Its length, from the Bering Strait in the north to Coats Land in the South is 12,810 miles. The breadth, from Newfoundland to Ireland is 2,059 miles and from Capo Sao Roque in Brazil to Capo Palmas, Africa, is only 1,769 miles. The East-West distance continues to widen as the Americas continue to drift closer to Asia. Without its marginal seas, the Atlantic Ocean now covers an area of 31,814,640 square miles; including the marginal seas, this area is around 41,000,000 square miles. Although it thus is a relatively small ocean, and also relatively shallow (average depth, 3,310 m) it has the largest drainage area of all oceans..and receives large amounts of fresh water and sediment from rivers. The Amazon and Congo Rivers flow into the equatorial Atlantic. Together they

discharge about one-quarter of the world's river flow to the ocean. Other large rivers, the St. Lawrence, the Mississippi, the Orinoco, the rivers of La Plata, the Niger, the Loire, the Rhine, the Elbe and the great rivers of the Mediterranean and the Baltic flow into marginal seas in the Atlantic and into the Arctic Ocean. The total area of land draining into the Atlantic has been estimated as 13,432,000 square miles, or, with the Arctic area, over 16,000,000 square miles, nearly four times the area draining to the much vaster Pacific Ocean and almost precisely four times the area draining to the Indian Ocean. The rivers carry pollution from the lands into the oceans. In marginal and coastal seas this has reached critical dimensions.

The North Atlantic is bordered exclusively by industrialised countries, the South Atlantic, by developing countries

The Atlantic and its marginal seas have seen much warfare and conquest, and the rise and fall of great civilisations. Its trade routes generated wealth; its living resources, including some of the richest fishing grounds in the world, nourished growing coastal populations. The film might give some back-flashes of this history: Viking ships; the Hanseatic league; Pax Britannica the colonization of South America by Spain and Portugal. The focus of this part of the film, however, should be on the current crisis of the Atlantic fisheries: the exhaustion of practically all commercial species in the North Atlantic due to overfishing, pollution, and destruction of breeding grounds; the bleaching of coral reefs, the destruction of mangroves and sea-grass beds in the south. Distant-water fishing fleets, displaced from "Exclusive Economic Zones" now under the jurisdiction of coastal states and resource depletion in the North, turn to the South and exploit the resources near the coasts of developing countries. Impoverished coastal villages in Senegal see their fishing boats return home empty while factory ships, anchored at the border line of their coastal sea, suck up and grind into fish meal for their far away markets what should have nourished the coastal population. A few sequences might illustrate the recent "fish war" between Canada and Spain. Oil pollution on tanker routes; the ruinous impact of coastal megacities ports and shanty towns; the ravages of drift-net or dynamite fishing, the impoverishment of fishing villages and their cultures; nuclear waste in the Arctic, might be shown

Historic scenes might alternate with expert discussions on the problems

and how they would have to be solved. A part of the solution -- and an inevitable trend -- would be the passage from an economy of hunting and gathering in the oceans to an economy of cultivating marine plants and husbanding marine animals (sea farming): a process similar to the one that occurred ten thousand years ago on land, with the emergence of agriculture. Some illustrative parallel scenes might be shown.

II. THE PACIFIC OCEAN

Twice as large as the Atlantic and covering an area bigger than the whole land surface of the planet, the Pacific is, nonetheless, an ocean in decline in geological time. Ocean floor is being devoured at its volcanic rims faster than it is produced at the mid-oceanic ridge, and the ocean is shrinking. In human time, however, the Pacific may well be the ocean of the twenty-first century. While the sparse populations of the small islands in the South Pacific remind us of the difficulties of surviving in a modern world where a ruthlessly competitive and self-serving economy is destroying their traditional ways of living with the ocean and managing and conserving its resources, the so-called "Pacific Rim Countries" boast the fastest growing economies in the world, including the most advanced technologies for the exploration and exploitation of their ocean, not only the largest but also the deepest in richest in mineral resources.

This part of the film might start with an interview with Jacques Piccard who, back in 1960, pioneered in exploring, in his bathyscaphe *Trieste*, the Marianas Trench in the Eastern Pacific, reaching a depth of 36,198 feet, the greatest depth ever reached by a human being, until that time.

From there, the film might move to Japan where the most modern submarines are being built, capable of exploring and exploiting the ocean at any depth.

The famous Clarion-Clipperton Fracture Zone, which contains the much discussed manganese or polymetallic nodules, is located in the North-Central Pacific Ocean. Trillions of these mysterious nodules cover the ocean floor, and they contain commercially valuable quantities of nickel, copper, cobalt, and

manganese. International Law has declared these to be the Common Heritage of Mankind, to be managed by an International Seabed Authority for the benefit of all people of the world, especially the poor. This Authority has been established in Jamaica, and although commercial mining may be some decades in the future, exploration and technology development are going ahead. Other metals and minerals, such as polymetallic sulphides and cobalt crusts are continuously being discovered on the deep sea-bed. Recently attention has also focused on the deep-sea microbes. Existing in a unique environment of extremely hot temperatures and high pressure, they appear to have unique qualities of great commercial value to the bio-industries and pharmacological companies. Some of the microbes, the methanococci, produce methane and have a major, though little understood, effect on the respiratory cycle of the planet. They might be cultured in laboratory/factories in the future and become an alternative renewable energy source.

Japan is also a leader in the design and construction of artificial islands and ocean cities. A segment of this part of the film could be devoted to this subject.

Thus, while the Part on the Atlantic Ocean would focus on fisheries, their history, their future, the Part on the Pacific might focus on science, technology, and the exploration of the deep sea. Interviews should alternate with scenes in laboratories and clips of scientific videos. Professor Alexander Malahoff at the University of Hawaii is an excellent source for such videos. Japan would be the place for filming the submarines and related technologies as well as of ocean cities..

III. THE INDIAN OCEAN

The Indian Ocean, filling the smallest of the three major ocean basins, lies primarily in the Southern Hemisphere and is bordered almost exclusively by developing countries. Until the arrival of the Europeans, the Indian Ocean was a sea of peace, traversed by trade routes from earliest historical times. Now that the time of empire building is over, the people living in and around the Indian Ocean would like to see that peace restored. A number of United Nations Resolutions

have declared the Indian Ocean to be a Zone of Peace, a concept that has been carried over to other seas and oceans and deserves further study and implementation.

After a brief survey of ocean uses within the cultural context of the Indian Ocean peoples, and the problems they are encountering, e.g., in coastal management, such as flooding of low-lying plains, environmental impacts of coastal megacities or of ill conceived commercial shrimp farming by multinational companies (now prohibited by the Indian Supreme Court), or river-borne pollution -- three of the world's largest rivers, Ganges, Brahmaputra, and Indus -- discharge into the northern Indian Ocean which thus is the ocean most affected by nearby lands, -- this part of the film could concentrate on the military uses of the oceans, in "Beelzebub's grand Arsenal, where you meet so much Tumult, Thunder, Fire and Smoak, sometimes, that Old Nick himself cannot know which way to turn himself" (quoted by Oliver Warner, *Great Sea Battles*) Nations now can destroy the earth from the depth of the ocean. The film might take a look at the Diego Garcia naval base and the US Navy, its MIRV Missile equipped Posidons or the Vikings with their Mark 46 homing torpedo, or the huge arrays of listening devices, "pumping megawatts of acoustic energy into the ocean so as to make the whole ocean basin ring like a bell and thereby betray the presence of submarines..."

The end of the cold war, together with economic recession, has changed all that. Navies are seeking new justifications for their survival. *The peaceful uses of navies* -- regional joint surveillance and enforcement of international law e.g., for the protection of the environment or the conservation of fish stocks; search and rescue operations, disaster relief with the help of the marvellously equipped Navy Hospital Ships, and, above all peace keeping may be the navies new "missions" in seas and oceans declared to be Zones of Peace.

There is now a global network of hundreds of undersea microphones (or hydrophones), known as Sosis (sound surveillance system), originally deployed by the United States Navy in the early 1990s. During the past year, many more institutions and private companies have gained access to the system, which can "hear" noises over distances of hundreds, even thousands of miles. Expectations of the system are high, e.g., to study

seaquakes and volcanic activities, monitor distant nuclear blasts, track ships involved in drift-net fishing, as well as movements of marine mammals, and to avoid maritime collisions... (*Law of the Sea, Report of the Secretary-General*, 1 November 1996)

As our concept of “security” changes, including now “economic” as well as “environmental” security, the functions of navies must change accordingly.. Evolving systems of regional cooperation in the oceans in “regional seas programmes” for the sustainable development of marine resources , in the Indian Ocean as elsewhere, can be successful only if they are part and parcels of regimes of regional security in zones of peace.

Alternating with the horror show of naval weaponry and interviews with the military as well as with U.N. personnel in charge of Peace keeping, preferably even the outgoing Secretary-General, Dr. Boutros Boutros-Ghali, the author of the U.N. Agenda for Peace,, the film might also show shrines of the Buddhist and Ghandian culture of peace.

IV. THE SOUTHERN OCEAN

The three major ocean basins connect on their southern end in the Southern Ocean This ocean has special importance in ocean circulation and other processes.

The embayments on the margins of Antarctica, especially the Weddell Sea, are especially important to the rest of the ocean system. Here the coldest and most dense waters form and flow northward into all three major ocean basins.

Thick ice sheets flow of Antarctica, forming ice shelves 100 to 200 metres thick. Large pieces of ice break off intermittently, forming icebergs that are then carried northward into the ocean basins.

A large part of the Southern Ocean, together with the landmass of Antarctica, are governed by the Antarctic Treaty system, reserving that part of the world for exclusively peaceful purposes, cooperative scientific research, and the

protection and conservation of this pristine nature park. *The film should show some of the splendours of Antarctica, e.g., a colony of Empire Penguins, which truly arrange themselves like a solemn assembly of courtiers at an imperial court. The film should also discuss the dangers threatening the integrity of the Antarctic Ecosystem, arising from air and sea traffic, landing strips, garbage disposal and tourism.*

The Southern Ocean has been declared a sanctuary for the great whales. Their Magnificent movements, their sounds and systems of communication might provide a beautiful ending for this film.

EPILOGUE

A brief round-table discussion on the future of the ocean: cultural impacts; the emergence of an “ecological world-view” with new ethical implications, the role of oceans in mythology, the arts, literature, music; some technology future-casting; and some concluding thoughts on the new world order emerging from the oceans. Participants in the discussion should come from Asia, Africa, Latin America, North America, and Europe. The round-table might be conducted by satellite teleconferencing.

PLAN OF WORK, PRELIMINARY BUDGET

May, 1997: filming in India, Japan and China. Work: 18 days. Travelling: 6 days
Estimated cost: DM220,000.

June/July: Filming North Atlantic (Canada) and SouthAtlantic/ Antarctic (Argentina), 2x6 working days ;4 days of travelling; estimated cost” DM180,000.

August/December: Cutting, editing, music editing, etc. Cost: DM200,000

Total cost:: DM600,000

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Frau Prof. Elisabeth Mann Borgese
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Datum 05.05.97

CANADA B3H 3P7

Ihr Zeichen	Ihre Nachricht vom	Unser Az	Bearbeiter	Tel.-Durchwahl
	19.03.97		Hr. Pyhel	96 33-401

Filmprojekt „Four Oceans“

Sehr geehrte Frau Prof. Mann Borgese,

ich danke Ihnen ganz herzlich für Ihr Fax vom 19.03.1997, das ich im Auftrage von Herrn Dr. Real kurz beantworten möchte.

Ihre Unterlagen und die Konzeption über das geplante Filmprojekt „Four Oceans“ habe ich mit großem Interesse gelesen. Ein Projekt dieser Art stellt sicherlich nicht nur eine große Herausforderung für alle Beteiligten dar, sondern birgt sicher auch eine große Chance in sich, die Zusammenhänge von Natur und Kultur am Beispiel der Ozeane aufzuzeigen, die Problematik von „Sustainable Ocean and Coastal Management“ zu verdeutlichen und gleichzeitig ein Gefühl für Verantwortung für den Schutz der Weltmeere zu erzeugen.

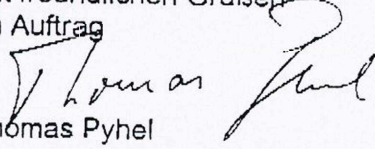
Trotz der aus meiner Sicht sehr ansprechenden Filmkonzeption muß ich Ihnen leider mitteilen, daß auf der Grundlage der Förderleitlinien der Umweltstiftung kaum Förderchancen für Ihr Projekt bestehen. Aus der Erfahrung mit anderen, vergleichbaren Projektvorhaben weiß ich, daß auch ein detaillierter Projektantrag kaum Chancen auf Erfolg hätte.

Bitte haben Sie Verständnis dafür, daß ich die Gründe für die Einschätzung Ihres Vorhabens in Anbetracht der zahlreichen Projektanträge und -skizzen, die der Geschäftsstelle der Umweltstiftung vorliegen, nicht im Detail darlegen kann. Ich möchte aber an dieser Stelle noch mal ausdrücklich darauf hinweisen, daß mit der Einschätzung der Fördermöglichkeiten keine negative Bewertung Ihres Vorhabens an sich verbunden ist.

Ich hoffe, daß Sie noch andere finanzielle Möglichkeiten finden werden, Ihr anspruchsvolles Filmprojekt zu verwirklichen. Hierfür wünsche ich Ihnen viel Erfolg und verbleibe

mit freundlichen Grüßen
im Auftrag

Thomas Pyhel

A handwritten signature in black ink, appearing to read 'Thomas Pyhel', written in a cursive style.