The common heritage

only when satellite detection of natural resources is governed by international law will it benefit mankind

by ELISABETH MANN BORGESE

The world is one underdeveloped country: a network of slums, as Georg Borgstrom called it, with a shrinking number of oases. A small elite, less than half a thousand million people, live in comparative luxury. Over 2.5 thousand million are undernourished or malnourished. Technological advance, divorced from social and political change, merely serves to make the rich richer and the poor poorer. Globally and locally, divisions are deepening. A planless, profit-oriented economy has tampered with the environment, altered human settlement patterns, upset ecological balances. Subtle changes in the world's climate, part "natural," part man-made, connive with manipulated shortages of energy, poorly planned water resource management and lack of fertilizers in conjuring up the spectre of large-scale starvation, turmoil, violence and untold suffering.

From swivel chairs in comfortable offices, richly endowed by philanthropic foundations, so-called scientists calmly announce that half a thousand million children will die between 1980 and 2025. "Let them die," they add, in their systems-analytical wisdom. "Let them die, unless they promise to be good, buy our pills and keep the world the way it is: an underdeveloped country, with the rich getting richer and the poor, poorer. We will not feed them *unless* . . . ." They call this triage: "denying attention to those fated to die."

A well-known American food processing company has announced a new product: dog food containing a contraceptive agent. It will be on the market soon. A breakthrough. Are we to believe that all the R and D went into keeping the number of American dogs under control? It is well known that the indigent and the prolific, unable to keep up with rising food prices in the U.S., widely eat dog food. Why, then, not extend this blessing to Asians and Africans, if it works on American dogs and underdogs? Here, then, appears a way to implement triage, to feed only those who practise birth control: "slurp this, starving humanity, or nothing!"

There must be more human ways to deal with human beings. There is so much that could be done. Arable lands could be expanded. Grains could be improved. Tropical areas could be brought under cultivation. Edible proteins from the oceans could be multiplied tenfold or even more, by new biotechnologies, managerial innovation and political will.

In the oceans, at least, a beginning has been made. Following the initiative of Arvid Pardo of Malta, the United Nations has declared the seabed and its resources the common heritage of mankind, to be managed by all peoples for the benefit of all, especially the poorer nations. The huge machinery of the Third UN Conference on the Law of the Sea has been set into motion toward the goal of creating a more equitable and rational order of governing the development of an area that covers more than two thirds of the globe. There is no doubt that the concept of the common heritage of mankind will be extended from the mineral resources of the deep seabed to the living resources of the waters above: to the management of fisheries; to the increased production and more equitable distribution of food. In the oceans, for the first time, mankind is beginning to bring political change, including great changes in the conduct of international relations and international organization, into line with technological change, which has been carrying the industrial revolution deeper and deeper into ocean space.

To avoid tragedy

There is no reason why the concept of the common heritage of mankind should remain limited to ocean resources. Eventually all resources, including food, will have to be managed globally, cooperatively, with the participation of all nations for the benefit of all people, if tragedy is to be avoided and a course redirected that strikes at the very heart of human dignity and national sovereignty. What we are learning in the oceans is that the common heritage of mankind cuts across national boundaries. There is a common heritage beyond and within the limits of national jurisdiction. And it must be managed as a whole, or it cannot be managed at all. The cooperative management of the common heritage of mankind is quite compatible with national sovereignty. Imposing contraceptives on starving populations is not.

The next candidate for global management, in accordance with the common heritage principle, may be the earth resource satellites. Their potential impact on resource development is enormous. They are used in the search for earth resources, including mineral deposits, soil with high-growth potential and fish at sea; the monitoring of such diverse phenomena as ice movements on the oceans, forest fires, mass insect movements (e.g., locusts) on land; flood predictions, and similar worldwide collections of warning data, collision avoidance and distress relay and rescue.

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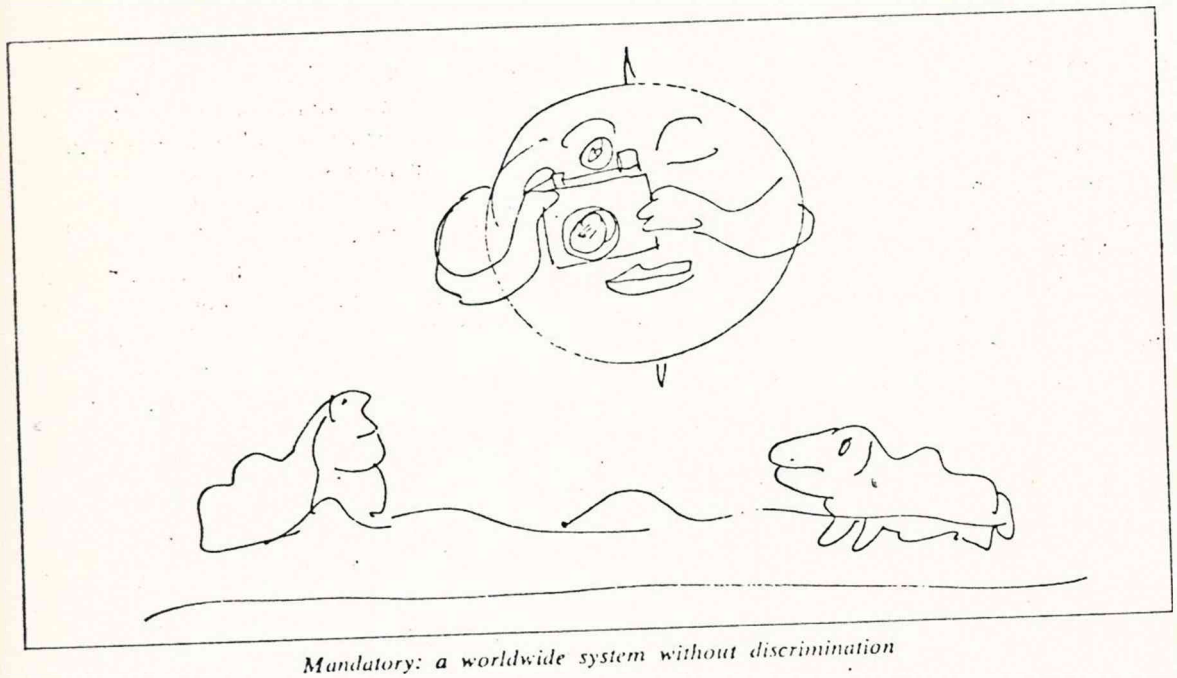
Agricultural applications of thermal infrared scanners from satellites include the detection of plant water stress due to various causes such as the need for irrigation, soil salinity, etc.; measuring occurrence of rainfall; measuring soil temperatures for indicating when the soil is warm enough for the planting of crops; studying occurrence and patterns of freezes; monitoring thermal pollution; detecting springs and subsurface flows into lakes, rivers and oceans; estimating evapotranspiration of farmland, forest and rangelands; estimating water evaporation from lakes, ponds and reservoirs.

Leading to conflict

Potential global benefits from these techniques and their impact on agricultural improvements may reach as high as $45 thousand million a year, according to the U.S. Department of Agriculture.

In the United States, NASA is directing the whole programme, and it has agreed with all participating experimenters that all Earth Resource Technology Satellite (ERTS) data will be placed immediately in the public domain. This is undoubtedly a step in the right direction, but there is still something frighteningly unilateral, voluntaristic and uncontrollable about this way of sharing information. At this time, no international agreement exists regarding the sharing of commercial and economic information through reconnaissance from space. And even if information is made available, most nations do not have the technical capacity to interpret and utilize it. Thus, the space powers have in their possession an enormous advantage in the exploitation of the natural resources of earth and sea and in the planning of their own economies based on knowledge of what is available and what is being done in other countries.

It seems impossible to assume that such a situation will not lead to conflict. The organization of the administration and operation of a worldwide system of satellites, based on the principle of equal cooperation of all states without discrimination, seems mandatory.



Mandatory: a worldwide system without discrimination

There are certain measures the United Nations could take immediately. The General Assembly could adopt a resolution welcoming the launching of earth resource satellites by some member states as another beneficial advance in the peaceful uses of outer space for the welfare of mankind and all countries. The resolution could then request states launching such satellites to make available to the United Nations the resource photographs taken by the satellites so that their benefits might be disseminated to all states.

The General Assembly could set up a small group of experts charged with the responsibility of sorting, examining and interpreting the photographs received from the earth resource satellite states, and make the relevant photographs available to other member states. A modest fee could be charged for the photographs thus made available. The proceeds of these fees might form the nucleus of a fund that would be used to defray the cost of training persons from the developing countries in the reading and interpretation of earth resource photographs.

The General Assembly could call upon member states to set up stations equipped to receive photographs transmitted from earth resource satellites. It could also appoint a committee, drawn from all the regions of the world, to examine all other aspects of interest arising out of the launching of earth resource satellites with a view to maximizing their value to mankind in general, and particularly to the developing countries, for developmental and rational utilization of resources, also taking into account ecological considerations.

As a long-term goal, the committee should examine the feasibility of a UN earth resource satellite system or an international earth resource management organization. It might be based on a declaration of principles very similar to the Declaration adopted by the XXVth General Assembly with regard to the peaceful uses of the seabed and its resources. Thus, some of the main points might be the following.

THE GENERAL ASSEMBLY
Solemnly declares that

1. Earth resources, both mineral and vegetal, renewable and nonrenewable, are the common heritage of mankind.

2. No state or person, natural or juridical, shall claim, exercise or acquire rights with respect to earth resources incompatible with the international regime to be established and the principles of this Declaration.

3. All activities regarding the exploration of earth resources from outer space and their use and other related activities shall be governed by the international regime to be established.

4. Satellite systems shall be used exclusively for peaceful purposes by all states without discrimination, in accordance with the international regime to be established.

5. States shall act in outer space in accordance with the applicable principles and rules of international law including the Charter of the United Nations and the Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations, resolution adopted by the General Assembly on 24 October 1970, in the interest of maintaining international peace and security and promoting international cooperation and mutual understanding.

6. Resource exploration from outer space and the use of such resources shall be carried out for the benefit of mankind as a whole, and taking into particular consideration the interests and needs of the developing nations.

7. Satellite systems shall be used exclusively for peaceful purposes, without prejudice to any measures that have been or may be agreed upon in the context of international negotiations undertaken in the field of disarmament and which may be applicable to outer space.

8. On the basis of the principles of this Declaration, an International Earth Resource Management Organization (IERMO), including appropriate international machinery to give effect to its provisions, shall be established by an international Treaty of a universal character, generally agreed upon. The Treaty shall, inter alia, provide for the orderly observation and inventory of earth resources and for expanding opportunities in the use thereof, and ensure the equitable sharing by states in the benefits derived therefrom, taking into particular consideration the interests and needs of developing countries.

9. States shall promote international cooperation in scientific research exclusively for peaceful purposes:

(a) *By participation in the programmes and plans proposed by IERMO's institutions;*

(b) *Through effective publication of research programmes and dissemination of the results of research through international channels;*

(c) *By cooperation in the measures proposed by IERMO to strengthen research, analysis and interpretation capabilities of developing countries.*

No such activity shall form the legal basis for any claim with respect to any part of resources.

10. With respect to activities in outer space and acting in conformity with the international regime to be established, states shall take appropriate measures for and shall cooperate in the adoption and implementation of international rules, standards, and procedures for, inter alia:

(a) *Prevention of pollution and contamination and other hazards to outer space and the atmosphere and of interference with the ecological balance of the biosphere;*

(b) *Protection and conservation of natural resources and prevention of damage to the flora and fauna of the environment.*

11. In their activities in outer space, including those relating to earth resources, states shall pay due regard to the rights and legitimate interests of subjacent states in the region of such activities. Consultations shall be maintained with the subjacent states concerned with respect to activities relating to the exploration and use of their resources with a view to avoiding infringement of such rights and interests.

12. Nothing herein shall affect:

(a) *The legal status of the air space of nations or their territorial sovereignty;*

(b) *The rights of subjacent states with respect to measures to prevent, mitigate or eliminate grave and imminent danger to their air space or related interests from pollution or threat thereof resulting from, or from other hazardous occurrences caused by, any activities in outer space, subject to the international regime to be established.*

13. Every state shall have the responsibility to ensure that activities in outer space, including those relating to resources whether undertaken by governmental agencies, or nongovernmental entities or persons under its jurisdiction, or acting on its behalf, shall be carried out in conformity with the international regime to be established. The same responsibility applies to international organizations and their members for activities undertaken by such organizations or on their behalf. Damage caused by such activities shall entail liability.

14. The parties to any dispute relating to activities in outer space and dealing with earth resources shall resolve such dispute by the measures mentioned in Article 33 of the Charter of the United Nations and such procedures for settling disputes as may be agreed upon in the international regime to be established.

It may be premature to discuss in any detail the structure of the machinery to give effect to this regime. In many ways, it will follow the pattern being created by the ocean regime. Like the ocean regime, it will have to provide for a number of active institutions, including a satellite management system, organized along the lines of the ocean mining enterprise now under discussion at the Conference on the Law of the Sea; a Scientific Institute to assemble, analyse and interpret all data obtained by the satellite system and supporting earth stations; and a Planning Commission to use the data and interpretations provided by the Institute for the global planning of resource use, recycling and conservation. The plans must be indicative, not enforceable. There should be only one binding obligation, and that is that the plan must be discussed by all national parliaments of member nations, just as ILO resolutions and decisions are. After that, it is up to each government to implement the parts of the plan relevant to it. It is assumed that, in the long run, plans will be so beneficial to all nations that noncompliance would simply be too costly.

The active institutions must be responsible to an international assembly system linked to the United Nations.

The world is one underdeveloped country because — among other things — institutional change has not kept pace with technological and scientific change; and science and technology, that is, the most important wealth-producing factor today, have remained a monopoly of a small minority of nations. The establishment of an Earth Resource Management System, in the wake of an Ocean Resource Management System, would do much to correct the imbalance and to enhance world development. And it is only in a developing world that nations can develop. □

The Common Heritage of Mankind: From Non-living to Living Resources and Beyond

Elisabeth Mann Borgese

This essay celebrates the life and work of Shigeru Oda, one of the great scholars in international law and the law of the sea of the 20th/21st century. I have chosen, in this context, a subject that has always been dear to him, and that is the extension of the concept of the common heritage of mankind from the mineral resources of the international seabed area – the Area – to which it now legally applies, to include the ocean's living resources.

On 25 November 1998 Shigeru Oda wrote to me:

> "The inaugural session of *Pacem in Maribus* was held in Malta, and I, as a member of the planning and organising committee and of the Bureau in Malta, have fond memories of the significant and enjoyable start of the work in Malta, where we discussed the broad aspects of the new Regime of the Ocean on the basis of the challenging concept which was proposed by Ambassador Arvid Pardo – the common heritage of mankind to apply to the deep ocean floor. *You may remember that you gave sympathy and understanding to my suggestion that this concept, originally applied to the seabed, would eventually surface to apply to the fisheries resources in a few decades*". (emphasis added)

This, indeed was a prophetic statement.[1] The thesis of this essay is that, "in the few decades" since our early common work in Malta, the issue has matured. The time has come to reconsider it in the light of contemporary developments. The purpose of this essay is to bring some supporting evidence to the attention of the international community.

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[1] Oda's thinking on this subject goes back a very long way. In his address to the Coordinating Committee of the Economic and Social Council, on 10 July 1970, Arvid Pardo recalled that "as far back as 1957, Professor Oda identified the central problem of modern fisheries as the equitable sharing among States of limited desirable living marine resources". Equitable sharing is one of the attributes of the common heritage concept.

N. Ando et al. (eds.), Liber Amicorum Judge Shigeru Oda, 1313-1334

I. The Ocean Régime

While this essay focuses on the evolution of public thinking, it is perhaps interesting to mention in passing that my own model convention, *The Ocean Regime*, published in 1968 by the Center for the Study of Democratic Institutions, Santa Barbara, California, included living resources, in fact, all ocean resources and services, in the common heritage and provided mechanisms for their management. Article III of this model stated that: "Ocean space is an indivisible whole. Geological structures extend, currents and waves move, species migrate, across the high seas and the ocean floor regardless of political boundaries. The law of the seas and the seabeds must accord with this reality". And: "The natural resources of the High Sea and on or below the seabed as defined by this Statute are the common heritage of mankind. They must be developed, administered, conserved and distributed on the basis of international cooperation and for the benefit of all mankind".

Fishing organisations, fish processors and merchants, unions of seamen serving on fishing vessels and consumers, as well as representatives of regional fishing commissions, were to compose one of the chambers of the Maritime Assembly, the supreme organ of the Régime. The Maritime Assembly was to consist of five chambers: a political chamber, elected by the General Assembly of the United Nations on a regional basis; a fisheries chamber; a chamber representing international mining corporations; a chamber representing shipping companies, cable companies and other organisations providing services or communication on or under the oceans; and a chamber representing scientists in oceanography, marine biology, meteorology, etc. A majority vote of two chambers, i.e., of the political chamber and the chamber competent in the matter voted upon would be required for the adoption of any decisions or recommendations. If the two competent chambers failed to agree, they would have to discuss the matter in a joint session and vote in common. A simple majority vote of the two joint chambers would suffice for the adoption of a decision or recommendation. The full participation of those responsible for the management of living resources, in the broader context of integrated ocean management, was thus assured.[2]

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[2] The model of the five-chamber assembly is adapted from the Yugoslav Constitution of 1958, which was based on the two fundamental principles of social ownership, a concept of non-ownership similar to that of the common heritage of mankind, applicable to resources which cannot be appropriated either by States or individuals, and self-management, including bottom-up participation in decision making. See, J. Djorjevic, "The Social Property of Mankind", in EMB (ed.), *Pacem in Maribus*, 1972, 170-174.

II. The Common Heritage of Mankind: Arvid Pardo and the Definition of the Concept

In his historic address of 1 November 1967, Ambassador Pardo proposed the following definition for the concept of the common heritage of mankind:

> "(1) The seabed and the ocean floor are a common heritage of mankind and should be used and exploited for peaceful purposes and for the exclusive benefit of mankind as a whole. The needs of poor countries, representing that part of mankind which is most in need of assistance, should receive preferential consideration in the event of financial benefits being derived from the exploitation of the seabed and ocean floor for commercial purposes".[3]

And he suggested that the following, among other principles, should be incorporated in the proposed treaty:

> "(1) The seabed and the ocean floor, underlying the seas beyond the limits of national jurisdiction, as defined in the treaty, are not subject to national appropriation in any manner whatsoever.
> (2) The seabed and the ocean floor beyond the limits of national jurisdiction shall be reserved exclusively for peaceful purposes.
> (3) Scientific research with regard to the deep seas and ocean floor, not directly connected with defence, shall be freely permissible and its results available to all.
> (4) The resources of the seabed and ocean floor beyond the limits of national jurisdiction, shall be exploited primarily in the interests of mankind, with particular regard to the needs of poor countries.
> (5) The exploration and exploitation of the seabed and ocean floor beyond the limits of national jurisdiction shall be conducted in a manner consistent with the principles and purposes of the United Nations Charter and in a manner not causing unnecessary obstruction of the High Seas or serious impairment of the marine environment".[4]

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[3] First Statement to the First Committee of the General Assembly, 1 November 1967, in A. Pardo, *The Common Heritage: Selected Papers on Oceans and World Order 1967-1974*, 1975 IOI Occasional Papers No. 3 (Malta University Press).

[4] *Ibid.*, 40.

This definition, ready as early as 1967, has basically survived, incorporated, first, in Resolution 2749 (XXV), then in Part XI of the Convention itself. The basic attributes of the concept are:

1. The common heritage cannot be appropriated: neither by persons, nor by companies, nor by States. Areas or resources which are part of the common heritage are non-property. This concept is articulated in Article 137.
2. The common heritage must be managed, for the benefit of mankind as a whole, with particular consideration for the needs of poor countries (Article 140).
3. The common heritage is reserved exclusively for peaceful purposes (Article 141).
4. The common heritage must be managed with due consideration for the conservation of the environment (Article 145).

Marine scientific research in the Area shall be carried out for exclusively peaceful purposes and for the benefit of mankind as a whole. It is to be coordinated by the Authority, which may also engage in research itself, and research results are to be shared, which puts it effectively under a common heritage régime (Article 143).[5]

While the four attributes above only apply to mineral resources in the Area, marine scientific research is not thus restricted and presumably includes environmental, biological and genetic research.

Pardo was of course fully aware, from the very beginning, that it was inadequate to apply the common heritage concept only to the non-living resources and restrict its application to the international seabed area. From the very beginning, he recognised the essential unity of ocean space which he considered to be the common heritage of mankind. His arguments in favour of this new concept which he proposed to introduce into international law, namely, that neither high seas freedom nor national appropriation could solve the contemporary problems of pollution, resource depletion, and conflict, are even more applicable to living than to non-living resources. In his Ocean Space Draft Convention of 1971, he designed a régime applying the common heritage concept to all resources anywhere in ocean space. Article 6(2) of that Draft Convention asserts that "All States have the duty to co-operate with the competent international institutions in the adoption and enforcement of such measures as may be necessary for the conservation of the living resources of the seas".

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[5] Arvid Pardo considered marine scientific research as "a public interest of the international community". As a public interest "it would enjoy special protection throughout ocean space...". Statement to Subcommittee III of the Committee on the Peaceful Uses of the Seabed and the Ocean Floor, 2 April 1973.

Part IV of the Draft Convention, dealing with the international ocean space, adapts all the basic principles established by Resolution 2749 (XXV) for the seabed to the international ocean space as a whole, and extends the common heritage status from non-living to living resources. The international ocean space, comprising the seabed, the ocean floor and its subsoil, as well as the water column and the atmosphere above it, is the common heritage of all mankind (Article 66). It cannot be appropriated (Article 68). The administration of the international ocean space and the exploration and exploitation of its resources is exclusively for peaceful purposes and shall be carried out for the benefit of mankind as a whole, taking into particular consideration the needs of developing countries (Article 71) and with due consideration of the conservation of the environment (Article 72).

With regard to ocean space as a whole, the Ocean Space Institutions play the same role that the International Seabed Authority plays with regard to the seabed. There is an Assembly, a Council, and a Maritime Court, and a number of subsidiary organs. What is most impressive, and way ahead of its time, is the mandate of these ocean institutions: to maintain international law and order in ocean space; to safeguard the quality of the marine environment; to harmonise the actions of nations in ocean space; to encourage marine scientific research, international cooperation, and strengthening the capacities of technologically less advanced nations; to promote the development and practical application of advanced technologies for the penetration of ocean space and for its peaceful use by man and to disseminate knowledge thereof; to develop in an orderly manner and to manage rationally the international ocean space and its living and non-living resources and to ensure the equitable sharing by all States in the benefits derived from the development of the natural resources of the international ocean space, taking into particular consideration the interests and needs of poor countries; to promote the harmonisation of national maritime laws and the development of international law relating to ocean space; to undertake in ocean space such services to the international community and such activities as may be consistent with the provisions of this Convention.[6]

All this is further detailed in the respective mandates of the Assembly, the Council, and the Court.

In his statements between 1967 and 1974 to the Seabed Committee and elsewhere, Pardo went even further. He saw the common heritage concept not only applicable to both non-living and living resources, he considered it basic and essential for sustainable development and peace in the modern world.

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[6] Shortly before his untimely death in 1981, H. Shirley Amerasinghe, President of UNCLOS III, said to me, "Had we really looked at Arvid's Draft in 1971, we could have spared ourselves ten years of work!"

> "For my delegation the common heritage concept is not a slogan, it is not one of a number of more or less desirable principles, but it is the very foundation of our work, the key that will unlock the door of the future. It is a new legal principle which we wish to introduce into international law. It is a legal principle which, we feel, *must* receive recognition if the international community is to cope constructively and effectively with the ever more complex challenges which will confront us all in the coming decades. We cannot deal effectively with the accumulating and increasingly serious problems of the total environment in which we live ... on the narrow, outdated basis of traditional international law; new concepts must be introduced, new solutions sought to enable us all, from the greatest world powers to the smallest society, to cope intelligently with new problems".[7]

III. The Law of the Sea Convention (1982) and the Straddling Stocks Agreement (1995)

If a common heritage resource (1) cannot be appropriated; (2) is reserved for peaceful purposes; (3) must be managed on the basis of equity for the benefit of mankind as a whole, with special consideration to the needs of poor countries; and (4) must be conserved for future generations, then it is clear that, in spite of its ardent assertions with regard to the freedom to fish in the high seas and the sovereign rights of coastal States in their exclusive economic zones, the Law of the Sea Convention goes some way towards making the ocean's living resources a common heritage resource. The sovereign rights of coastal States are somewhat limited by the imposition of responsibilities. Management and conservation are prescribed in Article 61. Paragraph 2 states: "The coastal State, taking into account best scientific evidence available to it, shall ensure through proper conservation and management measures, that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation".

Some awareness of the need for equity, and the duty of sharing is expressed in Articles 62, 69, and 70. Article 62 imposes the duty to share – if only the surplus, i.e., the difference between the total allowable catch and the harvesting capacity of the coastal State. Articles 69 and 70 assert the rights of land-locked and geographically disadvantages States "to participate, on an equitable basis", in the exploitation of an appropriate part – even if only "of the surplus of the living resources of the exclusive economic zones of coastal States...".

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[7] Statement to the First Committee of the General Assembly, 29 October 1968.

Among other criteria, the nutritional needs of the States involved are to be taken in consideration; and even when the "surplus" disappears, because the coastal State has reached the capacity to harvest its total allowable catch, it still has the duty "[t]o cooperate in the establishment of equitable arrangements ... to allow for the participation of developing land-locked States", etc. This duty, however, is abrogated (Article 71) "in the case of a coastal State whose economy is overwhelmingly dependent on the exploitation of the living resources of its exclusive economic zone".

Management and Conservation are responsibilities that limit the Grotian freedom to fish on the high seas (Articles 116-119), even though references to the duty of equitable sharing are conspicuously absent. Reservation for peaceful purposes is implicit, both with regard to the exclusive economic zone and the high seas, insofar as this part of ocean space itself is reserved for peaceful purposes (Article 88). This indeed is a remarkable departure from the 1958 Convention on the High Seas. One might therefore come to the conclusion that three of the four criteria determining a common heritage resource are applied by the Convention to the living resources of the sea. However, this application appears to be weak, half-hearted and lacking concreteness, compared to the detail lavished on the management of non-living resources in Part XI of the Convention!

The Straddling Stocks agreement[8] has made important contributions to strengthening the management provisions, and thus brought the living resources even closer to a common heritage status. It has done this in three ways. First, it has strengthened the management role of regional and subregional fisheries commissions.[9] Secondly, it has greatly strengthened the *enforcement mechanism* on a regional basis.[10] And

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[8] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 12 October 1995.

[9] See, e.g., Part III, Article 8. Only States which are members of the competent regional fisheries commission or undertake to apply the management measures adopted by these commissions are allowed to fish on the high seas within the region concerned. Article 13 mandates the "strengthening of existing organizations and arrangements". Article 10 lists the duties and responsibilities of regional fisheries commissions or arrangements. Where no competent regional commission or arrangement exists, it has to be established (Articles 8, 9).

[10] Articles 20, 21. Any State Party to the Agreement may board and inspect any ship of any other party, regardless of whether it is a member of the fisheries commission concerned. The inspector then has to notify the flag State, but if the flag State fails to respond, the inspecting State can take all necessary

thirdly, and perhaps most importantly, it has imposed the duty on coastal States to harmonise their conservation measures with those agreed upon within the regional Commission for the High Seas beyond the jurisdiction of the coastal State.[11] This was a hotly debated question, and that it could be resolved signifies progress in the direction of a common heritage régime for living resources.

The fourth criterion determining a common heritage resource, that is, that it cannot be appropriated, is missing altogether, both in the Convention and in the Agreement. Indeed, the voices of those who advocate the establishment of "property rights" over this "common resource", for instance, in the form of "individual transferable quotas" (ITQs), are getting stronger. They claim that the "privatisation" of the fishing industry and its governance by the invisible hand of the market is the only way to save it from extinction. It is, however, not too hard to counter their arguments. Quite apart from ethical and equity considerations, the proposition does not make sense from a resource-economic perspective. Thus Partha Dasgupta:

> "Now in many cases of externalities it may be impossible, or at any rate difficult, to define property rights, let alone establishing them legally and then enforcing them...".

And he points out:

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enforcement measures, including taking the ship into one of its ports. Basic procedures for boarding and inspecting are detailed in Article 22. Article 23 lists the rights and the duty of port States with regard to inspecting and detaining ships voluntarily in their ports. This is an extension of the port State régime in the Convention, relating to violations of environmental and fisheries regulations. It should also be noted that, in the Convention, the port State has the right to take enforcement measures. In the Agreement it has not only the right, but also the duty.

[11] Article 7 establishes that coastal States and States whose nationals fish for straddling or highly migratory stocks in the adjacent high seas shall seek, either directly or through the fisheries commissions or other mechanisms, to agree upon the measures necessary for the conservation of these stocks both within the EEZ and in the adjacent high seas. Compatibility of conservation and management measures is of course essential both for the coastal State and for the conservation of the stocks on the high seas. Article 7 stipulates that "Conservation and management measures established for the High Seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety". If there is no agreement, the dispute is subject to mandatory peaceful settlement in accordance with Part VIII of the Agreement, which is in accordance with Part XV of the Convention.

> "[T]here are many circumstances in which market solutions do not sustain an efficient allocation of resources. Many such situations can be described by saying that certain essential markets do not exist. Sometimes they just happen not to exist for accidental or historical reasons; sometimes there are logical reasons why they cannot exist; sometimes the nature of the physical situation keeps them from existing, or makes them function wrongly if they do exist. *It happens that industries producing (or using) renewable and non-renewable resources are especially vulnerable to these difficulties...*".[12]

If, by some misfortune, the establishment of property rights such as ITQs, privatisation and resource allocation entrusted solely to market mechanisms were to succeed, this most certainly "would make the system function wrongly". It would concentrate fishing power in the hands of large companies, forcing the artisanal fisher out of business. While reducing the number of fishers, it would not reduce fishing effort. Cut-throat competition between large companies and among fishing States would continue or increase, continuing the present trend of making the rich richer and the poor poorer and accelerating the ineluctable depletion and extinction of species after species. Rather than ignoring the question of property rights over the resource, it would seem necessary and urgent to deal with it in the sense that the living resources of the oceans cannot be owned, but must be managed for the good of mankind as a whole, including future generations, and with particular consideration for the needs of the poor. Thus complementing what is already there, this would make the living resources part of the common heritage of mankind.

IV. The Holy See and the Common Heritage of Mankind

On 19 May 1978, the Delegate of the Holy See, Msgr. Silvio Luoni, made an important statement before the Second Committee of UNCLOS III, which dealt, among other subjects, with the conservation, utilisation and management of living resources. Msgr. Luoni justified the participation of the Holy See in UNCLOS III on the basis of its character as a universal institution. "As such", he said, "the Holy See anxiously looks towards the adoption of measures capable of guaranteeing the common good as such, that is the peace of the international community".[13] This requires the abolition of presently existing injustice

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[12] P. S. Dasgupta and G. M. Heal, *Economic Theory and Exhaustible Resources*, 1979, 190-191, emphasis added.

[13] Statement by the Delegate of the Holy See before the Second Committee of UNCLOS III, 7th Session, 19 May 1978. Original in French. Copy on file

and the suppression of the root causes of possible future injustices. The Holy See did not intend to contribute technical solutions to the Conference, but rather to deal with principles which could guarantee just and equitable solutions for the whole international community, and, in this context, "first of all, the statement of that tenet universally accepted, at least in theory, that the sea is 'a common heritage of mankind'".[14]

"Moreover", he continued, "this principle is part of the wider concept of the 'universal purpose of creation', it has already been applied to the States in regard to their own national territory, not as restriction to their sovereignty, but for the exploitation and use of their natural resources in such a fashion as to take into account the needs of all mankind and, especially, of that part of mankind belonging to States with limited resources".[15] He expressed his deep concern about tendencies he could not fail to observe at this conference: national ambitions with regard to the uses of ocean space, which were in flagrant contradiction with this principle, and he endorsed instead the calls for a New International Economic Order which should not aim at the grabbing of natural resources for the benefit of a few privileged and, above all, geographically advantaged States, but that these resources should be shared equitably among all peoples in accordance with their real needs. He pointed out that the sovereignty of coastal States would necessarily be subject to important restrictions, and that this was generally recognised even for the territorial sea, and even more so for the exclusive economic zone, especially with regard to the migration of fish. "It would seem logical to affirm that such of restrictions on sovereignty apply also the resources living in an economic area. That means that the coastal States with an abundance of living resources have the duty to share them with other States, particularly the less fortunate, and therefore that the latter acquire some rights on these resources. This must be an assured right, which means that the criteria for this sharing and its effective implementation cannot be left to the discretionary power and the good will of the coastal States, but that measures and regulations must be laid down to give effect to the implementation of this right".

The Apostolic Delegate could ground his proposal in a tradition as old, almost, as the Church itself. In a brilliant essay, entitled "The Common Heritage of Mankind – A Roman Catholic View", delivered at *Pacem in Maribus* in Moscow, June 1989, Father Peter Serracino Inglott of Malta cited St. John Chrysostom, a fourth-century bishop of a city in Asia. He said:

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with the author, courtesy of the Permanent Observer Mission of the Holy See to the United Nations. For the full text in French, see also R. Platzoeder, *Kommentar zum Seerechtsübereinkommen der Vereinten Nationen*, 2001, 76.

[14] *Ibid.*

[15] *Ibid.*

> "Mark the wise dispensation of God! ... He has made certain things common, such as the sun, air and the ocean.... Their benefits are dispensed equally to all as brethren.... It is as if nature itself becomes indignant ... when we seek to divide and separate ourselves by appropriating such things.... Therefore, the (opposite) condition is rather our heritage and more in agreement with nature".[16]

As Father Peter pointed out, this statement "indeed literally contains almost all the key words in Ambassador Pardo's famous 1967 motion at the United Nations".[17] Dozens of quotes, from other Church Fathers could be added to this.

Father Peter drew attention to the distinction between *res nullius*, unowned resources capable of either private or national appropriation, *res communis*, as "not liable to private ownership, and *res communis omnium*, which "is also not to be subject to national sovereignty".[18]

It is this latter concept that the common heritage concept proposed by Ambassador Pardo was to replace. Father Peter sees the common heritage as

> "a totality of resources not necessarily material which, because of their very nature, should not only *not* be appropriated – neither by individuals, nor by groups, nor by States, nor by groups of States; but also should be *managed* – on behalf of mankind as a whole (including future generations) and managed appropriately (i.e., participatively) through legally constituted institutions. The crucial difference here is that the universality of destination of the resources is respected through the right to share in the management of the resource rather than through unimpeded physical access to it, and through the right to share in the benefits of the use of the resource, rather than through directly picking up bits and pieces of it. It is because of this positive requirement – the need of appropriate (participatory) management rather than mere non-appropriability – that such resources constitute a specific category". (emphasis original)

In the tradition of the Catholic Church, Father Peter points out, "by nature *all* earthly resources have a universal destination, that is, they are intended for the good of mankind as a whole", a theme taken up by the Holy See's Representative, Msgr. Antonio del Giudice at the first

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[16] Unpublished, copy on file with author.
[17] *Ibid.*, see also note 3 above.
[18] *Ibid.*

working session of UNCLOS III in Caracas, 12 July 1974.[19] The real importance of the International Seabed Authority would be the fact that it gave a legal and institutional form to the concept of the common heritage of mankind, which, in Catholic doctrine, comprises all the earth's resources, obviously including the living resources of the seas and oceans. "This concept has the strong support of the Catholic Church", Msgr. del Giudice stated, "as may be seen from her social teaching".[20] In his encyclical *Mater et Magistra*, Pope John XXIII stated, "According to the plan of creation, the goods of the earth are above all destined for the worthy support of all human beings".[21]

V. Food and the Common Heritage of Mankind

The ocean's living resources make a major contribution to world food, especially in poor countries where, in many cases, they provide the largest part of animal protein consumed by coastal populations. Food, in any case, is made of the earth's resources and thus, in accordance with Catholic doctrine, should be considered part of the common heritage of mankind. There is, however, at least one author, Judge Mohammed Bedjaoui of Algeria, who considers food as a whole, food as such, a common heritage of mankind. In various essays,[22] he deals with the basic human right to food as part of the right to development, which he considers *jus cogens*.

> "There is no place in such an analysis for charity, the 'act of mercy', considered as being a factor of inequality from which the donor expects tokens of submissiveness or political flexibility on the part of the receiving State. The concept of charity thus gives place to that of justice".[23]

This is entirely in line with Pardo's thinking, who repeatedly stated that the common heritage concept changes the relationship between rich and

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[19] Copy on file with the author, courtesy of the Permanent Observer Mission of the Holy See to the United Nations.

[20] *Ibid.*

[21] *Ibid.*

[22] See, for example, "The Right to Development", in M. Bedjaoui (ed.), *International Law: Achievements and Prospects*, 1991; "Propos libres sur le droit au développement", in *Le droit international à l'heure de sa codification. Etudes en l'honneur de Roberto Ago*, 1987; "Les ressources alimentaires essentielles en tant que 'patrimoine commun de l'humanité'", *Revue algérienne des relations internationales* 1 (1986); "Are the World's Food Resources the Common Heritage of Mankind?", *Indian JIL* 24 (1984).

[23] Bedjaoui, "The Right to Development", see note 22, 1196.

poor countries, as it implies that there are no "donors" or "recipients" because both have an inherent right to their equitable share of the common heritage.[24]

And Bedjaoui continues:

> "What belongs to the international community and is 'the common heritage of mankind' should be shared among all States in accordance with the maxim *'to each according to his needs'*. This therefore implies an element of *jus cogens*".[25]

Like Pardo, the Fathers of the Church and the founders of other great religions, Bedjaoui emphasises the universal importance of the common heritage concept:

> "There can be no denying that this innovative concept, the common heritage of mankind, is capable of giving world-wide solidarity a wealth of practical expression. It might prove especially productive for the future of world relations and be applied not only to the resources of the sea-bed and of space (those of the moon and celestial bodies), as is already the case, but also to the land, the air, the climate, the environment, inert or living matter and the animal and vegetable genetic heritage, the wealth and variety of which it is vital to preserve for future generations. It might also provide insights and suggest attractive solutions to questions such as those concerning the cultural and artistic property of the globe, just as it could, and even should, apply in the first place to the human race, the first common heritage of mankind, and to mankind itself, a new subject of international law and the supreme heritage that must at all costs be saved from the threat of mass destruction".[26]

Bedjaoui is fully aware that his proposal to declare "basic world food stocks" to be part of the common heritage of mankind will be considered utopian in these rough times. He is confident, however, that this will change.

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[24] See, e.g., A. Pardo and E. Borgese, *The Law of the Sea and the New International Economic Order*, 1977.

[25] Bedjaoui, "The Right to Development", see note 22, 1192.

[26] Bedjaoui, *ibid.*, 1196-1197, cites the 16th-century Spanish lawyer Vitoria asserting that the Christian Holy Scriptures intended "the goods of the earth" for "the whole of the human race", "for common use" and for "a universal purpose". He also refers to "the spirituality of the seventh century when the Koran announced to all mankind that 'all wealth, all things, belong to God and thus to all members of the human community'".

> "It is dangerous to write off the aspirations of four billion human beings by dismissing them too readily as being no more than fevered incantations. What we are advocating is that 'the world food stocks' essential to life, that is to say principally *grain* stocks, be declared to be the 'common heritage of mankind' so as to guarantee every people the vital minimum of a bowl of rice or loaf of bread in order to eradicate the monster which kills fifty million human beings a year".[27]

He even goes so far as to suggest an "immediate and provisional first step" to bring this "new world food order" into being. This should be the establishment of a universal agency, provided with an operational administration, which might be called the International Fund for Food Stocks (IFFS). It would have a budget with funds provided from a tax levied in each State on manufactured products of high added value made of raw materials from third-world countries, and/or by a one-per cent tax on military budgets. This agency would function as an equalisation fund, subsidising the purchase of food stocks or buying them from the food-producing countries and making them available to countries with a food deficit at a token price, which might later on be replaced by a general system of food distribution without charge.

In the present context, we might suggest an alternative "immediate and provisional first step" towards creating this new world food order by replacing grain with the ocean's living resources as an initial component of the world food stock to be declared a common heritage of mankind. Since the oceans are already regarded as such and a system of governance of this common heritage is already emerging – has largely emerged already – it might be less "utopian" to complete this system of governance than starting a new one.

VI. Genetic Resources and the Common Heritage of Mankind

Genetic resources are evidently living resources, but while, in general, living marine resources consist of fish, crustaceans, molluscs, marine mammals, turtles and birds, as well as seaweed and algae, genetic resources include all of the above, as well as, in particular, the aquatic microfauna and the myriad of bacteria of the deep sea, on and under the sea floor, which have been discovered only in recent years. They form the basis of very peculiar, quite unearthly ecosystems, driven by chemosynthesis rather than photosynthesis, and may hold the key to our understanding of the origin of life on this planet. They flourish in

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[27] *Ibid.*, emphasis original.

submarine areas of volcanic activity, in conditions of darkness, extremely high temperatures and pressures. Hence they have also been called "extremophiles" or "hyperthermophiles". The unique resistance they have developed against heat and pressure makes them particularly useful for the development of a number of bioindustrial and pharmaceutical processes, and bioprospecting for them has become part of big business.

The industries utilising these genetic resources are quite diversified. They include the pharmaceutical, waste treatment, food processing, oil and paper processing industries, as well as mining applications. The potential market for industrial uses of hyperthermophilic bacteria has been estimated at $3 billion per year.[28]

In a carefully documented paper Glowka points out:

> "Hyperthermophilic bacteria are just one example of the commercial potential of microbial genetic resources from the Area; as research continues, other commercially interesting organisms may also be discovered. For example, there may be organisms that orchestrate processes for minerals transport and bioaccumulation of metals. These could be useful in bioremediation of hazardous waste. Other organisms could be useful in biomining applications. Viruses associated with the organisms of the Area, in particular hyperthermophilic bacteria, may provide new vectors useful in biotechnological applications. Researchers may also be able to isolate potential anticancer and antibiotic compounds from deep seabed bacteria or fungi associated with other macro-organisms, as they have in more accessible areas of the ocean. In short, the biodiversity of the seabed has hardly been explored, and we simply do not know what may exist".[29]

The Biodiversity Convention (1992), which entered into force on 29 December 1993, affirms that the conservation of biological diversity is a common concern of humankind (Preamble). It does not explicitly apply the concept of the common heritage of mankind to genetic resources. Its provisions, however, imply several of the attributes of the concept. The very purpose of the Convention is the conservation of biological diversity for future generations,[30] through management and the equitable

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[28] L. Glowka, "The Deepest of Ironies: Genetic Resources, Marine Scientific Research, and the Area", *Ocean Yearbook* 12 (1996).

[29] *Ibid.*, The World Conservation Union has estimated that the deep sea may be home to 10 million species.

[30] "Determined to conserve and sustainably use biological diversity for the benefit of present and future generations". Preamble.

sharing of benefits derived from their use.[31] Cooperation in the management of these resources is to enhance peace and friendly relations among States.[32] It is only "non-appropriability" that is lacking among the attributes determining the common heritage status of the resource. The Convention indeed is based on the assumption of sovereign rights of States over their genetic resources and the right of industrial companies to acquire ownership through the controversial patenting of living resources. All these rights, however, are limited by considerations of the common good.[33]

The Biodiversity Convention is a remarkably land-oriented document. It assures the rights of developing countries, of local, especially indigenous, communities, and their participation in the conservation and utilisation of genetic resources in areas under national jurisdiction. Marine resources are given consideration not so much by the Convention itself as by the Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity.[34] The conservation of biodiversity in international waters, including, in particular, the microfauna of the deep seabed and its subsoil, remains, for all practical purposes, a legal lacuna.

Clearly, something will have to be done

1. to protect the bioprospectors from conflicts with other users of the international area (it should be noted that the International Seabed Authority has the mandate to coordinate its own activities with other activities in the Area[35]);

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[31] Article 19(2) provides: "Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by these Contracting Parties. Such access shall be on mutually agreed terms".

[32] "Noting that, ultimately, the conservation and sustainable use of biological diversity will strengthen friendly relations among States and contribute to peace for humankind...". Preamble.

[33] Article 16 contains an amazingly strong provision to this effect: "(1) The Contracting Parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives". In other words, conservation, community and equity interests take precedence over private property interests.

[34] First version, October 1998, issued by the Secretariat of the Convention on Biological Diversity for the CBD Roster of Experts on Marine and Coastal Biological Diversity.

[35] Article 147.

2. to protect and study the resources, which is within the mandate of both the Biodiversity Convention[36] and the International Seabed Authority[37]; and
3. to live up to the spirit of partnership and benefit and technology sharing that pervades all recent conventions, laws and regulations intended to save our environment in order to save ourselves. Politicians, the business world, academia, non-governmental organisations, all agree today that it is impossible to attain this goal without the cooperation of the developing countries, that is, the vast majority of humankind. If they are to cooperate, however, they have to have the necessary technologies, and must be fully included in the new phase of the industrial revolution in which genetic resources will play a major role.

Since the protection of genetic resources is the responsibility both of the International Seabed Authority and the Biodiversity Convention, it can be achieved only through a joint undertaking of both régimes. In his report to the meeting of the parties to the Law of the Sea Convention in April 1996, the UN Secretary-General exhorted States,

> "particularly States Parties to the Law of the Sea Convention which are also parties to the Convention on Biological Diversity, to coordinate their activities particularly with respect to the conduct of reviews of the relationship between the two conventions, the identification of additional measures that may need to be taken, including the possible development of new or additional international rules".[38]

And in his report to the General Assembly the same year, he stressed

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[36] "Each Contracting Party shall, as far as *possible and as appropriate, cooperate with other Contracting Parties, directly, or, where appropriate, through competent international organizations, in respect to areas beyond national jurisdiction and* on other matters of mutual interest, for the conservation and sustainable use of biological diversity. Article 5, emphasis added. The "competent international organization", in this case, is clearly the International Seabed Authority; the "area beyond national jurisdiction" is the international seabed area.

[37] Article 145(b) mandates the Authority with "the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment".

[38] United Nations Convention on the Law of the Sea, Meeting of States Parties, Fifth Meeting, New York, July 24-2 August 1996, *Report of the Secretary-General under Article 319 of the UNCLOS*, SPLOS/6, 11 April 1996, para. 46.

> "The general subject of marine and coastal diversity, as well as the specific issue of access to the genetic resources of the deep seabed, raise important questions....
>
> The specific issue of access points to the need for the rational and orderly development of activities relating to the utilisation of genetic resources derived from the deep seabed area beyond the limits of national jurisdiction".[39]

The rules and regulations of a joint law of the sea/biodiversity régime should not be burdensome for the industry. They could be formulated as a protocol and adopted by the parties to both Conventions. By way of a preamble, it might be recalled that, in accordance with the United Nations Convention on the Law of the Sea, the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction, and its resources, are the common heritage of mankind. All rights in such resources are vested in mankind as a whole, on whose behalf the International Seabed Authority acts. The objectives of these regulations would be:

1. the conservation of biological diversity in the Area
2. the sustainable use of its components
3. the fair and equitable sharing of benefits arising from the use of genetic resources
4. participation of developing countries in the bioindustries
5. the precautionary approach and intergenerational equity, and
6. international cooperation in technology development in a sector likely to be of primary economic importance in the 21st century.

It might also be stipulated that the use of genetic resources from the Area for purposes of biological warfare is prohibited.

The first part of a preamble of this kind is taken from the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, the second part summarises the purposes of the Biodiversity Convention, and the final provision is taken from the Andean Pact Common Régime on Access to Genetic Resources.

The most important substantive point should be that bioprospectors should notify the Authority of their intention to engage in bioprospecting, with an exact description of the area in which they intend to work, a clear statement of the aims and objectives of the project, of the time frame and methodology and, if applicable, a

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[39] United Nations General Assembly, Fifty-first Session, Agenda Item 24(a), Law of the Sea, *Report of the Secretary-General*, A/51/645, 1 November 1996, para. 231.

statement on how local communities possessing and traditionally utilising the same or similar genetic resources will participate in the project.

Such guidelines have already been elaborated by the University of the South Pacific and could easily be adapted to the requirements of the international seabed.

Prospecting for minerals in the international seabed area is subject to licensing, but without cost. Bioprospecting, of course, is different from prospecting for minerals. It is not followed by "exploration" and "exploitation", which would be subject to payment of a fee. All subsequent testing and developing is undertaken on land, under national jurisdiction. It would be fair, therefore, if, in return for the supervisory and coordinating activity of the Authority, guaranteeing the safety of the bioprospector, the bioprospector would be required to pay a modest fee upon the conclusion of an access agreement.

Provisions for the protection and preservation of the marine environment should be harmonised with those contained in the Authority's mining code, adopted in 2000.

The Authority's participation in scientific research, including biotechnological research activities based on genetic resources, fair and equitable sharing of research and development results and commercial and other benefits derived from genetic resource use, and access to and transfer of technology making use of genetic resources, should be determined in accordance with the provisions of the Biodiversity Convention, in particular Articles 15, 16 and 19. There appears to be a general consensus that joint ventures in R&D and technology co-development, funded partly by the partners (of which the Authority should be one) States, and international (GEF, UNDP, etc.) or bilateral funding agencies, are the most suitable instrument to achieve these goals.

It would seem that this kind of régime would serve the best interests of the industry as well as those of the International Seabed Authority and the parties to the Biodiversity Convention. It most certainly would enhance progress in exploring the living creatures in international waters, including the seabed which still has countless secrets to disclose. The fact is that only two to three per cent of the deep seabed has been explored thus far! Evidently, more than commercial interests are involved. Genetic resources, more than anything else, are our common heritage. Their exploration, bringing us face to face with the origin of life, should be the concern of all countries and people.[40]

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[40] For all the foregoing, see International Ocean Institute. *The International Seabed Authority: New Tasks*, Proceedings, Leadership Seminar, Jamaica, 14-15 August 1999.

VII. Sustainable Development and the Common Heritage of Mankind

"Sustainable development" is a term that has been used, overused and abused in various ways to cover the most diverse intentions and activities. In the worst case it is a tautology or oxymoron. Development that is not sustainable, in the sense that it destroys its own resource and/or the environment, natural or social, in which it is supposed to take place, is no development at all. In the best case it is a concept of considerable complexity. In her Sir Peter Scott Lecture, delivered in Bristol on 8 October 1986, Gro Harlem Brundtland gave it the following definition, which is preferable to the oversimplified version in the "Brundtland Report".[41] In Bristol she said:

> "There are many dimensions to sustainability. First, it requires the elimination of poverty and deprivation. Second, it requires the conservation and enhancement of the resource base which alone can ensure that the elimination of poverty is permanent. Third, it requires a broadening of the concept of development so that it covers not only economic growth but also social and cultural development. Fourth, and most important, it requires the unification of economics and ecology in decision-making at all levels".[42]

In this perspective, "sustainable development" has environmental, economic, ethical (equity), legal and institutional implications. This may have a familiar ring, because it takes us back to the opening pages of this essay, to the definition of the concept of the common heritage of mankind. The "attributes", "aspects" or "dimensions" are identical in both cases.

What, one may ask, about the disarmament dimension – the reservation for peaceful purposes? Principle 25 of the Rio Declaration holds the answer to this question: "Peace, development and environmental protection are interdependent and indivisible". Sustainable development rests, depends, on peace and security. Without peace and security there can be neither economic development nor protection of the environment. At the same time, there can be neither peace nor security without equitable economic development, including the elimination of poverty, and without environmental conservation or environmental security.

Unfortunately, Agenda 21 ignores this interdependence and indivisibility, and the whole structure of the UN system is still too sectoral to take up the challenge. There are, however, new beginnings

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[41] UNCED, *Our Common Future*, 1987.

[42] See E. M. Borgese, *The Oceanic Circle*, 1998.

which can be developed so as to transcend the sectoral approach and consider the closely interrelated problems of the ocean space as a whole. The most important of these is the General Assembly's newly established Consultative Process (UNICPOLOS) which has in fact already begun to look at the enforcement and security aspects of sustainable development, especially in a regional context.

What about the non-appropriability aspect of the common heritage concept? The sustainable development concept does to the Roman Law construct of private property or ownership what the common heritage concept does to the Grotian construct of sovereignty. Both sovereignty and ownership – the sovereignty of the individual – are being transcended and transformed.

It is the conclusion of this essay that the whole sustainable development process will either come to naught, or will have to be based on the concept of the common heritage of mankind: not only in the oceans, that great laboratory for the making of a new world order, but globally. In accordance with the cultures of the vast majority of humankind, its application must be extended from the wealth of the oceans to wealth in general, not to be owned by humankind, whether individually or collectively, but to be held in trust, and to be administered on the basis of cooperation between civil society and the institutions of governance, at local, national, regional and global levels, with special consideration for the needs of the poor.

VIII. Conclusion

Shigeru Oda was right and prophetic, three years ago, 30 years ago, 50 years ago, when he predicted and advocated that the living resources of the oceans must be declared a common heritage of mankind. Our present, market-based economic system is failing us miserably, giving all the wrong incentives and leading, ineluctably, to conflict, degradation and extinction. This is a market failure of the first magnitude. One might mention, in this context, that our Western economic system as a whole must be considered a war system: both historically and ideologically. Historically, because it developed in an era of aggressive expansionism, the conquest of the world by Western Europe; ideologically, because it is based on competition and conflict rather than on cooperation. Thus it is part of a "culture of war".

What we are striving to build today is a "culture of peace". The new law of the sea is at the vanguard of this effort, and the concept of the common heritage of mankind is fundamental to it.

Rome was not built in a day. It would not be realistic to think the common heritage concept could be applied universally tomorrow. If we are not to catapult into Utopia, we must envisage a step-by-step process,

without, however, losing sight of the whole. The ocean's living resources, constituting part of the world's basic food stock as well as of its biodiversity, are the most obvious next candidate. The time has come, Shigeru Oda, and we do not really have any choice. For if we do not act, these resources are doomed.

The next step, not into Utopia, but into the future, is greatly facilitated by what has already been achieved. Willy-nilly, *nolens volens*, the international community has already gone more than half way. Mechanisms, such as community-based co-management of fisheries, codes of conduct, regional fisheries commissions, are already in place and do not need to be invented. What is needed now is a new Protocol or Agreement, building on everything that has been built, putting it together in a consistent architecture in the context of the emerging "culture of peace" of the 21st century, which will have to comprise an "economics of peace" based on the concept of the common heritage of mankind. The world should give you such a Protocol, Shigeru, on the occasion of your next birthday!

G. Rohr adds -
this is the piece!

edited - N. Ando
SU (eds.) R. Wolfrum,
G. McWhinney, [illegible]

Liber Amicorum
for Judge Shigeru Oda
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contribution to a publication in honor of Judge Oda.

- paper for the MAX PLANCK INSTITUTE. (Prof. Dr. Wolfrum, Director)
- JANUARY 2001

THE COMMON HERITAGE OF MANKIND: From Nonliving to Living Resources And Beyond

by

Elisabeth Mann Borgese

This essay is to celebrate the life and work of Shigeru Oda, one of the great scholars in international law and the Law of the Sea of the twentieth/twenty-first century. I have chosen, in this context, a subject that has always been dear to him, and that is the extension of the concept of the Common Heritage of Mankind from the mineral resources of the international sea-bed -- "the Area" -- to which it now legally applies, to include the ocean's living resources.

> On November 25, 1998 Shigeru Oda wrote to me:
>
> The inaugural session of *Pacem in Maribus* was held in Malta, and I, as a member of the planning and organizing committee and of the Bureau in Malta, have fond memories of the significant and enjoyable start of the work in Malta, where we discussed the broad aspects of the new Regime of the Ocean on the basis of the challenging concept which was proposed by Ambassador Arvid Pardo -- the common heritage of mankind to apply to the deep ocean floor. *You may remember that you gave sympathy and understanding to my suggestion that this concept, originally applied to the seabed, would eventually surface to apply to the fisheries resources in a few decades.*(Emphasis added)

This, indeed was a prophetic statement[1]. The thesis of this essay is that, "in the few decades"

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[1]Oda's thinking on this subject goes back a very long way. In his address to the Coordinating Committee of the Economic and Social Council, on July 10, 1970, Arvid Pardo recalled that "as far back as 1957, Professor Oda identified the central problem of modern fisheries as the equitable sharing among states of limited desirable living marine resources."

since our early common work in Malta, the issue has matured. The time has come to reconsider it in the light of contemporary developments. The purpose of this essay is to bring some supporting evidence to the attention of the international community.

I. The Ocean Regime

While this essay focuses on the evolution of public thinking, it is perhaps fair to mention *in passim* that my own model convention, *The Ocean Regime,* published by the Centre for the Study of Democratic Institutions, Santa Barbara, California, in 1968, included living resources, in fact, *all* ocean resources and services, in the Common Heritage and provided mechanisms for their management. Article III of that model stated that "Ocean space is an indivisible whole. Geological structures extend, currents and waves move, species migrate, across the high seas and the ocean floor regardless of political boundaries. The law of the seas and the seabeds must accord with this reality." And: "The natural resources of the High Sea and on or below the seabed as defined by this Statute are the common heritage of mankind. They must be developed, administered, conserved and distributed on the basis of international cooperation and for the benefit of all mankind."

Fishing organizations, fish precessers and merchants, unions of seamen serving on fishing vessels, consumers, as well as representatives of regional fishing commissions, were to compose one of the chambers of the Maritime Assembly, the supreme organ of the Regime. The Maritime Assembly was to consist of 5 Chambers: a Political Chamber, elected by the General Assembly of the United Nations on a regional basis; and, besides the fisheries Chamber, a Chamber

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"Equitable sharing," is one of the attributes of the Common Heritage concept.

representing international mining corporations, a chamber representing shipping companies, cable companies and other organizations providing services or communication on or under the oceans, and a chamber representing scientists in oceanography, marine biology, meteorology, etc. A majority vote of two chambers, i.e., of the political chamber and the chamber competent in the matter voted upon -- should have been required for the adoption of any decisions or recommendations. If the two competent chambers failed to agree, they would have to discuss the matter in a joint session and vote in common. A simple majority vote of the two joint chambers should have sufficed for the adoption of a decision or recommendation. The full participation of those responsible for the management of living resources, in the broader context of integrated ocean management, was thus assured.[2]

II. The Common Heritage of Mankind: Arvid Pardo and the Definition of the Concept

In his historic address of November 1, 1967, Ambassador Pardo proposed the following definition for the concept of the Common Heritage of Mankind:

> (1) The seabed and the ocean floor are a common heritage of mankind and should be used and exploited for peaceful purposes and for the exclusive benefit of mankind as a whole. The needs of poor countries, representing that part of mankind which is most in need of assistance, should receive preferential consideration in the event of financial benefits being derived from the exploitation of the seabed and ocean

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[2]The model of the five-chamber Assembly was adapted from the Yugoslav Constitution of 1958, which was based on the two fundamental principles of *social ownership,* a concept of *non-ownership* similar to that of the Common Heritage of Mankind, applicable to resources *which cannot be appropriated either by States or individuals,* and *Self-management,* including bottom-up participation in decision making. See, Jovan Djorjevic, "The Social Property of Mankind," *Pacem in Maribus* (EMB, ed.), New York: Dodd, Mead & Company, 1972.

floor for commercial purposes.

And he suggested that the following, among other principles, should be incorporated in the proposed Treaty:

(1) The seabed and the ocean floor, underlying the seas beyond the limits of national jurisdiction, as defined in the treaty, are not subject to national appropriation in any manner whatsoever.

(2) The seabed and the ocean floor beyond the limits of national jurisdiction shall be reserved exclusively for peaceful purposes.

(3) Scientific research with regard to the deep seas and ocean floor, not directly connected with defence, shall be freely permissible and its results available to all.

(4) The resources of the seabed and ocean floor beyond the limits of national jurisdiction, shall be exploited primarily in the interests of mankind, with particular regard to the needs of poor countries.

(5) The exploration and exploitation of the seabed and ocean floor beyond the limits of national jurisdiction shall be conducted in a manner consistent with the principles and purposes of the United Nations Charter and in a manner not causing unnecessary obstruction of the high seas or serious impairment of the marine environment.

This definition, ready as early as 1967, has basically survived, incorporated, first, in Resolution 2749 (XXV), then in Part XI of the Convention itself. The basic attributes of the concept are four:

1. The Common Heritage cannot be appropriated: Neither by persons, nor by companies, nor by States. Areas or resources which are part of the Common Heritage, are *nonproperty.* This concept is articulated in Article 137
2. The Common Heritage must be *managed,* for the benefit of mankind as a whole, with

particular consideration for the needs of poor countries (Article 140).

3. The Common Heritage is reserved exclusively for peaceful purposes (Article 141); and
4. The Common Heritage must be managed with due consideration for the conservation of the environment (Article 145).

Marine scientific research in the area shall be carried out for exclusively peaceful purposes and for the benefit of mankind as a whole. It is to be coordinated by the Authority, which may also engage in research itself, and research results are to be shared: Which puts it effectively under a Common Heritage regime. (Article 143).[3]

While the four attributes above only apply to mineral resources in the Area, marine scientific research is not thus restricted and presumably includes environmental, biological and genetic research.

Pardo was of course fully aware, from the very beginning, that it was inadequate to apply the Common Heritage concept only to the nonliving resources and restrict its application to the international seabed area. From the very beginning he recognized the essential unity of ocean space which he considered to be the Common Heritage of Mankind. His arguments in favour of this new concept which he proposed to introduce into international law, namely, that neither High Seas freedom nor national appropriation could solve the contemporary problems of pollution, resource depletion, and conflict, are even more applicable to the living than to the nonliving resources. In his Ocean Space Draft Convention of 1971 he designed a regime applying the

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[3]Arvid Pardo considered marine scientific research as "a public interest of the international community." As a public interest "it would enjoy special protection throughout ocean space...(Statement to Subcommittee III of the Committee n the Peaceful Uses of the Seabed and the Ocean Floor, April 2, 1973)

Common Heritage concept to all resources anywhere in ocean space. Article 6.2. of that Draft Convention asserts that "All States have the duty to co-operate with the competent international institutions in the adoption and enforcement of such measures as may be necessary for the conservation of the living resources of the seas."

Part IV of the Draft Convention, dealing with International Ocean Space, adapts all the basic principles established by Resolution 2749 (XXV) for the seabed to international ocean space as a whole and extends the Common Heritage status from the nonliving to the living resources.. International Ocean Space, comprising the sea-bed and ocean floor and its subsoil as well as the water column and the atmosphere above it, is the common heritage of all mankind (Article 66). It cannot be appropriated (Article 68). The administration of International Ocean Space and the exploration and exploitation of its resources is exclusively for peaceful purposes and shall be carried out for the benefit of mankind as a whole, taking into particular consideration the needs of developing countries (Article 71) and with due consideration of the conservation of the environment (Article 72).

The *Ocean Space Institutions* play the role, with regard to ocean space as a whole, that the International Seabed Authority is playing with regard to the sea-bed. There is an Assembly, a Council, and a Maritime Court, and a number of subsidiary organs.. What is most impressive, and way ahead of its time, is the mandate of these ocean institutions -- to maintain international law and order in ocean space; to safeguard the quality of the marine environment; to harmonize the actions of nations in ocean space; to encourage marine scientific research , international cooperation, and strengthening the capacities of technologically less advanced nations; to promote the development and practical application of advanced technologies for the penetration of ocean space and for its peaceful use by man and to disseminate knowledge thereof; to develop

in an orderly manner and to manage rationally International Ocean Space and its living and nonliving resources and to ensure the equitable sharing by all States in the benefits derived from the development of the natural resources of International Ocean Space, taking into particular consideration the interests and needs of poor countries; to promote the harmonisation of national maritime laws and the development of international law relating to ocean space; to undertake in ocean space such services to the international community and such activities as may be consistent with the provisions of this Convention.[4]

All this is further detailed in the respective mandates of the Assembly, the Council, and the Court.

In his statements between 1967 and 1974, to the Seabed Committee and elsewhere, Pardo went even further. He saw the Common Heritage concept not only applicable to both nonliving and living resources, he considered it basic and essential for sustainable development and peace in the modern world.

> For my delegation the common heritage concept is not a slogan, it is not one of a number of more or less desirable principles, but it is the very foundation of our work, the key that will unlock the door of the future. It is a new legal principle which we wish to introduce into international law. It is a legal principle which, we feel, *must* receive recognition if the international community is to cope constructively and effectively with the ever more complex challenges which will confront us all in the coming decades. We cannot deal effectively with the accumulating and increasingly serious problems of the total environment in which we live...on the narrow, outdated basis of traditional international law; new concepts must be introduced, new solutions sought to enable us all, from the

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[4]Shortly before his untimely death in 1981, H. Shirley Amerasinghe, President of UNCLOS III, said to me, "Had we really looked at Arvid's Draft in 1971, we could have spared ourselves ten years of work!"

greatest world powers to the smallest society, to cope intelligently with new problems.[5]

III. The Law of the Sea Convention (1982) and the Straddling Stocks Agreement (1995)

If a Common Heritage resource is one (1) that cannot be appropriated; (2) that is reserved for peaceful purposes; (3) that must be *managed,* for the benefit of mankind as a whole, on the basis of equity, with special consideration of the needs of poor countries; and (4) that must be conserved for future generations, then it is clear that, in spite of its ardent assertions of the freedom to fish in the High Seas and the sovereign rights of coastal States in their exclusive economic zones, the Law of the Sea Convention goes some length of the way towards making the ocean's living resources a Common Heritage resource. The sovereign rights of coastal States are somewhat limited by the imposition of *responsibilities. Management* and *conservation* are prescribed in Article 61. Paragraph 2 states: "The coastal State, taking into account best scientific evidence available to it, *shall* ensure *through proper conservation and management measures,* that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation."

Some awareness of the need for *equity, and the duty of sharing* is expressed in Articles 62, 69, and 70. Article 62 imposes the duty to *share* -- even if only the surplus, i.e., the difference between the total allowable catch and the harvesting capacity of the coastal State . Articles 69 and 70 assert the *rights* of land-locked and geographically disadvantages States "to participate, *on an equitable basis*," in the exploitation of an appropriate part -- even if only "of the surplus of the

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[5]Statement to the First Committee of the General Assembly, October 29, 1968.

living resources of the exclusive economic zones of coastal States...Among other criteria, the *nutritional needs* of the States involved are to be taken in consideration; and even when the "surplus" disappears, because the coastal State has reached the capacity to harvest its total allowable catch, it still has the duty "To cooperate in the establishment of *equitable* arrangements...to allow for the participation of developing land-locked States" etc. This duty, however, is abrogated (Article 71) "in the case of a coastal State whose economy is overwhelmingly dependent on the exploitation of the living resources of its exclusive economic zone."

Management and *Conservation* are responsibilities that limit the Grotian freedom to fish on the high seas (Articles 116-119), even though references to the duty of *equitable sharing* are conspicuously absent.

Reservation for peaceful purposes is implicit, both with regard to the exclusive economic zone and the high seas, insofar as this part of ocean space itself is reserved for peaceful purposes (Article 88). This indeed is a remarkable departure from the 1958 Convention on the High Seas.

One might therefore come to the conclusion that three of the four criteria determining a Common Heritage resource are applied by the Convention to the living resources of the sea. True, this application appears to be weak, half-hearted and lacking concreteness, compared to the detail lavished on the management of nonliving resources in Part XI of the Convention!

The Straddling Stocks agreement[6] has made important contributions to strengthening the *management* provisions, and thus brought the living resources even closer to a Common Heritage

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[6]Agreement for the implementation of the provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks, October 12, 1995.

status. It has done this in three ways.

First, it has strengthened the management role of regional and subregional fisheries commissions.[7]

Second, it has greatly strengthened the *enforcement mechanism* on a regional basis.[8] And thirdly, and perhaps most importantly, it has imposed the duty on coastal States to *harmonize their conservation measures with those agreed upon within the regional Commission for the high seas beyond the jurisdiction of the coastal State.*[9] This was a hotly debated question, and that it

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[7]See, e.g., Part III, Article 8. Only States which are members of the competent regional fisheries commission or undertake to apply the management measures adopted by these commissions are allowed to fish on the high seas within the region concerned. Article 13 mandates the "Strengthening of existing organizations and arrangements." Article 10 lists the duties and responsibilities of regional fisheries commissions or arrangements. Where no competent regional commission or arrangement exists, it has to be established (Articles 8, 9).

[8]Articles 20, 21. Any State Party to the Agreement may board and inspect any ship of any other Party, regardless of whether it is a member of the fisheries commission concerned. The inspector then has to notify the flag State, but if the flag State fails to respond, the inspecting State can take all necessary enforcement measures, including taking the ship into one of its ports. Basic procedures for boarding and inspecting are detailed in Article 22. Article 23 lists the rights *and the duty* of Port States with regard to inspecting and detaining ships voluntarily in their ports. This is an extension of the port state regime relating, in the Convention, to violations of environmental regulations, to violations of fisheries regulations. It should also be noted that, in the Convention, the port State has *the right* to take enforcement measures. In the Agreement it has not only the *right,* but also the *duty.*

[9]Article 7 establishes that coastal States and States whose nationals fish for straddling or highly migratory stocks in the adjacent high seas shall seek, either directly or through the fisheries commissions or other mechanisms, to agree upon the measures necessary for the conservation of these stocks both within the EEZ and in the adjacent high seas. Compatibility of conservation and management measures is of course essential both for the coastal State and for

could be resolved signifies progress in the direction of a Common Heritage regime for living resources

The fourth criterion determining a Common Heritage resource, that is, that it cannot be appropriated, is missing altogether, both in the Convention and in the Agreement, and, indeed, the voices of those who advocate the establishment of "property rights" over this "common resource," for instance, in the form of "individual transferable quotas" (ITQs) are getting stronger. They claim that the "privatization" of the fishing industry and its governance by the invisible hand of the Market is the only way to save it from extinction. It is, however, not too hard to counter their arguments. Quite apart from ethical and equity considerations, the proposition does not make sense from a resource-economic perspective. Thus Partha Dasgupta:

> Now in many cases of externalities it may be impossible, or at any rate difficult, to define property rights, let alone establishing them legally and then enforcing them...

And, he points out,

> there are many circumstances in which market solutions do not sustain an efficient allocation of resources. Many such situations can be described by saying that certain essential markets do not exist. Sometimes they just happen not to exist for accidental or historical reasons; sometimes there are logical reasons why they cannot exist; sometimes the nature of the physical situation keeps them from existing, or makes them function wrongly if they do exist. *It happens that industries producing (or using) renewable and*

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the conservation of the stocks on the high seas. Article 7 stipulates that "Conservation and management measures established for the high seas and those adopted for areas under national jurisdiction *shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety.* If there is no agreement, the dispute is subject to mandatory peaceful settlement in accordance with Part VIII of the Agreement, which is in accordance with Part XV of the Convention.

non-renewable resources are especially vulnerable to these difficulties...(Emphasis added).[10]

If, by some misfortune, establishment of "property rights" such as ITQs, "privatization," and resource allocation entrusted solely to market mechanisms, were to succeed, this most certainly "would make the system function wrongly." It would concentrate fishing power in the hands of large companies, forcing the artisanal fisher out of business. While reducing the number of fishers, it would not reduce fishing effort. Cut-throat competition between large companies and among fishing States would continue or increase, continuing the present trend of making the rich richer and the poor poorer and accelerating the ineluctable depletion and extinction of species after species. Rather than ignoring the question of property rights over the resource it would seem necessary and urgent to deal with it in the sense that the living resources of the oceans cannot be owned, but must be managed for the good of mankind as a whole, including future generations, and with particular consideration for the needs of the poor. Thus complementing what is already there, this would make the living resources part of the Common Heritage of Mankind.

IV. The Holy Sea and the Common Heritage of Mankind

On May 5, 1979, The Delegate of the Holy Sea, Msgr Silvio Luoni, made an important statement before the Second Committee of UNCLOS III, which dealt, among other subjects, with the conservation, utilization and management of living resources. Msgr. Luoni justified the

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[10]P.S. Dasgupta and G.M. Heal, *Economic Theory and Exhaustible Resources*, Cambridge: Cambridge University Press, 19979, pp.190-191.

participation of the Holy Sea in UNCLOS III on the ground of its character as a Universal Institution. "As such," he said, "the Holy Sea anxiously looks toward the adoption of measures capable of guaranteeing the common good as such, that is the peace of the international community." This requires the abolition of presently existing injustice and the suppression of the root causes of possible future injustices. The Holy Sea did not intend to contribute technical solutions to the Conference, but rather to deal with principles which could guarantee just and equitable solutions for the whole international community, and in this contex*t*, "first of all, the statement of that tenet universally accepted, at least in theory, that the sea is 'a common heritage of mankind'."

"Moreover," he continued, "This principle is part of the wider concept of the 'universal purpose of creation,' it has already been applied to the States in regard to their own national territory, not as restriction to their sovereignty, but for the exploitation and use of their natural resources in such a fashion as to take into account the needs of all mankind and, especially, of that part of mankind belonging to States with limited resources." He expressed his deep concern about tendencies he could not fail to observe at this conference: national ambitions with regard to the uses of ocean space, which were in flagrant contradiction with this principle, and he endorsed instead the calls for a New International Economic Order which should not aim at the grabbing of natural resources for the benefit of a few privileged, above all, geographically advantaged States, but that these resources should be shared equitably among all peoples in accordance with their real needs. He pointed out that the sovereignty of coastal States would necessarily be subject to important restrictions; and that this was generally recognized even for the territorial sea, and even more so for the exclusive economic zone, especially with regard to the migration of fish. "It would seem logical to affirm that such of restrictions on sovereignty

apply also the resources living in an economic area. That means that the coastal States with an abundance of living resources have the duty to share them with other States, particularly the less fortunate, and therefore that the latter acquire some rights on these resources.". This must be an assured right, which means that the criteria for this sharing and its effective implementation cannot be left to the discretionary power and the good will of the coastal States, but that measures and regulations must be laid down to give effect to the implementation of this right."[11]

The Apostolic Delegate could ground his proposal in a tradition as old, almost as the Church itself. In a brilliant essay, entitled "the Common Heritage of Mankind -- A Roman Catholic View," delivered at Pacem in Maribus in Moscow, June 1989, Father Peter Serracino Inglott of Malta cited St. John Chrysostom, a fourth-century Bishop of a city in Asia. He said:

> Mark the wise dispensation of God!... He has made certain things common, such as the sun, air and the ocean...Their benefits are dispensed equally to all as brethren...It is as if nature itself becomes indignant...when we seek to divide and separate ourselves by appropriating such things...Therefore, the (opposite) condition is rather our heritage and more in agreement with nature.

As Father Peter pointed out, this statement "indeed literally contains almost all the key words in Ambassador Pardo's famous 1967 motion at the United Nations." Dozens of quotes, from other Church Fathers could be added to this.

Father Peter drew attention to the distinction between *res nullius,* unowned resources capable of either private or national appropriation, *res communis,* as "not liable to private

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[11]Statement by the Delegate of the Holy Sea before the Second Committee of UNCLOS III, May 5, 1978. Original text in French. Courtesy of the Permanent Observer Mission of the Holy Sea to the United Nations. For the full text in French, see also Renate Platzoeder, *Kommentar zum Seerechtsuebereinkommen der Vereinten Nationen,* Munich, 2001, p.76.

ownership, and *res communis omnium,* which "is also not to be subject to national sovereignty.

It is this latter concept that the Common Heritage concept proposed by Ambassador Pardo was to replace. Father Peter sees the Common Heritage as

> a totality of resources not necessarily material which, because of their very nature, should not only *not* be appropriated -- neither by individuals, nor by groups, nor by states, nor by groups of states; but also should be *managed* -- on behalf of mankind as a whole (including future generations) and managed appropriately (i.e., participatively) through legally constituted institutions. The crucial difference here is that the universality of destination of the resources is respected through the right to share in the management of the resource rather than through unimpeded physical access to it, and through the right to share in the benefits of the use of the resource, rather than through directly picking up bits and pieces of it. It is because of this positive requirement -- the need of appropriate (participatory) management rather than mere non-appropriabiliy -- that such resources constitute a specific category.

In the tradition of the Catholic Church, Father Peter points out, "by nature *all* earthly resources have a universal destination, that is, they are intended for the good of mankind as a whole," a theme taken up by the Holy Sea's Representative, Msgr. Antonio del Judice at UNCLOS III in Caracas, 12 July 1974.[12] The real importance of the International Sea-bed Authority would be the fact that it gave a legal and institutional form to the concept of the Common Heritage of Mankind, which, however, in Catholic doctrine comprised all the earth's resources, obviously including the living resources of the seas and oceans. "This concept has the strong support of the Catholic Church," Msgr del Giudice stated, "as may be seen from her social teaching. Pope John XXIII in his Encyclical *Mater et Magistra* stated, "According to the plan of creation, the goods of the earth are above all destined for the worthy support of all human

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[12]Courtesy of the Permanent Observer Mission of the Holy Sea to the United Nations.

beings."

V. Food and the Common Heritage of Mankind

The ocean's living resources make a major contribution to world food, especially in poor countries where, in many cases, they provide the largest part of animal protein consumed by coastal populations. *Food*, in any case is made of the earth's resources and thus, in accordance with Catholic doctrine, should be considered part of the Common Heritage of Mankind. There is, however, at least one author, Judge Mohammed Bedjaoui of Algeria, who considers *food* as a whole, food as such, a Common Heritage of Mankind. In various essays[13] he deals with the basic human right to food as part of the right to development, which he considers *jus cogens*. "There is no place in such an analysis for charity, the "act of mercy," considered as being a factor of inequality from which the donor expects tokens of submissiveness or political flexibility on the part of the receiving State. The concept of charity thus gives place to that of justice."

This is entirely in line with Pardo's thinking, who repeatedly stated that the Common heritage concept changes the relationship between rich and poor countries, as it implies that there are no "donors" nor "recipients" because both have an inherent right to their equitable share of

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[13]"The Right to Development," Chapter 53 of *International Law: Achievements and Prospects,* Mohammed Bedjaoui, General Editor, Paris: UNESCO, 1991; "Propos Libres sur le Droit au Developpement," *Le Droit International a l'Heure de sa Codification,* Etudes en l'Honneur de Roberto Ago, Milano: Dott. A. Giuffrè Editore, 1987; "Les ressources alimentaires essentielles en tant que 'patrimoine commun de l'humanité,'" *Revue algérienne des relations internationales, No.*1, preminer trimestre, 1986; Office des publications universitaires, Algiers; "Are the World's Food Resources the Common Heritage of Mankind?" *The Indian Journal of International Law,* Vol.24, October-December 1984, No. 4

the Common Heritage.[14]

And Bedjaoui continues: "What belongs to the international community and is 'the common heritage of mankind' should be shared among all States in accordance with the maxim '*to each according to his needs*'. This therefore implies an element of *jus cogens.*"

Like Pardo, the Fathers of the Church and the founders of other great religions, Bedjaoui[15] emphasizes the universal importance of the Common Heritage concept:

> There can be no denying that this innovative concept, the common heritage of mankind, is capable of giving world-wide solidarity a wealth of practical expression. It might prove especially productive for the future of world relations and be applied not only to the resources of the sea-bed and of space (those of the moon and celestial bodies), as is already the case, but also to the land, the air, the climate, the environment, inert or living matter and the animal and vegetable genetic heritage, the wealth and variety of which it is vital to preserve for future generations. It might also provide insights and suggest attractive solutions to questions such as those concerning the cultural and artistic property of the globe, just as it could, and even should, apply in the first place to the human race, the first common heritage of mankind, and to mankind itself, a new subject of international law and the supreme heritage that must at all costs be saved from the threat of mass destruction.

Bedjaoui is fully aware that his proposal to declare "basic world food stocks" to be part of the Common Heritage of Mankind will be considered as utopian in these rough times. He is

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[14]See, e.g., Pardo and Borgese, *The Law of the Sea and the New International Economic Order,* Malta: International Ocean Institute, 1977.

[15] Bedjaoui (1991) cites the sixteenth-century Spanish lawyer Vitoria asserting that the Christian Holy Scriptures intended "the goods of the earth" for "the whole of the human race," for common use" and for "a universal purpose." He also refers to "the spirituality of the seventh century when the Koran announced to all mankind that "all wealth, all things, belong to God and thus to all members of the human community."

confident, however, that this will change. "It is dangerous to write off the aspirations of four billion human beings by dismissing them too readily as being no more than fevered incantations. What we are advocating is that 'the world food stocks' essential to life, that is to say principally *grain* stocks, be declared to be the 'common heritage of mankind' so as to guarantee every people the vital minimum of a bowl of rice or loaf of bread in order to eradicate the monster which kills fifty million human beings a year."

He even goes so far as to suggest an "immediate and provisional first step" to bring this "new world food order" into being. This should be the establishment of a *universal agency*, provided with an operational administration, which might be called "International Fund for Food Stocks (IFFS). It would have a budget with funds provided from a tax levied in each States on manufactured products of high added value made of raw materials from third-world countries, and/or by a one-percent tax on military budgets. This agency would function as an equalization fund, subsidizing the purchase of food stocks or buying them from the food-producing countries and making them available to countries with a food deficit at a token price, which might later on be replaced by a general system of food distribution without charge.

In the present context we might suggest an alternative "immediate and provisional first step" towards creating this new world food order by replacing *grain* with the *ocean's living resources* as an initial component of the world food stock to be declared a common heritage of mankind. Since the oceans are already considered such and a system of governance of this common heritage is already emerging -- largely has already emerged -- it might be less "utopian" to complete this system of governance than starting a new one.

VI. Genetic Resources and the Common Heritage of Mankind

Genetic resources evidently are living resources, but while, in general usage, living marine resources consist of fin fish, crustaceans, molluscs, marine mammals, turtles and birds as well as seaweeds and algae, *genetic resources* include all of the above, plus, and in particular, the aquatic microfauna, the myriads of bacteria of the deep sea, on and under the sea floor which have been discovered only in recent years. They form the basis of very peculiar, quite unearthly ecosystems, driven by chemosynthesis rather than photosynthesis, and may hold the key to our understanding of the origin of life on this planet. They flourish in submarine areas of volcanic activity, in conditions of darkness, extremely high temperatures and pressures. Hence they have also been called "extremophiles" or "hyper-thermophiles." The unique resistence they have developed against heat and pressure makes them particularly useful for the development of a number of bioindustrial and pharmaceutical processes, and bioprospecting for them has become part of Big Business..

The industries utilizing these genetic resources are quite diversified. They include the pharmaceutical industry, the waste treatment, food processing, oil-well services, paper processing industries, as well as mining applications. . The potential market for industrial uses of hyperthermophilic bacteria has been estimated at $3 billion per year.[16]

In his carefully documented paper Glowka points out:

> Hyperthermophilic bacteria are just one example of the commercial potential of microbial genetic resources from the Area; as research continues, other commercially interesting

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[16]Lyle Glowka, "The Deepest of Ironies: Genetic Resources, Marine Scientific Research, and the Area," *Ocean Yearbook, 12.* Chicago: Chicago University Press, 1996.

> organisms may also be discovered. For example, there may be organisms that orchestrate processes for minerals transport and bioaccumulation of metals. These could be useful in bioremediation of hazardous waste. Other organisms could be useful in biomining applications. Viruses associated with the organisms of the Area, in particular hyperthermophilic bacteria, may provide new vectors useful in biotechnological applications. Researchers may also be able to isolate potential anticancer and antibiotic compounds from deep seabed bacteria or fungi associated with other macro-organisms, as they have in more accessible areas of the ocean. In short, the biodiversity of the seabed has hardly been explored, and we simply do not know what may exist.[17]

The "Biodiversity Convention"[18] *affirms* (Preamble) that *the conservation of biological diversity is a common concern of humankind.* It does not explicitly apply the concept of the common heritage of mankind to genetic resources. Its provisions, however, imply several of the attributes of the concept. The very purpose of the Convention is the *conservation* of biological diversity *for future generations*[19] through *management* and the *equitable sharing of benefits derived from their use.*[20] Cooperation in the management of these resources is to *enhance peace and friendly*

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[17]The World Conservation Union has estimated that the deep sea may be home to 10 million species.

[18]The Convention on Biological Diversity, 1992, entered into force on 29 December 1993.

[19]"*Determined* to conserve and sustainably use biological diversity for the benefit of present and future generations" (Preamble)

[20]Article 19 (2) provides that "Each contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results *and benefits arising from biotechnologies based upon genetic resources provided by these Contracting Parties.* Such access shall be on mutually agreed terms.

relations among States.[21] It is only "non-appropriability" that is lacking among the attributes determining the Common-heritage status of the resource. The Convention indeed is based on the assumption of sovereign rights of States over their genetic resources and the right of industrial companies to acquire ownership through the controversial patenting of living resources. All these rights, however, are limited by considerations of the common good.[22]

The Biodiversity Convention is a remarkably land-oriented document. It assures the rights of developing countries, of local, especially indigenous, communities, and their participation in the conservation and utilization of genetic resources in areas under national jurisdiction. Marine resources are given consideration not so much by the Convention itself as by the "Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity."[23] The conservation of biodiversity in international waters, including, in particular, the microfauna of the deep sea-bed and its subsoil, remains, for all practical purposes, a legal lacuna.

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[21]"*Noting* that, ultimately, the conservation and sustainable use of biological diversity will strengthen friendly relations among states and contribute to peace for humankind;" (Preamble)

[22]Article 16 contains an amazingly strong provision to this effect:

> 5. The contracting Parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law *in order to ensure that such rights are supportive of and do not run counter to its objectives.* In other words: Conservation, community and equity interests take precedence over private property interests.

[23]First version - October 1998, issued by the Secretariat of the Convention on Biological Diversity for the CBD Roster of Experts on Marine and Coastal Biological Diversity.

Clearly, something will have to be done about the situation,

- *to protect the bioprospectors from conflicts with other users of the international Area.* It should be noted that the International Sea-bed Authority has the mandate to coordinate its own activities with other activities in the Area;[24]
- *to protect and study the resources, which is within the mandate of both the Biodiversity*[25] *Convention and the International Sea-bed Authority;*[26] and
- *to live up to the spirit of partnership and benefit- and technology-sharing* that pervades all recent Conventions, laws and regulations intended to save our environment in order to save ourselves. Politicians, the business world, academia, the nongovernmental organizations, all agree today that it is impossible to attain this goal without the cooperation of the developing countries, that is, the vast majority of humankind. If they are to cooperate, however, they have to have the necessary technologies, they must be fully included in the new phase of the industrial revolution in which genetic resources will play a major role.

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[24] Article 147.

[25] "Each contracting Party shall, as far s possible and as appropriate, cooperate with other Contracting Parties, directly, or, where appropriate, *through competent international organizations, in respect to areas beyond national jurisdiction* and on other matters of mutual interest, for the conservation and sustainable use of biological diversity. Article 5. Emphasis added. The "competent international organization," in this case, clearly is the International Sea-bed Authority; the "area beyond national jurisdiction is the international sea-bed, "the Area."

[26] Article 145 (b) mandates the Authority with "the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment."

Since the protection of genetic resources is the responsibility both of the International Sea-bed Authority and the Biodiversity Convention, it can be achieved only through a joint undertaking of both regimes.. In his report to the meeting of the Parties to the Law of the Sea Convention in April 1996, the UN Secretary-General exhorted States,

> particularly States Parties to the Law of the Sea Convention which are also parties to the Convention on Biological Diversity, to coordinate their activities particularly with respect to the conduct of reviews of the relationship between the two conventions, the identification of additional measures that may need to be taken, including the possible development of new or additional international rules.

And in his report to the General Assembly the same year, he stressed

> The general subject of marine and coastal diversity, as well as the specific issue of access to the genetic resources of the deep seabed, raise important questions...
>
> The specific issue of access points to the need for the rational and orderly development of activities relating to the utilization of genetic resources derived from the deep seabed area beyond the limits of national jurisdiction.

The rules and regulations of a joint Law of the Sea/Biodiversity regime should not be burdensome for the industry. They could be formulated as a Protocol and adopted by the Parties to both Conventions. By way of a "Preamble", it might be recalled that, in accordance with the United Nations Convention on the Law of the Sea, the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction, and its resources, are the common heritage of mankind. All rights in such resources are vested in mankind as a whole, on whose behalf the International Sea-bed Authority acts. The objectives of these regulations would be

(a) the conservation of biological diversity in the Area;

(b) the sustainable use of its components;

(c) the fair and equitable sharing of benefits arising from the use of genetic resources;

(d) participation of developing countries in the bio-industries;

(e) the precautionary approach and intergenerational equity; and

(f) international cooperation in technology development in a sector likely to be of primary economic importance in the twenty-first century.

It might also be stipulated that the use of genetic resources from the Area for purposes of biological warfare is prohibited.

The first part of a Preamble of this kind is taken over from the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area ; the second part summarizes the purposes of the Biodiversity Convention, and the final provision is taken from the Andean Pact Common Regime on Access to Genetic Resources.

The most important substantive point should be that bioprospectors should notify the Authority of their intention to engage in bioprospecting, with an exact description of the area in which they intend to work, a clear statement of the aims and objectives of the project, of the time-frame and methodology and, if applicable, a statement on how local communities possessing and traditionally utilizing the same or similar genetic resources will participate in the project.

Such guidelines have already been elaborated by the University of the South Pacific and could easily be adapted to the requirements of the international sea-bed.

Prospecting for minerals in the international seabed area is subject to licencing, but without cost. Bioprospecting, of course, is different from prospecting for minerals. It is not followed by "exploration" and "exploitation," which would be subject to payment of a fee. All subsequent testing and developing is undertaken on land, under national jurisdiction. It would be fair, therefore, if, in return for the supervisory and coordinating activity of the Authority,

guaranteeing the safety of the bioprospector, the bioprospector should be required to pay a modest fee upon the conclusion of an Access Agreement.

Provisions for the protection and preservation of the marine environment should be harmonized with those contained in the Authority's mining code, adopted in 2000,

The Authority's participation in scientific research, including biotechnological research activities based on genetic resources; fair and equitable sharing of research and development results and commercial and other benefits derived from genetic resource use, and access to and transfer of technology making use of genetic resources, should be determined in accordance with the provisions of the Biodiversity Convention, in particular Articles 15, 16 and 19. There appears to be a general consensus that joint ventures in R&D and technology co-development, funded partly by the partners, of which the Authority should be one, by States, and by international (GEF, UNDP, etc.) or bilateral funding agencies, are the most suitable instrument to achieve these goals.

It would seem that this kind of regime would serve the best interests of the industry as well as those of the International Sea-bed Authority and the parties to the Biodiversity Convention. It most certainly would enhance progress in exploring the living creatures in international waters, including the sea-bed which still has countless secrets to disclose. The fact is that only two to three percent of the deep sea-bed has been explored thus far! Evidently, more than commercial interests are involved. Genetic resources, more than anything else, are our common heritage. Their exploration, bringing us face to face with the origin of life, should be the

concern of all countries and people.[27]

VII. Sustainable Development and the Common Heritage of Mankind

"Sustainable development" is a term that has been used, overused and abused in various ways, to cover the most diverse intentions and activities. In the worst case it is a tautology or oxymoron Development which is not sustainable, in the sense that it destroys its own resource and/or the environment, natural or social, in which it is supposed to take place, is no development at all. In the best case it is a concept of considerable complexity. In her Sir Peter Scott Lecture, delivered in Bristol on 8 October 1986, Gro Harlem Brundtland gave it the following definition, which is preferable to the oversimplified version in the "Brundtland Report."[28] In Bristol she said:

> There are many dimensions to sustainability. First, it requires the elimination of poverty and deprivation. Second, it requires the conservation and enhancement of the resource base which alone can ensure that the elimination of poverty is permanent. Third, it requires a broadening of the concept of development so that it covers not only economic growth but also social and cultural development. Fourth, and most important, it requires the unification of economics and ecology in decision-making at all levels."[29]

In this perspective, "sustainable development" has environmental, economic, ethical

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[27]For all the foregoing, see International Ocean Institute. *The International Sea-bed Authority: New Tasks. Proceedings, Leadership Seminar, Jamaica, August 14-15, 1999.* Halifax: International Ocean Institute, Canada, 1999.

[28] United Nations Commission on Environment and Development, *Our Common Future,* Oxford: Oxford University Press, 1987.

[29]See, Elisabeth Mann Borgese, *The Oceanic Circle,* Tokyo: United Nations University Press, 1998.

(equity), legal, and institutional implications. This may have a familiar ring, because it takes us back to the opening pages of this essay, to the definition of the concept of the Common Heritage of Mankind. The "attributes," or "aspects," or "dimensions" are identical in both cases.

One may ask: What about the disarmament dimension: The reservation for peaceful purposes?

Principle 25 of the Rio Declaration holds the answer this question:

Peace, development and environmental protection are interdependent and indivisible.

Sustainable Development rests, depends, on peace and security. Without peace and security there can be neither economic development nor protection of the environment. At the same time, there can be neither peace nor security without equitable economic development, including the elimination of poverty, and without environmental conservation or environmental security.

Unfortunately, Agenda 21 ignores this interdependence and indivisibility, and the whole structure of the UN system is still too sectoral to take up the challenge. There are however new beginnings which can be developed so as to transcend the sectoral approach and consider the closely interrelated problems of ocean space as a whole. The most important of these is the General Assembly's newly established "Consultative Process" (UNICPOLOS) which has in fact already begun to look at the enforcement and security aspects of sustainable development, especially in a regional context.

What about the "non-appropriability" aspect of the Common Heritage concept?

The Sustainable Development concept does to the Roman-Law construct of private property or "ownership" what the Common Heritage concept does to the Grotian construct of "sovereignty." Both "sovereignty" and "ownership" -- the "sovereignty of the individual" are being transcended and transformed.

It is then the conclusion of this essay that the whole sustainable development process either will come to naught or it will have to be based on the concept of the Common Heritage of Mankind: not only in the oceans, that great laboratory for the making of a new world order, but globally. In accordance with the cultures of the vast majority of humankind, its application must be extended from the wealth of the oceans to wealth in general, not to be "owned" by humankind, whether individually or collectively, but to be held in trust, and to be administered on the basis of cooperation between civil society and the institutions of governance, at local, national, regional and global levels, with special consideration for the needs of the poor..

VIII. Conclusion

Shigeru Oda was right and prophetic, three years ago, thirty years ago, fifty years ago, when he predicted and advocated that the living resources of the oceans must be declared to be a common heritage of mankind. Our present, market-based economic system is failing us miserably, giving all the wrong incentives and leading, ineluctably, to conflict, degradation and extinction. This is a "market failure" of the first magnitude. One might mention, in this context, that our Western economic system as a whole must be considered as a *war system*: both historically and ideologically. Historically, because it developed in an era of aggressive expansionism, the conquest of the world by Western Europe; ideologically, because it is based on competition and conflict rather than on cooperation. Thus it is part of a "culture of war."

What we are striving to build today is a "culture of peace." The new Law of the Sea is at the vanguard of this effort, and the concept of the Common Heritage of Mankind is fundamental to it.

Rome was not built in one day. It would not be realistic to think the Common Heritage

concept could be applied universally tomorrow. If we are not to catapult into Utopia, we must envisage a step-by-step process -- without, however, losing the vision of the whole. The ocean's living resources, constituting part of the *world's basic food stock as well as of its biodiversity,* are the most obvious next candidate. The time has come, Shigeru Oda, and we don't really have any choice. For if we do not act, these resources are doomed.

This next step, not into utopia, but into the future, is greatly facilitated by what has already been achieved. Willy-nilly, *nolens volens,* the international community has already gone more than half way. Mechanisms, like community-based co-management of fisheries, codes of conduct, regional fisheries commissions, are there and need not be invented. What is needed now is a *Protocol* or new *Agreement,* building on everything that has been built, putting it together in a consistent architecture, in the context of the emerging "culture of peace" of the 21st century which will have to comprise an "economics of peace" based on the concept of the Common Heritage of Mankind. The world should give you such a Protocol, Shigeru, on the occasion of your next birthday!