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The Role of the Geographically-Disadvantaged States in the Law of the Sea

LEWIS M. ALEXANDER*
ROBERT D. HODGSON**

One of the more ambiguous terms to have surfaced in recent law of the sea negotiations is in reference to certain States as being "geographically-disadvantaged." Few criteria have been spelled out for inclusion in such groups, and the only serious suggestions for distinguishing among degrees of disadvantage have been those which tend to put land-locked States in a special category of misfortune. For many years, the plight of the land-locked countries has attracted international attention: witness the 1921 Barcelona Convention, the provisions on their behalf in the 1958 Geneva High Seas Convention, and the 1965 UNCTAD Convention on Transit Trade of Land-locked States.1 Their problems are by no means resolved, and the Informal Single Negotiating Text,2 which emerged

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from the 1975 Geneva Session of the Third United Nations Conference on the Law of the Sea, makes a number of provisions on their behalf. But in addition to the land-locked States, there are an indefinite number of coastal countries which, for various reasons, claim or may be expected to claim, special rights in the new regime of the oceans on the grounds of geographic disadvantage. It is with the parameters of such a group that this paper is concerned.

The first category of States, other than the land-locked, to attract notice in law of the sea negotiations, was the “shelf-locked” States, those whose continental shelf abutted on the shelf or shelves of neighbors, as in the North Sea, the Red Sea, and the Persian Gulf. Such States lack the advantages of a continental slope and rise, and thus lack the prospects of hydrocarbon reserves on the outer parts of the continental margin. But the shelf-locked countries—some developed and some developing—have now been joined by new categories of “geographically-disadvantaged States” (hereinafter referred to as GDS), with the result that a strong political force is at work in law of the sea negotiations, seeking special rights and privileges for what may turn out to be a substantial number of countries.³

In introducing the issue of the GDS, several points should be noted. One is that “disadvantage” is more a relative than an absolute concept. The 29 land-locked States have no direct access to the sea, and in this sense have an “absolute” disadvantage with respect to the 125 coastal States. But even among the land-locked States there are important differences; first, in levels of economic development and second, in difficulties of securing and maintaining access to the sea. Thus, some land-locked States might be seen as “disadvantaged” with respect to others of the group.⁴ But if a country has a limited coastline, a small extent of economic zone (given the extension seaward of national limits to a maximum of 200 miles), or few resources therein, these conditions may seem inadequate

⁴. Consider, for example, Afghanistan, one of the two dozen “least developed” States of the world, whose most direct route of access to the sea, across Pakistan to the port of Karachi, is denied it because of territorial and political differences with Pakistan.
relative to what other States receive. The countries are “disadvantaged” because they have less than other States. The question that poses itself: at what point, moving on a scale from near zero to some sort of median or average point for the national attributes of all coastal States, does one move from a “disadvantaged” to “non-disadvantaged” status?

A second point is that “disadvantaged” has in the past normally been used in reference to marine-related activities. But in the context of the Developing World, and the quest of countries for reallocation of wealth, the term tends to take on a broader meaning. Developing countries are more disadvantaged than the developed ones, and among the developing, there are at least some efforts to single out the two dozen or so “least developed” for some special considerations.

Finally, there is the question of the rationale for the new ethic of equity being applied with respect to the sea. Throughout history, nations have possessed unequal resource bases. Some States had oil, others agricultural land, still others minerals. Geographic inequity was the rule of international affairs. Add to this the mystique of independence. National areas with little or no economic viability have opted for freedom from outside rule as separate entities, rather than in combination with neighbors. In a global system of approximately 155 States, many units, having chosen independence, are in the position of having few potential resources within their boundaries on which to build a strong economic base. It is in the world ocean that some of these countries hope, in the name of equity, to find compensation for the geographic inadequacies they experience. But to increasingly “politicize” the geographically-disadvantaged concept could mean that its viability with respect to the more “legitimate” claimants may be undermined.

**Criteria for Identifying GDS**

One of the first issues in identifying GDS might be considered a problem of semantics. Does the term include the land-locked States or not? The Single Negotiating Text is unclear on this point. Some references are made to GDS which clearly are meant to include the land-locked. Other references are to “land-locked and other GDS,” and to “land-locked and GDS.” There was, at Geneva, an informal Group of Land-locked and Other Geographically Disadvantaged States, which in April, 1975 presented a draft text to the
Chairman of Committee II, outlining their common position on the question of the economic zone.\(^5\) The issue is not unimportant; first, because the land-locked States may come to enjoy special rights not available to the other GDS, and second, because the land-locked group includes several developed States, while conceivably the term GDS may come to apply only to developing countries.

A first set of criteria for identifying GDS involves access to the sea and its resources. Priority here goes to the land-locked States. Of the nine land-locked States in Europe, four are mini-States and the other five would seem to be in the developed category.\(^6\) None of the land-locked countries of other continents are developed (Table 1). As noted earlier, the land-locked States differ among themselves in the difficulties of securing access to the sea. This is true both because of possible international difficulties with neighboring countries, and because of inadequacies of transport facilities across the neighboring (or “Transit”) State to the sea, and of port facilities available for the land-locked’s use.\(^7\)

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5. The countries sought the right to participate in the exploration and exploitation of the living and nonliving resources of the economic zones of the neighboring coastal State or States, such neighboring States to be adjacent to, or situated in the vicinity of, the land-locked or geographically-disadvantaged State concerned.

6. The United Nations, in distinguishing among countries on the basis of levels of economic development, omits from the developed/developing definition the socialist bloc countries. Thus, Czechoslovakia and Hungary, two of Europe’s land-locked States, would not tend to be labelled either “developed” or “developing.” The same would be true for Mongolia, one of Asia’s land-locked countries.

7. An interesting point here is that certain transit States might themselves be in a position to claim disadvantage because of the requirement that they make available transport and harbor facilities to their land-locked neighbors. Both Tanzania and Zaire, for example, have five contiguous land-locked States. The situation would be exacerbated for certain transit States should neighboring land-locked countries have the right to share on an equitable basis in the exploration and exploitation of the living (and perhaps also nonliving) resources of the transit State’s economic zone.
### TABLE 1

**LAND-LOCKED STATES**

**European**

<table>
<thead>
<tr>
<th>Andorra*</th>
<th>Luxembourg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>San Marino*</td>
</tr>
<tr>
<td>Hungary</td>
<td>Vatican City*</td>
</tr>
<tr>
<td>Liechtenstein*</td>
<td></td>
</tr>
</tbody>
</table>

* Mini-States

**On Other Continents**

<table>
<thead>
<tr>
<th>Afghanistan</th>
<th>Mali</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>Mongolia</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Nepal</td>
</tr>
<tr>
<td>Botswana</td>
<td>Niger</td>
</tr>
<tr>
<td>Burundi</td>
<td>Paraguay</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>Rwanda</td>
</tr>
<tr>
<td>Chad</td>
<td>Swaziland</td>
</tr>
<tr>
<td>Laos</td>
<td>Uganda</td>
</tr>
<tr>
<td>Lesotho</td>
<td>Upper Volta</td>
</tr>
<tr>
<td>Malawi</td>
<td>Zambia</td>
</tr>
</tbody>
</table>

A second group of GDS are those with limited coastlines on the sea (Table 2). Iraq borders the sea for ten miles, Jordan for 15, and Zaire for 22. This means they have little space available for ports, fishing harbors, beaches, and marinas. It also may mean they have a corollary disadvantage, namely, a small area of continental shelf and economic zone. Iraq, Jordan, and Zaire, as shown in Table 3, have very limited offshore zones. Yet the mid-Pacific island-State of Nauru, which has only nine miles of coastline, would be entitled to an economic zone of over 125,000 square miles, since no other land area is located near it.

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8. All measurements are in nautical miles. One nautical mile equals 1.151 statute miles, or 1.852 kilometers. One square nautical mile equals 1.324 square statute miles, or 3.430 square kilometers.
If a small coastline is a disadvantage, where then should the cut-off point be between a “disadvantaged” and nondisadvantaged State? One could use 100 miles of coastline, 200 miles, or some greater figure as a limit. The authors have no suggestion for resolution to this point, and note that any decision made on this issue may be more political in nature than geographic.

A second point is what should be done about Belgium, a developed country with only 34 miles of coast. Would it be entitled to any special rights along with the developing States of this category?
A third group of GDS are those coastal States with small continental margins and/or economic zones. Singapore’s potential economic zone comes out to 100 square miles, ⁹ Iraq’s and Jordan’s to 200, Zaire’s to 300 square miles (Table 3). As noted earlier, some island States may have short coastlines but extensive economic zones. The converse is also true. Yugoslavia, for example, has a relatively long coastline, but would be constricted by the size of its economic zone in the narrow Adriatic Sea. Once again the twin questions arise: (1) where would the cut-off point be between disadvantaged and nondisadvantaged States, and (2) should developed countries be included among the GDS identified on the basis of limited-area continental margins and/or economic zones?

### TABLE 3

**STATES WITH SMALL CONTINENTAL MARGINS AND/OR ECONOMIC ZONES**

<table>
<thead>
<tr>
<th>Category</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1,000 square miles</td>
<td>Belgium</td>
</tr>
<tr>
<td></td>
<td>Iraq</td>
</tr>
<tr>
<td></td>
<td>Jordan</td>
</tr>
<tr>
<td></td>
<td>Singapore</td>
</tr>
<tr>
<td></td>
<td>Togo</td>
</tr>
<tr>
<td></td>
<td>Zaire</td>
</tr>
<tr>
<td>1,000-5,000 square miles</td>
<td>Albania</td>
</tr>
<tr>
<td></td>
<td>Bahrain</td>
</tr>
<tr>
<td></td>
<td>Cameroon</td>
</tr>
<tr>
<td></td>
<td>German Democratic Republic</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
</tr>
<tr>
<td></td>
<td>Monaco</td>
</tr>
<tr>
<td></td>
<td>Syria</td>
</tr>
<tr>
<td>5,000-10,000 square miles</td>
<td>Bulgaria</td>
</tr>
<tr>
<td></td>
<td>Congo</td>
</tr>
<tr>
<td></td>
<td>Dahomey</td>
</tr>
<tr>
<td></td>
<td>Gambia</td>
</tr>
<tr>
<td></td>
<td>Israel</td>
</tr>
<tr>
<td></td>
<td>Lebanon</td>
</tr>
<tr>
<td></td>
<td>Poland</td>
</tr>
<tr>
<td></td>
<td>Qatar</td>
</tr>
<tr>
<td></td>
<td>Romania</td>
</tr>
<tr>
<td></td>
<td>Yemen</td>
</tr>
</tbody>
</table>

Still another group are the shelf-locked States (Table 4). Most share the twin disadvantage of limited size of their continental shelf/economic zone area, and an absence of outer continental margin. Within this group, the country with the largest shelf area is Finland, whose 28,600 square mile shelf places it 30th among the States of the world in shelf size. Many of the shelf-locked group are developed States.

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TABLE 4

SHELF-LOCKED STATES

| Bahrain                         | Malaysia (c) |
| Belgium                         | Netherlands  |
| Cambodia                        | Poland       |
| Denmark (a)                     | Qatar        |
| Ethiopia (b)                    | Saudi Arabia (b) |
| Finland                         | Singapore    |
| Federal Republic of Germany     | Sudan (b)    |
| German Democratic Republic      | Sweden       |
| Iran (c)                        | Thailand     |
| Iraq                            | North Vietnam* |
| Jordan                          | United Arab Emirates |
| Kuwait                          | Yemen (b)    |
|                               | Yugoslavia (b) |

(a) extensive shelf area off coast of overseas possessions
(b) opens on semienclosed sea, a small part of which is deeper than 200 meters
(c) mostly shelf-locked but narrow shelf area also on the open sea

Some countries have fairly extensive offshore margin areas, and/or could anticipate reasonably large economic zones, but are faced with what seems to be very limited resource potential therein (Table 5). At the 1974 Third Law of the Sea session at Caracas, for example, the representative from Jamaica submitted a proposal which would allow coastal States to establish economic zones beyond the 12-mile territorial sea, but provides that nationals of all countries of the region should have the right to exploit the living resources of the extra-territorial waters of the region on a reciprocal and preferential basis. A status of disadvantage, resulting from a shortage of resources in the economic zone, would, of course, be changed with the discovery of hydrocarbon or manganese nodule resources within the zone.

TABLE 5

STATES WITH INDICATIONS OF LIMITED RESOURCE POTENTIAL IN THEIR PROSPECTIVE ECONOMIC ZONES

| Barbados | Kenya |
| Dominican Republic | Nauru |
| Grenada | Tanzania |
| Haiti | Western Samoa |
One other possible group of GDS are those States in isolated oceanic locations, considerably removed from major shipping lanes. Again, at the Caracas session, there was an indication of this issue. The representative from Tonga referred to his country as disadvantaged on the basis of location (Table 6).

**TABLE 6**

**STATES IN ISOLATED LOCATIONS**

- Fiji
- Maldives
- Mauritius
- Nauru
- Tonga
- Western Samoa

In addition to matters of access, there are two special forms of disadvantage, both of them noted in the Single Negotiating Text. One is the case of States producing minerals and other raw materials, which may in time be competing with commodities obtained from seabed mining (Table 7). Chile and Zambia might fall within this group because of copper, Gabon with respect to manganese, and Zaire for cobalt. Such States could be expected to seek compensations from any International Seabed Authority for economic disadvantages suffered as a result of seabed mineral exploitation.

**TABLE 7**

**DEVELOPING STATES PRODUCING MINERALS OR OTHER RAW MATERIALS WHICH MAY BE AFFECTED BY COMMODITIES OBTAINED FROM SEABED MINING**

- **Copper**: Chile, Papua New Guinea, Peru, Philippines, Zaire, Zambia.
- **Cobalt**: Cuba, Morocco, Zaire, Zambia.
- **Manganese**: Brazil, Gabon, India, Mexico, South Africa.
- **Nickel**: Cuba, Indonesia.

A second item concerns States which are particularly dependent for the satisfaction of their nutritional needs on the exploitation of the living resources of the economic zones of other States of the region. Japan would be a strong candidate for inclusion in this group, but the Single Negotiating Text, as it now stands, specifies only developing States as being eligible for consideration (Table 8). The Text also notes that developing coastal States, which can claim no exclusive economic zones of their own, shall enjoy similar privileges.
TABLE 8

DEVELOPING STATES DEPENDENT FOR THE SATISFACTION OF THEIR NUTRITIONAL NEEDS ON THE EXPLOITATION OF THE LIVING RESOURCES OF THE ECONOMIC ZONES OF OTHER STATES OF THE REGION

Cameroon
Ghana
Ivory Coast
Thailand

DEVELOPING COASTAL STATES WHICH CAN CLAIM NO EXCLUSIVE ECONOMIC ZONE OF THEIR OWN

Iraq
Jordan
Singapore
Zaire

Cutting across the whole spectrum of geographic issues is the question of levels of economic development. A recent United Nations publication lists 24 States as being least developed on the basis of (1) per capita gross domestic product; (2) share of manufacturing in the total gross domestic product, and (3) share of the literate population in the age group of 15 years or more. In addition, the survey was concerned with the size of the economy, and the extent of its stagnation or buoyancy. On the basis of such considerations, these countries were designated as least developed (Table 9).

TABLE 9

THE LEAST-DEVELOPED COUNTRIES

| Afghanistan | Lesotho |
| Bhutan      | Maldives |
| Burundi     | Malawi  |
| Central African Republic | Mali |
| Chad        | Nepal   |
| Dahomey     | Niger   |
| Democratic Yemen | Rwanda |
| Ethiopia    | Somali  |
| Gambia      | Sudan   |
| Guinea      | Tanzania |
| Haiti       | Upper Volta |
| Laos        | Yemen |

10. Identification of the Least Developed among the Developing Countries: A Review in Light of Recent Information, U.N. Doc. E/AC.54/L.72 (1975). The report actually listed 25 States, but one, Sikkim, has subsequently been incorporated within India.
Two caveats should be noted. First, the survey did not take into account a number of recently-independent States, one or more of which conceivably merit inclusion in the list. These new States include Cape Verde Islands, Sao Tome e Principe, Papua New Guinea, Angola, Comoro Island, and Surinam. Second, there are some developing States very close to inclusion on the list. For example, three countries—Botswana, Uganda, and Western Samoa—were on the 1971 list of the least developed, and were removed only because they are now slightly better off.

The “multiplier effect” of the disadvantaged is evident here. Thirteen of the least developed are land-locked States, 11 of these in Africa, and two in Asia. Botswana and Uganda are also land-locked. Gambia has only a 38-mile coastline, and a small economic zone, while Tanzania is a potential transit State for several land-locked neighbors.

**Special Rights for the GDS, and for Developing States, as Provided for in the Single Negotiating Text**

The prospective positions both of the GDS and all developing States in a future regime of the sea, were singled out in the Single Negotiating Text which appeared in 1975. What follows are specific articles in the Text, arranged according to varying criteria. The roman numeral refers to the part in the Single Negotiating Text, and the arabic numeral to the particular article. In the case of part III of the Text, there were a series of sections, each with a separate numbering system.

**Equality of Treatment for Developing GDS, Including Land-Locked States**

III Development and Transfer of Technology—7:

States shall endeavour to ensure that international organizations competent in the field of the transfer of technology coordinate their activities in this field, including any regional or international programmes, taking into account the interests and needs of the developing States, including land-locked and geographically disadvantaged States.

**Special Consideration for All Land-Locked States**

II-57:

Land-locked States shall have the right to participate in the exploitation of the living resources of the exclusive economic zones of adjoining coastal States on an equitable basis . . . . Developed

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11. In addition, other newly-independent States, e.g., Equatorial Guinea, Guinea-Bissau, and Grenada, may not have been considered in the March, 1975 survey.
land-locked States shall, however, be entitled to exercise their rights only within the exclusive economic zones of neighboring developed coastal States.

II-109:
1. Land-locked States shall have the right of access to and from the sea for the purpose of exercising the rights provided for in the present Convention . . . . To this end, land-locked States shall enjoy freedom of transit through the territories of transit States by all means of transport.

II-116:
Land-locked States may, in accordance with the provisions of Part III, participate in the exploitation of the living resources of the exclusive economic zone of adjoining coastal States.

SPECIAL CONSIDERATION FOR DEVELOPING LAND-LOCKED STATES

I-23:
1. In the exercise of its functions, the Authority shall take measures pursuant to this Convention to promote and encourage activities in the Area and to secure the maximum financial and other benefits from them.
2. The Authority shall avoid discrimination in the granting of opportunities for such activities . . . . Special consideration by the Authority under this Convention for the interests and needs of the developing countries, and particularly the land-locked among them, shall not be deemed to be discrimination.

I-27:
1. The Council shall consist of 36 Members of the Authority elected by the Assembly . . . the election to take place in the following order:
   (b) Six Members from among the developing countries, one being drawn from each of the following categories:
       . . . .
   (iv) Land-locked States.

III Development and Transfer of Technology—4:
1. In order to achieve the above-mentioned objectives, States . . . shall endeavor to, inter alia:
   (a) establish programmes of technical cooperation for the effective transfer of all kinds of marine technology to the developing States, particularly the developing land-locked States . . . .

SPECIAL CONSIDERATION FOR GDS, INCLUDING LAND-LOCKED STATES

I-9:
1. The development and use of the Area shall be undertaken in such a manner as to:
   . . . .
(b) avoid or minimize any adverse effects on the revenues and economies of the developing countries, resulting from a substantial decline in their export earnings from minerals and other raw materials originating in their territory which are also derived from the Area.

I-26:
2. In addition, the powers and functions of the Assembly shall include:

. . .

(xi) Consideration of problems arising from States in connection with activities in the Area, from the land-locked and otherwise geographically disadvantaged location of some of them and to recommend basic guidelines for appropriate action.

I-30:
2. The Economic Planning Commission. . . shall. . . make recommendations to the Council on programmes and measures . . . and in particular:

. . .

(b) Appropriate programmes and measures . . . to avoid or minimize adverse effects on developing countries whose economies substantially depend on the revenues derived from the export of minerals and other raw materials originating in their territories which are also derived from the resources of the Area . . .

III-23—Conduct and Promotion of Marine Scientific Research:
1. States and international organizations conducting marine scientific research in the economic zone of a coastal State shall take into account the interest, and rights of the land-locked and other geographically disadvantaged States of the region . . .

2. Such neighbouring land-locked and other geographically disadvantaged States shall, at their request, be given the opportunity to participate, whenever feasible, in the proposed research project through qualified experts to be appointed by them.

SPECIAL CONSIDERATION FOR GDS, EXCLUDING LAND-LOCKED STATES
I-27:
1. The Council shall consist of 36 Members of the Authority elected by the Assembly . . . the election to take place in the following order:

(b) Six Members from among the developing countries, one being drawn from each of the following categories:

. . .

(v) Geographically disadvantaged States
(vi) Least developed countries.

II-58:
Developing coastal States which are situated in a subregion or region whose geographical peculiarities make such States particularly dependent for the satisfaction of the nutritional needs of their populations upon the exploitation of the living resources in the economic zones of their neighbouring States and developing coastal States which can claim no exclusive economic zones of their own shall have the right to participate, on an equitable basis, in the exploitation of living resources in the exclusive economic zones of other States in a subregion or region.
EQUALITY OF TREATMENT FOR ALL DEVELOPING STATES

III-9 Development and Transfer of Technology:
The International Sea-bed Authority shall . . . ensure:

(a) that nationals of developing States whether coastal, land-locked or other geographically disadvantaged, on an equitable geographic distribution, be taken on under training as members of the managerial, research and technical staff constituted for its undertakings.

SPECIAL CONSIDERATION FOR ALL DEVELOPING STATES

I-9:
2. Activities in the Area shall be carried out in an efficient manner to ensure:

(d) Equitable sharing in the benefits derived therefrom, taking into particular consideration the interests and needs of the developing countries, whether land-locked or coastal.

I-10:
3. States Parties shall promote international co-operation in scientific research in the Area exclusively for peaceful purposes by:

(b) ensuring that programmes are developed through the Authority for the benefit of developing countries and technologically less developed countries with a view to:
   (i) strengthening their research capabilities;
   (ii) training their nationals and the personnel of the Authority in the techniques and applications of research;
   (iii) fostering the employment of their qualified personnel in activities of research in the Area;

I-11:
The Authority and through its State Parties to this Convention shall take necessary measures for promoting the transfer of technology and scientific knowledge relating to activities in the Area so that all States benefit therefrom. In particular, they shall promote:

(a) Programmes for the promotion of transfer of technology to developing countries with regard to activities in the Area, including, inter alia, facilitating the access of developing countries to patented and non-patented technology, under just and reasonable conditions;

(b) Measures directed towards the acceleration of domestic technology of developing countries and the opening of opportunities to personnel from developing countries for training in marine science and technology and their full participation in activities in the Area.

I-18:
Participation in the activities in the Area of developing countries, including the land-locked and other geographically disadvantaged
States among them, shall be promoted, having due regard to their special needs and interests.

I-23:
3. The Authority shall ensure the equitable sharing by States in the benefits derived from activities in the Area, taking into particular consideration the interests and needs of the developing countries whether coastal or land-locked.

I-26:
2. In addition, the powers and functions of the Assembly shall include:

(x) Adoption of criteria, rules, regulations and procedures, for the equitable sharing of benefits from the Area and its resources, taking into special account the interests and needs of the developing countries, whether coastal or land-locked.

II-108:
1. In determining the allowable catch and establishing other conservation measures for the living resources in the high seas, States shall:

(a) adopt measures which are designed . . . to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing countries . . . .

III-1 Protection and Preservation of the Marine Environment:
States have the sovereign right to exploit their natural resources pursuant to their environmental policies and they shall, in accordance with their duty to protect and preserve the marine environment, take account of their economic needs and their programmes for economic development.

III-12 Protection and Preservation of the Marine Environment:
Developing States shall, for purposes of the prevention of marine pollution or the minimization of its effects, be granted preference in:

(a) the allocation of appropriate funds and technical assistance facilities of international organizations, and

(b) the utilization of their specialized services.

III-16 Protection and Preservation of the Marine Environment:
3. States . . . shall endeavour to establish global and regional rules standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account . . . the economic capacity of developing countries and their need for economic development.

III-6 Development and Transfer of Technology:
States, either directly or through appropriate international organizations shall promote the establishment of universally accepted guidelines, taking into account in particular the interests and needs of the developing States, for the transfer of marine technology and other work in the field of transfer of technology on a bilateral basis or within the framework of international organizations and other fora.
In summary, it may be seen that the Single Negotiating Text provides relatively few real compensations for the GDS. They receive no priorities in terms of the allocation of funds from seabed mineral exploitation, although there is the implication that developing States which produce minerals and other raw materials also originating from seabed mining could be compensated for economic losses sustained. Only under very restricted conditions would developing coastal States be entitled to share in the exploitation of the living resources of the economic zones of other States of the region. The GDS and the least developed countries are entitled to one representative each on the Council, a condition which may lead to confusion, since many of the land-locked States are also among the least developed.

The land-locked also do not fare too well in the Single Negotiating Text. As a group, they are entitled to one representative on the Assembly and they may have special opportunities in the activities of the Area. But their rights to partake in the exploitation of the living resources of the economic zones of coastal States are limited to “adjoining” States, rather than States of the region, a distinction which may in time cause difficulties.

**Geographic Interrelationships of the GDS**

The dimensions of the problem inherent in the concept of the land-locked and other GDS may best be illustrated by their geographic distribution. Figure 1 depicts the world-wide distribution of land-locked States. Five of the nine European land-locked countries form a solid, contiguous block. One, Liechtenstein, is also surrounded by her land-locked neighbors Austria and Switzerland. Andorra, Vatican City, Luxembourg and San Marino constitute outliers of individually land-locked States.

From a different perspective, France is bordered by three land-locked States—Andorra, Luxembourg and Switzerland. The Federal Republic of Germany has four land-locked neighbors—Austria, Czechoslovakia, Luxembourg, and Switzerland. The French and German totals could each be raised by one, depending upon the resolution of the particular problem of Liechtenstein, which is joined in a customs union with Switzerland. Italy, in turn, has four or five land-locked adjacent States—Austria, Vatican City, San Marino and Switzerland. The fifth State is Liechtenstein.
San Marino and Vatican City may fall into a category by themselves in that they abut only one coastal State—Italy.

In the case of Europe, the economic problem of the land-locked is made easier by the short distances to the coastline; the longest straight-line distance (from the closest border point) is approximately 200 miles. Furthermore, all of the States bordering the land-locked have excellent infrastructures including ports which may serve the land-locked communities. Several of the important river systems, e.g., the Danube, are internationalized by recognized accords of long standing. On the other hand, many of the coastal States bordered by land-locked countries—Belgium, the Federal Republic of Germany, the German Democratic Republic, Poland and possibly Yugoslavia—are in themselves disadvantaged, i.e., they are shelf-locked or would have very small economic zones.

Five land-locked States lie in Asia: Afghanistan, Bhutan, Laos, Nepal, and Mongolia. China borders all five of these; India borders two.

Unlike the situation in Europe, local transportation systems in Asia, particularly in the border regions, are ill-developed and overburdened. In the Asian land-locked States, railroads are all but unknown, and connections with China, for example, would have to cross some of the highest mountains of the world. This fact alone tends to direct the attention of the land-locked southward. Political considerations already alluded to, may override local geographic factors.

Most of the States adjacent to the land-locked countries, however, comprise either some of the least developed States in the world or those which are within the general range. India, with its teeming millions of people and developmental problems, may find itself hard-pressed to find the resources to assist Nepal and Bhutan. Laos borders on the war-torn States of North and South Vietnam and Cambodia. The country, however, has additional coastal neighbors in Burma, China (as noted) and Thailand.

Two neighboring countries in the Americas—Bolivia and Paraguay—are land-locked. Bolivia's natural access has historically been west to the Pacific through Chile and Peru. Negotiations have been underway for many years to alleviate many of the transportation problems. Paraguay is more fortunate, being situated on the navigable Parana with direct access to the harbors of Argentina and Uruguay.
It is in Africa, however, where the problems of the land-locked States are most intense. Thirteen land-locked countries exist here, nearly 45 percent of the world’s total. These land-locked countries comprise over 2.5 million square miles of territory—20 percent of the continent’s total area. As in Europe, large blocs of land-locked States are encountered: Central African Republic, Chad, Mali, Niger, and Upper Volta in West Africa; Burundi, Rwanda and Uganda in Central Africa; and Botswana, Malawi and Zambia in Southern Africa; Lesotho and Swaziland are isolated. The land-locked presence of Southern Rhodesia further complicates the situation.

As in Europe, several States border many land-locked States. Tanzania has five of them as neighbors—Burundi, Malawi, Rwanda, Uganda, and Zambia. A railroad, currently under construction, will join Zambia with the ports of Tanzania. Uganda already has rail connections with Kenya. Chad, situated in the drought-stricken Sahel, borders on two other land-locked States—Central African Republic and Niger—and on zone-locked Sudan; it is also isolated to the north from Libya by the Sahara. Zaire, a very short coastline country, has five land-locked adjacent States—Burundi, Central African Republic, Rwanda, Uganda, and Zambia.

Unlike conditions in Europe, however, distances from coastlines are generally considerable. Rwanda is more than 600 miles from the nearest coast, while Burundi is only slightly less. Chad lies nearly 500 miles inland. To complicate the African picture of land-locked and geographically-disadvantaged States, 16 of the least developed States of the world are situated on the same continent. While ten of these comprise land-locked countries, the remaining six coastal States, with one exception (Somalia), are adjacent to one or more of the land-locked countries. The problems of transportation and of sharing of resources are compounded by adjacency. States with very short coastlines generally are geographically dispersed; no continental or regional patterns of distribution are evident. Furthermore, they are normally situated adjacent to States with long coastlines and therefore are close to relatively extensive economic zones. However, several of this group—Bahrain and Iraq, and Dahomey and Togo—are paired by adjacency. In general, most very short coastline States fall under other categories of disadvantaged. While the various types of attributes of being disadvantaged may be combined, some care should be exercised, in any development of categories, to insure that geographical interrelationships do not artificially compound the issue, i.e., all very short coastline States, by definition, will either have small economic zones or be shelf-locked.

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Small coastline island States, particularly if they do not lie adjacent to other countries or territories, will automatically have large economic zones. Thus, an insular continental distinction, if the category is deemed valid, will have to be made.

The shelf-locked States are also widely dispersed throughout the world. By their very nature, however, they tend to be regionally concentrated along the shores of the semienclosed or enclosed seas. All Baltic Sea States, except the U.S.S.R., for example, are shelf-locked. As a result, most Baltic countries are in a condition of adjacency only with other shelf-locked (i.e., potentially GDS) States. The same general situation prevails in the Red Sea, the Persian Gulf and the Gulf of Thailand. How this shelf-locked problem may be alleviated is difficult to determine within the constraints of adjacency.

The ECOSOC study (E/AC.54/L.72) of least-developed States identified 24 States in this specific category (Figure 2). The list includes Haiti in the Americas, the Asian land-locked States, excluding Mongolia, and a block of African States extending from Malawi in the south, to Sudan in the north, and from Somalia in the east, to Senegal in the west. These least-developed countries, however, were selected from a broader group and the distinctions among all the less-developed States are very slight. The entire list compiled in the study is represented on Figure 3. It can easily be seen that these States constitute several cohesive agglomerations; (1) south and southeast Asia, and (2) central and eastern Africa. If the more recently independent States, which were probably not considered in the study, are added to the area, an even greater intensification of the concentration occurs. Three of the new countries are African; one, southeast Asian; and two, Carribbean. The States include Cape Verde, Guinea-Bissau, Sao Tome e Principe, Grenada, Papau New Guinea and Surinam, among others. An examination of the three maps shows the geographic interrelationship of the categories of the GDS. Their adjacency and concentration militate against any easy solution to their problems. Indeed, it may accomplish little for GDS to share mutually their status of being geographically disadvantaged.

One example, perhaps, will illustrate the range of the classification problems and of a search for a solution. Dahomey is one of
LEAST DEVELOPED STATES
the 24 least-developed States. It also possesses a very short coastline and will potentially receive a small economic zone as a result. Little interest has been shown in Dahomean offshore petroleum exploration. The country borders on another least-developed State (Togo) which also has a very short coastline, and a lesser-developed State (Nigeria). The status of the latter, however, may be altered when new GNP figures are released reflecting the increased prices of petroleum. Notwithstanding, Dahomey has two land-locked neighbors—Upper Volta and Niger. They, in turn, are bounded by two additional land-locked countries—Chad and Mali.

The scenario may, of course, be repeated elsewhere although perhaps not as vividly.

What then is the resolution of the problem? It is difficult to see how one may arrive at an equitable solution for the GDS without inequity for other adjacent GDS as a consequence of their geographic propinquity. As noted, the partial problem of the land-locked States, i.e., access to the sea, may well be met within the framework of existing international law, treaties, bilateral agreements and the language of the Single Negotiating Text, although serious problems exist. Access to the sea may, however, involve great distances, impassable terrain or inhospitable desert. Infrastructures may not exist even to satisfy the needs of the transit State.

The problems of access to marine resources, however, appear to be virtually insurmountable. Direct access to resources through one preferred neighbor may result in an intensive concentration of demands on that State, which may itself be geographically disadvantaged. Even if not in this category, a coastal State may be hard-pressed to meet the demands of four or five land-locked or geographically-disadvantaged neighbors.

The actual problem, hopefully, may not be as great as it potentially appears to be. Certain GDS may not have an interest in the living resources of an adjacent State’s economic zone for either economic or political reasons. Other lines of development or of “access” may be available which have a greater appeal or which may be more efficient. However, even if the worst case does not develop, the problems of providing equitable allocations will be enormous due primarily to the geographic concentration of the States. National solutions do not appear to be able to provide the logical answer to international problems.

One avenue of approach would appear to parallel the fisheries policies of the European Economic Community. In essence, a re-
ional arrangement of States might be able to meet, within national interest constraints, an essentially regional or international problem.

A similar solution to the GDS resource-access question may be possible through regional arrangements within the various existing regional and subregional organizations of Africa and Latin America. These arrangements combine States with geographic, historical and/or cultural bases for cooperation. States may even agree, as in certain regional organizations, to national specializations within the regional or economic area which would afford to the GDS a particular relevance in accordance with its existing resources. Such regional arrangements will be difficult to negotiate and to implement, but they may, in the long run, offer more rational solutions.

The geographical obstacles, for example, in allocating to Niger access to the living resources of adjacent States, appear insuperable. Niger is bound by the coastal States of Algeria, Libya, Dahomey and Nigeria. Will Niger be granted access to each of the four economic zones or will Dahomey be exempt since it too is a GDS? How would a Niger allocation be divided among the three or four States? How may Niger gain access across the Sahara to Libyan and Algerian economic zones? If this right proves too expensive to exercise, will Niger concentrate its activities only in the zone of Nigeria? What will happen to the “unused allocations”? Will Dahomey also have rights in Nigeria’s zone? How will these rights be apportioned among Dahomey, Niger and Nigeria? The answers seem fraught with potential conflicts creating more problems than they may actually solve.

Another possibility, of course, is to grant these States financial aid from the revenues of the international seabed operations. However, it is not known at present when these revenues will be available or how significant they may be. Indeed, the potential costs of the Authority itself are unknown and they will out of necessity have a prior claim on revenues. Moreover, we have seen a move by the land-based, and potentially GDS, producers of seabed minerals to establish production controls or to determine economic means to soften the blow, if any, of future deep seabed mineral production. Controls will inhibit revenues.

It appears obvious that the first problem should be to identify what is meant by a “geographically-disadvantaged state” in order
to determine the magnitude of the issue. The location, i.e., adjacency of these States, must then be determined to ascertain how the question will be concentrated locally and world-wide. The nature of the disadvantage must further be identified; different types of disadvantage will most assuredly require different solutions.

The problems of resource access may then be able to be met by regional and subregional fisheries and development accords. The problems of the land-based producers may require funding from the revenue of the international zone, if the economic competition does produce inequities. Other types of geographical disadvantage will have to be met by other arrangements. However, until the problem has been studied and the issues identified, conventional solutions may prove to be no more than palliatives.