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DEVELOPMENT AND INTERNATIONAL ECONOMIC CO-OPERATION: ENVIRONMENT

Study on financing the Plan of Action to Combat Desertification

Report of the Secretary-General

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* This annex reflects the views of the group of experts that has prepared it and has not been reviewed by the Secretary-General.

I. INTRODUCTION

1. The present report is submitted in response to the request in paragraph 9 of General Assembly resolution 35/73 of 5 December 1980. In that resolution, the Assembly, inter alia, noted with concern the constraints on the implementation of the Plan of Action to Combat Desertification, 1/ particularly the problem of insufficient financing and the increasing demands on the scarce resources of countries suffering from desertification, and strongly appealed to international financial institutions, multilateral financial institutions and Governments of industrialized countries, and of the developing countries in a position to do so, to give their financial support to the Special Account, with a view to enhancing the implementation of the Plan of Action. The Assembly, taking note of the report of the Secretary-General (A/35/396) to which was annexed the study by the high-level group of experts on additional resources for financing the Plan of Action, further requested the Secretary-General to prepare, in consultation with the United Nations Environment Programme (UNEP) and with the assistance of similar groups of experts on the subjects concerned, to be convened by the Executive Director of UNEP, the following:

(a) Feasibility studies and concrete recommendations for the implementation of the additional means of financing deemed practicable by the Secretary-General, including those providing for a predictable flow of funds;

(b) The detailed modalities of obtaining resources on a concessionary basis;

(c) A full feasibility study and working plan for the establishment of an independent operational financial corporation for the financing of desertification projects.

2. The Executive Director of UNEP drew the attention of the Governing Council at its ninth session to the consultations called for in General Assembly resolution 35/73.

3. The Executive Director subsequently convened the group of high-level consultants at Geneva from 20 to 24 July 1981. The group examined and eventually adopted a draft of the study prepared by a core group of its members, assisted by a secretariat made available by the Executive Director of UNEP. The study prepared by the high-level consultants is annexed to the present report and commended to the General Assembly for its consideration and action.

II. BACKGROUND

4. The United Nations Conference on Desertification, which met at Nairobi from 29 August to 9 September 1977, approved a Plan of Action to Combat Desertification and the modalities for financing it. The Plan, which contains 28 recommendations for combating desertification, called for specific measures for the mobilization

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1/ A/CONF.74/36, chap. I.

of capital resources necessary for its implementation, including the establishment of a Special Account which would draw its resources, inter alia, from Member States, international taxation, donations, multilateral financing institutions and interest-free loans; and additional measures of financing, including fiscal measures entailing automaticity, which should be the subject of a study by a group of high-level experts in international financing.

5. The Plan of Action was approved by the General Assembly in its resolution 32/172 of 19 September 1977. The study prepared by the UNEP group of experts on additional measures and means of financing for the implementation of the Plan of Action (UNEP/GC.6/9/Add.1) was presented to the Assembly at its thirty-third session (A/33/260). In its resolution 33/89 of 15 December 1978, the Assembly requested the Secretary-General to solicit the views of Governments on the additional measures and means of financing and to report to the Assembly at its thirty-fourth session.

6. The Secretary-General submitted the requested report (A/34/575) to the General Assembly at its thirty-fourth session. In its resolution 34/184 of 18 December 1979, the Assembly, inter alia, took note of the report and requested the Secretary-General, in consultation with the Governing Council of UNEP, to submit to the Assembly at its thirty-fifth session a report based on a detailed study of this question by a group of high-level specialists in international financing to be convened by the Executive Director.

7. The study prepared by the expert group (A/35/396, annex) was divided into three parts:

(a) An inventory of new means of financing involving automaticity proposed in the United Nations system;

(b) A financial plan and analysis outlining the components and costs of a programme for combating desertification, identifying what is already being financed and what additional resources may be required;

(c) Analyses and recommendations for mobilizing the resources required under the financial plan.

8. The General Assembly considered the report at its thirty-fifth session. In paragraph 9 of its resolution 35/73 of 5 December 1980, the General Assembly requested the Secretary-General, in consultation with UNEP and with the assistance of similar groups of experts to be convened by the Executive Director of UNEP, to submit to the General Assembly at its thirty-sixth session a report on those topics mentioned in paragraph 1 above.

9. The present report and the accompanying study by the group of high-level specialists are, thus, part of a continuum: a continuing search for solutions to the problems of financing the Plan of Action, including proposals for predictable sources of funding which originated during the Conference on Desertification and were later discussed by the General Assembly at its thirty-second, thirty-third, thirty-fourth and thirty-fifth sessions.

III. SUMMARY OF THE STUDY

10. The study prepared by the high-level specialists in international financing consists of three distinct components:

(a) Feasibility studies and concrete recommendations for the implementation of the additional means of financing deemed practicable by the Secretary-General, including those providing for a predictable flow of funds;

(b) The detailed modalities of obtaining resources on a concessionary basis;

(c) A full feasibility study and working plan for the establishment of an independent operational financial corporation for the financing of anti-desertification projects.

A. Feasibility studies and concrete recommendations for the implementation of the additional measures of financing deemed practicable by the Secretary-General, including those providing for a predictable flow of funds

11. Among the spectrum of additional measures of financing involving automaticity identified in the report on the subject submitted to the General Assembly at its thirty-fifth session (A/35/396), the following, including those providing for a predictable flow of resources, were deemed to be practicable by the Secretary-General:

(a) International taxation of trade flows;

(b) International Monetary Fund (IMF) gold sales and trust fund reflows;

(c) Link between SDRs and development finance;

(d) Taxes or "parking fees" from geo-stationary satellites;

(e) International revenues from sea-bed mining;

(f) The Common Fund for Commodities.

12. The study analyses the technical, administrative, legal and financial implications of the modalities and makes recommendations in regard to their feasibility and eventual implementation.

B. Detailed modalities of obtaining resources on a concessionary basis

13. The study examines different avenues for raising concessional funds and comes to the conclusion that the most practicable avenue for raising concessionary loans

is to tap private capital markets on a commercial basis and to combine this with the following elements necessary for concessionary re-lending:

(a) An interest subsidy element large enough to permit interest rates to the borrower to fall to acceptable levels and to extend maturities sufficiently beyond those of market borrowings to keep the borrowers debt service burden within safe limits;

(b) A system of supporting guarantees provided by Governments and/or collateral sufficient to carry sufficient credibility in the market place to enable the loans to be raised.

14. Of the different possibilities available the group of experts favours channelling the interest-free loans through an independent institution.

15. The alternative possibility for setting up a system of guarantees which does not require of itself a separate institution has been described in the study as a system of "limited joint and several" guarantees. Under this arrangement each participating Government would provide only a "several guarantee" whereby that Government would provide only a specified proportion of a bond, other proportions of which would be guaranteed by other Governments. However, all Governments would be contributing to a fund in which bond holders would share if there were a default.

16. One alternative to raising monies under the system of guarantees identified in the study is to seek alternative forms of collateral such as that available within the IMF by future sales of part of its gold stock.

17. The essence of raising loans under the system of supporting governmental guarantees or the callable capital of an institution or the collateral of IMF gold is that a multiple of the capital available with an interest subsidy can be raised. The precise multiple will depend on the difference between the terms of borrowing and the terms of lending, in particular the market rate of interest on borrowings and on lending, the period of disbursement of the loan and the maturity of the loan.

C. Feasibility study and working plan for the establishment for an independent operational financial corporation for the financing of desertification projects

18. The feasibility study and the working plan, contained in chapter V of the study, outline the setting up of an independent operational financial corporation for the financing of anti-desertification projects. Because of their nature, the projects funded by the corporation would have to be financed primarily with funds provided on an interest-free basis.

19. The study interprets the General Assembly's use of the term "independent" in resolution 35/73 as intended to exclude the possibility of the establishment of the institution as an affiliate or subsidiary of any existing financial body.

20. The study examines in detail the size and composition of the equity of the corporation and of its interest-free loan capital, the nature of its operating expenses and the possibility of setting up a research fund. It is proposed by the specialists that the business of the corporation should be managed by a board of 11 directors selected from different geographical groupings within the membership of the United Nations.

21. In its estimate of the demand for loan funds, the study places, at the medium estimate, the total cost of a programme of corrective measures on irrigated land, range land and rain-fed crop land, at an average of $2,389 million per year over the next 20 years. It is assumed that one-fifth of the expenditures will be for the category of anti-desertification projects, whose potential return cannot be quantified at the preparatory stage and which would, therefore, be eligible for the highly concessional loans the corporation could provide. In practice, those who use the resources should be able to undertake planning of their use with reasonably accurate prior knowledge concerning the amounts and terms on which the resources will become available over the years. The minimum level of predictability considered necessary by the study is a seven-year supply of money.

22. The study describes the modalities for obtaining loans from the corporation, their terms, conditions and responsibility, and compares them with the concessionary loans offered by the International Development Association (IDA) and the International Fund for Agricultural Development (IFAD). It also identifies the mechanism for project implementation, control and monitoring currently established to implement the Plan of Action to Combat Desertification, and shows how these would be influenced by the corporation.

23. Chapter V also discusses the procedures for the establishment of the corporation and presents a draft charter of the international finance corporation for anti-desertification activities.

IV. CONCLUSIONS AND RECOMMENDATIONS

24. There is a consensus that anti-desertification projects are important in the over-all development process and that there is also a need to increase substantially the level of financial assistance to developing countries, many of them least developed countries, suffering from desertification.

25. While it is true that anti-desertification programmes and projects are of a long gestation period and do not generate early returns in the form of financial flows, the benefits that follow from them are unquestionable and of a basic nature. They affect food production, soil erosion, water systems and other fragile ecosystems, such as range lands, pastures, rain-fed crop lands and life-supporting natural balances. As such, anti-desertification projects are, thus, aimed at a variety of developmental goals including agricultural and rural development and social ecological improvement, which are high on the priority list of development plans.

26. Not only are the benefits of anti-desertification projects substantial, but the lack of progress in combating desertification is a matter today of great urgency. There is need for larger and more predictable flows of funds which the present system of international financing, based as it is on voluntary contributions, cannot meet.

27. In this situation, the Secretary-General recommends that the General Assembly should examine the study prepared by the high-level specialists on financial means with care and deliberation. The time has come when the Assembly should consider mechanisms with a good potential for raising additional funds such as the establishment of an independent operational financial corporation for the financing of desertification projects for which a full feasibility study and a working plan are proposed by the experts upon the request of the General Assembly.

ANNEX

Feasibility studies on and detailed modalities for financing the Plan of Action to Combat Desertification

Prepared by a group of high-level specialists in international financing convened by the Executive Director of the United Nations Environment Programme pursuant to General Assembly resolution 35/73

CONTENTS

PART ONE

I. Introduction

1. The present report represents a third step towards the implementation of the 1977 Plan of Action to Combat Desertification 1/ by elaborating on the several previous studies on additional sources of financing. 2/ The mandate to explore such additional sources originally grew out of a discussion at the United Nations Conference on Desertification, held at Nairobi, Kenya, 29 August to 9 September 1977. In its resolution 35/73 of 5 December 1980, the General Assembly, inter alia, requested the Secretary-General:

> "(a) To prepare, in consultation with the United Nations Environment Programme and with the assistance of similar groups of experts on the subjects concerned, to be convened by the Executive Director of the Programme:
>
> "(i) Feasibility studies and concrete recommendations for the implementation of the additional means of financing deemed practicable by the Secretary-General, including those providing for a predictable flow of funds;
>
> "(ii) The detailed modalities of obtaining resources on a concessionary basis;
>
> "(iii) A full feasibility study and working plan for the establishment of an independent operational financial corporation for the financing of desertification projects;
>
> "(b) To report on the results of the above-mentioned studies to the General Assembly at its thirty-sixth session."

2. In formulating these instructions, the General Assembly took account, inter alia, of last year's (second phase) study on financing the Plan of Action to Combat Desertification (A/35/396, annex), which had been prepared by a group of high-level specialists in international finance convened by the Executive Director of UNEP pursuant to Assembly resolution 34/184 of 18 December 1979. That study consisted of three parts:

(a) An inventory of new means of financing involving automaticity and previously proposed in the United Nations system (chap. I);

1/ A/CONF.74/36, chap. I.

2/ Such studies include documents UNEP/GC.6/9/Add.1 and A/35/396, annex.

(b) A financial plan and analysis outlining the components and costs of a programme for combating desertification, identifying what is already being financed and what additional resources may be required (chap. II);

(c) Analyses and recommendations for mobilizing the resources required under the financial plan (chaps. I, III, IV, V and VI).

3. That earlier study was not intended to carry beyond tentative evaluation of both feasibility and practicability of a number of specific finance mechanisms that had previously been put forward in the United Nations system. These evaluations found these two characteristics to differ greatly as between the various mechanisms. Based on this evaluation, the group of experts had then singled out certain of these mechanisms for more detailed treatment. One of these was a proposal for a special new institution to finance desertification and related projects. The group likewise considered in the study a variety of approaches to concessional financing, such as interest rate subsidies and the possible blending of long-term funds raised in private capital markets with such subsidies or of guarantees. Such funds might then be channelled directly into certain desertification projects or, alternatively, go toward meeting the capital requirements of the institution referred to. Lastly, the study surveyed a list of specific sources of additional funds, drawing on existing pools of sovereign capital or tapping new types of revenues to provide a future automatic flow of funds. Two of these involve certain adaptations in the working of the international monetary system. Others are de novo sources. The proceeds from any of such additional sources could flow into projects directly or indirectly through the new institution or serve as backup for private financing.

4. After reviewing the conclusions and recommendations of that earlier study, the General Assembly instructed the Secretary-General to undertake the present review, as outlined in paragraph 1 above. In response, the Executive Director of UNEP assigned the task of preparing the set of specific studies outlined in those instructions to a core group of specialists selected from among those who had reviewed the previous year's study. These studies were once more reviewed by a similar group of high-level experts. Their findings reflect the Assembly's judgement that all of the mechanisms described in the preceding paragraph were, in principle, feasible but that a more concrete examination of the particular modalities of each was indicated. Accordingly, the studies review the economic feasibility of each mechanism, including its technical and legal aspects, as well as the administrative and practical aspects of each as a basis for the group's concrete recommendations for implementing each, as requested by the Assembly.

5. The group recognizes that, in practical terms, any additional funds raised for the objectives outlined in the Plan of Action are unlikely to remain confined to desertification control alone. Given the interrelationship between resources, environment, population and development, 3/ this comment applies with equal force to all of the different mechanisms described below; thus, desertification control forms just one aspect of economic development in general and of development in the related areas of energy, health, and agriculture in particular. The following

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3/ See the report of the Symposium on the Interrelations between Resources, Environment, Population and Development, held at Stockholm, from 6 to 10 August 1979, United Nations publication, Sales No. E.80.II.A.8.

considerations seem relevant in determining the proportion of additional resources that is reasonable to assign for anti-desertification purposes. Between 600-700 million people depend on desertification-prone areas for their livelihood; about 15 per cent of the world population. The total crop-producing lands (rain-fed plus irrigated cultivated lands) prone to desertification are estimated at 200,180,000 ha; about 13 per cent of the world croplands. The area of rangelands prone to desertification represents 25 per cent of the world rangelands and produces 10 per cent of the world livestock products. Accordingly, it appears that by various criteria, desertification control could reasonably hope to receive between 10 per cent and 15 per cent of such additional resources as may become available to meet developmental, environmental and other financial needs of the international community. The group of experts decided conservatively to assume that 10 per cent of any such resources would eventually be made available for desertification control.

II. BACKGROUND

6. Desertification takes some 20 million hectares out of agricultural production each year, a process that was dramatically highlighted by the disastrous drought of 1968 to 1972. Desertification control, thus, forms an integral, and increasingly indispensable part of the development process in the developing countries. The high cost and long gestation period of control programmes underscore the need for new sources and methods of financing. For the 20-year period to the year 2000, last year's study put the total cost of the anti-desertification programmes in the developing countries at a medium range of $48 billion, with a low of $29.5 billion and a high of $79.6 billion, all in 1978 dollars (see table 1 below). This points

TABLE 1

Alternative estimates of total costs of a 20-year programme of basic corrective measures for the rehabilitation of desertified lands in developing countries requiring external financial assistance

Type of land	Area covered (in millions of hectares)	Total cost of programme of corrective measures a/ (in millions of United States dollars) Low	Medium	High
(1)	(2)	(3)	(4)	(5)
Irrigated land	16.35	8,175.00	12,262.50	19,620.00
Rangeland	722.62	7,226.20	18,065.50	28,904.80
Rainfed cropland	68.03	13,606.00	17,007.50	30,613.50
Sand dune stabilization	2.04	449.00	449.00	449.00
Total	809.04	29,456.20	47,784.50	79,587.30

a/ Estimates are based on area covered and average low, medium and high unit costs of rehabilitation of desertified lands, as discussed in the text. Costings are based on the assumption that the affected areas in column 2 are moderately desertified.

to an average annual funding requirement of approximately $2.4 billion for that 20-year period. Against the average $2.4 billion annual expenditure implied by the medium total, last year's plan called for financing needs averaging $1.8 billion a year net, after deducting $527 million of external assistance and $59 million of national expenditure concerned with desertification control that were provided, in the calendar year 1978, as follows: 4/

Member States of the Organization for Economic Co-operation and Development (OECD) plus international and regional financing agencies	$443 million
Bilateral and multilateral flows from the Organization of the Petroleum Exporting Countries (OPEC)	$ 23 million
United Nations system other than World Bank and IFAD	$ 61 million
Total	$527 million
Add: National expenditures	$ 59 million
Grand total	$586 million

(a) The above totals are expressed in 1978 dollars and, thus, exclude the effect of price changes, as well as further environmental deterioration between that year and 1980.

(b) These estimates ignore the cost of certain measures that may become necessary to implement the entire plan, but the cost of which cannot be reliably estimated. Examples would be the costs associated with education and training, social change, and particular structural adjustments such as the stratification of livestock, i.e., by careful planning of the movements of livestock at various stages of their growth cycle to achieve the optimum distribution of herds throughout the different rainfall zones; intensified production and stockpiling of feeds and fodder; provision of alternative energy technologies; and the monitoring of desertification and related natural resource processes.

(c) The table omits any breakdown of the $1.8 billion net external assistance requirement into local currency and foreign exchange components because neither local funding nor savings levels or revenue bases of the lowest-income countries affected would permit local currencies to be raised without external assistance. However, some part of such assistance could take the form of counterpart funds for food and other aid received in rem as outlined in paragraphs 164 and 165 of the previous study (A/35/396, annex).

4/ Includes some expenditure in areas not currently threatened with desertification.

7. Subject to these qualifications, the funding requirement would rise from a starting level well below the average $1.8 billion, building up over time to well above that amount. This need not be seen as a negative factor, since the financing mechanisms evaluated in the following sections are unlikely to materialize, or to move forward toward implementation, simultaneously, or perhaps even in any predictable sequence. In part, this reflects the fact that these mechanisms vary with respect to the degree to which they meet the criteria of additionality and automaticity. Thus, these mechanisms may overlap internally in the sense that governmental agreement to any one of them may exclude consensus on some or all of the others. Similarly, an agreement on the part of Governments to join in implementing some of the measures proposed here may come at the cost - expressed or implicit - of a slowdown in real terms, if not actual reductions, in other bilateral or other assistance programmes. Lastly, the automaticity, which represents an indispensable element of the type of long-term programming envisaged here, must likewise remain subject, even in a domestic context, to a measure of political and economic uncertainty over the entire 20-year planning span. Yet, it is imperative that a start toward this objective not again be delayed until new unforeseen contingencies once again overtake the initiatives needed to begin funding the Plan of Action.

8. Nevertheless, none of these comments is inconsistent with the General Assembly's judgement that all of the mechanisms discussed in this report are, or could be rendered, feasible. To be sure, they remain subject - albeit to varying degrees - to the more detailed examination of their technical practicability, including the legal and administrative aspects as elaborated in the individual feasibility studies that follow. Taken together, these findings actually highlight the critical point that this four-year sequence of studies has now reached, and the implications which all of them carry for meeting the goals of the Third United Nations Development Decade. The tenth anniversary of the Stockholm Conference would seem an appropriate moment for breaking the logjam over how to finance these goals. Just because the nature of desertification projects and the returns associated with them render their financing difficult, such a final breakthorugh toward originating, and success in implementing, new mechanisms would constitute a new signpost for determining the development patterns of the Third Development Decade.

9. In consultation with the Executive Director of UNEP, the present Group designated the six proposals in paragraphs 90 to 95 of the 1980 study (A/35/396, annex) as falling within the limits of appropriate degrees of feasibility and thus proper subjects for the following detailed studies. While all meet the criteria of additionality and - albeit to varying degrees - of predictability as well, they do differ in certain important respects. These differences must be kept in mind while evaluating the concrete recommendations for their implementation.

10. In considering the implementation of the additional means of financing, it is equally important to bear in mind that certain broad perceptions have emerged. In the first place, the international community appears to be agreed on the importance of a number of plans of action to meet critical concerns, one of the foremost among these being the Plan of Action to Combat Desertification, first approved by

the United Nations Conference on Desertification in 1977 and later endorsed by the General Assembly. The second perception relates to the fact that the countries and regions most seriously affected by desertification are precisely those that are least able to cope with the magnitude of the problem. Not only are additional resources required but those resources must clearly be available on a concessionary basis. Thirdly, the environmental concerns, such as the spread of desertification, are not only grave but extremely urgent. Finally, for a number of reasons, such as the need for a measure of automaticity and predictability in the flow of resources and the fact that desertification is not and cannot be confined to national boundaries, international measures are to be preferred to bilateral approaches.

PART TWO

III. Feasibility studies and concrete recommendations for the implementation of the additional means of financing

A. Generalized trade taxes

11. The general concept of funding economic development through taxes on international trade in goods and services has formed part of the literature on the subject both within and outside the United Nations system for some time past. The first formal request for a study of the practical use of such taxes by any United Nations body originated with the Plan of Action to Combat Desertification. 5/ In the following year, a study published by the Brookings Institution 6/ examined the subject in some depth, together with other additional measures for financing, some of which are addressed elsewhere in the present study. In 1979, the Brandt Commission Report included taxes on trade among the measures it recommended as useful for enlarging the flow of official development finance. 7/ In turn, they were listed, together with other variants of international taxation, in last year's comprehensive inventory of all additional means of financing proposed in the United Nations system. The trade tax concept was also pursued in the United Nations Conference on Trade and Development (UNCTAD) and discussed at the Trade and Development Board's ninth session (first part) held at Geneva in July 1980. 8/

12. Most of these studies, inter alia, try to evaluate the relative merits of two alternative approaches to such taxation: either a gross sales tax levied world-wide on the broadest possible mix of goods and services - the latter including tourism and transportation, along with financial services (such as investment income and revenues from banking and insurance), all with the least possible amount of exemptions; or, alternatively, a more narrowly-based tax, levied on specific categories of goods, and often structured so as to take into account its relative impact on the contributing countries' income and wealth. The following discussion covers both types of levy and examines the feasibility of applying them both to goods and to services. On the other hand, the discussion limits itself to taxes intended primarily to raise revenue, rather than those

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5/ Plan of Action to Combat Desertification (A/CONF.74/36, chap. I) adopted by the Conference on 9 September 1977 and approved by the General Assembly in resolution 32/172 of 19 December 1977.

6/ New Means of Financing International Needs, Eleanor B. Steinberg and Joseph A. Yager with Gerard M. Brannon (The Brookings Institution, Washington, DC, 1978).

7/ North-South: A Programme for Survival, Report of the Independent Commission on International Development Issues under the Chairmanship of Willy Brandt (MIT Press, Cambridge, Mass., 1980), pp. 290-91.

8/ Requirements of a comprehensive system of international financial co-operation (TD/B/C.3/161 and TD/B/C.3/161/Supp.2).

designed mainly for their penalty effect - such as taxes on polluters of the environment or taxes on shipments of military goods - or for their disincentive value, even though such effects are, to varying degrees, inherent in either type of tax.

13. In evaluating the economic and financial significance of any one or more of these various forms of taxation, the different modalities described below have been examined from the viewpoint of their revenue potential, ease of administration, fairness, and economic effects. In turn, these criteria have served as the basis of recommendations. As in other sections of this report, and given the complexities of collection and compilation, not all of the underlying statistical data are available in up-to-date form, nor are they always as comprehensive and reliable as might be desired. They are, nevertheless, considered to be fully adequate within the context of the mandate to make detailed, concrete, and action-oriented recommendations.

14. As brought out in paragraph 11 of chapter I of last year's study (A/35/396, annex), the earlier study had confined itself to discussing the taxation of merchandise trade alone. Last year's study by contrast, in paragraph 15 of chapter I, extended the discussion to taxation of invisibles, mentioning levies on international investment, air travel, and freight transport, all items that had meanwhile also been suggested by the Brandt Commission Report. In addition, the earlier Brookings Institution study had more systematically examined the merits and possible modalities of taxing invisibles, in which category it also included tourism. However, it was considered that, because of administrative and other factual reasons, an international trade tax on merchandise trade should be considered (in the first instance), notwithstanding the possibility of considering the taxation of invisibles as the system matures.

15. Keeping within the terms of the mandate of the study, which calls for a feasibility study of international taxation of all trade flows, levies on international investment (presumably interest and dividends) or on surpluses in foreign trade have not been considered, as these do not fall within that definition. The feasibility of taxing service transactions, both in absolute terms and relative to levies against merchandise trade, however, is being addressed below.

16. It is recognized that, by some measures, the value of service transactions may have grown faster than that of merchandise trade - particularly if the latter's value is taken net of trade in energy resources. Even so, estimated in the

roughest of terms, service transactions probably amount to no more than one fifth of the current $2,000 billion global value of merchandise trade. But some of these services, such as banking and insurance charges, are largely ancillary costs of merchandise trade and thus likely to be passed on to the final purchaser in one form or another. Thus, any taxable revenues from insurance and freight would be included if taxes on merchandise trade were imposed at the c.i.f. price (cost, insurance and freight) instead of the price free-on-board (f.o.b.). This would permit a lower level of administrative expense than that involved in a separate collection process; most proposals for the taxation of merchandise trade, therefore, use c.i.f. values.

17. Transportation and communications across national borders - not infrequently operated by public bodies - are other categories of services that are inherently difficult to capture for taxation except at considerable administrative costs. This would be less true for international air travel, which is generally associated with either business or tourist travel and thus often considered as falling in the luxury category, as distinguished from such "essential" services as insurance and freight. However, fairness would call for a good deal of differentiation - for instance, between tourism expenditures in wealthy countries and those in low-income developing countries aspiring to build up their income from that source. To avoid such taxation from becoming counterproductive would, therefore, require further modification, with all the attendant administrative complexities, by making special allowances for "essential" components like landing fees and airport or marine tender services, which could be considered as luxuries only from the viewpoint of their end use. As a final administrative barrier, many types of services are not generally subject to import duties or tariffs, so that the regular customs agencies could not handle the collection of taxes. A similar argument applies, a fortiori, to service payments for commissions, royalties, and management or copyright fees where the imposition of a tax would most likely cause widespread circumvention and evasion. In view of these considerations, it is considred that the proposed trade tax should remain limited to merchandise for the purposes under discussion here. This conclusion seems to have been shared by the UNCTAD group (cf. foot-note 8 above), which likewise confined its recommendations to the taxation of merchandise transactions.

18. It is tempting to view international taxation as an extension of domestic taxation and to treat it as a simple surcharge - or so-called "shadow tax" - levied along with a country's other taxes, whether direct or indirect, on behalf of an international organization. Such taxation would, of course, constitute an entirely voluntary scheme, with no assurance of permanence, even if it were possible to obtain a sufficient measure of agreement. To cement such consensus, once established, into a more binding form of agreement would require an international treaty for a trade tax administered by a special body (see para. 27 below). While either approach presupposes an act of will on the part of Governments, the latter procedure promises somewhat higher predictability, once it has been ratified by a sufficient majority of countries and approved by their national legislatures. Moreover, legislatures will usually find it easier to accept a new tax levied for specific purposes rather than to let the international community pre-empt their traditional sources of domestic revenue. This consideration would seem to rule out

any kind of surcharge on existing taxes, whether related to income (direct) or to expenditures (indirect). World-wide, more than twice as much revenue is raised through indirect taxation than through direct taxation; and that proportion is on the rise as more Governments are adopting simple sales or value-added taxes, while reducing income taxes.

19. With world trade currently running at about $2,000 billion a year and likely to reach $2,500 billion by 1984, the principal advantage of such a tax is its very large base. Provided that the tax is levied on essentially all commercial trade and on all trading nations, even as low a rate as 0.1 per cent would yield $2.0 billion a year currently and perhaps $3.0 billion by 1987. Assuming that up to 10 per cent of this revenue might become available to combat desertification, the tax could yield an average of over $250 million a year through the 1980s. It would thus contribute much more massive amounts than even the maxima likely to be obtained from either IMF Trust Fund reflows or SDR allocations, and would presumably continue in effect, i.e. provide greater predictability. At the same time, the tax rate of 0.1 per cent is too small to be considered as threatening to reduce the volume of trade, through import substitution, or exert any sufficiently visible pressure to raise consumer's inflationary expectations to any meaningful extent. The initial discussions of the requisite legislative measures should overcome such objections by specific reference to the purposes for which the tax is earmarked (such as desertification control or other development programmes). An international agreement directing the body administering the tax to exercise these functions would, inter alia, specify the currencies which would be acceptable from national authorities. Presumably, these would consist of a number of freely convertible currencies, such as the five currencies constituting the SDR, together with a smaller proportion of local currencies to be used for expenditure in the countries concerned. Similar arrangements would govern trade denominated in bilateral clearing currencies.

20. Lastly, the availability of a virtually world-wide network of national customs authorities with common classification standards facilitates the collection of what is, in essence, a surtax on both dutiable and non-dutiable trade. Since customs authorities generally value even non-dutiable goods for statistical purposes, their capture for purposes of the levy would generally not represent a problem. Lastly, while the tax would normally be collected from imports (c.i.f.) at ports of entry, there may be some advantage to alternative collection from exports at ports of shipment in order to provide greater assurance of collection in cases where certain importing countries may balk at meeting their agreed obligations.

21. Notwithstanding this powerful array of advantages, the parallel with national sales taxes also suggests a number of negative elements that necessarily characterize any international trade tax. All broad-gauged consumption taxes are unavoidably regressive in that they weigh most heavily on low-income consumers, whose purchases of necessities claim higher proportions of their income than do those of the more affluent. In the same way, it is often the lower-income (especially smaller) country that shows the greater dependence on imports, while larger and more populous countries tend to be less import-dependent, regardless of their income levels, simply because their greater size and resources provide them with a greater measure of self-sufficiency. In actual fact, differences in

TABLE 2

Country	Population (millions)	Imports (c.i.f.) GNP
	(1979 data, exept as noted)	
China (1977)	950	2.0 per cent
India (1977)	626	7.1 per cent
Union Soviet Socialist Republics	265	5.7 per cent
United States of America	220	10.4 per cent
Brazil	119	9.6 per cent
Sudan	17	16.0 per cent
Kenya	15	32.6 per cent
Sri Lanka	15	45.7 per cent
Netherlands	14	52.3 per cent
Sweden	8	32.8 per cent
Norway	4	42.8 per cent
Liberia	1.7	73.2 per cent
Mauritania	1.5	61.8 per cent
Trinidad and Tobago	1.0	31.8 per cent
Gabon	0.5	50.8 per cent

population and size, more than in income and wealth, explain most of the discriminatory effect of an import surcharge. As the following table demonstrates, imports of the larger countries tend to absorb lower percentage shares of their total income than do imports of smaller, less populous countries, regardless of the absolute level of their income per capita. The table compares the relevant percentage shares of five of the world's most populous countries with those of ten of the less populous ones.

22. These data clearly show the discriminatory effect of taxing various countries' imports at a uniform rate. Taking that rate as 0.1 per cent of the c.i.f. import value, the United States would contribute 0.01 per cent of its GNP and the Soviet Union 0.00 per cent; these low ratios compare with a range of 0.03 per cent for Trinidad and Tobago to 0.07 per cent for Liberia. Thus the latter country would be liable for seven times the GNP percentage contributed by the United States, and Mauritania for ten times the Soviet Union's. Because this would not be found acceptable, adjustments would be required. The tax levy on merchandise could be corrected by a variable representing the degree of dependency of each country on international trade so as to achieve greater equity between the contribution required from countries heavily dependent thereon and from those with a greater degree of self-sufficiency. Such adjustment may, for instance, introduce one or more ceilings which limit the rate of tax to a maximum percentage of GNP for smaller developing countries with low per capita incomes. Such adjustment would not provide a significant degree of relief, however, in an environment where these low-income developing countries' imports have been declining from 2.1 per cent of world-wide imports in 1970 to only 1.5 per cent in 1977 - a larger decline than that registered by all developing countries relative to the value of global imports. Instead, population data must be brought into the equation, although, as indicated above, not necessarily in the form of per capita GNP.

23. One possible formula for effecting this adjustment was suggested by the 1978 study of the Brookings Institution, 9/ which had the small, more trade-dependent developing countries retain a part of their tax collections, the rate of retention varying inversely to each country's population. That study found that imports tended to average 21 per cent of GNP for medium-sized countries (30 million population), 10 per cent for large ones (200 million population), but 43 per cent for small countries (1 million). Over-all, the effect of applying the Brookings formula was to reduce by one half this group of countries' tax burden, expressed as a percentage of social product. By way of example, where a 1 per cent tax on all imports would have taken 0.16 per cent of all countries' combined GNP, adjusting the tax to 2 per cent for the non-retainers and applying the retention formula to the smaller country group would reduce the latter's global burden to 0.075 per cent of its combined GNP, without significantly changing the total tax collected.

24. Even this adjustment would still leave substantial inequities in the distribution of the burden between the retaining and the "normal", i.e. non-retaining countries as a group, as well as between countries individually. The

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9/ New Means of Financing International Trade, pp. 54-55 and appendix A.

formula does not extend to countries with the largest populations where import/GNP ratios of 7.5 per cent or less prevail; the breakpoint occurs at a population level of 150 million. Thus, applying the alternative formula, with the tax rate doubled to 2 per cent, would also double the contributions of the United States (from 12.9 per cent to 25.5 per cent of total tax collections), India (from 0.6 per cent to 1.2 per cent), China (from 0.6 per cent to 1.2 per cent), and the Soviet Union (from 3.3 per cent to 6.5 per cent). The benefits would be distributed even more randomly as between higher and lower-income countries. Exclusive of the doublingof the United States' contribution, the formula would actually reduce that of all other countries with income per capita of $2,000 and over by more than 14 per cent and would cut that of the oil-exporting countries by almost one third. As a result, the oil exporters' contribution, which had equalled 1/16th that of the entire $2,000 and over group, would have shrunk to less than 1/25th - clearly not a pattern of burden-sharing likely to find ready acceptance then or now.

25. One main reason for these inequities lies in the choice of imports as a basis for the trade tax, without reference to countries' trade balances - plainly a more useful indication of their ability to contribute. Obviously, it would be logical to expect deficit countries to be more seriously affected by an import surcharge, because import elasticities are lower than those for exports, especially in low-income countries with a large proportion of essentials in their import mix. 10/ The formula does not make this distinction, even though that proportion has risen faster for the lower-income countries than it has for the others. Between 1960 and 1977, the proportion of total imports absorbed by food and fuel rose from 33 per cent to 35 per cent for the industrial countries, but from 29 per cent to the same 35 per cent ratio for the lower-income ones. Given the further increases in the costs of energy imports since 1977, the trend has accelerated to the detriment of the latter group of countries.

26. It may well be that these and similar inequities are inherent in any rate differential or rebate scheme, whether the amount of rebate is made more directly income-sensitive than in the Brookings version or not. Following that scheme on the basis of available data for 1979, but applying a uniform 0.15 per cent rate of tax without rebating and an 0.3 per cent rate, rebated according to the Brookings formula, would not support a materially different conclusion. Nor, as explained earlier, would these inequities be significantly reduced by apportioning the total tax burden in direct proportion to per capita incomes, except for reducing modestly the percentage gap between the industrial countries' contribution and that of the oil exporting countries. On balance, simply exempting the lowest-income countries, regardless of their population size, would be no more inequitable and would simplify administration. This approach has the further advantage of not requiring frequent adjustments, as countries' circumstances change, even though it would tend to violate the principle of universality. Moreover, it would be considerably less

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10/ Greater precision regarding elasticities - at least in the long run - would offer useful clues regarding the incidence of the burden on importers and exporters. Unfortunately, the great variety of goods and commodities involved does not permit such precision.

cumbersome than to apply lower tax rates to those countries' essential imports, like food, medicines, and energy resources. The prima facie appearance of feasibility, as referred to in the annex to the report of the Secretary-General (A/35/396, annex, paras. 17-20), thus comes down to the recognition that the decisions required for their implementation involve judgements that remain controversial or political, rather than on technical considerations alone. The resolution of these issues involves the acceptance of some of the inequities referred to, mainly by those countries best able to agree to do so, as an expression of their political will to marshall truly additional real resources for the most urgent demands of long-term development, without reducing other contributions to ODA. Once such a consensus is established, the legal and technical aspects of their implementation will ipso facto become more easily manageable.

27. The legal foundation for any international undertaking - whether revenue-raising or not - of the size and complexity involved in taxing world trade would be a basic treaty or convention to be negotiated and ratified by an agreed minimum number of countries in order to permit it to enter into force. The treaty would operate through a permanent international treasury created to carry out its provisions, including, inter alia:

(a) Organizing the working relationships with sovereign Governments, and administering tax collections, by means of rules and regulations;

(b) Supervising the operations of a trust fund that would receive and disburse tax collections and possibly borrow against expected future receipts;

(c) Settling disputes by arbitration or otherwise, and using sanctions where required to enforce collections.

The composition of that body's management and policy-making apparatus should, in principle, be structured so as to reflect the relative importance of each signatory power's expected revenue contribution. In practice, countries may insist on this as a pre-condition for their ratification of the treaty. At the operating level, measures should be taken to ensure the democratic participation of all Member States in the decision-making process. The adjudication of disputes and imposition of sanctions may call for the creation of a separate panel or court.

28. Acting, in effect, as agents of this newly-created body, national customs agencies will collect the trade tax directly from importing firms and individuals, based on c.i.f. values (thus effectively taxing insurance and freight along with the value of the merchandise). Taxes on dutiable goods would thus be collected as a surcharge on existing (S.I.T.C.) classification categories and tariff schedules. The tax would apply to all non-dutiable goods, but would exclude commercial samples; special consideration should be given to transit trade, imports into free ports and free trade zones, as well as otherwise exempted trans-border processing transactions. In countries that refund local value-added taxes to exporters, such taxes would be excluded from invoice values in computing the amount of the trade tax, as would any corresponding import-equalization tax imposed by importing countries.

29. Special discretion will be required in areas where such apparently technical decisions actually touch upon issues involving trade policy. Among these, any double taxatiuon of re-exports is of particular concern to smaller developing countries and territories like Singapore, Hong Kong, and Trinidad and Tobago, whose high import/GNP ratios would otherwise subject them to unreasonably high tax burdens even under the Brookings tax retention scheme. Seen more broadly, the growth of world trade over recent decades owes much to liberalization measures such as the expansion of customs unions, the extension of most-favoured-nations (MFN) treatment, and similar arrangements. Without in any way diminishing the benefits of such arrangements, these must remain neutral for purposes of the trade tax, on the pinciple that universality requires the taxation of all trade that clears customs borders, including, for instance, those between the members of the European Community and the European Free Association, and between the Federal Republic of Germany and the German Democratic Republic. 11/ In the Eastern trading area, as well as in certain other jurisdictions where state trading prevails, equally tax-neutral provisions must be made to apply in the valuation of goods, including those invoiced in clearing currencies, or exchanged in barter transactions which possibly involve non-market pricing. In large part, such technicalities will likewise fall within the purview of the newly-created agency, but provisions designed to address some of the problems mentioned above may well have to be incorporated in the treaty itself.

30. In considering the economic impact of any general trade tax, its advantages - meaning its broad base and the low tax rates at which it still yields large revenues carry with them certain disadvantages. Thus, the question of whether and how much of the tax would ultimately be borne by the importer/buyer, or how much of it that importer can shift back to the exporter/seller, cannot be answered validly for such a large variety of goods without detailed demand and supply data that would, together with historic prices, permit the establishment of demand/supply and price elasticities. And even with such data in hand, attempts to express these elasticities numerically would not provide any meaningful conclusions at rates of tax running as low as 0.1 per cent to 0.4 per cent. The impact on any individual (buying) country depends similarly, on the elasticities attaching to its particular mix of imports. Countries with a high proportion of low-elasticity essentials, like food and fuels, in its total imports will, by definition, have to absorb larger parts - if not all - of the tax, at least in the short run, because of their dependence on imports. Where possible, import substitution through local production might play a role in the longer run, but seems extremely unlikely to be triggered by tax levels of the order of magnitude proposed here. The same de minimis judgement applies to the question of the impact of the tax on cost and price levels, i.e. its inflationary impact, particularly in countries unable to shift back the tax burden. Even after allowing for transmission of this cost in subsequent processing stages, for raw materials, and commercial (resale) levels, including the attendant profits, it is difficult to see a coefficient as high as

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11/ However, exemptions could be granted for trade between England and Scotland, Belgium and Luxembourg, and the United States and Puerto Rico, which does not formally clear customs.

1.5 applying to the basic import tax, i.e. an effective impact of 0.15 per cent fora 0.1 per cent tax rate, after including all the secondary price effects resultant. This would mean a one-time inflationary impact of 0.075 per cent in a country with an import/GNP ratio as high as 50 per cent but would equal only 0.0125 per cent worldwide. Given the commanding need for additional sources of development funds with a high rate of predictability, this cost cannot be considered as excessive.

31. The revenue-raising potential of an international trade tax is, thus high. Moreover, once adopted, the tax would afford a considerable degree of automaticity, in that a country would have to withdraw from the treaty for its contribution to cease. Based on the assumption that no more than 10 per cent of the additional revenues created by the tax would be devoted to desertification control measures, tabulation shows a flow of funds that would produce $200 million (at 0.1 per cent) on last year's trade, rising by 50 per cent to $300 million by 1987 (see table 12 following para. 189 below). This reflects an average annual gain of only 6 per cent in nominal terms - an estimate tending toward the lower end of current expectations. These sums could be channelled directly into anti-desertification projects. Alternatively, some modest fraction could be used to leverage the borrowing capacity of the institution organized to finance such projects, as outlined in chapter IV.

IMF gold sales and Trust Fund reflows

32. It is unnecessary for present purposes to recapitulate the circumstances under which the IMF came to divest itself of 50 million ounces of gold or a third of its original total gold stock of 150 million ounces, except to note that one half of this fraction, viz. 25 million ounces, was auctioned publicly over a four-year period beginning in 1976; the other half was restituted to the original contributors. These gold auctions produced total profits in excess of book value of $4.64 billion, of which $1.29 billion was distributed directly to the 104 developing country members of IMF with nearly 28 per cent of total quotas. The remaining gold sale profits of $3.35 billion, corresponding with investment income etc. to SDR 2.9 billion 12/ was transferred to a Trust Fund, established in May 1976 for the benefit of certain developing countries (see following paragraph) and which began operations in 1978.

33. Trust Fund loans have a maturity of 10 years and a grace period of 5 years so that, while repayments can commence on some loans in 1983, the first repayments on the last installment of Trust Fund loans fall due only in 1986. It is necessary therefore to examine what part of the repayment of Trust Fund loans could be made available for anti-desertification purposes in the light of two decisions made by the Fund's Executive Board pre-empting the use of these reflows for certain other purposes. 13/ In the first place, SDR 750 million of Trust Fund reflows have been earmarked for a Subsidy Account intended to reduce the cost of using the IMF's Supplementary Financing Facility (the Witteveen facility) for its low-income members. In the second place, another SDR 1.5 billion has been set aside to provide balance-of-payments assistance on concessional terms on a uniform basis to low income developing members in need of such assistance under arrangements broadly similar to those of the Trust Fund. The Trust Fund was originally established to provide additional balance-of-payments assistance on concessional terms to eligible developing countries that qualified for assistance by carrying out programmes of balance-of-payments adjustment. Unless, therefore, countries with desertification problems have gone through the same rigorous discipline necessary to benefit from the Supplementary Financing Facility or have accepted the considerably milder degree of conditionality required to benefit from Trust Fund loans, they cannot expect to benefit from these two sources of Trust Fund reflows totalling SDR 2.25 billion. In any event no part of this amount can be available in terms of existing Fund Board decisions for interest subsidy purposes against which a miltiple amount of Third Window type loans can be raised under guarantee.

34. However, a residual amount due under Trust Fund repayment procedures does remain as yet unpre-empted by any prior Fund Board decision. The rough SDR equivalent of the original £3.35 billion transferred to the Trust Fund - about SDR 2.9 billion - had been lent out when the Trust Fund was wound up,

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12/ At historic exchange rate; current value is approximately $1.15 per SDR (24 July 1981).

13/ See IMF Press Release 1980/81 of 19 December 1980 from which the following account is drawn.

following the disbursement of two final loans on 30 April 1981. This still leaves a difference, as yet unallocated by IMF, between the SDR 2.9 billion lent under the Trust Fund and the SDR 2.25 billion of reflows already earmarked, as described by the Fund Board, for essentially IMF purposes. This amounts to SDR 650 million in all. However, commencing no later than 1986, when payments begin on the last installment of Trust Fund loans, this amount with additional interest income accruing to it over the period 1986-1989 could amount in round figures to SDR 1 billion, which will be available to provide assistance to low-income developing members in accordance with the second section of sub-section 12.f (ii) of the Fund's Articles of Agreement under a decision of the Fund to be taken not later than 30 June 1988. This sub-section of the IMF Articles specifies that "balance-of-payments assistance may be made available on special terms to developing members in difficult circumstances and for this purpose the Fund shall take into account the level of per capita income". The sub-section also specifies that action under it should be "consistent with the purposes of the Fund". These purposes are, of course, defined in article 1 of the Fund and, in the light of evolving thinking concerning the nature of the balance-of-payments adjustment process in developing countries, there seems every reason to suppose that the SDR 1 billion not so far earmarked by the Fund Board can be made available, inter alia, for anti-desertification purposes. Given the time pattern of repayment of Trust Fund loans, SDR 1 billion can be expected to accrue in four annual installments of SDR 250 million each during each of the years 1986 to 1989.

35. As will be argued in the next sub-section, the implementation of a link between SDRs and development finance, could, on conservative assumptions about the scale of annual SDR allocation and the proportion of SDRs that developed countries would agree to forego, be expected to yield over the fourth basic period 1982-1986 some SDR 800 million. On the assumption that 10 per cent of this amount can be earmarked for anti-desertification purposes, this yields annual interest subsidy amounts of SDR 80 million. On the assumption that SDR allocations will continue at least on the same scale during the subsequent basic period covering the years 1987-1991, a total of SDR 1.05 billion would become available for over-all development purposes annually from 1986, when Trust Fund reflows are also added in. On the previous assumption that no more than 10 per cent of this amount could reasonable be earmarked for anti-desertification purposes for each of the years 1986 to 1989 SDR 105 million is made available, as compared with SDR 80 million annually in 1982-1985, which can be used for purposes of subsidizing concessionary loans to be raised under guarantee (see table 3 below).

36. Action within the provision of article V, section 12, of the Fund's Articles of Agreement requires a special 85 per cent majority of the Fund Board. What makes it probable that the relevant majorities can be mustered stems from evolving trends in both the policies of IMF and the World Bank. While IMF has been steadily extending the maturities of its lending either through an extension of the maturity of the Extended Fund Facility to 10 years or through the device of successive stand-by agreements broadly agreed to in advance, the World Bank has recently introduced its structural adjustment facility also for extending programme loans to countries. Both sorts of evolution reflect the recognition that the

conventional three to five year time period previously thought relevant for balance-of-payments adjustment, and the concentration, in the Bank's case, on project as compared to programme loans, have the effect not of promoting but of frustrating the adjustment process and of imposing avoidable social and economic costs on the borrowing country. Central to both sorts of evolution is the recognition that, in the case of a developing country, exchange rate charges per se, in the absence of more purposive steps of a planning character involving both import substitution and export promotion activities both of which take time for the necessary capacities to be installed, are not in themselves likely to suffice. These considerations apply a fortiori to the low income country saddled not only with the task of development but with the task of combating desertification as well.

37. Increasing recognition of the necessity of bridging the gap between adjustment and development financing is now in process. 14/ It is this shift of opinion above all which makes it reasonable to suppose that IMF can allocate some portion of its resources to an anti-desertification institution whose purposes relate much more closely to longer term development. There would appear to be nothing in the purposes listed in article 1 of the IMF Articles of Agreement that militates against such a course of action as indeed against the establishment of a link between SDRs and development finance.

Future sales programme

38. The group reiterated the necessity to promote the common objective of making the SDR the preferred international reserve medium by phasing out gold and national reserve currencies and the potential it may hold providing assistance to developing countries. Likewise, it felt that an effort should be made to adjust the distribution of international liquidity in favour of developing countries in the light of the massive potential transfer to the major gold-holding countries of some 400 billion dollars as a result of the effective revaluation of their reserve asset gold holdings.

14/ While the Extended Fund Facility took the first step in reducing the distance between the short-term balance-of-payments approach of the Fund and the long-term approach of the Bank, there remains a substantial gap between the two approaches involving the medium-term. "It has become clear in the course of the 70s that for developing countries the process of adaptation to external shocks to the balance-of-payments of the magnitude experienced during this period calls for efforts of adjustment that go well beyond the time frame and scope envisaged under the Extended Fund Facility. No doubt as the period of adjustment is lengthened and the scope of measures required expand, it becomes difficult to distinguish between the adjustment process and the development process. The two activities reach a point at which they may be said to merge. The problems of adjustment and development are therefore a continuum and the stratification of institutions should not prevent related problems from being dealt with in a related manner." (See United Nations Balance of Payments Adjustment (1979) Report to the Group of 24, pp. 12 to 13.)

39. Towards this end, four-fifths of the remaining 103 million ounces of gold held by IMF would be auctioned or otherwise disposed of over a 10 to 15 year period, and that portion of the profits not directly distributed to developing countries earmarked for new international assistance programmes for developing countries, except as noted in the following paragraph.

40. Out of these proceeds, one-tenth could be earmarked for financing desertification control programmes. Subject to the requisite approval by a qualified voting majority, this could probably be done within the present Articles of Agreement of the IMF. A total amount on the order of $3 billion would thus be released over this 10 to 15 year period out of which $2.2 billion would represent the transfer of the other members of the international community to the anti-desertification programmes in the developing countries. Developing countries in a financial position to do so would be expected to announce that they would not avail themselves of credit facilities or funds made available through such transfers.

41. Alternatively, and if necessary, subject to appropriate amendment to the Articles of Agreement of the IMF, the above-mentioned portion of the profits from these new IMF gold sales could be kept by the IMF in a segregated trust fund and invested so as to permit its use as collateral for guaranteed loans which the proposed corporation would raise on the international financial markets, whose terms and conditions would then be subsidized either from the other sources envisaged in this report or from the income from the trust fund.

42. To assure the maximum returns from any future sales programme, such sales should again be spread over time in line with the market's absorptive capacity. Sales would have to be predicated on projections of such capacity at given price levels; it will be recalled that the amount of monthly Fund sales had to be reduced from 525,000 ounces to 470,000 ounces, following the United States series of auction sales.

43. The wide fluctuations of the gold price would suggest that future sales strategies should focus on methods for capitalizing on such price volatility by (a) pre-determining price levels that would trigger new auction sales; and (b) authorizing alternative means of disposing of gold, including sales on the open market and perhaps the writing of call options whenever market conditions would make such alternatives more attractive. (The latter represents virtually the only way of extracting a return from the Fund's gold stocks regardless of whether it actually disposes of any part of such stocks).

44. Yet another alternative would be to follow the Brandt Commission recommendation to use the IMF gold as collateral for borrowing. This would not require that any part of the IMF gold be sold, so that it can remain within the IMF to serve this purpose. Still, the use of IMF gold as collateral has the complication of requiring possible time consuming amendments to IMF articles whereas, as mentioned, the gold sales procedure can probably be accommodated within the present articles, thus requiring a qualified majority.

C. Link between SDRs and development finance

45. As is well known, SDRs are currently allocated in proportion to the quotas of Fund members so that roughly speaking 26 per cent of any such allocation now accrue to the non-oil developing countries; 10 per cent to oil-exporting developing countries and the balance to the developed countries. The proposal to link SDRs with development finance has a long-standing history, going back to the Stamp Plan of the 1950s, under which all SDR-type deliberately created international liquidity - there being no SDRs as such as that stage - would accrue to developing countries. Since then, the current of established opinion has veered in favour of having as emphasized in 1969 by the Pearson Commission "the developed countries relinquish a part of their quotas of the new reserve medium (SDRs) in favour of the less developed countries", on the grounds that "there are strong reasons of simplicity and equity" for so doing "when the scale of the issue of SDRs has been decided on appropriate grounds", 15/ namely those relating to world liquidity and not the needs of development finance. The Pearson Commission proposal related to a form of link where SDRs were channelled to the IDA and relent to developing countries. Since that time however various alternative mechanisms for implementing the link were developed especially during the discussions of the Group of 20.

46. These may be illustrated as comprising the following schemes:

(a) The allocation of SDRs directly to development financing institutions (DFIs);

(b) The allocation of SDRs directly to developing countries entailing a larger share in SDR allocations than their share in fund quotas;

(c) An increase in the share of developing countries in Fund Quotas and hence in SDR allocations;

(d) An "indirect link" under which SDR allocations would remain proportionate to Fund Quotas, but would be accomplished by an agreement among donor countries to transfer a pre-determined portion of their SDR allocations or the equivalent in currencies, to DFIs;

(e) A link between grants to development finance institutions or developing countries directly and the establishment of a "Reserve Substitution Facility" (a precursor of the more recent substitution account proposal).

47. Since that time more recent discussion within the IMF has brought to surface two new possibilities labelled F and G, which are briefly described as follows:

Scheme F: A link to Fund-supported programmes having the purpose of reinforcing the incentive for adjustment provided by the availability of conditional resources through the Fund. One variant of this scheme would provide additional resources in the form of SDRs to developing countries that would qualify for IMF stand-bys under the normal conditionality rules.

15/ Lester B. Pearson et al., Partners in Development (1969), p. 225.

Scheme G: An interest subsidy link under which SDRs would be distributed for the purposes of subsidizing payments of charges to the Fund by developing countries with outstanding purchases from the Fund. Under this scheme, SDRs could play an identical role to Trust Fund reflows in subsidizing interest rates payable by the borrower. With SDR interest rates now at market levels, an illustrative calculation made by the Fund suggests that as much as 1 billion SDRs would be required to reduce interest payments to low income countries by 3 percentage points under the Supplementary Financing Facility. As explained below, such an SDR allocation for interest subsidy purposes if transferred as an indirect link by the original recipient together with ancillary arrangements for shifting charges on to the facility, makes the transfer tantamount to a line of interest-bearing credit with which to meet interest cost. This cost could be avoided if again, as explained below, the amounts take the form of counterpart national currencies rather than SDRs as such.

48. In the course of the last year, the question of the link has been revived in Fund Board discussion both as part of the IMF response to the Programme of Action of the Group of 14 tabled at the 1979 annual meeting in Belgrade and as part of the consideration of the Brandt Commission Report, which came out in favour of the link. The discussion within the IMF has also been influenced by changing economic circumstances which perhaps give more grounds for hope concerning the establishment of a link now than at any previous time in the history of the discussion of this question. The principal argument favouring the establishment of a link now derives from the expected persistence of developing country deficits as a counterpart of current account surpluses elsewhere in the system, the difficulties attending the smooth recycling of oil-producing countries' surpluses by private banks at the present time, and the difficulty of looking to increased official development assistance out of government budgets. If therefore extrabudgetary sources of finance can be found to meet developing country deficits at the present time, this can serve to offset the recessionary influence deriving from sluggish aid flows and any weakening of the recycling processes by private banks. Given the constraints affecting other available sources of finance, the importance of an SDR link becomes obvious in this context.

49. Although the SDR has now lost its previous element of concessionality by the decision to charge interest at market rates, an allocation still has the effect of extending a perpetual line of credit at market rates to developing countries which are net users of SDRs but will by the same token confer market rates of return on countries who increase their net holdings of SDRs. This results from the present Articles of Agreement of the IMF. A participant receiving an allocation of SDRs assumes inter alia an obligation to pay charges on that allocation equivalent today to market rates of interest. As long as it holds the SDRs allocated to it, it will also receive interest on these holdings. Since the rates at which charges and interest accrue are equal, the allocation of SDRs per se imposes no net cost upon participants. It is only when a participant reduces its holdings of SDRs below its net cumulative allocation for whatever reason, whether by transfering them to a development institution or by settling its own payments deficits, that it incurs a net interest charge; it loses the right to receive interest on the SDRs it uses while retaining the financial

obligation to pay the charges attached to their allocation. It is for this reason that, as described above, the SDR allocation is tantamount to the opening of a line of credit which does not involve a net interest cost until the credit is actually used. Conversely, as mentioned, a participant adding to its net cumulative allocation by "accepting" SDRs obtains a net return that is now equivalent to a market rate of interest.

50. The effect of a link, whichever form is adopted, is to increase the perpetual line of credit being extended to developing countries who benefit, given any particular global total of SDR allocations, as compared with the situation where SDRs are allocated in the normal way in proportion to Fund quotas. This increase of course represents the SDR amounts foregone by the developed countries, in implementing the link. Such an enhanced line of credit will of course facilitate the access of developing countries to normal capital markets and therefore enhance their capacity to finance balance-of-payments deficits. At the same time, the market rates of interest attaching to SDRs will permit confidence to be maintained in the asset so that the developed countries who will be foregoing some part of their normal SDR allocation as a result of the link will continue to have an inducement to earn and "accept" SDRs.

51. The principal question that arises in the current context concerns which mode of implementing the link is most suitable from the standpoint of providing an interest subsidy element in an anti-desertification programme. The principal consideration concerns the form of link which can be implemented most speedily without an amendment of IMF articles. This consideration points unambiguously in favour of the type d link described in paragraph 46 above - above the so-called "indirect link".

52. A second consideration relates to whether such an indirect link is to be implemented by transferring SDR allocations as such to an anti-desertification institution or the equivalent in currencies. As already explained, the effect of an "indirect link" is that countries foregoing SDRs to an anti-desertification institution will continue to bear the financial obligation to pay charges attaching to the original SDR allocation. This obligation can, it is true, be passed on to the anti-desertification institution by agreement, but this can only have the effect of diminishing the resources available to such an institution. It would therefore seem preferable for the contributing countries to take on the continuing burden of paying charges on those SDRs which they will have contributed to an institution through a link mechanism. The operation thus becomes similar to the contributing country having borrowed money which is then transferred without interest or charges to the anti-desertification institution. If that institution chooses to hold the contributed SDR, it earns a net return. If it chooses to use the SDRs, it can do so without incurring an interest cost.

53. It is the expectation that an anti-desertification institution receiving SDRs via a link mechanism will be applying them for interest subsidy purposes to generate some multiple amount of commercial borrowings under a set of guarantees so that it will, in effect, be using its SDRs. However, in so far as it has some flexibility in using them, the form of indirect link where SDRs as such are contributed carries with it the prospect of an anti-desertification institution earning a net return.

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54. Rather than resort to this form of transfer of SDR allocations some developed countries may resort to the transfer of an equivalent amount in their local currency. Their choice would be guided by a comparision of the cost of each one of the two types of allocation.

55. Assuming that the IMF obtains support by October 1981 for the proposal of an allocation for the fourth basic period 1982-1986, and while an annual allocation of 10 billion SDR as proposed by the IMF staff and endorsed by the Group of 24 appears most plausible, the experts chose to limit themselves to a more conservative estimate of 5 billion SDR per annum. If 25 per cent of SDR allocations are thus transferred through the indirect link 16/ by countries having a per capita income of at least $3,000 and not in a state of "structural imbalance" as defined by the Fund, the same amounts involved would reach 800 million SDR.

56. Supposing 10 per cent of this sum was released for desertification control, 80 million SDRs would thus be made available for interest subsidies for such programmes.

16/ The most recent report to the Group of 24 of the UNDP/UNCTAD Project (March 1981) on measures to strengthen the SDR proposed that during the next basic period the annual allocations of developing countries other than those in structural surplus should be increased to 150 per cent of their quota share and the allocations to industrial countries decreased by an equivalent amount and that this should be brought about by a voluntary action on the part of industrial countries. This is tantamount to an indirect link somewhat differently formulated than we have above with virtually the same effect in terms of link transfer amounts.

TABLE 3

(in million SDRs)

	1982	1983	1984	1985	1986	1987	1988	1989
SDR link Proceeds	800	800	800	800	800	800	800	800
Trust Fund reflows	-	-	-	-	250	250	250	250
Total Resources available through IMF mechanisms	800	800	800	800	1 050	1 050	1 050	1 050
Amount available for anti-desertification purposes	80	80	80	80	105	105	105	105

TABLE 4

Market rate of interest on borrowings	Leverage factors a/ For disbursement in year	For disbursement spread equally through 7 years
15 per cent	1.5	2.5
12 per cent	1.8	2.8
10 per cent	2.4	3.2
8 per cent	2.8	4.0

a/ These are factors applicable to lending on Third Window Terms with 4 per cent interest and 7 years grace period, 25 years maturity. The leverage factors represent the multiples of lending permitted by each dollar of interest subsidy for loans raised at the specified market rates and lent on specified disbursement schedules provided the borrowings are supported by equivalent guarantees collateral.

D. The Common Fund for Commodities

1. Background

57. The Common Fund is composed of two separate accounts. The First Account would help to finance the buffer stocks of (existing and new) International Commodity Agreements (ICAs). Its pooling of the resources flowing to it in consequence of the association of various ICAs would help to achieve economies in financing requirements since the financial needs of different commodities would not generally be synchronous, so that proceeds from sales of commodities with rising prices could often finance purchase of commodities with falling prices.

2. First Account

58. The ICAs associating with the Common Fund would be required to make cash deposits equal to one third of the Maximum Financial Requirements (MFR) anticipated for acquisition of buffer stocks. The member Governments of the ICAs would be required to make guarantees to back the maximum expected borrowing equal to the other two thirds of the MFR. Together these deposits and borrowings would add significantly to the resources of which the Fund would dispose. Current estimates suggest that, if suitable agreements were reached on the major commodities under discussion (rubber, tin, wood, sugar, coffee, tea, cotton, copper, jute and hard fibre), the total resources of the First Account would be between $6 and $8 billion.

59. The First Account is, however, not intended as a source of international revenue, nor likely to be authorized to act as such. Its capital stock is not an annual flow but a fixed resource, and it is not expected to be replenished (nor need to be) on a regular basis.

3. Second Account

60. Under the agreement constituting the Common Fund, 17/ the Second Window programmes include research, marketing, development of commodity processing, and productivity improvements. 18/ This Second Account is to have resources of $350 million, consisting of $70 million allocated from the capital of the Fund and $280

17/ See document ID/IPC/CF/CONF/24.

18/ Paragraph 3 (a) of article 18 ("the second account") of the Agreement states: "The measures shall be commodity development measures, aimed at improving the structural conditions in markets and at enhancing the long-term competitiveness and prospects of particular commodities. Such measures shall include research and development, productivity improvements, marketing and measures designed to assist, as a rule by means of joint financing or through technical assistance, vertical diversification, whether undertaken alone, as in the case of perishable commodities and other commodities whose problems cannot be adequately solved by stocking, or in addition to and in support of stocking activities".

million in separate voluntary contributions. The Second Account is subject to replenishment. It would appear, then, that the annual flows of concessional lending through the Second Account would be approximately $100 million, in the first three years; subsequent flows would depend upon the volume and frequency of replenishment as decided by the Governing Council of the Fund.

61. For certain commodities, programmes of development measures may include environmental aspects, subject to the termination by producers and consumers concerned within the International Commodity Body (ICB) designated for such specific commodity by the Common Fund's Executive Board according to paragraph 9 of article 7 of the Agreement. To qualify for such designation, an ICB must meet the following eligibility criteria:

(a) An ICB shall be establised on an intergovernmental basis, with membership open to all States Members of the United Nations or of any of its specialized agencies or of the International Atomic Energy Agency;

(b) It shall be concerned on a continuing basis with the trade, production and consumption aspects of the commodity in question;

(c) Its membership shall comprise producers and consumers, which shall represent an adequate share of exports and of imports of the commodity concerned;

(d) It shall have an effective decision-making process that reflects the interests of its participants;

(e) It shall be in a position to adopt a suitable method for ensuring the proper discharge of any technical or other responsibilities arising from its association with the activities of the Second Account.

62. Sponsorship by the relevant ICB is a basic requisite for any decision to include desertification-control measures among those eligible for Second Account support for any given commodity. ICBs may eventually be recognized for some 18 or more commodities, each produced by an array of countries that may or may not be affected by desertification. Many - though not all - of these producers may be developing countries (and many of the consumers of these commodities are developed countries). By way of illustration, tables 5 to 10 below show the world's top ten producers of wheat, coffee and cotton, with output data for 1977 to 1979, and estimates for 1980.

4. Current status

63. The Agreement on the Common Fund will enter into force when it has been ratified by 90 countries accounting for two thirds of total capital subscriptions, and 50 per cent of the targeted voluntary contributions to the Second Account. By 20 July 1981, 41 countries had signed the Agreement (although only 8 had ratified it). The signatories account for little more than 61 per cent of the direct contributed capital of the Fund. Pledges to the Second Account were $225 million, out of a target of $280 million. It is noteworthy that OPEC countries accounted

for one fifth of contributions to the Second Account 19/, and non-OPEC developing countries accounted for 15 per cent.

64. The negotiating conference set a period of 18 months from October 1980 as the period allowed for ratification, with provisions for two extensions, if required. The progress just described suggests that the CF could be established on schedule. However, there could be delays in view of the situation of the ICAs. At least one major industrial country intends to withhold ratification until a sufficient number of "suitable" ICAs are available to associate themselves with the Common Fund. At the present time, it appears that the International Cocoa Agreement, the International Rubber Agreement and the International Tin Agreement, meet the criteria for consistency with the Common Fund, in that they rely primarily on buffer stocks. The international agreement on coffee relies primarily on export quotas instead of buffer stocks and would not be considered eligible for association in the Common Fund in its present form. The Sugar Agreement is based on internationally co-ordinated national stocks which are also eligible for financing by the Common Fund. However, the agreement does not provide for international financing of the acquisition costs, which would be essential if it is to associate with the Common Fund. For copper, there appears little possibility at the present time that an ICA will be established although considerable discussion has taken place of an arrangement based on an international buffer stock.

5. Financial implications

65. Even over the medium - and longer term, when it seems likely that the CF will be ratified and operational, the Common Fund is unlikely to be a major source of incremental revenue for general development. For its first three years, the annual concessional flows of the Second Account will amount to only approximately $100 million, or 0.3 per cent of global annual concessional assistance, although this amount could grow, depending on future replenishments of the Second Account. Even this extremely modest flow may not necessarily be "additional" to other aid flows, in that donor countries may merely rearrange the composition of their normal foreign assistance programmes to make funds available for the Common Fund without increasing total aid.

66. The Common Fund for Commodities, once properly constituted, can make a significant contribution to economic growth and stability for both North and South through commodity price stabilization. Furthermore, it is unique among international financial institutions as a creation primarily of the developing countries (rather than a product of the Bretton Woods era), who will have a much larger role in voting and control than in most other international financial institutions. But this does not make the Common Fund a major source for additional resources for international development in the more narrowly defined sense of extra tax revenue or source of concessions funds for international purposes, such as desertification.

19/ The OPEC Fund has agreed to pay for the subscriptions of certain low-income developing countries.

TABLE 5

Top ten producers of wheat (1979)

(in thousands of metric tonnes)

PRODUCER	1977	1978	1979
Union of Soviet Socialist Republics a/	92 165	120 824	90 100
China a/	45 001 b/	52 002 b/	60 003 b/
United States of America a/	55 420	48 922	58 289
India a/	29 010	31 749	34 982
France	17 350	20 970	19 393
Canada	19 862	21 146	17 746
Turkey a/	16 720	16 769	17 631
Australia a/	9 370	18 250	16 100
Pakistan a/	9 144	8 367	9 944
Italy	6 347	9 332	9 140

TABLE 6

Top ten producers of coffee (1979)

(in thousands of metric tonnes)

PRODUCER	1977	1978	1979
Brazil a/	975	1 226	1 295
Columbia a/	571 c/	669 c/	762 c/
Ivory Coast	291	196	275 c/
Indonesia	198	223	267
Mexico a/	182	215	228
Ethiopia a/	191 c/	191 c/	194 c/
El Salvador	143	132	180 c/
Guatemala	148	149	169 c/
Uganda a/	150 c/	121 c/	120
India a/	102	125	105

TABLE 7

Top ten producers of cotton (1979)

(in thousands of metric tonnes)

PRODUCER	1977	1978	1979
United States of America a/	3 133	2 364	3 163
Union of Soviet Socialist Republics a/	2 697	2 731	2 821 c/
China a/	2 049 b/	2 167 b/	2 207 b/
India a/	1 208	1 279	1 220 b/
Pakistan a/	553	475	650
Brazil a/	555	477	575
Turkey a/	575	475	505 c/
Egypt a/	409	438	482
Mexico a/	418	340	336
Guatemala	137	147	146 c/

Source: FAO Production Yearbook.

a/ Countries affected or threatened by desertification.

b/ FAO estimate.

c/ Unofficial figure.

TABLE 8

Wheat production, estimated 1980

(in millions of metric tonnes)

Major Producers	
Union of Soviet Socialist Republics a/	98
United States of America a/ b/	65
China a/	57
European Community b/	51
India a/	32
Canada b/	19
Turkey a/	17
Pakistan a/	11
Australia a/ b/	11
Argentina a/ b/	8

a/ Countries affected or threatened by desertification.

b/ 5 major exporters.

Source: International Wheat Council, London.

TABLE 9

Coffee production

(Exportable production estimated for crop year October 1980-September 1981)

(in thousands of 60 kg bags)

Major producers/exporters	
Brazil a/	16 350
Colombia a/	10 575
Indonesia	3 918
Ivory Coast	3 117
Mexico a/	2 600
El Salvador	2 350
Guatemala	2 223
Uganda a/	2 134
Ethiopia a/	1 700
United Republic of Cameroon a/	1 662
Costa Rica	1 524
Ecuador a/	1 496
India a/	1 333
Kenya a/	1 297
Honduras	1 280
Zaire	1 205
Peru a/	1 100
Madagascar a/	1 062

a/ Countries affected or threatened by desertification.

Source: International Coffee Organization, London.

TABLE 10

Cotton production, estimated 1 August 1980-31 July 1981

(in thousands of metric tonnes)

Major producers

United Soviet Socialist Republics a/	3 079
China a/	2 624
United States of America a/	2 428
India a/	1 336
Pakistan a/	672
Brazil a/	568
Egypt a/	528
Turkey a/	484
Mexico a/	347
Guatemala	136
Argentina a/	130
Syrian Arab Republic a/	119
Greece	116
Colombia a/	112
Peru a/	103
Sudan a/	101

a/ Countries affected or threatened by desertification.

Source: International Cotton Advisory Committee.

E. International revenues for sea-bed mining

1. Background

67. The seas have long been considered one of the primary "international commons". They have thus been identified as one of the most likely potential resources to be used for the benefit of the international community. Long before the Brandt Commission's reference to such use, 20/ the Declaration on Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction (General Assembly resolution 2749 (XXV) of 17 December 1970) stated that the sea-bed and its resources formed part of "the common heritage of mankind" and laid a foundation for the subsequent negotiations in the Third United Nations Law of the Sea Conference toward the establishment of an intenational legal regime dealing with the uses of the sea. This regime would include, inter alia, the rights of passage for civil and military shipping, and a vast range of definitions of other legal and economic aspects and issues, including safeguarding the interest of the developing countries. Secton 4 of part XI of the draft Convention on the Law of the Sea ("the Convention") currently in discussion at the conference addresses the broad questions of activities in the area, including the development of both living and non-living resources. The International Sea-Bed Authority ("the Authority"), which is to be composed of all United Nations Member States would govern operations relating to sea-bed mining and would be the sole body authorized to levy taxes, fees, royalties, or other types of charges on such operations.

68. The draft convention would establish an exclusive economic zone within 200 nautical miles of nation's coastline (article 57). In addition, the draft Convention would grant nations exclusive economic rights over the continential shelf (the "submerged prolongation of the land mass of the coastal State") (article 76 and 77). The draft Convention would declare the sea-bed beyond national jurisdiction to be the common heritage of mankind and places jurisdiction over the sea-bed in an International Sea-Bed Authority (articles 136, 137). The Authority, acting through its various organs would be required to approve all sea-bed mining projects, including those of private or state-owned commercial operators or of consortia composed of two or more of these, or those in which it choose to engage itself through its operating entity (the "Enterprise") acting by itself or as a joint venture partner. Accordingly, the only channel for tapping the large potential that such activities may generate in the future would lead through the Authority. There is no present alternative legal basis for levying either specific national or international taxes on such activity, regardless of its prupose; nor do the provisions of the draft Convention lend substance to any suggestion of there being a viable economic rationale for any such alternative method of taxing the economic rents accruing to any or all of the different parties that may, in due course, decide to engage in such activity, regardless of whether such parties are private or public entities operating outside the Authority, or the Authority's own operating arm, referred to hereinafter as "the Enterprise".

20/ North-South: A Programme for Survival, p. 245.

69. The 1958 Convention on the Continental Shelf 21/ had already granted national jurisdicton in coastal waters up to 200 metres in depth, and in deeper waters "adjacent to the coast". The present draft Convention, i.e. the informal text identified as the negotiating document in its Preamble, moved toward the establishment of exclusive national zones up to 200 nautical miles offshore and, in certain cases, beyond. Actually, the draft Convention would provide for certain payments in cases of exploitation of non-living resources where the continental shelf extends beyond the 200 mile limit (see para. 73 below). One main significance of this consensus toward the 200-mile limit in the Third United Nations Law of the Sea Conference is that it sharply reduces the potential for internationalizing some or even all of the oil and gas reserves lying beyond. The North Atlantic, for instance, includes the relatively shallow Grand Banks, which are widely believed to hold such potential, even though its actual exploitation still faces formidable technical obstacles in an area hundreds of miles from dry land and exposed to the risks of weather and iceberg movement.

70. With petroleum reserves thus essentially ruled out as a source of international revenue, the mining of manganese nodules from the deep sea-bed beyond national jurisdiction remains the only presently evident potential source for such revenue. These potato-sized nodules, which are strewn on the floor of the deep sea, average around 30 per cent manganese by weight; but their economic value derives from nickel, followed by copper, manganese, and cobalt, and possibly molybdenum and vanadium contained in them. Several mining and metallurgical technologies have been developed, proven out in the laboratory and, to a degree, on experimental and/or test sites. They result in the production of either three metals (nickel, copper and cobalt) or four (including manganese) or five (including molybdenum) as joint products in relatively fixed proportions. But no full-fledged pilot plant has ever operated for the requisite period of time, which would be the prime pre-condition for scaling up to a full-sized operation. In fact, while individual operators have probed further into the technical problem, official authorities raised new demands for costly prototype demonstration units. Together with subsequent changes in metals prices and production costs, these developments may go some way toward explaining why such operators seem to have downgraded the commercial priority accorded to sea-bed as against land-based mining projects since the time when earlier projections had raised high hopes for their revenue potential. This downgrading has, inter alia, resulted in a postponement of the most likely start-up schedule, from an earlier expectation of a first venture period between 1982 and 1985 to one falling more toward the early part of the following decade, with the current outlook pointing toward 1992. Consequently, another element of uncertainty has been added to the hazards of estimating tonnage production volume, prices, and costs of deep sea-bed mining.

71. The establishment of an acceptable legal regime, which is even more fundamental than the purely economic factors, has slowed down what is hoped will be no more than a temporary delay in the negotiatons themselves. These negotiations

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21/ United Nations, Treaty Series, Vol. 499, p. 311.

had succeeded in bringing about a large degree of agreement on the draft Convention during the negotiating session held in late 1980, but have not been finalized.

72. The temporary delay in the negotiations does not invalidate any of the conclusions reached by these studies. In fact, if a draft Convention on the Law of the Sea is not successfully concluded, the problem of exploitation of sea-bed resources beyond national jursidiction should be considered separately. The possibility of obtaining revenues for international purposes from this part of the international commons should not be abandoned. However, in the light of this situation, the study limits itself to providing analytical support to these negotiations - rather than to generate any specific recommendations of new proposals.

73. In principle, the draft Convention recognizes three sources of potential revenue from mining beyond the 200-mile limit:

(a) Taxes ("shares of net proceeds") and royalties ("production charges") from exploitation of non-living sea-bed resources;

(b) Income from operations by the Enterprise;

(c) Payments and contributions in kind with respect to the exploitation of the continental shelf beyond 200 miles as referred to in paragraph 69, (developing States which are net importers of a mineral resource produced from their continental shelf are exempted from payments with respect to that mineral resource).

74. These three types of income accuring to the Authority would be distributed in accordance with article 173 of the draft Convention 22/ which directs that funds remaining after payment of the Authority's administrative expense may, inter alia, go to States that are parties to the Convention on the basis of equitable sharing criteria; the draft Convention defines these criteria in article 140 with respect to sources (a) and (b) above, while it deals with the type (c) income, which is of relatively smaller proportions, in article 82. The difference between these two articles arises from the fact that article 140 covers revenues arising from operations lying within the area - the Authority's main zone of authority, i.e., beyond national jurisdiction, whereas article 82 addresses operations from extensions of the continental shelf, which remain outside the area as defined by the draft Convention. This distinction is crucial when it comes to the distribution of any income accuring to the Authority itself from operations within that area. The relevant provision of article 140 specifies that such operations be

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22/ Under the same paragraph 2 of article 173, such net revenue would be permitted to fund certain of the capital needs of the Enterprise, and/or to compensate developing States (but not commercial enterprises) for losses of their market share from existing land-based mining operations, if the Convention's production limitations should prove insufficient.

carried out for the benefit of mankind as a whole. Under paragraph 2 of that article, the Authority, in effect acting as a principal, "shall provide for the equitable sharing of financial and other economic benefits deriving from activities in the area through any appropriate mechanism, on a non-discriminatory basis". The language of article 140 thus remains somewhat less specific than that contained in article 82, under which distribution of the payments or benefits from continental shelf operations through the Authority (i.e. as agent) would be on the basis of equitable sharing criteria, taking into the account the interests and needs of developing States, particularly the least developed and the land-locked amongst them" (para. 4). It is this particular provision of article 82 that presents a legal basis for advancing the interests of a group of countries that includes those most adversely affected by such environmental threats as those posed by the spread of desertification. Given the somewhat greater leeway for defining the criteria for distributing income from the Authority's own activities, which provide the bulk of prospective revenues under headings (a) and (b) above, the group of experts would urge the Authority, once constituted to adopt criteria essentially similar to those defined in article 82 in distributing income from these latter sources. This would seem to be the most effective way of raising additional revenue for the broad purposes contemplated by the terms of reference proposed by the group. As regards the predictability of such future revenues, the economic specifics of sea-bed mining, starting with the prospective impact of the production ceilings referred to above, are discussed below.

75. Past analyses of the economics of sea-bed mining have indicated that the supplies of cobalt and nickel could exert significant adverse effects on existing producers of some of the nodule metals. Earlier studies concluded that the contribution of manganese nodules to world production of copper and nickel would not be sufficient to affect prices to any significant extent, but that it would create sufficiently large additions to the production of cobalt that could substantially reduce its price. 23/ This is also corroborated by the findings of later studies carried out for the Committee on Natural Resources of the Economic and Social Council, "Mineral Resources: Trends and Salient Issues, with particular reference to molybdenum, cobalt and vanadium, including problems of Technology Transfer" (E/C.7/115, 6 April 1981). Section F of chapter II of that study, after describing the status of negotiations at the Third United Nations Conference on the Law of the Sea, presents an analysis of the effect of the production ceilings which, under the draft Convention formula, would be calculated from the trend line of nickel consumption. In its basic form, the draft Convention's formula would provide that the sea-bed production of nickel may not exceed (a) an amount equal to the entire increment in trend-line world consumption of nickel during the five-year period immediately preceding sea-bed production (which now seems likely to begin by about 1992), plus (b) an amount equal to 60 per cent of the trend-line increment in world consumption thereafter (article 151). The trend line underlying the data shown here, by way of illustration, projects historical data derived from consumption over the last 15 years to the years 1990 and 2000.

23/ Richard N. Cooper, "The Oceans as a Source of Revenue", in J. Baghwati, ed., The New International Economic Order: the North-South Debate (Cambridge, MIT Press, 1977), p. 112.

76. Shown in table II below are ranges of production ceilings for four metals based on a study entitled "Effects of the production limitation formula under certain specified assumptions" (A/CONF.62/L.66). The figures shown can do no more than to illustrate orders of magnitude of the maximum amounts allowable from sea-bed mining. They are predicated on such operations starting in 1988.

TABLE II

	1990		2000	
	Low a/	High b/	Low a/	High b/
Nickel	196 000 tons (21)	252 600 tons (20)	320 700 tons (28)	806 500 tons (39)
Copper	168 600 tons (1.0)	218 000 tons (1.4)	275 800 tons (1.2)	693 600 tons (2.9)
Cobalt	21 600 tons (58)	27 900 tons (74)	35 300 tons (89)	88 700 tons (169)
Manganese	1 176 000 tons (8)	1 521 600 tons (10)	1 924 200 tons (10)	4 839 000 tons (25)

Source: E/C.7/115, p. 22, para. 57.

a/ Low case assumes that world nickel demand increases at 2 per cent beyond 1979.

b/ High case assumes that world nickel demand increases at 5 per cent beyond 1979.

N.B. Figures in parentheses are percentages.

77. The figures in parentheses indicate the ratios of the production ceilings to the hypothetical world demand figures for the respective metals. In the case of nickel, the high case, these data indicate that sea-bed supply could reach about one fifth of world production in the third year of production, and nearly 40 per cent by the end of the century.

78. Clearly, the production limitations in the draft Convention reflect compromises between the interests of existing producers, as opposed to those engaging in sea-bed mining entities and, in a wider sense, the international community at large. As indicated, some existing producers feel that this present compromise does not reflect an adequate balance, and therefore they oppose that aspect of the draft Convention because it would not provide for any compensation

for the potential losses of independent operators (article 173 only protects States, as part of the distribution of the Authority's net income. However, earlier studies 24/ indicate that such losses could assume major dimensions relative to the prospective economic rents from sea-bed mining, thus effectively negating the draft Convention's revenue-raising objectives. It remains to be seen how this further, and major, source of uncertainty will be dealt with in the course of future negotiation.

79. Another central feature of the draft Convention is that it would give the Authority direct access to mining operations through the Enterprise, which could do so either by itself or through joint ventures with independent operators. Any independent operator - in practice, mainly consortia organized for the purpose - applying to the Authority for a mining license would be required to propose two mining sites, one of which the Enterprise could choose for itself. In that case, the Enterprise would be entitled to a certain proportion of the production ceiling. In addition to this parallel exploitation of sea-bed resources, the draft Convention would also require independent operators to sell their technology to the Enterprise at a fair market price. The Convention's attempt to find common ground between reliance on the private market, and the internationalization of production advocated by some developing States, have caused a degree of unease among independent operators. Obviously, without resolution of these issues, it is difficult to offer more than the most tentative of projections of the revenues flowing from the Authority's operations.

80. In addition to the profits earned by the Enterprise, international revenue would be obtained from income taxes and production charges from the actual mining operation, but not from the related transportation and processing activities. It is assumed that these would remain subject to national taxation, although the draft Convention does not address this point. To the sea-bed miner, the draft Convention would actually offer a choice between a so-called single system and a combined, or mixed system. The single system would suit collective economies which seldom resort to taxing incomes; instead, it would only call for a charge on production, ranging from 5 per cent in the first ten-year period of production to 12 per cent in the second period, which starts in the eleventh year of commercial production. These rates would yield revenues roughly in harmony with those obtained under the so-called mixed system, which involves levying a combination of production charges and actual taxes. That mixed system would impose:

(a) Up to the time of full recovery of investment (with interest), a 2 per cent flat charge on gross sales plus an incremental income tax on the profits from the mining sector of 35 per cent, 42.5 per cent, or 50 per cent, depending on the rate of return on investment achieved - up to 10 per cent, 10 per cent - 20 per cent, and above 20 per cent;

24/ E. Steinberg and J. Yager, with G. Brannon, New Means of Financing International Needs, p. 149; and D. Leipziger and J. Mudge, Seabed Mineral Resources: The Economic Interests of Developing Countries, p. 148.

(b) Thereafter, the flat charge doubles to 4 per cent on gross sales, plus profits taxes of 40 per cent, 50 per cent, or 70 per cent, again depending on the same scale of return on investment.

81. In addition to these international revenues accruing to the Authority, the typical integrated operator would be liable to national income taxation in the jurisdiction governing his related activities in transportation and processing. This raises the problem of transfer pricing, i.e., the price which the mining operation charges the downstream operations described, because that price would determine the ratio in which taxable incomes are allocated as between international and domestic authorities. This was another point of contention during the negotiations; it was finally resolved by reference to the United Nations Commission on Transnational Corporations and the Expert Group on Tax Treaties between developed and developing countries. These bodies are to establish criteria for fair transfer pricing by reference to free market or arm's length transactions in relevant markets.

82. The issue of national authorities granting relief, in the form of full tax credit or else allowability as a tax deduction, while not address in the draft Convention, can be answered analogously to the same problem in the proposed taxation of communications satellites (in the following section of this chapter). For the reasons stated there, no country allows tax credits against international levies, leaving deductibility as the only protection against what might turn out to be unacceptably high levels of over-all taxation for those entities engaging in sea-bed mining that are liable for domestic taxation of their downstream operations. Accordingly, industry pressure on national legislatures for more extensive relief than currently available would appear likely. Conceivably, the extent to which such pressures are accommodated could, in turn, influence the pertinent international revenues, given their dependance on rates of return.

2. Possible Magnitudes of International Revenue

83. Geological, technological and economic uncertainties along with the legal issues that remain unresolved render any projection of possible magnitudes of international revenue an extremely difficult task. Information about crucial geological factors, e.g., abundance and metal content of manganese nodules, topography of the area to be mined, is sparse. While the basic technology for mining, transporting and processing manganese nodules exists, it has to be further tested for efficiency and reliability. The workability, over a period of time, of the total system, integrating all the components, has to be demonstrated and finally the total system has to be scaled up to commercial level. Metal markets are notoriously volatile and projections of future demand, supply and price levels vary widely. Lastly, as indicated earlier, the provisions of the legal régime, as reflected in the draft Convention on the Law of the Sea, are negotiating provisions, so that the final nature of the provisions still remains an open question.

84. A number of studies have examined the economic dimensions and profitability of sea-bed mining. The wide divergence of the conclusions can be seen from the estimates of internal rates of return of a sea-bed mining project ranging from as low as 5 per cent to as high as 100 per cent. 25/ Virtually all these researchers and industry experts agree that considerable uncertainty remains about the profitability of sea-bed mining, depending on the geological, technological, economic and legal factors.

85. The most recent and detailed estimate of the profitability of a sea-bed mining project are to be found in the studies by the Massachusetts Institute of Technology (MIT) and Arthur D. Little. The MIT study constructs a computerized model which allows introductions of variations centered around a baseline case. On the basis of certain assumptions abount, inter alia, abundance and metal content of manganese nodules, effeciency of mining and processing technology, capital and operating costs, future prices of metals and capital structure of the project using a 1:1 debt equity ratio, the baseline case shows an internal rate of return of 18 per cent. Taking the MIT baseline case, and several variations arount that case, and applying the taxation provisions of the draft Convention, the Chairman of Negotiating Group 2 of the Third United Nations Conference on the Law of the Sea (the group which dealt with the financial and fiscal provisions of the draft Convention) estimated the revenues of the Authority over a 25-year lifespan of one sea-bed mining project to be in the range of $260 million to $1,960 million in 1976 US dollars. 26/ With the following additional assumptions:

25/ A Cost Model of Deep Ocean Mining and Associated Regulatory Issues (J. D. Nyhart, Lance Antrim, Arthur E. Capstaff, Alison D. Kohler, Dale Leshaw), MIT, 1 March 1978; Research Institute for International Techno-Economic Co-operation of Technical University Aachen and Battelle-Institut e. V. Franfurt, Analysis of the MIT Study on Deep Ocean Mining - Critical Remarks on Technologies and Cost Estimates (Franz Diederich, Wolfgang Müller, Wolfgang Schneider), March 1979; Eleanor B. Steinberg and Joseph A. Yager with Gerard Brannon, New Means of Financing International Needs (Washington, D.C.: Brookings Institution, 1978); Danny M. Leipziger and James L. Mudge, Mineral Resources: the Economic Interests of the Developing Countries (Ballinger, 1976); United Nations Committee on Natural Resources, Report of the Secretary-General on "Mineral Resources: Trends and Salient Issues, with Particular Reference to Molybdenum, Cobalt and Vanadium, including Problems of Technology Transfer" (E/C.7/115); Arthur D. Little, Inc., Technological and Economic Assessment of Manganese Nodule Mining and Processing, Revised, Nov. 1979 (Cambridge, Massachusetts), prepared for United States Department of the Interior, Office of Minerals Policy and Research Analysis.

26/ Third United Nations Conference on the Law of the Sea, Official Records, vol. XII, document A/CONF.62/C.1/L.26, Annex E, Table 1).

(a) Commercial sea-bed mining would start in 1992;

(b) Five sea-bed mining projects would start in that year;

(c) The Authority's income would be distributed evenly over 25 years;

the international revenue from sea-bed mining in 1992 could be estimated to range from about $50 million to $390 million. This range of estimates thus falls below the Brandt Commission's earlier estimate of $500 million by the middle or late 1980s. 27/

86. Assuming 3 per cent annual growth in world consumption of nickel, the production limitation formula discussed above would allow roughly 10 sea-bed mining projects by the year 2000, and international revenue would likewise double by the year 2000.

87. When or whether the costly next steps in sea-bed mining will be taken will largely depend on the future development of the legal regime and on the future outlook in the work metal markets. 28/

88. While final agreement on the draft Treaty on the Law of the Sea has been delayed, a renegotiation of the entire draft would appear to be very difficult. In the meantime, it may be noted that United States legislation in effect since 1980 permits firms to register claims, provides the basis for exploration, and permits them to begin actual mining if international agreement is not reached by 1988. Similar legislation exists in the Federal Republic of Germany. The United States law also provides for a trust fund for taxes on sea-bed mining (although at considerably lower rates than the draft Convention) for possible disbursement to an international entity if an international agreement is reached. 29/

89. Despite the possibility of national legislation, the mining consortia may be unprepared to proceed with investments without an international treaty. The investments are large, as much as $1 billion per operation, and in the face of uncertain claims subject to international reversal, firms are unlikely to risk such sums, and capital markets are unlikely to lend them.

27/ North-South: A Programme for Survival, p. 245.

28/ "Sea-bed Mineral Resource Development: Recent Activities of the International Consortia", document, ST/ESA/107.

29/ "Deep Sea-bed Hard Mineral Resources Act" of 1980, House of Representatives bill 2759-33.

3. Conclusion

90. If these negotiations do not succeed, the possibility of obtaining revenues for international purposes from sea-bed resources should be pursued separately. Failure to do so would result in preemption of this revenue by enterprises acting under authority of national legislation.

F. Taxes on "parking fees" from geostationary communicatios satellites

1. Background

91. A geostationary earth satellite rotates in a unique orbital zone around the equator, at a distance of approximately 22,300 miles from the earth, travelling from west to east, and remaining in approximately the same position above the earth at all times. These satellites have become central to modern communications by transmitting signals from telephone, telegraph, teletype, and facsimile systems for both domestic and international commercial, military, meteorological, maritime, and numerous other uses, some of which serve environmental purposes (A/AC.105/203 and Add. 1). There is a limit to the number of such satellites that the geostationary technologies orbit zone can accommodate. Satellites must be spaced at certain intervals to avoid interference among their communication signals.

92. The International Telecommunication Union (ITU) determines which parts of the frequency spectrum are available for satellite communications. At the 1979 World Administrative Radio Conference ITU established procedures for the assignment of frequencies by its International Frequency Registration Board (IFRB) so as to avoid early saturation of the frequency spectrum. There is, however, no international system for allocating positions in the geostationary orbit zone. The thought of an eventual scarcity of such positions, sometimes referred to as "parking slots", has suggested to some observers the concept of imposing fees for their uses, 30/ or else taxing revenues on profits from such use. The Brandt Commission cited satellites as a possible new source of international revenue to be used for economic development, 31/ a suggestion already made in the 1980 report on financing the UN Plan of Action to combat Desertification (A/35/396, annex, para. 35).

93. The developing countries' present lack of direct access to the requisite technologies does not bar them from sharing the benefit of geostationary satellites, since all of these countries are free to use the facilities of the International Telecommunications Satellite Organization (INTELSAT), and many of

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30/ See for example Eleanor B. Steinberg and Joseph A. Yager, with Gerard M. Brannon, New Means of Financing International Needs (Washington, D. C. : Brookings Institution, 1978), pp. 27-28.

31/ North-South: A Programme for Survival, p. 245.

them do. Meanwhile, their access rights to radio frequencies in their area enjoy the protection provided for the 1966, "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies" (General Assembly resolution 2222 (XXl), annex) to the degree that the IFRB allots frequencies within three regions, each of which includes both industrial and developing countries. This, to a degree, mitigates the more advanced countries' inherent advantage from applying a "first come, first served" satellite system. It also suggests the possibility of certain developing countries leasing out, for finite periods of time, their frequencies to countries in need of additional frequencies for their communication satellites. While this would provide the developing countries involved with additional, though temporary, revenue, there would be no confluence of such funds for common developmental goals.

94. Prospective demand growth could complicate the task of co-ordinating the use of communications satellites. However, technological progress may well determine the degree to which expectations of scarcity will prove to be realistic. The ITU is convening another World Administrative Radio Conference which will discuss various communications problems in two sessions in March 1984 and in November 1985, and these meetings could consider the imposition of taxes or fees for assignment of satellite parking slots.

2. Taxation principles

95. The 1966 Treaty on the use of outer space provides that, although exploration and use of outer space "shall be the province of all mankind" (art. I) national jurisdication remains binding because a "State Party ... on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object" and "ownership of objects launched in outer space ... is not affected by their presence in outer space (art. VIII). National taxation, therefore, is the norm, and not international taxation.

96. International taxation of satellites would, therefore, appear to be ruled out, but the possibility of international taxes or charges for the use of geostationary parking slots is left open. Such taxes or charges should not, however, exceed the rental value of the slots, or they would prevent the owners of satellites from earning normal profits and thereby discourage satellite activity.

97. The slots have rental value only if they are now, or are expected within a reasonable time to be, a scarce resource. Slots well-located with respect to important land areas already are scarce resources and a situation of general scarcity of slots could arise before the end of the century.

98. Geostationary orbital positions are analogous to sea-bed resources that are scarce, finite, and may be said to belong to "all mankind". Therefore, international collection of the rental value of their use is justifiable. It is difficult to decide how much the rental value is, and therefore how high the tax should be, if the tax is to be set arbitrarily by an international forum, such as ITU. A more effecient approach would be to allow competitive bidding for satellite "parking slots". The revenues from these bids could then be made available for international uses, in the form of annual fees for the duration of the slot

assignments. Many national telecommunications systems use taxation or competitive bidding to allocate the available radio and television frequencies domestically, and the same principle could apply internationally to geostationary orbital positions.

99. Competitive bidding for parking slots would be a more efficient system of preventing overcrowding than arbitrary rationing. Taxation even without competitive bidding, would also be better than rationing, because it would limit the number of satellites by favouring those that would make the best use of particular slots.

100. If, international taxes are imposed on the use of geostationary orbital positions, the question of double taxation would arise. The situation would be similar to the taxation of a firm's income by two nations. The established solution in such cases is for each nation to permit the firm to deduct the tax paid to the other nation from its taxable income. (This arrangement, it might be noted, is not the same as a tax credit, or full deduction of levies paid another nation from tax liability.) It would probably be necessary to obtain agreement from the countries concerned that international taxes would be deductible from income subject to national taxes. Such an agreement would not be based on reciprocity, as is the case in similar arrangements between nations, but on equity and the need to avoid excessive taxation of satellite activities.

3. Prospects of overcrowding

101. At the present time, there are approximately 100 active geostationary satellities in orbit, out of a total of 126 geostationary satellites placed in orbit since 1963. Nearly half of that total, however, is dedicated to uses other than those related to civilian communications, such as military, maritime, meteorology, space research and remote sensing - all activities that limit the applicability of income-based taxation, if not that of fees for parking or royalties based on utilization. Current technology requires that geostationary satellites be spaced at least three degrees apart. Under the technology of standard satellites of the past, the most heavily used portions of the orbit (over North America, the Indian Ocean, and the Atlantic Ocean) already have satellites spaced as closely as possible.

102. Technology is changing rapidly, however. Recent satellites placed into orbit have achieved greater traffic volume by frequency re-use through polarization, whereby some signals are sent vertically and others horizontally, and by the use of directional antennas permitting more than one satellite in the same orbital position to serve different areas. New satellites are using the separation of beams to permit separate transmission on each beam. 32/

32/ Thus, the INTELSAT V satellites now on order by the International Telecommunications Satellite Organization use polarization and beam separation to achieve multiple use of both the 14/11 GHz frequency band and the 6/4 GHz band used by older satellites. The new satellites have a capacity of 12,000 telephone circuits, compared with only 4,000 to 6,000 in earlier versions. (INTELSAT, Annual Report, 1 April 1979-31 March 1981, p. 10.)

103. Technology is expected to change further in the medium-term future. The spacing of satellites may be narrowed to less than three degrees. Frequencies may be used that are not currently used. Satellites may be "stacked", one at 1 1/2 degrees to the north of the equator and another 1 1/2 degrees to the south, to permit dual use of a single orbital slot without interference. Within a decade as many as 10 to 12 satellites might be strung together in a halo or figure eight configuration at a single orbital slot, multiplying capacity tenfold. In the longer-term future, technology may move toward "antennae farms", or large space platforms designed for multiple use, permitting fewer satellites with much larger capacity to handle telecommunications and other services. Some observers doubt that foreseeable demand growth will be strong enough to permit any real scarcities to develop assuming full and co-ordinated exploitation of the technological innovations currently in prospect.

104. However, the demand for satellite services is also growing rapidly. INTELSAT, which operates 12 of the geostationary satellites, has had a growth in the number of telephone circuits from 1.8 thousand in 1969-1970 to 14.4 thousand in 1978-1979, an annual average growth rate of 26 per cent, 33/ At this rate demand doubles in three years and multiplies tenfold in a decade. In other words, technological changes that could multiply the capacity of a geostationary satellite tenfold by 1990 could well be needed just to keep up with the pace of increasing demand.

105. According to a recent United Nations analysis entitled "Efficient Use of the Geostationary Orbit" (A/CONF.101/BP/7), the best estimate at the present time is that foreseeable technological improvements will make it possible to meet the growing requirements for geostationary satellite service for at least the next two decades without encountering a generalized problem of overcrowding. For the foreseeable future, the instances of scarcity, seem likely to be limited to the choicest locations.

4. Financial considerations

106. Even though there appears to be little prospect of general overcrowding of orbital positions for geostationary satellites for the next two decades or so, it is informative to consider the financial magnitudes that might one day be involved in international taxation of these satellites. The annual revenues of INTELSAT provide a basis for gauging the size of the market for services of geostationary satellites. In 1980 INTELSAT had total revenues of $215 million. 34/ Its depreciation and operating expenses accounted for $112 million, leaving (untaxed) profits of approximately $100 million. Considering that INTELSAT accounts for between one third and one fourth of the geostationary satellites in operation, a conserative but purely illustrative estimate, might be that the total market value of services of such satellites was $500 million in 1980. This allows for the fact

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33/ INTELSAT, Annual Report, p. 9.

34/ Ibid., p. 21.

that some satellites produce no revenue. While many of the other United States satellites are commercial (for example, the RCA, Western Union, and COMSAT satellites used for domestic United States telecommunications), a portion is used by defense and other public entities.

107. Assuming that profits are approximately 50 per cent of revenue (as for INTELSAT), an international tax of 50 per cent imposed on profits would generate $125 million annually at the present time; a 10 per cent royalty on total revenue alternatively, would generate $50 million, and an annual "parking fees of $1 million per satellite about the same amount. Compared with total concessional economic assistance of approximately $30 billion in 1980, 35/ these figures are not large; if 10 per cent were to go toward desertification projects, the result must be viewed as minimal relative to the $1.8 billion annual target.

108. In view of the exceedingly high growth of demand for telecommunication satellite services, however, these financial dimensions could become much larger in 10 or 20 years. Even assuming a more modest growth rate of demand than in the past, for example, 15 per cent annually, total revenue from all geostationary satellites would grow from a postulated $500 million in 1980 to $2 billion in 1990 and $8 billion in the year 2000 (at 1980 prices). The need to resort to greater technological sophistication would probably reduce the ratio of profits to revenue, but under optimistic assumptions that perhaps 40 per cent of revenue might be profit, a 50 per cent international tax on profits would generate $400 million by 1990 and $1.6 billion by the year 2000 (at 1980 prices).

109. A 50 per cent tax rate would require a full tax credit by national Governments, meaning, in effect, a donation, on their part, of the entire regular income tax on the private operator. In fact, most industrial countries' effective tax rates lie below that figure; thus, full credit for a 50 per cent tax would require such Governments to give up more than the full tax, resulting in either a reduction of the rate at which non-satellite operations are taxed, or else a net credit to be refunded to the taxpayer. It seems extremely unlikely that this would find acceptance among national Governments. If, instead, the 50 per cent "international tax" were to be treated as a tax-deductible expense, the result would be an effective halving of the operator's after-tax profit - clearly an extremly high burden. The alternative aproach of using a royalty of, say, 5 per cent to 10 per cent on gross revenues would be more acceptable to both taxpayers and Governments. It would also offer greater predictability, in that the yield would fluctuate along with revenue which is less volatile than operating costs, interest, and depreciation. Based on the same assumptions regarding demand growth, one can project royalties at rates of between 5 per cent and 10 per cent to generate the following income streams over the next 20 years:

35/ World Bank, World Development Report 1980, p. 29.

Year	Annual revenues	At royalty rates of 5 per cent	10 per cent
1980	$500 million	$25 million	$50 million
1990	$2,000 million	$100 million	$200 million
2000	$8,000 million	$400 million	$800 million

Annual parking fees of between $0.5 million and $1.0 million for each taxed, communications, satellite, rising from 50 in number in 1980 to 200 by 1990 and 800 by the end of this century, would yield exactly the same amount as would the royalties at the rates of 5 per cent and 10 per cent shown above. If use of larger satellites resulted in smaller numbers the parking fees could be raised.

110. These financial estimates are merely illustrative, but they do suggest two conclusions. First, in the next few years, international revenue from geostationary satellites would probably be small. Second, the expected rapid growth of this market does mean that, by the turn of the century, taxation of these satellites might generate a substantial amount of revenue (equal, in real terms, to as much as roughly half of the current annual lending of the International Development Association, for example).

5. Other considerations

111. The introduction of an international tax on geostationary satellites would encounter institutional obstacles. INTELSAT is already an international entity with over 100 members and over 140 countries use its services. Some would argue that the international community already benefits from this organization, and that imposing taxes on it for international community already benefits from this organization, and that imposing taxes on it for internatinal purposes would be redundant or self-defeating. However, by far the largest users of INTELSAT are the industrial countries, so that on balance the developing countries would clearly benefit from taxation with tax revenue earmarked for their economic development, including environmental programme.

112. If technology does not manage to keep ahead of the growth in demand for geostationary satellite services, there is a danger that political rationing would allocate the available parking slots instead of market forces through taxation or (better) the competitive auctioning of these slots. At one extreme, rationing could favour the early entrants, the United States and other industrial countries. At another extreme, a rationing system arbitrarily preserving some portions of the slots for developing countries might occur as the consequence of international voting structures, and such an outcome would be unlikely to be as efficient (or, for that matter, equitable, since the developing countries capable of launching satellites would hardly be representative of the low-income countries). Thus, some form of market rationing of these positions through internatinal taxation or competitive bidding would be highly desirable.

6. Conclusions

113. For the near term, and very likely much of the next decade or two international taxation of geostationary satellite parking slots holds little promise as a substantial source of international revenue.

114. Establishing the principle of international taxation of these unique geophysical resources would, however, be desirable before the possiblity is preempted by national claims or other arrangements. Morever, a system of regulating the use of geostationary orbital positions should be established to prevent overcrowding before the need beomes acute. International taxation of orbital positions could be a central feature of such a system. The study recommends that the possibility of early action on these questions be considered by the Preparatory Committee for the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, which is to be held in 1982.

115. It is important that the international regime governing allocation of geostationary orbital locations evolve in a way that is consistent with international taxation and probably also with competitive bidding.

PART THREE

IV. DETAILED MODALITIES OF OBTAINING RESOURCES ON A CONCESSIONARY BASIS

A. Introduction

116. The first avenue for raising resources is not to seek grants from governments but rather interest free loans. While current budgetary constraints affecting governments may apply to interest free loans no less than to grants, it is somewhat more plausible to suppose that, since the amounts are repayable, they are more likely to be forthcoming, provided the amount being sought as loans from each government is judged to be reasonable. This route has the advantage that if borrowing countries are charged rates of interest on the order of 2 1/2 to 3 per cent, a period of no more than 20 years will suffice for the loan to be repaid to donor governments on the basis of accumulated interest alone. This is fully explained in paragraphs 45 to 56 above.

117. The second avenue consists of raising funds on commercial terms from governments and then utilizing a combination of budgetary grants and other available extra budgetary sources to subsidise the interest rates on lending. This route has typically been resorted to by the International Monetary Fund.

118. The third avenue open to governments to raise concessionary resources is to tap private capital markets where obviously loans can only be raised on a commercial basis in terms of both prevailing interest rates and maturities. For the proceeds of such loans to be re-lent on concessionary terms two elements are required:

(a) An interest subsidy element large enough to permit interest rates to the borrower to fall to acceptable levels and to extend maturities sufficiently beyond those of market borrowings to keep the borrowers debt service burden within safe limits;

(b) A system of supporting guarantees and/or collateral that will carry sufficient credibility in the market place to enable the loans to be raised.

119. This was the procedure adopted in the case of the World Bank's Third Window, where the availability of a subsidy element of a grant character sufficed to transform market borrowings at market maturities, e.g. 8 per cent 10 year bonds, into Third Window terms, i.e. lending to developing countries at 4 1/2 per cent, with a 7-year grace period, and a 25 year maturity. The guarantee element to support the borrowings on market terms was supplied by the callable capital of the World Bank. In the Third Window as originally proposed, 36/ it took $225 million of subsidy to convert a billion dollars worth of market borrowings into lending to developing countries on Third Window terms, a leverage factor of approximately 4 to 1. The advantage of this is simply that relatively modest amounts by way of interest subsidy would suffice to raise a substantial multiple of loanable funds provided that supporting guarantees/collateral satisfactory to the market place were forthcoming. Again in the case of the World Bank's Third Window the limiting factors were not only the amounts that could become available as interest subsidy but also the limits then set to the scale of borrowing by the "unused" callable capital of the Bank before the pending capital increase could come into effect. In general, the multiple of resources that can be raised in this way per dollar of available subsidy depends on the spread between market rates and the desired concessional interest rate, the required degree of maturity extension beyond market terms and the period of disbursement of the loan which, in the case of the Third Window, coincides with the seven-year grace period.

120. It is this avenue which this section of the report will attempt to explore on the basis of the following assumptions:

(a) The amounts available for interest subsidy purposes are assumed for purposes of illustration, to come from extra budgetary sources (in line with present day realities) and specifically from amounts within the purview of the International Monetary Fund. These relative to:

(i) Reflows of money to the IMF arising out of its gold sales operations which were lent through its Trust Fund to developing country members and which return to the Fund as these loans are repaid;

(ii) The establishment of a link between SDPs and development finance during the forthcoming fourth five-year basic period for SDR allocation 1982-1986;

36/ As events turned out, only $154 million of subsidy amounts were raised from developed and OPEC countries, permitting the raising of no more than $700 million worth of capital.

(b) The subsidy amounts that can reasonably be ear-marked for anti-desertification purposes amount to no more than 10 per cent of the total resources that can be released to the international community through the mechanisms outlined in (a) above. In terms of the feasibility studies of (a) (i) and (ii) above and the 10 per cent assumption in (b) above interest subsidy amounts of 80 million SDR for the years 1982-1985 and 105 million SDR for the years 1986-1989 would be forthcoming (see table 3 above);

(c) The concurrence of the developed country members of the international community can be obtained to these arrangements on the basis that these need not for present purposes require an amendment of the IMF Articles of Agreements with Executive Board decisions alone providing the necessary authority for their implementation, with appropriate qualified majorities;

(d) An acceptable degree of concessionality is assumed to consist of approximately World Bank Third Window terms, i.e. 4 per cent interest; 7 years grace period; 25 years maturity. Concessioned anti-desertification lending would therefore comprise two separate streams; a highly concessional stream stemming from interest free loans to be provided by governments to an independent institution for lending with maturities up to and over 40 years and slightly harder "Third Window" terms permitted by extra budgetary subsidies;

(e) The supporting system of guarantees/collateral would be forthcoming on the following alternative bases to support Third Window terms:

(i) Ad hoc arrangements extending during the period 1982 to 1989 to permit the independent corporation for combating desertification or some other entity to raise in capital markets the loans warranted by available subsidy amounts. This would most suitably take the form of a system of "limited joint and several guarantees" negotiated among interested donors;

(ii) In lieu of such an ad hoc system of quarantees the incorporation in the institution of a callable capital component having the same legal effect and no larger than necessary to permit the nine-year borrowing programme warranted by available subsidies; 37/

(iii) Obtaining access to some part of the callable capital of the World Bank for anti-desertification lending;

(iv) Alternative to (i), (ii) or (iii) above the earmarking of a modest part of the IMFs existing gold stock as collateral to enable the independent corporation or other entity to undertake the necessary borrowing.

37/ It would be understood that (i) could always phase into (ii) at the discretion of the Governments concerned.

121. The remainder of this part will examine in further detail the implications of assumptions (d) and (e) of paragraph 120 above with a view to arriving at a range of illustrative magnitudes for concessional lending from IMF sourced interest subsidy amounts. The approach can be extended without difficulty to accomodate other subsidy sources.

Resources mobilizable through combined subsidy-guarantee/collateral mechanisms

122. The discussion in the feasibility studies above as regards potential interest subsidy amounts arising out of the implementation of a link and of trust fund reflows may be summarized as in table 3 following paragraph 56 above, table 4, following the same paragraph, summarizes the leverage factors with which these subsidy amounts have to be multiplied in order to generate amounts that can be lent out on World Bank Third Window terms. These factors vary according to the market rate at which funds are borrowed and according to whether the loan is fully disbursed in the first year or spread out over a seven-year period. Disbursement in the initial year will approximate to the terms of programme type loans while disbursements over seven years would be more appropriate to the average anti-desertification project. The table indicates the leverage factor of 4 which applied in the case of the Bank's Third Window when market interest rates were 8 per cent, and when disbursements were spread equally over the seven-year grace period. Since interest rates are currently at record levels, the yield on World Bank dollar bonds being 15 per cent, it seems reasonable to expect a downward trend for the forthcoming decade. For illustrative purposes it seems convenient to work with an interest rate of 10 per cent and a leverage factor of 3 so as to look after the case where disbursements fall between programme and project type lending.

123. Combining this factor with the subsidy amounts available as illustrated in table 3 yields a total borrowing potential annually of 240 million SDR during 1982 to 85 and 315 million SDR during 1986 to 1989. These represent magnitudes rounded to the nearest $100 million corresponding to $300 million and $400 million respectively. What remains to be specified are the guarantee collateral arrangements that will permit the borrowing of these amounts to take place. (See para. 120 (e) above).

B. Alternative guarantee collateral arrangements

1. Ad hoc guarantee arrangements

124. At least three types of guarantee arrangements are open to governments to establish among themselves for the purpose of underwriting any floatations of bonds raised in the capital markets, irrespective of whether they are to underpin any permanent new development agency.

125. The first and simplest type of guarantee would be a "full joint and several guarantee" of the bonds of the participating governments. Each government would, under such a guarantee, be liable for the full amount of the guaranteed obligations

and a bondholder could make a claim against any single guarantor for the full amount due. The guarantor governments could, by arrangement, determine the proportion of their respective liabilities as among themselves, and any guarantor paying a bondholder more than its agreed share could recover from the other guarantors.

126. Secondly, and at the other extreme, would be a "several guarantee" under which each Government would guarantee only a specified proportion of each bond. This would present greater difficulty for bondholders since, unless special arrangements were made, it would be necessary in the event of a default to make a claim against each guarantor government.

127. A third and intermediate possibility would be an arrangement under which each member government, while giving only a several guarantee, would contribute, in an amount based on the proportion of the bonds guaranteed by it, to a fund in which the bondholders would share if there were a default. This approach is illustrated by the Austrian Government Guaranteed Loan (1923-1943) arranged by the Financial Committee of the League of Nations. The net effect of such an arrangement would have many of the characteristics of, but would fall short of, a full joint and several guarantee. It is this third approach which may be described as a "limited joint and several guarantee".

128. This type of guarantee would be somewhat similar to the arrangement by which the member Governments of any development agency "guarantee" that agency's obligations on the basis of its callable capital. Strictly speaking, bonds issued by the agency are not guaranteed by the agency's member Governments. However, in case of a default on its bonds or to prevent a default, the agency could call for payment of the callable as distinct from paid-in capital of its member governments and use the amounts received to make the required payments on its bonds. Each Government's obligation to make payments on such calls is not dependent on payment being made by other member Governments and, since successive calls may be made until sufficient funds are available to pay the obligations of the Agency, the system is very like a joint and several guarantee. But since each Government is liable only to the extent of its uncalled capital, such a system is not equivalent to a full joint and several uarantee, as no single Government can be liable for the total amount being guaranteed by all participating Governments together.

129. It follows from this account of possible guarantee mechanisms that any desired system of guarantees can be established among participating Governments, whether or not a formal agency is set up. Indeed in the case of anti-desertification, it is open to interested Governments to establish a system of "limited joint and several guarantees" along the lines of the Austrian Loan guarantee procedure referred to above. This would enable them to raise monies without the formal establishment of an institution in a manner which would obviate the need in the transitional years for the formal putting in of capital subscriptions other than the amounts required for the interest subsidy element. This would, in principle, enable interested governments to put together only the cash amounts required for the interest subsidy element, leaving any chosen interested Government or designated entity not only to discharge the task of disbursing funds but also enabling it to float bonds in the capital market on the strength solely of the guarantees being provided by the group of interested governments taken together.

2. Incorporation in an anti-desertification institution/agency of a callable capital component

130. The anti-desertification institution described later in this report (the independent financial institution) would have total equity capital of $100 million all of which would be expected to be paid in. If the institution were to be equipped to borrow for lending on Third Window terms, it would be necessary to supplement this capital with a callable component of $2.8 billion so as to permit market borrowings averaging 300 million dollars in the first four years of operation and 400 million dollars in the subsequent four years. In round figures it would seem safe to work with a callable capital provision of $3 billion.

131. In this event the implementation of phase 1 (See paragraphs 124-129) could conceivably involve a more gradual stepping up towards this callable capital provision. In the first instance interested donors from developed and OPEC countries may be approached to put up the callable capital for the first four years amounting to $1.2 billion. An amount of this order could be raised in capital markets through a system of ad hoc limited joint and several guarantees if donor countries seem unwilling to make the more formal commitment of coverting guarantees into callable capital at the inital stages.

132. Alternatively, the anti-desertification institution could in principle utilize the callable capital of the World Bank which already has a high credit rating. The negotiations for securing access to this guarantee capability could presumably be conducted by the institutions on terms that would safeguard its autonomy, taking into account the precedents already established between the World Bank and other development institutions, e.g. the Caribbean Development Bank. With the increase in the capital base of the World Bank to $80 billion and the proposed doubling of its gearing ratio, the World Bank's total guarantee capability would rise to $160 billion. Assuming that 10 per cent of this, or $16 billion, would be used for anti-desertification purposes, this would more than suffice to accommodate the lending capability of $3 billion generated by subsidy amounts stemming from IMF sources alone (trust fund reflows and SDR link monies) for an eight-year programme of development. Indeed, this guarantee capability, if assumed to be spread over eight years at an annual rate of $2 billion a year, would permit additional subsidy amounts to be used. Thus, resources stemming from IMF sources would permit the borrowing of up to $400 million annually. Resources arising out of international trade taxes of $200 million annually would permit the borrowing under guarantee of up to thrice this amount, or $600 million annually. The total to be raised therefore in capital markets under World Bank guarantee of up to $1 billion would still leave a substantial margin of unused guarantee capability to which recourse could be had if necessary by finding other interest subsidy sources, e.g. by varying slightly the rate of taxes on international trade.

3. Collateral arrangement

133. The alternatives to 1 and 2 above are, as mentioned, borrowings against collateral which is most easily available in the form of some part of the IMF's existing gold stock. This currently stands at 100 million ounces and can be valued at $400 an ounce or a total of $40 billion. The recommendation that the IMFs gold constitute collateral for borrowing for desirable purposes has been made by the Brandt Commission 38/ on the grounds, largely, that not a great deal is to be gained by dissipating the IMFs gold over time if the gold sales procedure were, for example to be revived. In this particular case of the collateral required to support borrowings based on IMF sources alone, e.g. Trust Fund reflows and SDR link monies, the amount of $3 billion compared to the total IMF gold stock of $40 billion amounts to a modest percentage of 7.5 or 7.5 million ounces.

PART FOUR

FEASIBILITY STUDY AND WORKING PLAN FOR THE ESTABLISHMENT OF AN INDEPENDENT FINANCIAL CORPORATION FOR THE FINANCING OF DESERTIFICATION PROJECTS

134. The proposed independent corporation for the financing of desertification projects is dealt with in chapter 5 of the annex document A/35/396. In paragraph 180 of that chapter, attention was drawn to the fact that the establishment of such a corporation "to attract investments and provide financing for suitable anti-desertification projects with non-commercial rates of return" had been proposed previously. The proposal called for providing the corporation with equity funds from countries with international account surpluses and from financial institutions.

135. In paragraph 182, it was stated that the feasibility of establishing such a public international corporation for desertification control projects financing would depend on whether donor countries and organizations would provide the necessary resources for its establishment.

136. In paragraph 183, the warning was given that the projects the corporation would be expected to finance would for the most part be incapable of bearing interest costs even on the highly concessional terms presently available from IDA and similar financing institutions. It was important to recognize, therefore, that such projects would have to be financed primarily with funds provided on an interest-free basis.

137. The feasibility study undertaken in this report accordingly proceeds on the assumption that, in the view of the General Assembly, a corporation could be provided with funds free of interest.

38/ North-South: A Programme for Survival, p. 211.

138. Subsequent paragraphs of the same chapter considered the question of whether the corporation should be established as an affiliate or subsidiary of an existing finance institution, or as an independent institution; however, neither method of establishment was recommended above the other.

139. The present study interprets the General Assembly's use of the term "independent" to describe the corporation in its resolution 35/73 as intended to steer further examination of this issue away from the possibility that this institution might be established as an affiliate or subsidiary of any existing body. The corporation must be independent in the sense of standing on its own and possessing its own resources of equity, loan capital, or both.

140. This does not mean that the finance corporation must be precluded from recourse to any existing institution for technical or administrative co-operation, but rather that any such co-operation would be recognized as extended by one independent institution to another, and not by an institution to its associate or affiliate.

A. Equity of the corporation

141. The first question which must be examined is that of the corporation. Size and composition of equity normally determine both the character and capacity of a financial institution. It is understood, however, that this corporation would use borrowed funds, not its equity, for lending, so the size of its equity is not a matter of the highest importance. All participants in the activities to be financed through the corporation - both donors and potential clients - should be members of the corporation and should contribute to its equity capital.

142. It has the advantage of simplicity to assign to each member of the corporation the same or equal rights of membership. The equity capital of the corporation could be divided into shares valued at approximately $US 1 million each; acquisition of one share would then be made the qualification for membership in the corporation. Countries and international organizations only would be eligible to purchase shares.

143. If the large majority of the States members of the United Nations should become shareholders of the corporation, its total equity capital would be of the order of $150 million. A conservative estimate of the participation which is likely to be forthcoming is, however, that a maximum capital of $100 million would be sufficient to provide for all the potential participants.

144. It is estimated that about $1 million would be small enough to be subscribed in one lump sum by each participating country. There should be no need for deposits and successive calls in the subscription of a sum of this size. It would be appropriate, therefore, to require each member of the corporation to pay for its share of equity in a single instalment; as a result, the equity of the corporation would be fully subscribed in the first year of its operation.

145. All shares should be equal in status as regards both dividend and repayment of capital.

146. No member should be able to obtain loan assistance from the corporation until his qualifying share capital has been taken up.

B. Research fund

147. Countries in the donor group should be encouraged, upon subscribing to their qualifying shares, to make further voluntary contributions of from $1 to $4 million each towards a research fund.

148. Four-fifths (80 per cent) of the income earned on the equity of the corporation, minus operating expenses, should be credited annually to the research fund until a target of approximately $40 million (from contributions and earnings) is reached.

C. Operating expenses

149. The management of the corporation should ensure that its annual operating expenses would not exceed the amount earned on the subscribed equity and unused loan capital. The corporation should not use its equity to make loans, at least not during the first ten years of its existence. Operating expenses should be financed from earnings on capital and capital should remain available to meet any unexpected losses which the corporation might incur.

D. Management of the corporation

150. It is proposed that the day-to-day business of the corporation should be managed by a board of not fewer that 7 nor more than 11 directors. Each director should have an alternate. The member and the alternate would be selected from different countries within the same group. Each should serve for three years. The following groups are suggested:

Developing countries

Mediterranean Group	:	Two members Two alternates
Latin America and Caribbean Group	:	One member One alternate
Sudano-Sahelian and Tropical African Group	:	Two members Two alternates
Asian and Pacific Group	:	Two members Two alternates

Developed countries

West European and Others Group	:	Three members Three alternates
East European Group	:	One member One alternate

151. Countries would be asigned to one or another of the above groups upon applying for membership in the corporation.

152. The board of management should have the usual responsibility and powers to establish internal rules and regulations, to appoint the chief executive and senior staff and to select advisers, including legal advisers.

E. Demand for loan funds

153. The earlier report of the Specialists (A/35/396, annex) estimated the area of desertified land in developing countries which will require external financial assistance. These figures in millions of hectares were:

Irrigated land	16.35	million hectares
Range land	145.24	" "
Rain-fed crop land	97.19	" "
Total	1,558.78	" "

154. At the medium estimate of cost, the total cost of a programme of corrective measures on these lands would be as follows:

Irrigated land	12,262.50	$US	million
Range land	18,065.50	"	"
Rain-fed crop land	17,007.50	"	"
To this should be added:			
Sand dune fixation	449.00	"	"
Total	47,784.50	"	"

155. This represents an average cost of $2,389.22 million (2.389 billion) per annum over the next 20 years if a minimum period of 20 years is allowed for the meaningful attack on desertification problems which is contemplated in the Plan of Action.

156. It is not possible to be precise as to how much of this expenditure would fall into the category of projects whose potential return could not be quantified at the preparation stage. The group of experts estimates that one fifth of the total expenditure, or one third of the measures on range land ($6,022 million), and one fourth of the measures on rain-fed crop land ($4,252 million) would be of this kind and, therefore, eligible for the most highly concessional loans the corporation can provide.

157. It must be assumed that a larger portion of the expenditure for desertification control will be provided by national Governments than the 2 percent estimated in the earlier report. (The projects presented to the Consultative Group for Desertification Control up to August 1981 indicate that external aid will probably be required for not more than 72 per cent of the total expenditure.)

158. On the assumption that the amount required to be financed by loan would remain a major portion of the total expenditure, it may be assumed that the demand for the high concession loans could be accommodated within an annual supply of the order of $500 million per annum for 20 years.

F. Estimate of potential supply

159. Ever since the General Assembly at its seventh special session considered the supply of resources for global development, the proposal has been actively advanced and supported that the resources to be provided in the future should be made available on an increasingly assured and predictable basis. This means in practice that those who use the resources should be able to plan their use with reasonably accurate prior knowledge of the amounts and terms on which the resources will

become available over the years. This proposal was in itself a substantial modification of, and withdrawal from, the earlier advocacy of automatically flowing resources. Some measure of assurance of supply and predictability must therefore be written into the arrangements for the interest-free loans to the corporation. It seems reasonable that the minimum level of predictability to be provided for should be a seven-year supply of money. Taking account of the time which will be spent in the disbursement of desertification control funds, it seems that the period to be covered by the minimum forward look should be seven years.

160. Donor countries wishing to contribute towards long-term desertification projects through the corporation should therefore be requested to undertake to supply a specific sum of loan money to the corporation each year over a seven-year period. This annual contribution could be comparatively small.

161. Desertification is neither a merel national nor a merely regional phenomenon, but a global problem. All the Governments of the world should be involved in the proposed loan programme. The progressive annual withdrawal of 20 million hectares of land from production of any kind is a phenomenon the consequences of which will soon be felt over the whole world - in mass movements of population; in the appearance of refugees on a scale with which no nation or group of nations will be able to contend; in malnutrition and food shortages; and in the persistent demand for short-term measures which will absorb all available resources without providing a single long-term solution. It is essential, therefore, that all countries of the globe, whether or not they are directly threatened by the advance of the deserts, should consider themselves involved in the fight against desertification and that those countries directly threatened should be in the vanguard. All member countries of the United Nations should be encouraged to contribute towards the interest-free resources of the corporation.

162. Recognizing that all Governments have a duty to participate in the campaign against desertification, it is useful to consider next which countries are best qualified to take the lead. We consider that these countries with the greatest economic strength might be invited to contribute one half of the total resources required, i.e., $250 million per annum, on the basis shown below:

	Annual provision of interest-free loans in million of United States dollars
United States of America	50
Federal Republic of Germany	36
Japan	30
France	24
United Kingdom	20
Netherlands	18
Italy	12
Australia	10
New Zealand	10
Sweden	10
Norway	10
Denmark	10
Canada	10
	$250

The remaining $250 million should be the subject of negotiations with the countries with centrally planned economies, the petroleum-exporting countries and the remainder of the developing countries members of the United Nations (except the least developed). Countries in these groups should contribute towards this total according to their United Nations scale of assessment.

G. Availability of loans from the corporation

163. It is recognized that some countries with arid and semi-arid areas will prefer not to approach the corporation with a request for finance. For the most part they will regard it as sufficient if they receive technical assistance, help with planning, and so on. It cannot, of course, be assumed that no applications for finance will be made to the corporation in respect of lands not currently regarded as arid or semi-arid. All that can be said on this point is that:

(a) Countries will be eligible for financial assistance from the corporation only for anti-desertification projects to be carried out in or for arid or semi-arid areas, that is areas having less than 50 centimetres of rainfall per annum;

(b) Loans will be available towards the cost of composite projects, but only for that part of the project which qualifies on the basis of anti-desertification criteria, i.e., which involves measures directly designed to arrest the spread of desert conditions.

164. The following example will illustrate these principles: Country A submits to the corporation a project which involves both the rehabilitation of irrigated land which has become water-logged and salinated and the addition of irrigation to previously non-irrigated lands. The corporation would finance only that part of the project which involved the rehabilitation of the land. Country A would be free to seek assistance from other agencies such as the International Bank for Reconstruction and Development, IFAD, etc., for the part of the project involving addition of irrigation works.

H. Funding of research and experimentation

165. It is envisaged that a great deal of experimentation would characterise the early desertification control projects. Typically, technical assistance missions would visit a country or region, assess anti-desertification needs and recommend that a pilot project be implemented and evaluated before a larger-scale project is attempted. Such pilot projects may involve moving of livestock in order to try new grazing methods, or experimental planting of new crops introduced from other climates. Governments will wish to seek assistance, by way of grants or loans, towards the implementation of such pilot projects. These loans and grants would be made from the corporation's research fund.

I. Terms of the loans

166. Once it is decided that a full-scale desert control project should be undertaken and the project is designed, the national governments or the governments of the region (where a region is involved) should negotiate with the corporation as to what part of the total cost they will be able to bear. Financing would then be sought for the balance of the cost.

167. The commitment to make the loan having been accepted by the corporation, it is proposed that a uniform disbursement period of five years should be allowed. Actually, the disbursement period could be a year or more longer or shorter. During this five-year period, no interest would be charged on the funds disbursed and no commitment fees would be imposed.

168. From the sixth to the twenty-fifth year interest should be payable at 2 1/2 per cent per annum on the sums lent, and no repayment of principal should be required. (This grace period may be extended to the thirtieth year if necesssary.) No interest should be capitalized.

169. From the twenty-sixth to the fortieth year the loan should be repaid together with interest at 2 1/2 per cent per annum on the diminishing balance. (In order to equalize the annual payments, these could take the form a 15-year annuity with interest at 2 1/2 per cent per annum.)

170. It is an essential feature of this financial outline that the interest paid in during the sixth to the twenty-fifth or thirtieth year, together with accumulated earnings thereon, should be sufficient 39/ to repay the original interest-free loan from the donor. The original donor-lender should have the loan repaid before the end of the thirtieth year. Receipts by way of principal and interest from the thirty-first year onwards would be available to make further desertification loans.

J. Responsibility for the loans

171. Money borrowed from the corporation will be available (a) to national Governments; and (b) with a guarantee from the national Governments to domestic entities identified by the national Governments.

K. Comparison with IDA and IFAD concessionary loans

172. It will be noted that the terms suggested for high-concession loans by the corporation are somewhat less generous than those currently available on the most highly concessional terms which IDA and IFAD allow. IDA loans are repayable in 50 years, and attract no interest at all; there is only a commitment charge of three fourths of 1 per cent. IFAD makes loans on "regular", "intermediate" and "highly concessional" terms. The last category - the "highly concessional" - carries no interest rate. It attracts a service charge of 1 per cent per annum, and has a maturity period of 50 years, including a grace period of 10 years.

173. According to information available, loans on these highly concessional terms are available only to countries having special characteristics - the least developed countries in the case of IDA, and the "food priority" countries in the case of IFAD. The least developed countries have less than $350 per capita of gross national product. Up to the present time countries can only qualify for inclusion in the IFAD category of food priority countries on the basis of:

(a) Low per capita income;
(b) A projected cereal deficit by 1985;
(c) Severe protein-calorie malnutrition;
(d) Insufficient average increase in food production;
(e) Serious balance-of-payments constraints.

174. It follows that the corporations's terms should be less generous than those of IDA or IFAD in order to encourage countries which qualify for IDA and IFAD assistance for anti-desertification projects to seek such assistance. It is understood that the corporation's high-concession loans should be reserved for projects that would not currently qualify for financing because of the difficulty of estimating in advance potential financial returns.

39/ Compounded and accumulated interest at 8 per cent per annum will permit full repayment of the principal in 19 years.

175. As the corporation gains experience in the management of its interest-free loans, it will certainly be subjected to increasing pressure to augment the types of loans it can offer. By this time also, it may also have accumulated modest reserves. It will no doubt consider it appropriate then to endeavour to raise additional resources by the issue of its own bonds. It should be possible to issue bonds equivalent in total to the amount of its share capital. Loans from these resources would be made on less generous terms than the loans from interest-free resources.

L. Project implementation, control and monitoring

176. At the present time the management and implementation of the Plan of Action to combat desertification is the responsibility fo the Governing Council and the Executive Director of the United Nations Environment Programme (UNEP) and the Administrative Committee on Co-ordination (ACC). The General Assembly has, by its resolutions, effected institutional arrangements to assist UNEP to fulfil its mandate. These arrangement include:

(a) The expansion of the mandate of the United Nations Sudano-Sahelian Office, as a joint venture between UNEP and UNDP to cover the implementation of the Plan of Action to Combat Desertification in the Sudano-Sahelian region;

(b) The establishment of the Desertification Unit within the UNEP secretariat;

(c) The establishment of an Inter-Agency Working Group on Desertification;

(d) The establishment of a Consultative Group for Desertification Control to assist in mobilizing resources for the activities undertaken within the framework of implementation of the Plan of Action.

1. United Nations Sudano-Sahelian Office

177. The original functions of the Office were to assist the drought-stricken countries of the Sahel in implementing their medium- and long-term rehabilitation and development programmes. Under joint arrangements between UNEP and UNDP, the scope of its concern was extended to become the focal-point and central co-ordinating mechanism of the United Nations system for assisting 19 countries of the Sudano-Sahelian region, on behalf of UNEP, in implementing the Plan of Action. To achieve these objectives, the Office provides assistance in planning, programming and implementation of priority projects, and in resource mobilization.

178. Strictly speaking, the Office does not approve desertification-control projects. It mainly considers and evaluates anti-desertification projects. To a large extent therefore, the final arbiters of approval are the donor Governments or the organizations to which these projects are submitted for finance.

179. The sources of finance available to the Office are its own Trust Fund, voluntarily contributed by United Nations members, and the joint contributions of UNEP and UNDP to its operating expenses. The Office canvasses donor agencies bilaterally and multilaterally in an effort to broaden the financial basis for the funding of projects in this region.

2. Desertification Unit

180. This Unit was established in 1978. It co-ordinates and follows up activities relating to the implementation of the Plan of Action to Combat Desertification. The Unit serves as the secretariat office for the Inter-Agency Group on Desertification and the Consultative Group for Desertification Control.

3. Inter-Agency Working Group on Desertification

181. The Group was established in 1977. It includes representatives of the relevant members of the United Nations system. It computes and disseminates information, monitors projects and makes recommendations regarding constraints and priorities for implementation of the Plan of Action for consideration by ACC and then by the Governing Council of UNEP.

4. Consultative Group for Desertification Control

182. The Consultative Group is composed of co-sponsors and other members. Co-sponsors include some members of the United Nations system. Other members are certain States having an interest in or suffering from desertification such the United States, Mexico, Iran, Iraq, etc., and some other members of the United Nations system and some financial institutions, for example, the Arab Bank for Economic Development in Africa. It considers project proposals submitted through the Sudano-Sahelian Office, the Desertification Unit or other United Nations organs, examines the need for additional financing and assists in the mobilization of resources.

183. It should not be assumed that, with the setting up of the corporation, any of these agencies will be rendered superfluous. A country in the Sahel which desires to undertake a desertification control project will still need the advance and help of the Sudano-Sahelian Office. A country outside the Sahel region which has not yet embarked on its share of the Plan of Action will need the advice of the Desertification Unit so as to assess its needs and establish its priorities. When a project has been designed, the Government of the country concerned would approach potential suppliers of credit and would determine the eligibility of the project, or parts thereof, for IDA, IFAD, the World Bank or Development Bank finance.

184. It will be sufficient to assume that the management of the corporation would join the other agencies in the Inter-Agency Working Group and the Consultative Group on Desertification Control and participate in the scrutiny of all projects.

185. Recognizing that the Plan of Action to Combat Desertification is wider than the objectives of the corporation, the Group hesitates to suggest that the corporation should immediately absorb the Desertification Unit. The Group is already convinced, however, that the staff of the Unit will need to be enlarged and that additional disciplines will need to be added if it is to possess the competence to assist the corporation in the technical scrutiny of the projects presented for its consideration.

M. Procedure: Establishment of the corporation

186. If the proposals in this study are accepted by the international community, the group proposes that the charter of the new corporation should be embodied in an agreement in the form which follows.

187. The agreement should take effect and the corporation should come into being when 30 countries, including ten countries, donors of interest-free loans, have signed or adhered thereto.

AGREEMENT

The Governments on whose behalf this Agreement is signed:

Recognizing the importance of the Plan of Action to Combat Desertification;

Realizing that concerted action must be taken to promote the flow of resources on an assured and predictable basis into the financing of long-term desertification control projects; and

Bearing in mind the necessity to provide a substantial portion of such long term funds on an interest-free basis;

Have agreed to the following Charter of the International Finance Corporation for Anti-desertification:

CHAPTER I - GENERAL PROVISIONS

Article 1

Establishment of the Corporation

The International Finance Corporation for Anti-desertification (hereinafter called the Corporation) is hereby established, and shall function in accordance with the provisions of this Agreement.

Article 2

Legal Status

The Corporation shall possess an international legal personality and shall enjoy administrative and financial independence.

Article 3

Headquarters

The Headquarters of the Corporation shall be Kenya. Such agencies, branches or representative offices of the Corporation as the Board of Directors may consider necessary, may be established in other countries.

Article 4

Objectives and Functions

The objective of the Corporation is to provide finance for measures to control desertification in the territories of member countries and so accelerate the economic and social development of these countries.

In fulfilling this objective, the Corporation shall be authorized and shall have the power:

(a) to raise funds of grants and loans from its members;

(b) to raise funds by the issue of bonds and securities;

(c) to issue and recover loans to member countries, or to institutions and agencies identified by member countries, for the control of desertification either alone or jointly with any other institution; and

(d) to provide technical assistance and services in the field of anti-desertification.

Article 5

Membership

1. The countries which have signed this Agreement shall be the original founding members of the Organization;

2. Any other country of the United Nations or international financial institution or inter-governmental agency, may accede to membership in the Corporation upon a favourable decision taken by a simple majority vote of the Board of Directors of the Corporation;

3. The liability of members in the Corporation, as shareholders, shall be limited to the amount, if any, which may remain unpaid on the portion of capital subscribed.

CHAPTER II - FINANCIAL RESOURCES

Article 6

Resources of the Corporation

The resources of the Corporation shall consist of:

(i) the equity capital subscribed by its members;

(ii) voluntary subscriptions to its capital by members and other parties;

(iii) interest-free loans to the Corporation, amounts recovered through the repayment of loans and interest received on loans;

(iv) other amounts raised by borrowing, and

(v) funds derived from the operations or otherwise accruing to the Corporation.

Article 7

Equity Capital

The initial capital of the Corporation shall be $US 150 millions in shares of $US 1 million each. Each member of the Corporation shall be required to subscribe one share. Shares subscribed shall not be transferable except in accordance with the provisions of this Agreement.

Article 8

Alteration of Capital

1. The Corporation may increase or decrease its initial share capital, may cancel, consolidate or divide shares or otherwise alter its capital by a resolution of a general meeting;

2. No member shall be obliged to subscribe additional amounts in the case of general or individual increases in the capital of the Corporation.

Article 9

Additional Subscriptions

The Board of Directors shall lay down appropriate conditions and procedures for additional subscriptions to be provided by members on a voluntary basis. Such additional subscriptions may include contributions to a Research Fund.

Article 10

Loan Capital

1. The Corporation may accept interest-free loans from members or non-members and may repay such loans from its resources;

2. When it is in a position to do so, the Corporation may also raise funds by the issue of bonds or other securities, or by obtaining credit in national or international capital markets;

3. Members making interest-free loans to the Corporation shall be required to make such loans annually for periods of seven years, or such further periods as may be agreed between the members and the Board.

Article 11

Periodic Review of Resources

The Board of Directors shall between the fifth and the seventh year, and at intervals of not more than seven years thereafter, review the resources of the Corporation in relation to its needs and may submit recommendations thereon to a meeting of the general membership.

CHAPTER III - OPERATIONS

Article 12

Principles

The Corporation shall provide assistance in the form of grants or loans for desertification control measures, (including measures on irrigated land, range land, rain-fed crop land and for the fixing of sand dunes), to be carried out in or for arid or semi-arid areas - that is areas having less than 50 cm of rainfall per annum.

The Corporation may complement its available resources of finance in the best interest of its members, but shall not provide highly concessional loans to any undertaking which in the opinion of the Board is able to obtain adequate financing elsewhere on terms which the Corporation considers reasonable.

Article 13

Eligibility for Loans

Subject to the conditions stipulated in this Agreement the recipients eligible for assistance from the Corporation shall be:

(a) Governments of member countries as well as agencies, departments or subdivisions thereof;

(b) public or private institutions or enterprises operating in the territory of member countries;

(c) interregional or subregional organizations established by member countries for the promotion of anti-desertification measures.

Article 14

Types of Loans

The Corporation may issue as the Board of Directors may deem appropriate:

(a) highly concessional loans - being loans for periods exceeding 30 years with low interest and a grace period of not less than 5 years;

(b) less concessional loans - being loans for a period not exceeding 30 years, with a higher rate of interest and a shorter grace period.

Article 15

Terms and Conditions of Loans

General guidelines for each type of loan shall be issued by the Board of Directors.

Article 16

Limitation on Financial Operations

When this Corporation proposes to raise funds by the issue of bonds or other securities or by obtaining credit in capital markets, the Board of Directors shall ensure that the total amount outstanding of loans, credits and guarantees issued by the Corporation (other than interest-free loans) shall not at any time exceed twice the amount of its subscribed capital, its reserves and free income.

CHAPTER IV - ORGANIZATION AND MANAGEMENT

Article 17

Structure of the Corporation

The Corporation shall have a general meeting, a Board of Directors, a President and such other officers and staff as may be required for the performance of its duties.

Article 18

The General Membership

(a) each member of the Corporation shall appoint a representative and an alternate representative to attend meetings of the general membership;

(b) each representative shall have one vote in the general meetings of the Corporation. An alternate representative may vote only in the absence of the representative;

(c) general meetings shall be held not less frequently than every two years;

(d) the general meeting is the supreme authority of the Corporation and shall have the power to:

(i) issue or amend general policy guidelines for the management of the Corporation's business;

(ii) consider and approve the annual report by the Board of Directors, or the President, on the Corporation's activities;

(iii) elect the Board of Directors;

(iv) appoint auditors and set their remuneration, and

(v) transact any other business not within the competence of any other organ.

(e) unless otherwise stipulated, resolutions put to the vote in a general meeting shall be decided by a simple majority of members. Resolutions adopted in a general meeting shall be binding on all members.

Article 19

Board of Directors

1. The Board of Directors shall be composed of no fewer than seven nor more than eleven directors. Each director should have an alternate, the director and the alternate to be selected from different countries within the same group of members. Each director and alternate director should serve for three years. An alternate director shall not vote in a meeting of the Board, except in the absence of the director.

2. Directors and alternate directors shall be selected according to groups:

Developing Countries

The Mediterranean Group	- 2 directors 2 alternates
The Latin American and Caribbean Group	- 1 director 1 alternate
Sudano-Sahelian and Tropical African Group	- 2 directors 2 alternates
Asian and Pacific Group	- 2 directors 2 alternates

Developed Countries

Western European and Other States Group	- 3 directors 3 alternates
East European Group	- 1 director - 1 alternate

3. Countries shall be assigned to one or another of the above groups upon applying for membership in the Corporation;

4. Each director and alternate shall serve until a successor has been appointed.

Article 20

Powers of the Board of Directors

All the executive powers of the Corporation shall be vested in the Board except such powers as are reserved to the general meeting. These powers shall include the power:

(a) to formulate policies in accordance with the provisions of this Agreement and such guidelines as the general meeting may issue from time to time;

(b) to adopt regulations and other measures to ensure the efficient operation of the Corporation;

(c) to decide on borrowing, the issue of bonds and securities or guarantees;

(d) to prepare for meetings of the general membership;

(e) to appoint the President and senior staff of the Corporation;

(f) to approve the Corporation's budget; and

(g) to interpret the provisions of this Agreement.

Article 21

Resolutions of the Board

Resolutions at meetings of the Board shall be decided by a majority of the directors, each director having the right to cast one vote only. The President shall have the casting vote in the event of an equal division of votes.

Article 22

The President

The President of the Corporation shall be appointed by the Secretary-General of the United Nations upon the recommendation of the Executive-Director of the United Nations Environment Programme for a term of five years, which may be renewed for another term of equal duration. He shall remain in office until his successor assumes office.

Article 23

Other staff

In selecting its personnel, the Corporation shall, subject to the paramount importance of securing a high standard of efficiency and technical competence, pay due regard to the importance of recruiting personnel on as broad a geographical basis as possible.

Article 24

International Status of Staff

1. In the discharge of their duties, members of staff owe their duties entirely to the Corporation and to no other authority. They shall refrain from any act which is incompatible with the international character of their functions and independence.

2. Each member of the Corporation shall respect the international status of the staff and shall refrain from all attempts to influence any member of staff in the discharge of his duties.

CHAPTER V - FINANCIAL PROVISIONS

Article 25

The Financial Year

The financial year shall commence on 1 January and end on 31 December of each year. The term of the first financial year shall be fixed by the Board of Directors.

Article 26

The Budget

The President shall submit to the Board of Directors on a date not later than 15 October of each year an estimate of the expenses and current income of the Corporation for the following financial year.

Article 27

Accounts and Auditors

1. The President shall ensure that proper books of account are kept which will give a true and fair view of the state of the Corporation's affairs and will explain its transactions.

2. The Board of Directors shall submit to the general meeting of the Corporation a report containing an audited statement of the accounts including a balance sheet and an income and expenditure account. The form of such statement shall be determined by the Board of Directors.

3. The accounts of the Corporation shall be certified by a firm of Auditors of recognized (International) standing appointed by the general meeting.

Article 28

Profits and Reserves

The general meeting of the Corporation shall determine, upon the recommendation of the Board of Directors, the allocation which should be made of the net income of the Corporation.

CHAPTER VI - IMMUNITIES AND PRIVILEGES

Article 29

Immunities of Assets, Correspondence and Records

1. The property and other assets of the Corporation in the territories of member countries shall enjoy immunity from nationalization, confiscation or any form of seizure by executive or legislative action. Such immunities shall not extend to judicial action or to assets purchased by proceeds of loans extended by the Corporation to its beneficiaries.

2. The official correspondence and records of the Corporation shall be accorded in each member country the same privileges enjoyed by the official communications and records of other member countries.

Article 30

Exchange Restrictions

The assets and transactions of the Corporation shall not be subject to the exchange control regulations prevailing in any member country.

Article 31

Immunity from Taxation

The Corporation, its assets, property, income and its operations and transactions authorized by this Agreement as well as the shares of its capital shall be immune from all taxation and all customs duties in member countries.

Article 32

Personnel Privileges and Immunities

All directors, alternates, officers and employees of the Corporation, including experts on missions for the Corporation, shall be immune from legal process with respect to acts performed by them in their official capacity.

CHAPTER VII - SUSPENSION OF OPERATIONS AND LIQUIDATION

Article 33

Temporary Suspension

In an emergency the Board of Directors may temporarily suspend its activities in respect of new operations pending an opportunity for further consideration and action by the general meeting.

Article 34

Liquidation

1. The general meeting may by a two-thirds majority and after giving member states not less than three months notice, decide to terminate operations and liquidate the Corporation.

2. The Corporation shall undertake the liquidation proceedings either by itself or through a Committee of liquidators to be appointed by the general meeting.

3. No distribution of assets shall be made to members on account of their subscriptions to the capital of the Corporation until all liabilities to creditors have been discharged or provided for.

CHAPTER VIII - MISCELLANEOUS PROVISIONS

Article 35

Arbitration and Interpretation

1. If a disagreement should arise between the Corporation and a country which has ceased to be a member or between the Corporation and a member after a decision to terminate operations of the Corporation, such disagreement shall be submitted to arbitration by a tribunal of three arbitrators. One arbitrator shall be appointed by the party instituting the proceedings, another by the adverse party, and the third within 30 days of the appointment of the second arbitrator, by the President of the International Court of Justice.

2. A majority vote of the arbitrators shall be sufficient to reach a decision which shall be final and binding upon the parties.

3. Questions of interpretation or application of this Agreement shall be submitted to the Board of Directors for decision.

Article 36

Amendments to the Charter

This Agreement may be amended by a resolution passed by a three-fourths majority at a general meeting of the Corporation. Only member countries or the Board of Directors shall be authorized to propose amendments to this Agreement. Amendments shall enter into force for all members three months after date of the approval.

Article 37

Prohibition of Political Activity

Neither the Corporation nor any personnel working in any of its organizations shall in any manner interfere in the political affairs of any member country or in other international political issues.

Article 38

Relations with other Organizations

The Board of Directors may conclude with organizations of national, regional or international character, agreements conducive to the expansion of co-operation with the Corporation.

CHAPTER IX - FINAL PROVISIONS

Article 39

Entry Into Force

This Agreement shall enter into force when approved by resolution of the General Assembly.

Article 40

First Meeting of the Board of Directors

The Governing Council of the United Nations Environment Programme or the Executive Director of the Programme shall convene the first general meeting of the Corporation within a period of six months following the entry into force of this Agreement.

Article 41

Commencement of Operations

The Board of Directors shall inform all member countries of the date of commencement of operations.

PART FIVE

VI. Conclusions

A. Additional means of financing

188. Summing up the prospective yields of the various additional measures examined in the preceding feasibility studies, the group of experts arrived at the following amounts and time frames:

(a) General trade taxation: Assuming a uniform 0.1 per cent rate, revenues are projected to rise from $2.0 billion in 1980 to $2.5 billion by 1984 and $3.0 billion by 1987, etc. for an indefinite period into the future. The relatively high degree of predictability of these flows would permit the organization charged with their collection to pledge them as security behind borrowing at market rates, if deemed advisable, with the possibility of subsidizing the costs of such borrowings to the extent that they are devoted to lend for designated purposes, such as desertification control measures. Sources of funds for such interest subsidies might include, assuming their timely adoption by the authorities involved.

b) IMF gold: Reflows to the IMF Trust Fund from book profits from earlier sales of gold not otherwise earmarked would amount to $288 million (SDR 250 million) in each of the calendar years 1986 to 1989, subject to vote by the Fund's Executive Board; additionally, collateralization of 7.5 per cent of the IMF gold holdings would support borrowing of perhaps $1.5 billion to $2 billion spread over several years. Profits from future sales of IMF gold depend on future prices and are, therefore, inherently unpredictable.

c) Proceeds of the proposed indirect SDR link: These would yield SDR 800 million ($920 million), in each of the years from 1983 to 1987, assuming IMF agreement on a fourth basic period, (possibly followed by a fifth period from 1988-1992), provided that a sufficient number of developed countries accept this type of link.

d) Parking fees for communication satellites: These are estimated at $100 million per year beginning around the year 1990, but subject to considerable uncertainty regarding both amount and timing. Earlier receipts, but of substantially lesser amounts as shown in the following table are a possibility.

(e) Revenues from deep sea-bed mining: In the absence of agreement on the present draft Treaty, the expectations of levels of future revenue generated under these or similar conditions remain too vague to permit meaningful quantification at this time. The present draft Treaty designates the International Sea-bed Authority as the sole body entitled to receive any net revenue from sea-bed mining. If the current negotiations do not result in a convention, the possibility of obtaining revenues for international purposes from sea-bed resources should be pursued separately.

(f) Common Fund, Second Account: Designed to improve the production and marketing of specific commodities, other than price stabilization, the Second Account could become a source of funds for anti-desertification measures whenever the authorities designated to speak for a particular commodity felt such support to be justified. Pending such determination, even though the Treaty has entered into force, no estimate can be made of such possible flows of funds.

189. Altogether, and subject to the margin of error implicit in these projections, the following estimates summarize the prospective annual flows from 1982-1990, assuming, in each case, timely activation of the requisite measure.

TABLE 12

(in billions of United States dollars)

	1982	1983	1984	1985	1986	1987	1988	1989	1990
Trade tax at 0.1 per cent	2.25	2.38	2.52	2.67	2.84	3.00	3.18	3.37	3.57
Trust Fund from IMF gold sales	-	-	-	-	0.29	0.29	0.29	0.29	-
SDR link	-	0.92	0.92	0.92	0.92	0.92	0.92 a/	0.92 a/	0.92 a/
Satelite parking fees	-	-	-	0.03 a/	0.04 a/	0.05 a/	0.07 a/	0.08 a/	0.10 a/

a/ Indicates figures that are more speculative than others.

B. Modalities of obtaining resources on a concessionary basis

190. Resources can be obtained from Governments on a concessionary basis as a form of official developmental assistance, or they can be obtained from governmental or private sources on commercial terms and converted to concessional resources by interest subsidies. Every dollar of interest subsidy can create several times as much in the way of concessionary resources. The exact rates will depend on the terms of the commercial borrowing and the degree of concessionality desired.

191. Providing the lender reassurance that the loan will be repaid is crucial. This can be done by offering collateral or some form of guarantee or possibly both.

192. Collateral could be money raised in any number of ways or physical assets, such as gold, pledged by international financial institutions or governments. One possibility to be explored is the use of part of the gold of the IMF as collateral.

193. Participating governments could provide a joint and several guarantee under which each government would assume responsibility for repayment of the entire amount of a given loan, or they could provide merely a several guarantee under which the liability of each government would be limited to a specified fraction of the loan. An intermediate arrangement would be for participating governments to contribute to a fund on which creditors could draw in the event of a default.

194. This last arrangement is somewhat similar to the more common use of callable capital as backing for a loan. The callable capital could in principle be that of the borrowing institution or that of an international financial institution. In the latter case, the Financial Institution would guarantee repayment of the loan and might also act as the agent of the borrowing institution in obtaining it.

195. The strength and credibility of the reassurances provided lenders - in the form of collateral or guarantees or both - would determine whether borrowing was possible and on what terms. The terms of a loan would in turn determine the size of the interest subsidies required to achieve a desired degree of concessionality. The adequacy of reassurance to lenders is therefore the essential component of any effort to mobilize resources on concessional terms.

C. Independent financial corporation

196. The General Assembly's request that the group of experts should provide a feasibility study and working plan for a financial corporation implies a willingness on the part of the international community to supply such a corporation with interest-free resources. The experts had little difficulty therefore, in designing an independent operating financial corporation for the financing of desertification projects.

197. The plan calls for a corporation independent of other financial institutions, with a minimum capital of $100 million subscribed by its members in equal shares of $1 million each. It is intended to operate with a predictable flow of interest-free loans contributed by the majority of the member countries of the United Nations. The contributors to these 24-year loans would be asked to pledge a supply of loan funds in the first instance amounting to $500 million per annum for seven years. They would be requested to replenish the supply after intervals of seven years.

198. It is important to recognise that the corporation's raison d'être is to operate on the extreme end of the project feasibility scale. It will finance those long-term desertification projects which, although possessing definable economic and social viability, will produce returns which cannot be quantified at the time of project preparation, and so the project would not be entertained by the existing financial institutions. About one-fifth of all desertification expenditures is expected to fall into this category, representing some $500 million out of an annual total expenditure of $2.4 billion.

199. The ultimate borrower of interest-free money would be offered loans for periods of between 40 and 45 years. Nothing would be paid on the loan in the first 5 years but a nominal payment of 2 1/2 per cent per annum would be required over the remainder of its life. The payments over the first 20 years would be regarded as interest, after which the remaining payments would retire the loan in 15 to 20 years.

200. As the corporation gains experience in the management of its loan portfolio, the possibility of raising additional resources through the issue of its own bonds would be considered.

D. Co-ordinated financing plans

201. Two broad sources of funds to finance the Plan of Action to Combat Desertification have been described above: additional means of financing (paras. 188-189) and interest free loans to an independent financial corporation (paras 196-200). Only a fraction (possibly 10 to 15 per cent) of funds raised by additional means of financing could, however, be expected to be available for anti-desertification purposes.

202. Table 11 above presents estimates of the total amounts that might be obtained by the various additional means of financing over the period 1982 to 1990. With one exception, the funds raised by additional means of financing would be turned over initially to a new central institution or treasury established for that purpose. That institution would make allocations for specific purposes, including anti-desertification.

203. Money provided by the Second Window of the Common Fund for Commodities would presumably be earmarked from the beginning for a specific anti-desertification activity and would not be deposited in the treasury.

204. Funds raised by additional means of financing and made available for anti-desertification purposes could be administered by the existing Environment Fund, the independent financial corporation, or the Special account for Desertification established in 1978.

205. Money raised by additional means of financing could be used directly for anti-desertification purposes, or they could be used as interest subsidies to permit the relending on concessional terms of funds borrowed on commercial terms. This kind of borrowing and relending could be undertaken by the independent financial corporation under modalities described in paragraphs 190 to 195 above.

206. Although the additional means of financing and the independent financial corporation can be usefully related, they are not interdependent. Both approaches to financing the Plan of Action to Combat Desertification can and should be pursued separately.

207. The corporation should be created as soon as possible with the capital and assets described in paragraphs 196 to 200 above. Its assets could be expanded later by drawing on funds raised by additional means of financing. At some point, a decision could also be made on whether the corporation should borrow additional funds using its augmented assets as collateral. Guarantees by interested governments might also be necessary. In time, the corporation might arrange for callable capital as a substitute for guarantees.

208. The estimated yield of additional means of financing plus the initial assets of the independent financial corporation could support an average annual anti-desertification effort of about $400 million over the period 1982 to 1990. 39/ This is less than one-fourth of the average annual financing of $1.8 billion additional external funds that is required to carry out the Plan of Action over the next 20 years. Even though annual expenditures in the next few years need not be as high as the average for the 20-year period, additional financial resources are clearly needed.

209. Such resources might be obtained by increasing the yield of the additional means of financing (for example, the trade tax rate might be raised above the assumed 0.1 per cent), by allocating more than 10 per cent of the funds raised by additional means of financing to anti-desertification, or by borrowing additional money on commercial terms and using prospectively available funds as interest subsidies to permit re-lending such money on concessional terms.

39/ This estimate assumes that 10 per cent of the $33.66 billion from additional means of financing would be allocated to anti-desertification and that $200 million of the $500 million in interest-free loans received by the corporation would have been re-lent by 1990.

APPENDIX

Participants in the group of high level specialists in international financing convened by the Executive Director of the United Nations Environment Programme to prepare a study on financing the Plan of Action to Combat Desertification

(serving in personal capacities)

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