Third United Nations Conference on the Law of the Sea

1973-1982
Concluded at Montego Bay, Jamaica on 10 December 1982

Document:-
A/CONF.62/C.1/L.19

Costs of the Authority and contractual means of financing its activities

Extract from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume VII (Summary Records, Plenary, General Committee, First, Second and Third Committees, as well as Documents of the Conference, Sixth Session)*

List of Documents

DOCUMENTS OF THE FIRST COMMITTEE

DOCUMENT A/CONF.62/C.1/L.19

Costs of the Authority and contractual means of financing its activities

[*Original: English*]
[*18 May 1977*]

TABLE OF CONTENTS

I. Introduction

1. This report contains the studies and information requested from the Secretariat by the First Committee at the meetings held during the fifth session of the Third United Nations Conference on the Law of the Sea. It was agreed at those meetings that the Secretariat should prepare, for presentation at the sixth session of the Conference, two studies on certain legal and financial questions connected with the Authority and particularly with one of its organs—the Enterprise. The first study was to provide information on the probable costs of operating the Authority.[2] It was subsequently requested that this study should be expanded so as "to give the delegations appropriate guidelines regarding the financial arrangements, to ensure that the Authority obtained an adequate income from the activities carried on in the area, without pre-

[2] See *Official Records of the Third United Nations Conference on the Law of the Sea*, vol. VI (United Nations publication, Sales No. E.77.V.2), First Committee, 28th meeting.

cluding subsequent more detailed indication of possible incentives, as might be needed for the participation of potential contractors".[3] The second study was to be a continuation of the preliminary note on "Alternative means of financing the enterprise" submitted by the Secretary-General during the fifth session of the Conference in document A/CONF.62/C.1/L.17.[4] Following consultations held with the Chairman of the First Committee, it was agreed that this additional work should be focused on the preparation of a descriptive study of agreements concluded between Governments of developing countries and foreign enterprises for the exploration and exploitation of non-renewable resources.

2. The three subjects mentioned (costs of the Authority, financial arrangements of the Authority and national experience regarding contracts for the exploration and exploitation of natural resources) are all closely related, although they could be dealt with separately. It seemed advisable to deal with them together, in order to better illustrate how each would form part of the vast and complex question of the financing of the Authority.

3. There is an obvious relationship between the problem of the costs of operating the Authority and the question of its financing, since one of the sources of financing would be the financial arrangements between the Authority and the entities operating in the Area. According to article 46 of part I of the revised single negotiating text,[5] "all receipts of the Authority arising from activities in the Area shall be paid into the General Fund", from which all the expenses of the Authority, including any expenses incurred by it in carrying out the functions entrusted to it by the convention, shall be met to an extent to be determined by the Assembly on the recommendation of the Council (article 48, para. 2).

4. There is also, as has been pointed out in the First Committee, a clear relationship between the question of the financing of the Authority and the question of the financing of the Enterprise, which is one aspect of the former question. In the revised single negotiating text there are some provisions which touch upon the flow of funds from one entity to another. The contribution of the Authority to the financing of the Enterprise was briefly examined in paragraphs 15 and 16 of document A/CONF.62/C.1/L.17. On the other hand, article 46 of the negotiating text sets forth that "any excess of revenues of the Enterprise over its expenses and costs" shall be deposited in the General Fund. Besides, it should be borne in mind that the relationship between the Authority and the Enterprise is the same as the relationship between the whole and one of its parts, and therefore the financing of the latter cannot be treated in isolation from the financing of the former, although the problems posed in each case are not always identical.

5. In addition, it should be noted that the information on the elements usually included in the relevant financial arrangements as well as the information on some legal forms adopted by Governments of developing countries in their relations with foreign companies for the exploitation of their natural resources, may be used in the study of the financing of the activities of the Authority, both when it is acting in association with other entities and when it is acting through the Enterprise. In accordance with article 22 of part I of the revised single negotiating text, activities in the Area are to be conducted in two ways: either directly by the Authority (through its operational organ, the Enterprise) or in association with the Authority by States Parties, or State enterprises or persons natural or juridical which possess the nationality of States Parties or are effectively controlled by them or their nationals, when sponsored by such States, or any group of the foregoing.

6. Each avenue of exploitation presents a different set of problems. In the case of exploitation through the Enterprise the basic problem is how to ensure that the Enterprise has the necessary financial and technical means to enable it to conduct operations in the Area. Reference was made in document A/CONF.62/C.1/L.17 to various ways in which the Enterprise could obtain such resources (amounts determined from time to time by the Assembly out of the Special Fund; voluntary contributions made by States Parties; amounts borrowed by the Enterprise). In paragraph 40 of that document it was suggested that the Enterprise could obtain the necessary financial means through entering into contractual arrangements similar to those which some Governments of developing countries conclude with foreign enterprises for the exploitation of their natural resources. The general information given on existing contractual arrangements has therefore been supplemented by a special section on the question of the legal capacity of the Enterprise to enter into certain kinds of contracts in connexion with the exploration and exploitation of the resources of the Area.

7. The Authority, on the other hand, has the power to conclude contracts of exploration and exploitation with the entities enumerated in article 22 of the negotiating text. The text did not clarify some important aspects connected with the conclusion of these contracts, such as the determination of which organ of the Authority should negotiate and sign them. Article 22 refers to associations between the Authority and the other entities engaged in activities in accordance with a plan of work in the form of a contract of exploration and exploitation. This formulation seems to give the parties considerable flexibility to conclude any of the types of contract which have been used for the exploitation of natural resources. The only contracts which seem to be excluded would be those which, like traditional concessions, would be incompatible with the provisions of the revised single negotiating text concerning, for instance, the control exercised by the Authority over the activities.

8. Both the information on contractual arrangements concluded by Governments of developing countries with foreign companies, and the study on the elements in the financial arrangements which was prepared as requested, in the context of the financing of the activities to be undertaken by the Authority in association with third parties, would seem to be equally useful in the two approaches to exploitation, notwithstanding the particular problem of each.

9. This study thus covers the three requests made by the First Committee which are set out in the following order: the second part contains a rough estimate of the costs of the Authority; the third part, section A, analyses the special situation of the Authority and the Enterprise with respect to the resources of the Area; section B follows with a brief description of current trends with regard to mining and petroleum contracts, giving examples of some kinds of them; section C refers to the basic elements normally contained in financial arrangements concluded

[3] *Ibid.*, 37th meeting.
[4] *Ibid.*, vol. VI.
[5] *Ibid.*, vol. V (United Nations publication, Sales No. E.76.V.8), document A/CONF.62/WP.8/Rev.1.

between Governments and contractors; and lastly, in section D, some reflections on the contractual capacity of the Enterprise are made.

10. The same caveat as was expressed in document A/CONF.62/C.1/L.17 (para. 4) should be reiterated in this additional note. All references to the functions, rights and duties of the Authority, to its sources of finance, to the competence of the Enterprise, and so on, are based on the revised single negotiating text, and their validity will therefore depend on whether or not the relevant provisions are retained.

II. Costs of the Authority

A. General remarks

11. It is evident that the estimates given below must be somewhat—in some cases indeed highly—speculative, both by reason of the relatively early stage of work on the subject and because it remains to be seen how the many assumptions which had perforce to be made will correspond to actual circumstances and requirements. The guesses made probably err on the low side in a number of instances. It should also be noted that a substantial portion of costs related to the establishment of the headquarters of the Authority are treated very tentatively or not at all. Figures on costs of the conference complex that will be required have not been attempted, nor have the costs associated with building maintenance or the installation and operation of a communications network, interpretation and reproduction facilities, etc. No solid assessment of these costs can be made without detailed exploration on the spot and with appropriate officials of the prospective host country. On the other hand the figures do include amounts covering initial rental of premises. All the estimates presented in the following tables have been based on prevailing New York rates and will, of course, require later revision. Finally, the present study does not review the estimates on the administrative costs of the Enterprise which were presented in document A/CONF.62/C.1/L.17. Since the Enterprise is part of the Authority, however, the estimates made earlier are added to the figures given below.

12. Certain assumptions have had to be made where the required single negotiating text did not provide specific guidance. It has been assumed that the duration of regular sessions of the Assembly each year would probably last two months and that the languages of the Assembly would be the same as those of the Conference, namely, Arabic, Chinese, English, French, Russian and Spanish. As regards the Tribunal, the estimates assume a total of three weeks of meetings per annum with interpretation into two languages on the model of the International Court of Justice. No summary records have been allowed for in respect of the Tribunal. It may be noted that the estimates of appropriate salary to be paid to members of the Tribunal will need review in the light of the qualifications and experience required.

13. As regards the Council of the Authority it has been assumed that the official languages will correspond to those of the Assembly and costs have been based on the holding of three sessions each year lasting two weeks each.

14. All three of the Commissions of the Council, it has been assumed, would also use the same six official languages as the Assembly. The Commissions may need approximately 20 weeks of meetings total per annum and it is assumed that they would not meet at the same time as the Assembly or the Council. The costs associated with the servicing of those meetings could therefore be absorbed by the permanent conference staff. It is presumed that they will probably not need summary records. Since the revised single negotiating text does not indicate whether the members of the Commissions would be treated analogously to certain United Nations expert bodies, the estimates do not include remuneration.

15. The secretariat of the Authority, it has been calculated, will probably require fairly substantial consultant services in the first months of operation and by the end of its first year in operation, some 142 Professional posts, a great many of which, owing to the nature of the qualifications called for, must be at a relatively high level. The further assumption has been made that the number of professionals would probably remain unchanged until about the third year. The substantive departments of the secretariat have been envisaged as comprising a legal division, an economic division and a technical division. The latter would presumably have to include engineers, marine geologists, environmentalists, metallurgical engineers, safety experts, etc. It has been assumed that the nucleus of an inspection system would have to be established within the first three years to be developed later as activities grow in the area.

16. Supporting services such as administration, finance, interpretation, translation, etc. and special requirements such as the auditing of the Authority's books, etc. will presumably need to be independent of headquarters to an extent to be determined by the status of the Authority in relation to the United Nations system. All figures provided in these repects will clearly require revision in the light of developments.

B. Tables of estimates

Summary

		(In U.S. dollars)
A.	Meetings and conferences	
	I. The Assembly	1 059 000
	II. The Tribunal[a]	618 600
	III. The Council	889 900
	IV. The Commissions[b]	225 600
B.	The secretariat[c]	8 543 300
C.	Permanent equipment[d]	404 700
D.	General expenses[e]	2 032 300
E.	Documentation	70 000
F.	Administrative costs of the Enterprise[f]	2 825 000
	Grand total	16 668 400

[a] Includes estimates for the servicing of meetings, and the travel and salaries of the 11 members of the Tribunal.

[b] Estimated cost represents travel and subsistence allowance for the 48 members of the three Commissions.

[c] Includes salaries and common staff costs for 328 staff members, consultants' fees and travel, temporary assistance and overtime, other travel of staff and hospitality.

[d] Total estimated cost provides for the basic requirements in such areas as furniture and fixtures, office equipment, transportation equipment, building maintenance and grounds equipment, security and safety equipment and miscellaneous equipment. It must be noted, however, that no estimate has been attempted for conference servicing and reproduction equipment, communications network and medical equipment.

[e] Includes rental of premises, supplies and materials, postage, cable and telex charges, pouch and freight, telephone, uniforms for security guards and manual workers, petrol and other lubricants (for the four vehicles), rental and maintenance of equipment (e.g. xerox machines, etc.) and provision for minor alterations to premises.

[f] See A/CONF.62/C.1/L.17, paras, 5-8. This figure is the estimate for the first year.

International Sea-Bed Authority

		(In U.S. dollars)
A. MEETINGS AND CONFERENCES		
I. THE ASSEMBLY (annual session of 8 weeks in 6 languages)		
In-session		
(a) Interpretation:		
Travel for 20 interpreters at $1 062 each	21 240	
Salary (20 × 58 days × 154)	178 640	
		199 880
(b) Translation:		
Travel for 36 translators × 1 062	38 232	
Salary for 300 man/days of translation at 121	36 300	
		74 532
(c) Revision:		
Travel for 8 revisers	8 496	
Salary for 150 man/days of revision	19 350	
		27 846
(d) Typing:		
Travel for 18 non-local typists	19 116	
Salary for 8 man/months of typing at 1 230	9 840	
Salary for 8½ man/months of typing at 750	6 375	
		35 331
(e) Other staff:		
Conference and documents clerk	3 000	
Telecommunications engineering services	39 900	
(f) Reproduction and distribution of documents	10 100	
		53 000
		390 500
Summary records		
(a) Translation:		
Salary for 26 translators—26 × 121 × 56	176 176	
(b) Revision:		
Salary for 6 revisers—6 × 129 × 56	43 344	
(c) Typing:		
Salary for 18 non-local typists—18 × 1 230 × 2	44 280	
Salary for 18 local typists—18 × 750 × 2	27 000	
(d) Reproduction and distribution of documents	77 700	
		368 500
Pre-and post-session documentation estimated at		300 000
TOTAL		1 059 000
II. THE TRIBUNAL (three weeks of meetings in two languages)		
(a) Members of the Tribunal:		
Travel: 11 members, each $3 000 per annum	33 000	
Salary: Chairman	50 000	
10 members, each $40 000	400 000	
		483 000
(b) Interpretation:		
Fees, travel and subsistence for 6 interpreters		
6 × 1 062	6 372	
6 × 154 × 20	18 480	
		24 852
(c) Translation:		
Fees, travel and subsistence for 4 translators		
4 × 1 062	4 248	
4 × 121 × 20	9 680	
		13 928

List of Documents

International Sea-Bed Authority (*continued*)

		(In U.S. dollars)
(*d*) Revision:		
Fees, travel and subsistence for 2 revisers		
2 × 1 062	2 124	
4 × 129 × 20	10 320	
		12 444
(*e*) Typing: fees for 5 typists—5 × 750 × 22	82 500	
(*f*) Other staff:		
Conference officer and Documents clerk	1 500	
(*g*) Reproduction and distribution of documents	400	
		84 400
TOTAL		618 600

III. THE COUNCIL (3 sessions of 2 weeks each in 6 languages)

In-session		
(*a*) Interpretation:		
Travel for 20 interpreters—20 × 1 062 × 3	63 720	
Salary and subsistence—20 × 154 × 30	92 400	
		156 120
(*b*) Translation:		
Travel for 32 translators—32 × 1 062 × 3	101 952	
Salary and subsistence—200 man/days of translation 200 × 121	24 200	
		126 152
(*c*) Revision:		
Travel for 6 revisers—6 × 1 062 × 3	19 116	
Salary and subsistence for 100 man/days of revision 100 × 129	12 900	
		32 016
(*d*) Typing:		
Travel for 18 typists (non-local)—18 × 1 062 × 3	57 348	
Salary and subsistence for 3 typists for 2 months 3 × 1 230 × 2	7 380	
Salary for 4 local typists for 2 months 4 × 750 × 2	6 000	
		70 728
(*e*) Other staff:		
Conference officer and Documents clerk	1 500	
(*f*) Reproduction and distribution of documents	3 620	
		5 120
		390 100
Summary records		
(*a*) Translation—26 × 121 × 30	94 380	
(*b*) Revision—6 × 129 × 30	23 220	
(*c*) Typing:		
18 × 1 230 × 2	44 280	
18 × 750 × 2	27 000	
(*d*) Reproduction and distribution of documents	60 950	
		249 830
Pre-session and post-session documentation estimated at		250 000
TOTAL		889 900

International Sea-Bed Authority *(continued)*

	(In U.S. dollars)	
IV. THE COMMISSIONS (ECONOMIC AND PLANNING, TECHNICAL AND RULES AND REGULATIONS COMMISSIONS)		
Members of the Commissions:		
Travel: 48 members, each $3 000	144 000	
Subsistence: 48 × 50 × 34 days	81 600	
TOTAL		225 600
B. THE SECRETARIAT (see proposed staffing table)		
Established posts	6 214 600	
Consultants	150 000	
Temporary assistance and overtime	50 000	
Common staff costs	1 988 700	
Travel of staff	120 000	
Hospitality	20 000	
TOTAL		8 543 300
C. PERMANENT EQUIPMENT		
(*a*) Furniture and fixtures (one-time cost)	230 500	
(*b*) Office equipment (includes typewriters, calculating and adding machines, shelving units, filing cabinets, spirit-duplicating machines, etc.)	60 700	
(*c*) Conference servicing and reproduction equipment	[a]	
(*d*) Transportation equipment—purchase of 4 official vehicles	18 000	
(*e*) Communications equipment	[a]	
(*f*) Other equipment:		
Building maintenance and grounds equipment	53 000	
Medical equipment	[a]	
Security and safety equipment	35 500	
Miscellaneous equipment	7 000	
TOTAL		404 700
D. GENERAL EXPENSES		
(*a*) Maintenance, operation and rental of premises	1 482 600	
(*b*) Minor alterations to premises	50 000	
(*c*) Rental and maintenance of equipment	80 000	
(*d*) Petrol and other lubricants	6 000	
(*e*) Supplies and materials:		
Stationery and office supplies	88 500	
Acquisition of books	18 000	
Subscription to publications and periodicals	10 000	
(*f*) Communications (includes postage, cable and telex charges, pouch and freight, telephone)	284 100	
(*g*) Other supplies (uniforms for security guards and manual workers, etc.)	13 100	
TOTAL		2 032 300
E. DOCUMENTATION		70 000
F. ADMINISTRATIVE COSTS OF THE ENTERPRISE		2 825 000
GRAND TOTAL		16 668 400

[a] No attempt is made at this time to provide an estimate on items such as interpretation equipment, printing equipment, communications network equipment and medical equipment.

Proposed staffing table—International Sea-Bed Authority

	Professional and above										*General Service and other categories*					
	Director General	*Under Secretary-General*	*Assistant Secretary-General*	*D-2*	*D-1*	*P-5*	*P-4*	*P-3*	*P-2/1*	*Total*	*Principal Level*	*Other Levels*	*Security Service*	*Manual Workers*	*Total*	*Grand Total*
1. *Office of the Director-General*	1	1	—	1	1	—	1	—	—	5	1	3	—	—	4	9
2. *Legal Division*	—	—	—	—	1	5	6	7	5	24	1	6	—	—	7	31
3. *Economics Division*	—	—	—	—	1	5	6	6	6	24	1	6	—	—	7	31
4. *Technical Division*	—	—	—	—	1	5	6	6	3	21	1	5	—	—	6	27
5. *Administrative and Financial Services*	—	—	—	—	1	4	6	6	6	23	4	72	15	45	136	159
6. *Permanent conference staff*	—	—	—	—	—	2	25	12	6	45	1	25	—	—	26	71
	1	1	—	1	5	21	50	37	26	142	9	117	15	45	186	328

III. Contractual financing of the Authority

A. Special situation of the Authority and the Enterprise

17. The experience of developing countries in contracting with foreign enterprises for the development of their natural resources can be of interest to the First Committee in dealing with the subjects of the financing of the Authority and the Enterprise. The analysis of the contracts concluded between developing countries and foreign enterprises for the exploitation of oil and minerals shows the various legal formulae which the Governments of those countries have tried as solutions to a problem somewhat similar to that with which the Authority and the Enterprise will have to deal. In both cases there is an entity possessing rights—including the rights of exploitation and disposal—over a number of resources, and in both cases the entity concerned, lacking the financial, technological and administrative means to carry out such exploitation, may need to resort to external sources in order to obtain them.

18. The guidance which may be derived from the experience of the developing countries is not, however, entirely applicable to the Authority and the Enterprise. The Authority and the Enterprise, once they are in operation, will differ from States in their legal nature, just as the kind of relationship which exists between States and their natural resources will differ from that between the Authority and the Enterprise, and the resources of the Area. In the former case, there is a relationship based on the notion of national sovereignty; in the latter, the idea of sovereignty is absent and in its place there is the concept of the common heritage of mankind. The Authority will be acting in relation to those resources on behalf of mankind as a whole, as indicated in paragraph 1 of the revised single negotiating text, and it is in that capacity that it will exercise rights over such resources.

19. It should also be borne in mind that the nature of the resource to be exploited can considerably affect the kind of contractual arrangement agreed upon between the entity to which the resources belong and the entity carrying out the exploitation. It may be that some of the contractual arrangements which are suited to the characteristics of petroleum production and marketing are not the ones best suited to the kind of activity the Authority will be carrying out in the foreseeable future, which has so far been conceived of basically in terms of production of the metals contained in manganese nodules. This point must be borne in mind especially because, owing to the paucity of materials which were available for the preparation of this report, most of the arrangements mentioned are contracts relating to petroleum exploration and production. The production-sharing contract, for example, is normally associated with the petroleum industry, possibly because Governments have found it easier in the case of petroleum than in that of other minerals, to sell their share of production both at home and abroad.

20. Another factor to be taken into account is the level of development of the producing country, which largely determines the extent of its participation in the exploiting enterprise when it forms an association with a foreign company. Thus, it has been pointed out that countries with a considerable measure of industrial development are in a better position to demand greater participation than can be sought by other countries where the lack of entrepreneurial skills, technical and scientific know-how and commercial experience is more marked. From this standpoint, the position of the Authority would seem to be closer to the latter category of countries. Although, as regards capital, its negotiating capacity will depend on the system of financing laid down in the convention, its position with respect to technological expertise and administrative and commercial experience will be one of dependence on certain enterprises based in developed countries, at least during its first few years of operation. The problem of the ability and capacity of the Authority and the Enterprise to acquire technology on the open market is dealt with in some detail in section D of this document.

21. Furthermore, some of the contractual arrangements recently employed in the mining and petroleum industries were possible because they involved the modification of contractual relationships already in existence between Governments and enterprises with regard to ongoing operations the results of which were already known. In the case of the Authority, a new contractual relationship will have to be established with respect to activities the technical and commercial risks of which are not fully

known and the results of which cannot be predicted. It should also be remembered that, in choosing this or that contractual arrangement, Governments frequently act in the light of political factors which will not arise (or will arise in a different way) in the decisions of the Authority. For example, in some cases, in order to meet the demands of growing nationalism and reaffirm the exercise of sovereign rights over resources, there are national laws laying down that title to the mineral extracted shall not pass until it is sold on the market. This precludes the use of some kind on contracts, under which the parties exercise rights over the minerals in the agreed proportions from the time of extraction. Political factors, particularly the desire to demonstrate the State's sovereignty over its resources, have often prevailed over all other considerations in the choice of the type of legal ties to be established between the Government and the foreign enterprise, the outcome being that from the economic standpoint the results have not always been satisfactory.[6]

22. An important feature of the situation of the Authority and the Enterprise which raises questions not easily resolved, is the novelty of their relationship and the relationship between each of them and a prospective contractor concerning taxation. Taxation, it must be noted, is generally an important factor in determining the financial terms of a contract and is discussed in this report to some extent. Little further can be said on this matter at this stage since the only relevant provisions in the revised single negotiating text merely contain reference to "charges" (annex II, para. 6 (*a*) (iv)), and the clauses concerning financial agreements have not yet been discussed. It may be appropriate for the First Committee to study the problem of the relationship between charges to be imposed by the Authority and taxation which is imposed by Governments within the terms of existing mineral contracts, with a view to establishing clear guidelines that would minimize the posibility of future problems analagous to double taxation.

23. Just as the rights that a State possesses over its resources determine its negotiating positions vis-à-vis foreign contractors, so the rights conferred on the Authority and on the Enterprise under the convention, and the financial and other means allocated to them, will determine their negotiating position vis-à-vis States Parties and other entities having the capacity to contract with them. The position of States is, in principle, very strong; for, through the exercise of their rights of sovereignty, they are in a position to decide with a considerable degree of latitude whether or not to permit the exploitation of those resources by foreign enterprises and, if so, on what terms. Of course, there are many factors influencing the bargaining position of the host country.[7] In respect to the Authority, again little can be said on this point at the present stage of the negotiations. Its position vis-à-vis entities wishing to carry out activities in the Area will depend upon the exploitation régime which will finally be adopted, and in particular on what solutions are agreed to in such matters as access to the Area, the resource policy and the discretion of the Authority to award or deny contracts.

24. The negotiating position of the Enterprise will vary according to whether or not the convention includes a mechanism such as is envisaged in annex I, subparagraph (*d*) of paragraph 8 of the revised single negotiating text. If that provision is applied, the Enterprise can expect, after a while, to have at its disposal a number of potentially mineable areas in which the prospecting phase has already been completed. These areas, selected by the Authority, to be exploited by it directly or under its control in association with developing countries or entities sponsored by them (annex I, para. 8 (*d*) (ii)), are presumably areas with great potential for profitable economic exploitation, since the applicant who proposed the area must, in his own interests, have submitted two commercially valuable areas in order to avoid the risk of the Authority assigning him an area of no value. Thus, the degree of similarity between the position of the Enterprise and developing countries vis-à-vis potential contractors and hence the possibility of its adopting legal and economic procedures and formulae used by them, will depend upon the system of exploitation finally adopted.

25. In spite of the differences between the Authority and the developing countries as regards exploitation of their resources, the basic similarity between both situations, namely the lack or inadequacy of financial, administrative and technological means for the carrying on of the exploitation, seems to justify a study of national experience in contracting for the exploitation of natural resources. In section B below the different types of contract are examined in some detail, pointing out the trends which have been marked in recent years. In section C, the elements which will possibly be of interest to the Authority when entering into financial arrangements with the contractor are analysed, whereas those points of particular interest to the Enterprise and its requirements in terms of obtaining financial and technological resources through contracts, are presented in section D.

B. THE PRACTICE OF DEVELOPING COUNTRIES IN CONTRACTING FOR THE DEVELOPMENT OF THEIR NATURAL RESOURCES

(a) *General remarks*

26. Developing countries have used many different kinds of legal arrangements for the exploitation of their resources and the acquisition of the necessary technological and financial means. Capital is acquired through loans granted by other Governments or by international financial agencies, or through direct foreign investment; technology may be transferred by direct acquisition or as a corollary to direct capital investment. When, in such cases, the transfer of technology is from the parent company abroad to a subsidiary owned by it, there is, strictly speaking, no transfer, and the benefits to the recipient country are minimal. Sometimes, however, the recipient enterprise may be a company in which the supplier of the know-how merely has a financial interest—perhaps even a minority interest—or no interest at all, the company being completely independent. In such cases, the transfer of technology takes place independently of any capital investment, whether by direct acquisition (e.g. through a licence agreement), the formation of a joint venture, or by other forms of association in which the contribution of the foreign partner consists of the transfer of know-how in return for a consideration that can be, *inter alia*, a share in production or a share of the profits.

27. A wide variety of terms are used by developing countries: concession, mineral lease, economic development agreement, work contract, service contract, production-sharing agreement, participation agreement, joint venture, ownership-sharing agreement, equity-sharing agreement, operation contract, contract of association, etc. These

[6] David N. Smith and Louis T. Wells, *Negotiating Third World Mineral Agreements: Promises as Prologue*, Cambridge, Massachusetts, 1975, p. 23.

[7] *Ibid.*, p. 15 ff.

are not hard and fast categories since evolving contractual practice has produced variations; in some cases the difference in terminology is simply a matter of national usage.[8]

28. The national laws of developing countries seldom make the inclusion of specific clauses in contracts mandatory or impose rigid terms in the case of agreements for the exploitation of natural resources. Usually, the law sets the general lines along which agreements must be negotiated, and this gives the bodies responsible for negotiations more flexibility in adapting the terms of contracts to the individual circumstances of each case. In the oil-producing countries, there are two distinct approaches to the legal regulation of the petroleum industry. First, there are the countries with a legal system consisting of laws, decrees and regulations which lay down in advance how rights in hydrocarbons are to be exercised and transmitted, and how exploitation is to be carried out. In other countries, national laws contain only provisions of a general nature, and the exploitation of hydrocarbons is carried out on the basis of contracts the terms of which are negotiated in each individual case. As a result of the considerable experience which some oil-producing countries now have, many of the terms of agreement have become standard formulae included in all contracts, which makes for less flexibility in negotiations.[9]

29. In the mining industry, the national law (mining codes, foreign investment laws, and general income tax codes) usually provides a general negotiating framework, and determination of the specific terms of the agreement is left to the outcome of negotiations.[10] This allows the Government more flexibility in the negotiations, enabling it to include those terms which it considers most desirable, according to the circumstances of each case. A number of reasons have been advanced for this approach. The first is the special problems which arise for the producing country in negotiating with multinational corporations. For example, there is the problem of transfer pricing between affiliated companies, a practice that creates difficulties in the application of the taxation and exchange control laws, which do not provide for such situations. Secondly, where the mining industry plays an important role in a country's economy, the authorities prefer to negotiate the terms of agreements in the light of the particular circumstances of each case, instead of enacting very detailed legislation. Lastly, the legal tradition in many producing countries favours the regulation of such matters by administrative decisions (decrees or regulations) leaving general laws to provide the guidelines.[11] For that reason, the contracts which developing countries have concluded in recent years for the exploitation of natural resources tend to be detailed, complex and all-embracing instruments which regulate all aspects of the relationship between the parties: conditions of exploitation, control, administration, financing, technology, questions of taxation and foreign exchange, forms of remuneration, import and export regulations, employment policy and conditions, and so on.

30. Of course, this does not mean that national laws do not contain indications as regards the type of the contract to be concluded, or its content. In some cases, national laws or decrees stipulate and define the type of contract which must be used (Indonesia, Iran, Ecuador, Chile, Bolivia). In other cases, the law prohibits the conclusion of certain types of agreement; for example, in Iraq the granting of petroleum concessions is prohibited by law (law No. 97 of 1967). The State enterprise, the Iraq National Oil Company (INOC), may carry out directly exploration of the areas assigned to it, or, by way of partnership with other enterprises, "if it finds this better for the realization of its purposes", but any such partnership must be approved by law and may in no case constitute a concession or similar agreement, nor can it affect the public property status of petroleum or hydrocarbons existing in the national territory.

(b) *The evolution from traditional concession to new forms of association*

(i) *Concessions*

31. Most contracts concluded by Governments of developing countries for the exploitation of hydrocarbons and mineral resources require the company contracting with the Government to contribute all the technological and financial resources. The simplest form is the traditional concession, under which the concessionnaire acquires the ownership of resources discovered and produced in a given area during the term of the contract and the right to dispose of them in return for payment of a consideration. Concessions of the traditional kind were often granted for very large areas (in many cases, larger than the concessionaire was capable of exploiting) and for very long periods. Under these contracts, the concessionnaire assumed all risks, took all decisions and managed all operations. Accordingly, the concessionnaire decided on production schedules and set prices without any intervention by the local Government. The Government generally refrained from any kind of control over, or intervention in, the operations and simply received the agreed financial consideration. This consideration varied according to the financial arrangements that had been agreed upon and may consist of many elements (see section C below).

32. During the last decades the concession in its traditional form has undergone a series of changes so as to ensure that the host country would receive a larger percentage of the benefits from exploitation. These changes included the following: an increase in the fees paid by the concessionnaire upon signature of the contract, upon the discovery of commercially exploitable deposits, and in respect of production and export; an increase in the minimum amount to be spent on exploration; an increase in rentals and royalties; assurances of additional benefits, such as an undertaking by the contracting enterprise to finance industrial projects (e.g., in the case of petroleum exploitation, an undertaking to set up refineries, petrochemical plants, etc.); speedier return of areas explored, purchase of local goods and services, recruitment and training of national personnel, and so on.[12]

33. A further step in this process was the introduction of the idea of giving the producing country a share in the

---

[8] On this subject see: "Minerals: Salient Issues: report of the Secretary-General" (E/C.7/68); "Permanent Sovereignty over Natural Resources: report of the Secretary-General" (E/C.7/66); Smith and Wells, op. cit.; Thomas W. Waelde, "Lifting the Veil from Transnational Mineral Contracts: a Review of Recent Literature", *Natural Resources Forum*, vol. 1, No. 3, April 1977; Stephen A. Zorn, "New Developments in Third World Mining Agreements", *Natural Resources Forum*, vol. 1, No. 3, April 1977.

[9] J. Montel: "Concession versus Contract", *Continuity and Change in the World Oil Industry*, edited by Z. Wikdashi, S. Cleland and I. Seymour, Beirut, 1970, p. 105.

[10] Smith and Wells, op. cit., p. 28.

[11] *Ibid.*, p. 29.

[12] Henry Cattan: "Present Trends in Middle Eastern Oil Concessions and Agreements", *Private Investors Abroad—Problems and Solutions in International Business in 1969*, edited by Virginia S. Cameron, New York, M. Bender, 1969, p. 147.

profits from exploitation. This profit-sharing was achieved by replacing the royalty system with a system of taxes on the concession. Royalties were not actually abolished but were now credited against the tax; in other words, the Government continued to receive the royalties originally contracted for, and then increased the amount payable until it equalled the percentage of profits which had been agreed on (usually 50 per cent), the difference being paid in the form of taxes.[13] The next step was taken in 1965, when the producing countries succeeded in having the royalties treated not as a credit against the taxes due but as an expense to be deducted before the tax rate was applied.[14]

34. While in the case of the apportionment of profits the tendency was to establish equality between the two parties, the same did not apply to the risks, particularly where petroleum was concerned. The usual practice was for the contracting enterprise to undertake to spend not less than a certain amount during the exploration phase, and if no petroleum was found the risks were borne entirely by the contractor. If, on the other hand, petroleum was found in sufficient quantities for commercial exploitation, the contractor received part of the proceeds of the sales of crude petroleum in reimbursement of the investments made during the exploration period.

35. Although in the beginning these changes affected only the financial terms of the relationship between the producing country and the foreign enterprise, so that the legal nature of the contract remained the same, they obviously went beyond the purely financial field. This is pointed out by one author, who states: "... It is evident that this development has constructively converted oil concessions into contractual arrangements between the producing countries and the oil companies in which each party makes its contribution—the producing countries contributing the natural resource and certain facilities and the oil company contributing capital, knowledge and markets—with the profits of the enterprise being equally or substantially shared between them."[15]

(ii) *Government ownership*

36. The predominant trend in recent years in both the mining and the petroleum industries had been towards government participation in the ownership and management of the operating enterprise. This trend involves major departures from the philosophy underlying the traditional type of concession. Governments of producing countries are abandoning the passive attitude which reduced their participation to nothing more than collecting consideration from the contracting enterprise, without involving themselves in the other economic and technical aspects of exploitation. Exploitation began to be viewed as an activity of mutual concern, over which the Government should exercise broader and more direct control. In some cases only the Government concerned may, by law, be involved in direct exploitation of petroleum as for instance in Syria (Decree No. 133 of 22 December 1964) or in Venezuela (Organic Act of 29 August 1975).

37. Participation in the ownership of an enterprise is achieved either through the purchase of shares in an existing company or through the establishment of a joint venture. A joint venture can either be formed immediately upon the conclusion of an agreement or deferred until the natural resources in question are discovered in commercial quantities. Government participation in the enterprise is brought about more or less along the following lines: the Government acts through a State entity, which, in agreement with the foreign enterprise, establishes a new company (sometimes called a "joint venture" or "joint structure"), in which the two parties usually have equal interests. The new company is responsible for carrying out the exploitation operations, but it has no legal personality of its own.

38. In this type of arrangement, the Government may share in capital expenditures or pay cash for its share of net assets. Sometimes it acquires its equity share in lieu of tax revenues which it agrees to forego. A joint venture implies that the Government must have funds available to purchase the shares or must contribute in some way to the joint venture. However, this is not always the case. Under some agreements[16] the contractor assumes the costs of exploration and, in addition, advances to the State enterprise the capital needed for the exploitation phase. As a result, the State enterprise makes no initial investment and uses part of the production assigned to it in order to repay the sums advanced by the contractor.

39. Generally, each partner in the venture possesses voting power or a voice in policy-making or management decisions commensurate with its equity participation. But in some cases, it can be seen that a party's participation in the registered capital of the enterprise is not proportionate to its share in the management and control of activities. Possession of a majority of the shares does not necessarily mean possession of a majority of the votes. In many cases procedural devices have been instituted to protect the interests of the party which has a smaller representation, such as the requirement of special majorities for the adoption of some kinds of decisions.[17] In some cases, each party holds 50 per cent of the registered capital, but in different classes of stock (Class A for one party and Class B for the other), the holders of each class have dif-

[13] The introduction into the petroleum industry of the concept of profit-sharing dates from 1950, when Saudi Arabia concluded with ARAMCO a contract incorporating what was then considered the novel idea of apportioning the profits from exploitation equally between the Government and the concessionnaire (50-50 profit share principle). This apportionment was effected through the imposition of a tax of 50 per cent on the company's earnings. The previous system of royalty payments was retained, but the royalties were computed to the portion of profits due to the Government. This method of remuneration was soon applied to most contracts already in effect and was also incorporated in new concessions, in some cases pursuant to the most-favoured-nation principle, which was applied in the relationship between the producing country and foreign companies whether or not a clause providing for this had been included in the agreement.

[14] Cattan, op. cit., p. 143.

[15] Henry Cattan: *The Evolution of Oil Concessions in the Middle East and North Africa*, 1967, p. XII.

[16] The agreement between the National Oil Company (NOC) of the Libyan Arab Republic and Shell Exploration Libya Ltd. (SHELL), or the agreements concluded by the National Iranian Oil Company (NIOC) with a group of Japanese enterprises in 1971 and with the Mobil Oil Company in the same year.

[17] One example among many was the agreement concluded in 1968 between the Algerian State Agency, SONATRACH, and the Getty Petroleum Company. The two parties agreed to establish "an association in participation for the joint exploration and production of hydrocarbons" in a specified area, but they declare that that association is not a legal entity or a corporation or partnership. It consists solely of a juxtaposition of interests in the proportion of 51 per cent for SONATRACH and 49 per cent for Getty (Article 9). The direction of the association is in the hands of an executive board of seven representatives of the parties, four of whom are chosen by SONATRACH and the other three by Getty. Decisions are taken by a majority of three-fourths of the members present, and six members constitute a quorum. Management is entrusted to SONATRACH.

ferent rights.[18] In other cases, decision-making organs are required to take decisions unanimously, thus giving each party a veto, regardless of its percentage interest in the enterprise.[19] Sometimes, Governments have chosen to remain uninvolved in day-to-day management decisions and the company may then operate under general guidelines or specific plans previously approved by the Government.

40. The national legislation of the developing country sometimes contains provisions specifying that foreign participation in enterprises operating in its territory shall not exceed a certain percentage. Equal participation, or a 50-50 arrangement, has been favoured by one school of thought as the best way of ensuring a spirit of partnership and a feeling of equality between the parties, whereas others consider it the most undesirable arrangement because equality of rights many lead to paralysis of the enterprise.[20] In some cases the foreign enterprise may prefer minority participation, with the aim of reducing the financial risks of investment or because it is unable to contribute all the capital to the venture.

41. The phase of government participation in petroleum exploitation activities in association with foreign enterprises was initiated in 1957, when a contract was concluded between two Egyptian State companies and the Italian State entity, ENI. In the same year, AGIP concluded a similar contract with the National Iranian Oil Company, NIOC.[21] The provisions of this contract attracted widespread attention and served as a model for many subsequent contracts.[22]

---

[18] In the contract between LAMCO of Liberia and Bethlehem in 1960 each party holds 50 per cent of the capital, the Government in Class A stock, and Bethlehem in Class B stock. The holder of Class A shares appoints five members of the Board of Directors, while the holder of Class B shares appoints six.

[19] An example of such a mechanism, which seeks to ensure the protection and the interests of each party, can be found in the contracts concluded by the Colombian Government for the exploration and exploitation of nickel deposits. In 1963 the Colombian Government granted a concession to the Richmond Petroleum Company of Colombia—later the Chevron Petroleum Company of Colombia—for the exploitation of the nickel. In 1970 at the Government's request, Chevron transferred to a State entity, Instituto de Fomento Industrial, and a private company, Compañía de Níquel Colombiano Sociedad Anónima, all its rights under the concession, in the ratio of one third to the State entity and two thirds to the company. For the purpose of performing the contract, the two assignees established a joint venture, the principal organ of which is an Administrative Board consisting of six members. Despite the fact that IFI has a minority interest in the joint venture, it is entitled to select half the members of the Administrative Board, which takes its decisions by an affirmative vote of members representing at least two thirds of the percentage interests on matters of lesser importance and by a unanimous vote on other matters. A settlement procedure has been laid down for cases where unanimity is required but is not achieved. In addition, there is a Technical Committee with advisory, supervisory and inspectorial functions whose members, at least half of whom must be Colombian, are appointed and removed by IFI. An auditor, appointed by the Administrative Board, and an operator to perfom all activities and operations that are necessary to carry out the concession are the remaining organs of the joint venture. The parties agreed, in addition, that the Compañía de Níquel Colombiano Sociedad Anónima would be the operator for the first few years of performance of the contract. The operator was in turn authorized to enter into service contracts with Hanna Mining Company for the provision of technical and management assistance. In remuneration for its services during the production period, Hanna receives a payment which varies according to the quantity of nickel produced. Operations are financed by contributions from the two parties proportionate to their percentage interest. Under recently concluded contract, the Panamanian State enterprise Corporación de Desarrollo Minero Cerro Colorado entered into an association with Texas Gulf Inc. for the purpose of carrying out studies and conducting the necessary operations to produce copper from the Cerro Colorado deposit. In order to achieve the purpose of the contract, the parties establish a private corporation in the form of a limited-liability company (Cerro Colorado S.A.), whose registered capital is divided into two types of shares: 80 per cent Class A shares for the Panamanian public sector, and 20 per cent Class B shares allotted to Texas Gulf. The State enterprise grants Cerro Colorado S.A. exclusive rights to explore, extract, smelt, refine and process the ore, the right to set up industries to use the copper extracted and the right to transport and market it. Cerro Colorado S.A. is managed by a Board of Directors consisting of seven members (five selected by the State Corporation and two by Texas Gulf) and a five-member Executive Committee (two members selected by the State corporation and three by Texas Gulf). In order to adopt major decisions, which are spelt out in the contract, the Board of Directors must obtain the affirmative vote of a majority of the shareholders of both classes. Cerro Colorado S.A. appoints Texas Gulf as manager to direct, perform and supervise all activities and matters relating to the purpose of the contract, in consideration of which it receives fees consisting either of fixed amounts or of a percentage of gross sales of the copper produced, which vary according to the period involved (evaluation, design and construction, and so forth). The managing enterprise carries out its tasks through organs and officials of its choice, subject, however, to the Authority of the Board of Directors. The managing enterprise must obtain the Board's approval for certain major decisions, which are spelt out in the contract.

[20] LAMCO, in Liberia, is one example of a joint venture with equal participation by the Government and by foreign enterprises. Other examples are SIRIP, established in Iran in 1957 by NIOC and AGIP, and IMINOCO, established in 1965 by AGIP, Phillips and the Oil and Natural Gas Commission of India on the one hand and NIOC on the other.

[21] Under this contract, the two entities established a company, SIRIP (Société Irano-Italienne des Pétroles), the capital of which was acquired in equal shares by the two constituent entities. SIRIP is styled a joint structure and is the entity responsible for exploitation, exploration and the sale of crude petroleum on behalf of the two parties without having a legal personality of its own. The two parties are equally represented in the management, since the Board of Directors of SIRIP is composed of three representatives appointed by NIOC and three appointed by AGIP. One of the NIOC representatives is Chairman and an AGIP representative is Vice-Chairman. In addition, AGIP appoints the Managing Director, who is also the Administrative Manager. The Technical Managers are appointed from among the staff of AGIP by the Managing Director. The Board of Directors takes its decisions by a majority of four votes. Exploration activities are entirely the responsibility of AGIP, which assumes all costs of exploration and waives any claim for reimbursement against NIOC if no petroleum is found. If petroleum is found, NIOC and AGIP undertake to finance jointly the exploitation activities, and the petroleum produced and the proceeds of its sale are divided equally. The agreement also incorporates the clauses normally included in traditional concession contracts concerning payment of royalties and of the 50 per cent tax on profits. Thus, the Government of Iran receives 75 per cent of the earnings, since SIRIP must pay 50 per cent of the net profits in tax and the other 50 per cent is divided equally between NIOC and AGIP.

[22] The following were some of the practices introduced by the NIOC/AGIP contract into the petroleum industry: a guarantee by the concessionnaire to invest a minimum amount during the exploration phase; an undertaking by the enterprise associated with the Government to bear all costs of exploration if petroleum is not found in quantities permitting its commercial exploitation; repayment to the contractor, when petroleum is discovered and produced, of the share of exploration costs which are for the account of the producing country, such repayment being made out of earnings from the sale of the petroleum produced; an increase in the amount of the producing country's share of earnings from the production of petroleum; shortening of the term of the contract, which is usually set at between 25-30 years, renewable for briefer periods. The term is reckoned from the date of signature of the contract or from the date on which commercial production begins. (Cattan: "Present Trends ...", op. cit., p. 136.) In 1958, Iran concluded with Pan American a contract modelled on the NIOC/AGIP contract and having the following features: the enterprise established by the parties (IPAC) is not a profit-making organization, has no legal personality of its own and is not subject to taxes, which are the responsibility of each of the constituent parties. The agreement does not provide for the payment of royalties but does provide for the payment of

(iii) *Contract of work, service contract and production-sharing contract*

42. During the past two decades new alternative formal arrangements have developed as a consequence of the increased experience and skills of negotiators of developing countries, and of their intention to conclude more equitable contracts, compatible with the requirements of national sovereignty and economic development. As has been said, there is a great diversity of terms for these new contracts that does not reflect any clear classification. Sometimes the new denomination is only a change in label not related to the substance of the agreement. Contract of work, service contract and production-sharing contract are amongst the most frequent denominations. Their common feature is that the foreign party has no ownership interest in the producing company. Without the intention of making a typology of contracts, each of the above-mentioned types will be examined separately in the following paragraphs.[23]

43. The distinctive features of the contract of work, as used in Indonesia for example, lie in the detailed clauses of the "work programme" which cover the

annual rentals as from the thirteenth year of the term of the contract, and of cash bonuses. Subsequent agreements concluded by NIOC with Sapphire (1958), with Mobil Oil (1971), with Teijin Ltd. and others (1971), and so on, follow approximately the same model of the NIOC/Pan American agreement. The changes in the legislation and practice of the Libyan Arab Republic are another clear example of this trend. The exploration and exploitation of petroleum in Libya was governed by Act No. 25 of 1955, which provided for a traditional concession system under which the State granted to the contracting enterprises the exclusive right to carry out all operations relating to the exploitation, export and marketing of petroleum in exchange for a share in the profits. From this original pattern, the legislation of the Libyan Arab Republic underwent gradual changes with a view to ensuring greater control by the State over oil activities and a greater share in the earnings. In 1968 the State agency LIPETCO (Libyan General Petroleum Corporation) was established to carry on all operations relating to the petroleum industry, either alone or in association with other entities. In the same year LIPETCO concluded its first joint venture agreement with the French enterprises Aquitaine-Libye and Société Auxiliaire de l'Entreprise de Recherches et d'Activités Pétrolières (AUXERAP). According to this agreement the foreign partners bear the cost of exploration and appraisal operations, and secure the necessary financing for Libyan participation with repayment to be made after the export of crude oil begins. The petroleum produced is owned at wellhead by the two parties in proportion to their participation in the venture. In 1970, by Law No. 24, LIPETCO was replaced by NOC (National Oil Corporation); according to this law, NOC's share in joint venture must be fixed at the time the contract is signed and the foreign partner must bear the complete burden of risks in the pre-commercial discovery period. The law introduced for the first time in the Libyan Arab Republic's oil legislation a "contract-type" agreement enabling NOC to undertake exploration of oil through a contractor who carries out operations for NOC's account and on its behalf, against a certain fee. NOC owns all oil produced. (Libyan Arab Republic, Ministry of Petroleum, "Libyan Oil", Tripoli.) In 1963, the Egyptian Government granted an exclusive concession for the production of petroleum in a specified area to two entities: a State agency, the Egyptian General Petroleum Corporation (EGPC), and a foreign private entity, Phillips, in the proportion of 50 per cent each. The rights, duties, obligations and liabilities of the parties are several and not joint, the intention being that "the ownership of their respective percentage interests under the agreement should be as tenants in common and that no relationship under the agreement shall be construed as constituting an association, corporation, mining partnership or any other kind of partnership" (article 49). Phillips pays all the expenses required for exploration; during the exploitation period, each party bears 50 per cent of the costs incurred for production, for subsequent exploration and for all other related operations. A company, WEPCO, is established to act as the operating company which will carry out on behalf of the two parties to the contract all exploitation, production and exploration operations subsequent to the discovery of petroleum in commercial quantities. Each party will own one half of the company's registered capital and will be entitled to receive and, as owner, dispose of 50 per cent of the total output of petroleum. The Government will receive payment of a royalty computed on the basis of total output. Subsequent concession agreements concluded by Egypt with Pan American (1963 and 1964) and with ENI (1963) are along the lines of the contract described above, with a few minor differences. In a more recent contract, dated 14 December 1974, the Egyptian Government granted a concession to EGPC and to Esso, as contractor, for petroleum exploitation operations, in consideration of which the Government receives a royalty equivalent to a percentage of total production, payable in cash or in kind by EGPC. Esso assumes responsibility for all costs involved in carrying out the operations and will be reimbursed with part of the petroleum, when production begins in commercial quantities. In addition, Esso advances all necessary funds and acquires the materials, equipment and goods required for the operations. The petroleum remaining after a deduction of costs in accordance with criteria stipulated in the concession contract is divided between EGPC and Esso, in proportions that vary with the depth of the drilling (80 and 20 per cent, or 70 and 30 per cent, for EGPC and Esso respectively). All decisions relating to petroleum exploitation and development operations are taken by the Board of Directors of a company established under the contract (Safag Petroleum Company). The Board has eight members (four appointed by EGPC and four by Esso), and decisions are taken by a majority of six votes. Since 1965 Saudi Arabia has participated in joint ventures with foreign companies in order to carry out petroleum exploration and exploitation activities. The national entity involved is the General Petroleum and Mineral Organization (PETROMIN), established in 1962, which acquires exploration and exploitation rights under concessions granted by the Government. The first agreement was concluded in 1967 with the French State enterprise AUXIRAP (Société Auxiliaire de la Régie Autonome des Pétroles). AUXIRAP has a 60 per cent interest in the joint venture, and PETROMIN a 40 per cent interest, once petroleum is discovered in commercial quantities. However, the two parties have equal voting rights and decision-making powers in the management of the venture. In the same year, PETROMIN concluded contracts with AGIP and with Sinclair and NATOMAS transferring to those companies all rights, interests and obligations deriving from its agreement with the Government, but "retaining the legal title" to the concession. The exploiting company acquires the right to a share of the financial interest in exploitation obtained by concession of the Government, although PETROMIN remains "the sole owner and holder of the legal title to the exploitation concession". PETROMIN reserves the right, once petroleum is discovered in commercial quantities, to acquire a 30 per cent share in the financial rights under the concession (or up to 50 per cent when the production of crude oil exceeds a certain level) by paying the equivalent percentage of the initial investment. The parties agree to establish a non-profit Saudi Arabian company to execute the concession contract, and provision is also made for the possibility of the two parties establishing integrated enterprises to conduct operations relating to the production, transport, refining and marketing of the oil. In Zambia, mining was, until recently, entirely in the hands of foreign companies. As a result of Government action in recent years, all rights over national resources reverted to the Government, and State control of mining was ensured by giving the Government an option to acquire an interest of up to 51 per cent in the ownership of enterprises. The basic instruments of that policy were signed on 24 December 1969 by the Government of Zambia and INDECO (a subsidiary of the State corporation ZIMCO), on the one hand, and two groups of mining enterprises, Zambian Anglo American (ZAMANGLO) and Roan Selection Trust Ltd. (RST), on the other. The agreements provided for the merger of the enterprises belonging to each group into two different enterprises, Roan Consolidated Mines Ltd. (RCM) and Nchanga Consolidated Copper Mines Ltd. (NCCM), and for the acquisition by the Government of 51 per cent of the interest of those companies in the extraction, smelting and refining of ores. The payment was financed with an issue of loan stock by ZIMCO at 6 per cent interest, fully and unconditionally guaranteed by the Republic of Zambia. The original companies obtained a management and sales contract for a transitional period, but subsequently the new enterprises, in which the Government has a majority interest, took over the management and carried out all transactions on their own.

[23] For additional information on this matter, see literature listed in foot-note 8 and in particular document E/C.7/68.

various project phases and the promotion of the national interest through increased employment at all levels, compliance with requests to offer shares of the company to nationals, and local processing. In the concept of the work contract, the foreign owned but locally incorporated mining company promises to "perform work and all other obligations imposed on it by the agreement".[24] The contract of work, as used in Indonesia, has been considered as a variation of the concession agreement. The differences between them, according to some opinions, lie more in the field of concepts and principles than in the substance. The following are the main features of this type of contract: title to the resources and the right to exploit them is retained by the State until they are extracted; and the foreign enterprise, which acts through locally constituted subsidiaries, is considered a contractor or operator rather than a partner.

44. Service contracts refer to a group of contractual arrangements in which ownership and control of the resources are always vested in the Government or in one of its agencies while the services required (management, capital and technology) are wholly or partly provided for by a contractor. In mining, service contracts are one of the elements that form part of more general agreements concluded by Governments and foreign enterprises providing for various forms of association. They are made possible by the fact that the entire process of mineral exploitation may be broken down into several stages such as preparatory work, mine development and management. Instead of a comprehensive contract with one investor (or with a consortium of investors), the contract is broken down into several agreements. Technology and managerial skills are thus "bought" on the international market while the over-all control of the project remains in the hands of the host country. Service contracts take several forms and over the years the distinction between these forms has become far less obvious. The characteristic feature of this type of contract is that the producing country hires the services of the contracting enterprise to carry out a specified activity, using its own financial and technological resources but without being granted any real right over the resources produced. The costs incurred by the contractor are usually regarded as loans repayable with or without interest over a given period of time. The producing country retains ownership of the resources and what the contractor receives in consideration of the performance of its obligation is the right to purchase a proportion of the production at an agreed price.[25] The

[24] One of the most recent examples of a contract of work is that concluded between Indonesia and the Aluminum Company of America (ALCOA), dated 2 April 1969. The contract relates to the establishment of an aluminium industry in Indonesia, which includes the phases of prospecting, exploration, exploitation, refining, bauxite smelting and aluminium production. To this end, ALCOA undertakes to establish the necessary subsidiary companies under Indonesian law, which will be responsible for carrying out each operation. In accordance with article 13 of the contract, each of the subsidiaries (known as "operating companies") will have to finance its own activities, which means that each of them will have to determine its own financial structure and decide how, where and on what terms it will obtain its financing. The operating companies will also have full and effective control and management in all matters connected with the project, the construction and operation of their enterprises and all other activities provided for in the agreement, including the production and marketing of their products, for which they will be fully responsible and will assume all risks. The contractor (ALCOA) undertakes to make available to each operating company the secret processes and technical information relating to its activities, provided that the operating company is capable of using such processes and technical information. Article 15 provides that this kind of know-how shall be transferred to the operating companies under licence agreements between them and ALCOA, or transferred directly to them as proprietors against remuneration in cash, in property or in production. The Government's share in the profits from exploitation is ensured through the payment of rentals, royalties and taxes by ALCOA and by the operating companies.

[25] Instances of this form of contractual arrangement in developing countries date back decades. For instance, it was in use between 1949 and 1950 when the Government-owned Petróleos Mexicanos concluded drilling contracts with foreign companies. Under this arrangement, if petroleum was not found, no payments were made, but if it was discovered in commercial quantities, Petróleos Mexicanos reimbursed the country's drilling and exploration expenses and paid it cash compensation for the risks it had assumed in an amount equivalent to between 15 and 18 per cent of the output. In 1966, NIOC of Iran concluded with the French State enterprise, Entreprises de Recherches et d'Activités Pétrolières (ERAP), and a subsidiary, Société Française des Pétroles d'Iran (SOFIRAN), a contract under which the contracting enterprises assume responsibilty for exploring and developing such resources as may be found in specified areas, using their own financial and technological resources; however, all petroleum discovered and produced belongs to NIOC, which in turn undertakes to sell a percentage of it to the contractor at an agreed price. The capital which the contractor invests in exploration activities is considered an interest-free loan, which will be repaid only if petroleum is discovered and produced in commercial quantities. Capital invested during the development phase prior to the start of commercial production is considered an interest-bearing loan, which is repaid in accordance with procedures set forth in the contract. In addition, the contractor undertakes to render commercial services, and in particular to place specified quantities of crude oil on the world market on behalf of NIOC. The agreement also provides that only half the resources discovered will be exploited and the other half will remain as a "national reserve". The legislation currently in force in Iran authorizes NIOC to enter into only this type of contract, which is defined in the Petroleum Act as "a contract under which the contractor undertakes to carry out certain petroleum operations for and on behalf of NIOC in specified areas and in accordance with the provisions of this Act". NIOC has concluded many service contracts with foreign enterprises along the lines of the model described above. These contracts usually provide for an Executive Committee, consisting of two representatives of each party, which is responsible for preparing development plans and programmes and for management and control of the operations. Once commercial production starts, the operations are turned over entirely to NIOC; the service contract is thereupon terminated and the two parties conclude a sales contract, under which the contractor acquires the right to purchase part of the production at a predetermined price in consideration of the risk it assumed in bearing the costs of exploration and in consideration also of the obligation to finance development expenditures. Similar contracts were concluded in 1969 between NIOC and the Association de recherche et d'exploitation du Pétrole d'Iran (AREPI), and between NIOC and the Continental Oil Company. In 1968, the Iraq National Oil Company signed a contract with ERAP which is generally along the lines of the contract concluded by Iran with that company. In this case also, the contractor appears as the entity which provides the financial, technical and commercial services essential for the exploration, exploitation and marketing of petroleum, in exchange for a percentage of the production at an agreed price. The contract further provides that, five years after commercial production begins, INOC will directly assume the management and conduct of all operations, on condition that ERAP has been reimbursed for all its loans. ERAP, however, undertakes to continue technical and managerial operations, and also to continue to finance the costs of exploration if INOC should be unable to meet those costs out of the funds obtained in accordance with the contract. At the same time, INOC will have to obtain the consent of ERAP before taking decisions which might affect the volume of production or the costs. In Venezuela, after the termination of the era of concessions in the early 1960s and until the entry into force of the Organic Act of 29 August 1975, recourse was had to service contracts in order to obtain greater financial and operational participation for the State agency, Corporación Venezolana de Petróleo. The main feature of these contracts is that the company which contracts with CVP undertakes to carry out the activities relating to exploration

foreign enterprise no longer acquires exclusive rights over the resources, with power to exploit and dispose of them, but instead becomes "a financier who loans capital, a broker who sells a part of the production at the market price, and an operator who is paid in part at cost price for his services and in part by means of a right to buy a proportion of the oil produced at an agreed price".[26]

45. In the management contract, the host country hires a contractor to manage its exploitation enterprise or its share in a joint venture. The contractor may be the former owner of the enterprise in the case where the enterprise was nationalized, or the partner in a joint venture. Remuneration for the contractor's services is based on one of the following: a flat fee, gross proceeds, expenses incurred, a stipulated share of profit or a mixture of two or more of these forms.

46. In Latin America the name "contract of operation", "risk contract" or "contract of association" is given to a type of agreement which has basically the same features as the agreements previously described: the contractor contributes all the technical and financial resources, without the producing country's assuming any risk with respect to the course or outcome of the operations; the contractor acquires no right of ownership or disposal over the resources produced.[27] In all cases, the contractor, assumes all risks and liabilities in respect of investment and of the outcome of the activities, receiving as remuneration a part of the production. The laws of some countries contain provisions which make this type of contract mandatory. In Bolivia and Chile they are called "operation contracts"; in Ecuador they are styled "contracts of association".[28]

47. Doubts have been expressed, however, as to whether this type of contract constitutes a completely different category from the joint ventures described earlier. For some experts the fact that the producing country retains title to the resource after it is extracted and undertakes to sell to the contractor a proportion of the production at an agreed price is not enough to change the nature of the relationship; it would still be one of association and not one between an employer and a supplier of services. The supplier of services, it is argued, does not depend for his remuneration on the outcome of the activity, nor does it advance the capital.[29]

48. In some cases, use has been made of so-called "production sharing agreements", a form of contract similar to the service contract, from which it is sometimes hardly distinguishable owing to, among other things, a lack of precision in the use of the different designations. The basic common feature of these two types of contract is that in both the contractor is regarded more as a creditor or a supplier of services than as a partner.[30] Moreover, the production-sharing agreement may be distinguished from the service contract by the form of remuneration which consists of the right of the contractor to take the part of the production to which it is entitled after having reimbursed its costs in an agreed percentage. The management of the operations remains in the hands of the State entity, at least in theory.[31]

49. This type of contract has sometimes been regarded as the one which enables the interests of the parties to be satisfactorily reconciled. Its advantage over the concession in its various forms, it is argued, is that the State enterprise retains title to the oil produced, which is transferred to the contractor in the percentage due to the latter, at the point of shipment. In addition, the State enterprise is responsible for the management operations, even though it is the contractor that has to provide the necessary material, equipment and know-how. Finally, this type of contract is regarded as superior to other types under which the financial arrangements are based on profit-sharing, because it ensures the participation of the State enterprise in the marketing phase and eliminates all the problems which arise with respect to setting the price of the product.[32] On the other hand, it is argued that in actual

of the area covered by the contract and to production of petroleum with its own resources and at its own responsibility and risk, but for and on behalf of CVP. The latter's financial contribution would be made only after production had begun. Until that time, all costs are to be borne by the contracting enterprise. The petroleum produced, owned by CVP, is transferred by CVP to the contracting enterprise in quantities of up to 90 per cent and the contractor pays to the Government royalties and income tax of total production for sale on international markets. At least 10 per cent of the production is retained by CVP, which will reimburse the contractor for production costs on a proportional basis. Once commercial production has been determined, CVP may, within a specified time, exercise the right to acquire shares in the registered capital of the enterprise. In addition, CVP will ensure its participation in the conduct of activities through committees and sub-committees in which the two parties are represented in equal numbers and which will take decisions on the formulation, execution and supervision of the requisite plans, programming and budgets for exploration and exploitation operations. The presence of at least one representative or alternate representative of each party is required for a quorum in committees or sub-committees, and decisions must be unanimous.

[26] Montel, op. cit., p. 108.

[27] Emilio Cárdenas, "Nuevas características del marco jurídico de la explotación de los recursos naturales en el contexto latinoamericano", *Derecho de la Integración*, INTAL/BID, Nos. 22-23, 1976, p. 67.

[28] The contract signed between Petróleos del Perú (PETROPERU), a public corporation of the Peruvian State, and the Occidental Petroleum Corporation of Peru is an example of this type of agreement. A Supervisory Committee composed of representatives of the parties is established to supervise the execution of the contract. The contractor may operate through subcontractors and receives as remuneration for its services between 44 per cent and 50 per cent of the hydrocarbons produced. PETROPERU has the first option to purchase the contractor's share of the production. In other countries (Panama, Uruguay), contracts have recently been concluded along the general lines of the model described above.

[29] Cattan: "Present Trends in Middle Eastern Oil Concessions and Agreements", op. cit., p. 141.

[30] Smith and Wells, op. cit., p. 50.

[31] Indonesia has used this form of contract particularly for petroleum exploitation. In an initial phase, from 1960 to 1965, the foreign investor provided capital in the form of loans and also provided certain technical services and cooperation in marketing the product. Repayment of the loans and payment of interest on them and of remuneration for the services were made in the form of an agreed percentage of the production. Beginning in 1965, Indonesia used a variation on the production sharing contract with a number of foreign oil companies. Under these contracts, the State oil company, PERTAMINA, is responsible for the management of operations, while the contractor assumes the task of carrying out the operations and provides all funds and the necessary technical assistance, in consideration of which it has the right to retain up to 40 per cent of annual production to amortize the capital costs and operating expenses. The rest of the production is divided between PERTAMINA and the contractor, sometimes in a fixed proportion and sometimes in a proportion which varies according to the volume of production. PERTAMINA's share fluctuates between 65 and 95 per cent (*The Indonesian Petroleum Industry: A Study of Resource Management in Developing Economy*. Sritna Arief Associates, 1976). Under the contract of 22 March 1975 between PERTAMINA and Philipps Petroleum Company Indonesia and TENEKO Indonesia, Inc., the percentage received by PERTAMINA may range up to 85 per cent of the production. PERTAMINA, for its part, assumes liability for all royalties, taxes, including taxes on the profits of the contractor.

[32] Fabrikant, *Production sharing Contracts in the Indonesian Petroleum Industry*, p. 158.

fact the production sharing contract usually operates in a similar manner to the concession contract. In practice, the contractor performs the managerial functions, despite what is laid down in the contract, and retains decision-making powers with regard to financing, technology and management of the project.

50. The evolution of oil and mineral contracts clearly shows a shift from the traditional concession agreements to contractual forms through which the Government tries to ensure its participation in the ownership of and control over the venture. Changes were introduced in the contractual formulae to bring about a new form of relationship between the State and foreign companies so as to achieve a twofold objective: to ensure for the producing country greater benefits, financial and other, from the exploitation of the resources and to enable it to exercise effective control over the operations. The first is achieved through a process of adjustment of the financial terms of the contracts. This process of adjustment substantially affected the traditional financial structure of the concession which, from the simplest of arrangements involving a cash payment computed on the basis of volume of production, progressed to formulae involving combinations of various kinds of consideration, including sharing by the Government in the profits derived from the activities, and the undertaking by the contractor of additional commitments, such as the financing of industrial projects, education and training of local personnel, etc. The second objective is attained mainly by the participation of Governments in the ownership of the exploiting enterprise, constituting a joint venture with the contractor who generally provides all or part of the financial, technological and managerial means.

51. The more recent contractual arrangements (contract of work, service contract and production-sharing contract) constitute another attempt to conciliate the divergent interests and the political and economic needs of Governments and foreign companies. By having foreign enterprises as a contractor, not partner, in a venture in which they have no ownership interests, the producing country ensures, theoretically at least, more control and more benefits while satisfying the economic interests through a share in the production or in the benefits. What is interesting to point out is that in these contracts as well as in joint ventures, the partial or total ownership of the venture by the Government does not prevent the foreign enterprise from exercising decision-making powers with regard to the day-to-day conduct of operations. As has been pointed out,[33] the new forms of contractual arrangements may not necessarily result in real increases in revenue and control for the host country's Government or national mining agencies.

C. Contractual methods of generating income for the Authority

52. In an earlier report of the Secretary-General on the economic implications of sea-bed mineral development in the international area,[34] under the chapter heading "Revenue for the international machinery", a number of comments were made which are relevant to the present study. They deal with the value of nodules—as opposed to the value of the processed metals; the profit potential of the nodule industry; the objectives of the Authority in determining its share of revenues, including the provision of the necessary incentives to attract capital and technology; and, briefly, with the basic component of that share. On that last point, the earlier report noted that there were three possible bases for determining the Authority's share of revenues: the right of exclusive access to a mine site; the value of production or a fee per ton of nodules mined; or the net revenues (profits) of an operation. As noted elsewhere in this report, such approaches are not mutually exclusive, but are often combined in national legislation to reinforce each other in securing a fair share of the revenues.

53. The purpose of the explanations given below is to provide a working knowledge of the basic elements of the fiscal régimes used in mining agreements, particularly as they may be applicable to the Authority. The presentation is not meant to be exhaustive (for example, renegotiation clauses have not been discussed), neither is it meant to be a treatise on elements chosen for discussion. This section, together with the earlier section on the experience of developing countries, demonstrates the complexities of fiscal régimes and the need for flexibility in their development.

54. It must be remembered that since the owner of a resource should be knowledgeable as to the true costs to be borne by a contractor and the expected profitability of an operation, the accounting rules and procedures of a contract will be of central importance.

(a) *Accounting rules and procedures*

55. A review of a number of mining agreements indicates that clauses dealing with accounting practices, reporting and auditing have become increasingly sophisticated. To a large extent, the reporting and auditing requirements of developed countries appear to have been used as examples for the drafting of recent agreements in developing countries.[35]

56. This review suggests that the following elements should be taken into account in establishing accounting rules and procedures:

(*a*) The set of accounting and reporting principles to be used;

(*b*) The nature and timing of information to be provided (balance-sheet, income statement, production statistics, statement of sources and application of funds, data about foreign exchange transactions and transfer prices, data about employment and labour, and whether these data will be provided monthly, quarterly or annually);

(*c*) The methods of choosing auditors;

(*d*) Period of time alloted to auditing and the submission of reports;

(*e*) Guarantees regarding the confidentiality of information;

(*f*) The right of inspection by the Government or its agency;

(*g*) Where the books are to be kept.

These elements may also be relevant to marketing and the computation of net profits.

---

[33] See E/C.7/66, p. 15 ff.

[34] *Official Records of the Third United Nations Conference on the Law of the Sea*, vol. III (United Nations publication, Sales No. E.75.V.5), document A/CONF.62/25.

[35] In some agreements, however, the requirements in this area are minimal. In one particular case, the company is only required to have its books audited "as soon as possible after each accounting year by such independent chartered accountants as may be chosen by the company and approved by the Government". In others, even this provision did not exist.

57. In addition to the above-mentioned items there are three concepts of central importance: depreciation; depletion allowances; and unadjusted rate of return. In part I of the revised single negotiating text, reference is made in the special appendix to the concepts of depreciation and to the unadjusted rate of return. In the case of depletion allowances, there is nothing in the text to indicate their applicability to the kind of financial arrangement the Authority might consider. However, they are used extensively in the oil and mineral industries as a means of encouraging exploration, and it was therefore considered advisable to also include a general description of this practice.

(i) *Depreciation*

58. The concept of depreciation on tangible assets, viz. property, plant and equipment, will enter into mining contracts most probably when determining the actual costs of exploitation. Such costs must be determined in any contract providing for the taxation of profits, profit-sharing schemes, etc. The value of physical items is derived from the future services that will be obtained from their use over a prolonged period of time. In general, their value is reflected by the cost of acquisition (including freight, installation, etc.). Since these tangible assets will be used for a period of time, the major difficulty in applying depreciation is the allocation of the original cost to particular time periods or units of production. Thus, the functions of depreciation in financial management are threefold: to provide a means of allocating the cost of capital assets (fixed, tangible, plant, etc.) to current costs of operation; to evaluate capital assets; and to make financial provision for the replacement of capital assets.

59. Various methods for calculating the periodic depreciation allowance are used according to whether a gradual or accelerated write-off is called for. For purposes of illustration, three methods will be briefly discussed here.

60. The straight-line method is by far the most common. The basic theory behind it is that depreciation is a function of time and that the amount of depreciation is uniform with the passage of time. Thus, an asset such as a mining ship with an estimated life of 10 years would be depreciated 1/10 yearly, i.e. 10 per cent per annum. This method of depreciation has a number of advantages that account for its great popularity. It is simple to apply and easy to calculate. Moreover, a great volume of data has been assembled regarding straight-line rates applicable to specific types of assets. Also, some flexibility can be secured since the annual depreciation rate can be increased or decreased according to any revision in the estimated service life of the asset.

61. The more complex declining balance method applies a uniform rate on the undepreciated value of the asset. This method results in an annual depreciation charge that is a constant percentage of the unexpired cost of the asset (original cost less accumulated depreciation charges). This method obviously provides for larger depreciation deductions in the early years of the life of the asset. During this early period, the asset is likely to be at its most useful and productive level, the obsolescence element being smallest and the maintenance requirements being at a minimum. Moreover, in situations involving the purchase of new and very expensive items, this method permits a rapid writing-off of the book value of the asset, thus enabling the operator to take advantage of early improvements in prices or technology. It should be noted that under this method, unlike the straight-line method, the asset can never be depreciated entirely.

62. The sum-of-the-years-digits (SYD) method also allows for a larger amount to be written off during the early years of the asset's life, and this is done even faster than under the declining balance method. The greater acceleration comes from the fact that the latter method produces periodic charges to depreciation which decline by decreasing annual amounts, while the SYD method results in depreciation charges that decline by a constant amount each year. The method is based upon a calculation using the sum of the digits that correspond to the estimated life of the asset. For a mining ship with a useful life of eight years, the digits concerned would be added to obtain the denominator ($1+2+3+4+5+6+7+8=36$); then for the first year, the fraction of the original cost, less the eventual salvage value, which may be written off will be 8/36; for the second year 7/36, and so forth.

63. Provisions dealing with depreciation rates are increasingly numerous. From the contracts reviewed, the maximum depreciation rate appears to be 12 per cent. The main purpose of depreciation is to enable the operator to recover his capital. This is normally done by appropriate allowances under the taxation systems of the States concerned. For the Authority, therefore, depreciation would have to be considered in relation to the charges it would impose on the operator in order to establish compatible rates of depreciation. The application of depreciation would also appear to require an examination of the differing tax structures, or their equivalent, in the home countries of potential contractors.

(ii) *Depletion allowances*

64. The depletion allowance is a feature of the mineral industry and in particular of the oil industry. The rationale behind its use, for the company, is that an orebody or an oil field is an asset which cannot be replaced once it has been worked out; rather a new body of ore or field must be discovered and developed. Part of the earnings from the exploitation of a non-renewable asset is therefore considered as a return on the capital investment and designated as a depletion allowance. The asset being extracted has to be given a valuation in order to calculate the amount to be deducted from earnings.

65. The argument that a contractor pays for the right to mine, in the form of cash premiums or front-end payments, for example, and should be able to recover these monies through a depletion allowance, has been increasingly subject to criticism.[36] When all that the holder of a mining right has is the "contractual right" to operate a mine or exploit a mineral deposit for a fixed number of years, and not a proprietary right, the property in fact belonging to the State, then depletion allowances would seem inappropriate. In any event the whole issue of depletion allowances is of questionable applicability to the field of deep sea-bed mining due to the special legal status of the area and its resources.

66. Depletion, where allowed, is generally a percentage of either the cost or the value of the mineral mined. Where the depletion allowance is calculated on the basis of the cost of securing rights to the deposit pro-rated over the life of its exploitation, this is normally called cost depletion. Where the depletion is a percentage of the value of the mineral mined each year, this is usually

[36] Charles J. Lipton, *Mining legislation*, paper presented at the Interregional Seminar on Mineral Economics, Ankara, October 1970.

called percentage depletion. The latter type of allowance is generally used, but there can be cases where cost depletion is preferable, e.g. for a mineral deposit with an acquisition cost (another type of front-end payment) of $10 million, producing at the rate of $100 million per year, a percentage depletion could be set at 15 per cent, which would allow the write-off each year of $15 million as a deduction against income. This method produces in a single year an allowance write-off one and a half times the cost of acquiring the mineral deposit in the first place. Obviously, cost depletion would be more beneficial to a Government in that case.

67. Whatever the basis used in the valuation of a non-renewable asset, the charge per unit of product is based in most instances upon the estimated recoverable content of the orebody. This content is fixed in a literal sense, but as a practical matter, it may vary greatly through the years with technological changes, improved methods of extraction, efficiency of operation and changes in economic conditions. At the outset then, a "scientific guess" is made as to the total amount of a product that can be economically extracted. Additional information upon commercial production may change the basis for calculating the depletion charge per unit of product.

(iii) *Unadjusted rate of return*

68. The unadjusted rate of return[37] is a tool for evaluating various investment possibilities in capital budgeting. It may be defined as the percentage of the average annual net income after taxes to the average investment over the life of the project. Its computations supposedly correspond most closely with conventional accounting methods of calculating income and required investment, but in fact the purposes of the computations differ. The most troublesome aspect of the exercise is to determine the factors of depreciation and the items which should be either listed as expenses in the year that the costs occur, or carried for a period of time as a non-tangible asset.[38] For example, research and development costs are usually charged in the year that they are incurred, even though the costs of such undertakings could be viewed as a long-range investment.

69. The equation for the unadjusted rate of return is:

$$R = \frac{O - D}{I}$$

Where: R = Average annual rate of return on initial additional investment

O = Average annual incremental cash inflow from operations

D = Incremental average annual depreciation

I = Initial incremental amount invested

Thus: Unadjusted rate of return =

$$\frac{\text{Increase in future average annual net income}}{\text{Initial increase in required investment}}.$$

70. This means of measuring profitability is adequate if the flow of income over time is relatively constant and if there is no need for an accurate comparison with other average rates of return or with the cost of capital. Although it is used as a practical operational tool by many business firms, it ignores the fact that the value of money is dependent on the interest rate that must be paid for it. To take this point into account, another tool, called the discounted cash flow rate of return of which there are two variations, is available.

71. One variation, the time-adjusted rate of return, has been defined as "the maximum rate of interest that could be paid for the capital employed over the life of an investment without loss on the project". This rate corresponds to the effective rate of interest computed for bonds purchased or sold at discounts or premiums. The second can be defined as the discount rate that makes the present value of a project equal to the cost of the project.[39]

72. The relationship of these rates of return on investments in mining is generally based on the assessment of risk. Mining projects are generally regarded as high risk ventures and as a result, acceptable rates of return for mining ventures tend to be higher than that for manufacturing, for example. No simplistic statements can be made as to the rates of return that may be considered adequate for sea-bed mining. However, it is important to note that with expensive and unproven technology and an unfamiliar, less accessible environment, the initial risks will be much higher than those for land-based mining.

(b) *Elements of income generating schemes for consideration by the Authority*

73. As has been illustrated in the preceding section III. B, the evolution in the mineral contracts concluded by developing countries shows a movement from the traditional type of concession agreement to increasing government participation schemes, employing more sophisticated devices for the sharing of benefits. The following elements are in use in various combinations in contracts, whether joint ventures, concession type agreements, service contracts, etc., depending upon the ultimate social and economic outcomes desired.

(i) *Grace period and tax holidays*

74. These two devices are used to induce companies to exploit a resource by allowing them a lowering of initial costs by waiving either royalties or other specific financial obligations or all or portions of the taxes that would eventually be collected by the Government.

75. The grace period makes reference to a period of time prior to and during the initial stages of exploitation when the contractor is exempt from specific financial obligations such as royalties, and during which time development work and other initial operative difficulties may be resolved. In the case of sea-bed mining, it could include the prospecting and exploration stages during which time, since there is no production, only rentals and fees may be imposed on the contractor. Following the commencement of commercial exploitation, the length of time for which a grace period might be allowed to continue by the Authority would be dependent on factors such as the over-all fiscal régime and the prevailing economic circumstances.

76. Tax incentives, in some instances referred to as tax holidays, exist for a wide range of items even though they are generally more difficult to negotiate than the grace period. They usually consist of initial tax exemptions, a temporary reduction of the tax rate, or special

[37] Also commonly known as the accounting method, the financial statement method, the book value method, the rate of return on asset method, the average rate of return method, and the approximate rate of return method.

[38] Charles T. Horngren, *Cost Accounting: a managerial emphasis*, 2nd edition, Englewood Cliffs, N.J., Prentice Hall, Inc. 1967.

[39] This rate is generally referred to in the literature as the internal rate of return of a project.

allowances such as investment credits. The purpose of tax exemptions is often to encourage the growth of supporting services or related industries in the host country concerned. Exemption from import duties on materials needed for the project is a common example. Tax holidays have been criticized as inappropriate tools, as they shift tax receipts from the host Government to the home Government of the investor.[40]

77. The use of either the devices of the grace period or the equivalent of a tax holiday, whilst stimulating entry into a high risk field, would cause a postponement in the flow of monies to the Authority.

(ii) *Royalties*

78. The original definition of royalties was "a payment made to the landowner by the lessee of a mine in return for the privilege of working it". This idea of a production based source of revenue for mined resources, which is independent of the level of profit generated, has survived to some extent.

79. Royalties based on production output perform the important function of allocating risk in mining projects and thus assure a stable income flow in periods of falling prices. While royalty payments are typically based on ore sold or shipped, some clauses take into account only the amount of produced ore, thus providing for payment when sales of the ore products have stopped but production still continues. In some cases, royalties may be paid in kind; in other words, a producing State may take a certain amount of the oil or mineral produced in order to meet its domestic needs. Another way of transferring market risks to the investor appears to be the stipulation of minimum royalty payments, or creditable, non-refundable advanced tax payments or their equivalent.

80. But the use of royalties, as a method of sharing the growing profits of investors, has long since been overshadowed by income taxation and/or an *ad valorem* cash levy. As this levy is associated with the commercial prize of the mineral extracted, special attention has to be given to the determination of a fair market value. Because of the problems created by transfer prices and artificially priced sales to affiliates by multinational corporations, some countries, notably Jamaica in its recent bauxite negotiation, have tied royalty payments to the price of the finished metal as quoted in an established market such as the London Metals Exchange.[41] More sophisticated agreements, such as the work contract, provide for a volume-based royalty but include an automatic readjustment scheme which increases or decreases the royalty rate in accordance with fluctuations in the United States or Canadian market price of the material. Additionally, these rates vary with the disposition of the ores. For example, their sale or processing in the host country stimulates linkages to the host country industry and increases export revenues.

81. Similar "sliding royalty" clauses, which split the royalty rate into a fixed and a variable part, both dependent upon production and the latter also on the movements of the metal market price, are being used in a few contracts. The problem with employing the sliding royalty method is the difficulty of determining the rate of the slide. Some contracts, as already mentioned, stipulate the average price for the finished mineral product, such as aluminum ingots, as the basis for royalty calculations. Another trend is to base royalties on revenues from concentrated ores. The reasoning here is that by not allowing the investor to include processing in the value of the ore, local processing will be encouraged.

82. Royalty rates may differ widely, from 1 per cent to 15 per cent depending upon the kind and extent of the mineral deposit.

(iii) *Rental fees*

83. Rental fees or surface duties are yearly payments or payments assigned according to the surface area of the mining site. The amount to be paid annually may be fixed, but yearly increasing surface duties are also employed. Rental fees and charges are based on the period of time that the exploiter has the right to exploit. They encourage early production in the area when the rental fee exceeds the rate of increase in the profit that the exploiter believes he can derive from holding the resources for future exploitation. The risk of non-production is placed upon the exploiter; a prolonged delay would bring him to the point where these rental charges would equal those which may be levied in the form of bonus payments. Obviously where production cannot be expected to commence more or less immediately, unrealistically high rental fees or surface duties could discourage potential investors.

(iv) *Bonuses*

84. A bonus is an amount paid to the entity holding the resource for the right to explore or produce in a given area and is usually one of the first payments to be made. An additional bonus payment may also be required when a commercial discovery is made, or when production reaches a certain level.[42] Instead of fixing the bonus in advance, a State may grant the concession to whichever company is ready to pay the most for a concession and in these cases, the bonus is determined by competitive bidding. In the United States, for example, oil and gas leases are granted by competitive bidding on the basis of a cash bonus and a royalty fixed by the Secretary of the Interior at not less than 12½ per cent of production.[43] If the concession is sold publicly, the bidding is called auction bidding. If the amounts offered to the Government are secret until the highest bidder is established, the system is called sealed bidding.

85. As the bonus is an initial or front-end payment, the amount must be such as not to discourage industries from entering a high risk field of mining. This aspect must be weighed against the benefit to the Authority from a substantial amount of money at a very early stage in its operations. Also high bonus payments remove the risk of non-production from the Authority and place them on the exploiter as he must proceed rapidly in order to recover that cost. It is primarily bonuses and rentals

[40] Charles J. Lipton, *Fiscal aspects of negotiating third world mineral development agreements*, AIME-Transactions 260, 1976.

[41] Transfer pricing is one of the practices of multinational corporations and it refers to the fixing of prices of goods and services traded between the corporation and its affiliates located in different countries, at an artificially lower price thereby limiting the amount of royalties and taxable profit. Apart from reducing the revenue of the host Government, this practice may also stifle local competition. For a more exacting treatment of the above, see *The Impact of Multinational Corporations on Development and on International Relations*, United Nations publication, Sales No. E.74.II.A.5.

[42] In a recent petroleum agreement in the Middle East (between Sharjah and Shell) an initial bonus of $1.5 million was required together with a bonus of $.25 million when commercial discovery was made. Another $2.5 million were to be paid when production reached 100,000 barrels/day and $.45 million finally when production reached a level of 200,000 barrels/day. See A. P. H. van Meurs, *Petroleum Economics and Offshore Mining Legislation*, Amsterdam-London-New York, Elsevier Publishing Company, 1971.

[43] *Summary of Mining and Petroleum Laws of the World*, Information Circular 8482 (1970), United States Government, Department of the Interior, Bureau of Mines.

that insulate the entity owning the resource from that risk, but in terms of the over-all economics, the net income to the Authority would probably be the same.

86. High bonus payments would tend to encourage participation in exploitation by only well financed and experienced operators, probably to the exclusion of most companies in developing countries. And, as was noted in the discussion of rental fees, bonus payments do not tend to encourage early abandonment of a producing area as does a fixed royalty used alone.

(v) *Fees*

87. The fee, as distinct from the rental fee, tends to be a nominal charge levied to cover administrative costs. Fees of this nature have a negligible effect on the operator due to the large sums of money involved in any operation that is under consideration. On the other hand, establishing high fees would have the same economic impact on exploitation as competitive bonuses.

(c) *Income taxation as a factor*

88. Income taxation is now the main device by which Governments share in the profits of investors. Mining agreements sometimes stipulate the income tax rate in the contract, but increasingly they refer to the general tax laws of the State concerned, thus allowing changes in the tax rate without modifying the contract. More often, however, the agreements limit the over-all tax burden, or otherwise guarantee tax stability.[44] Tax rates are in some cases split into a general and an additional rate (surtax, special tax, excess-profit tax, etc.) and increasingly, the stipulation is for a tax rate up to a certain profit level and a higher rate for additional profits.[45]

89. Modern mining contracts consequently include large chapters on accounting instructions related to gross income. These list the allowable deductions such as those covering depreciable items, transactions with affiliates and debt financing in order to render income taxation more effective. As regards gross income for example, most contracts still refer to actually realized benefits with the exception that affiliate transactions should be comparable to "fair market prices" or otherwise earned f.o.b. revenues (see discussion under Accounting Procedures: unadjusted rate of return).

90. Debt financing was brought to the attention of host countries when they realized that their revenue projections were sharply reduced by substantial interest deductions. In these cases, it was realized that host countries were financing the investor's capital or allowing the investor an even greater share of the benefits when loans were obtained from affiliated companies.[46] Most contracts now place a restriction on deductible finance charges by limiting these charges in volume (for example, by allowing only payments for loans equivalent to 70 per cent of the aggregate amount of indebtedness and equity) or by limiting the amount of debts (debt/equity ratio of 3:1, 4:1, or 3.5:1).

91. A similar problem is related to the deduction of payments for the use of patents, trade marks, etc. A proposed solution of this type of problem is that these payments should be by consent of the host Government or by comparison with widely used similar payments.

92. For the purposes of income taxation, special consideration is given in most contracts to the deductibility of royalties as operating costs. While most contracts, in line with practices adopted in the oil industry, affirm this deduction, others consider royalties as advance tax payments creditable against the income tax due, so that royalty payments are, in effect, non-refundable minimum tax payments.

D. CONTRACTUAL CAPACITY OF THE ENTERPRISE

93. The suggestion that the experience of developing countries with contracts for the exploitation of their natural resources might be useful in discussing matters relating to the organization of the Enterprise, particularly its financing, presupposes that the Enterprise will have the capacity to enter into contracts similar to those described in section B. There might be some doubts as to the capacity of the Enterprise to enter into these kinds of contracts. Such doubts would be based on the following three observations. Firstly, this particular capacity has not been expressly formulated in any of the provisions of the revised single negotiating text, either in part I or in the annexes; secondly, exploitation of the resources of the area through contracts might not be regarded as "direct" exploitation; and thirdly, it is not clear from the text whether the Enterprise may finance its activities by entering into such types of contracts.

94. However, the revised single negotiating text seems to lead to the conclusion that there are no legal obstacles to the Enterprise's concluding such agreements with other entities. With respect to the first observation, it may be said that such a capacity not only seems to be compatible with those provisions but it also appears to be an implied power of the Enterprise if it is to carry out the functions entrusted to it in accordance with the text. The Enterprise possesses full juridical personality, and, in particular, the capacity to contract (annex II para. 9(*b*)); it has the power to borrow funds and to furnish collateral or other security (para. 6); and, when it does not possess the goods and services required for its operations, it may procure and employ them under its direction and management (para. 7(*d*)). Moreover, paragraph 7(*f*) of the same annex lays down that the Enterprise shall exercise all such powers incidental to its business as shall be necessary or desirable in the furtherance of its purposes.

95. With regard to the second observation, it seems that when the Enterprise exploits the resources of the area through use of or in association with other entities, it would still be direct exploitation by the Authority, in so far as the latter retains complete control over the operations and title to the resources, and the power to adopt basic decisions. In addition, as regards the acquisition of financial resources through this type of contract, it should be pointed out that the list of sources of financing given in annex II, paragraph 6, seems not to be exhaustive, since the opening words of the paragraph state that the funds of the Enterprise shall "comprise" those listed in subparagraphs (i) to (iv). Moreover, subparagraph (iv) states that the activities of the Enterprise are to be financed by "other funds made available to the Enterprise . . . for carrying out its functions". Lastly, financial resources can be obtained by means of loan agreements concluded in conjunction with an exploitation contract, in which case one of the sources mentioned in paragraph 6(iii) would

[44] Zambia's royalty-substituting mineral tax of 51 per cent has been supplemented by an income tax of 45 per cent, resulting in an over-all tax burden of approximately 73 per cent. See *Economic Independence and Zambian Copper: A Case Study of Foreign Investment*, edited by M. Bostock and Charles Harvey, New York, Praeger, 1972.

[45] Anthony C. Ross, Ross Garnent "Uncertainty, Risk Aversion and the Taxing of Natural Resource Projects" *Economic Journal* 85, 1975, p. 272 ff.

[46] Smith and Wells, Jr., op. cit., pp. 79 and 80.

have been used. An example of this is the contract concluded between the State Agency of Iran (NIOC) and the French State Enterprise (ERAP) (see foot-note above) according to which ERAP undertakes to carry out petroleum exploration and exploitation and to provide the necessary capital. That capital is regarded as an interest-free loan, repayable only if petroleum is produced in commercial quantities, when the funds are used to finance exploration, and as an interest-bearing loan when they are used to finance exploitation.

96. The wording of paragraph 7(*d*) of annex II is broad enough to cover all the ways in which services and goods are usually acquired, in other words all of the many aspects of acquiring technology. It covers not only the direct acquisition of hardware or recruitment of foreign technicians or direct purchase of practical know-how (licences for use of patents, etc.), but also covers forms of transfer where the active participation of the supplier is required in the activities to be carried out. In addition, there is nothing in the text preventing the Enterprise from paying for the acquisition of technology either a specific sum in cash or by granting the supplier rights in the operation or a share in its profits.

97. In this connexion, mention should be made of the question of the cost to the Enterprise of acquiring technology. In a sector where concentration is so extreme that availability on the open market cannot be counted on, it will obviously be difficult to know what the price of the technology may be. The cost will vary considerably, depending on the type of transfer used. In this respect, comments which have been made on the cost of the acquisition of technology by developing countries also apply to the Enterprise.[47] Because of the high degree of concentration of technology for the extraction of sea-bed minerals, the Enterprise's problem will be not so much obtaining the financial means to acquire the technology as finding the technology on the market. The experience of developing countries has shown that sometimes it has been easier to build and operate steel mills and industrial plants with local capital, labour and management and imported technical services than to develop or take over a petroleum or mining industry which is already in operation, in part because the technical know-how and expertise involved in the petroleum and mining industries are less readily assembled.

98. In the case of future sea-bed mining, the degree of technological concentration is so much greater again. This new specialized technology is in the hands of a small number of enterprises based in a few developed countries, and there is no indication presently that this situation will change in the immediate future. The parties in possession of the technology cannot be expected to agree to its transfer or promote its development unless they are offered satisfactory incentives.

99. It would seem unlikely that the Enterprise would be able to purchase outright and operate the necessary technology on its own—at least during its first few years of operation—even assuming that both the problem of the availability of the financial resources required and the problem of the availability of technology on the open market were resolved. It would take some time for the Enterprise to acquire and develop its own teams of experts and its own experience and thus be in a position to dispense with the continuing collaboration of the supplier of the technology which would ensure its proper application in operations.

100. In the joint venture, the technology and expertise required is one of the contributions expected from the partner. No royalties or fees are paid for the use of that technology. Consequently, this approach would seem to be the most appropriate for the Enterprise, at least in its early years of operation. Another feasible approach might be to hire the necessary services through the conclusion of service contracts. In that case the Enterprise would have the continuous assistance of the supplier of the technology, covering both the administrative and technical direction of operations, but would not have to involve the supplier in the ownership of the venture. There is the possibility that the Enterprise may decide to concentrate for a time on the acquisition and development of a specific technology as opposed to the over-all technology required. Since distinct phases of exploration and exploitation of mineral resources can be identified, the use of service contracts would complement that approach (see para. 44 above). As a further possibility, the Enterprise may wish to resort to such contracts as would involve production-sharing or a share in the profits from the activity, etc. Of course, the choice of contract will be related to the kind of incentives that the Enterprise is able or willing to offer the supplier of the technology.

101. In any of the above forms of contract, where the supplier assumes responsibility for applying the technology during the operations, there is the inevitable result that the supplier will have some control over, or involvement in, the management of the operations. Some types of contracts such as engineering and construction agreements and management contracts presuppose a greater degree of such control than others. This question raises problems with respect to distinguishing between the "direct" activities of the Authority and activities which are carried out "in association" with other entities, and hence to determining the most appropriate forms of contract into which the Enterprise may enter. Although certain levels of control might be considered incompatible with the nature of the Enterprise it is possible to visualize arrangements which might be acceptable to both parties: such arrangements could involve the transfer of managerial and technical know-how required to plan, organize, construct, equip, put into operation and carry on a given activity and allow the entity supplying such know-how satisfactory incentives.

102. A final consideration, affecting the Enterprise —and the Authority—will be the market situation for sea-bed production. Such a question as the determination of the value of production from the area will require consideration of the implications of basing values on, to take two examples, untreated nodules or processed metals. The problem of access to the market-place is often met through committing the contractor to the sale of all or part of the production (see foot-note 25 above). The real problem for the Enterprise over access would arise in cases where the type of contract would not give such a responsibility to the contractor.

[47] See E/4038, paras. 26 to 28.