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THE ENTERPRISE: TODAY AND TOMORROW

1. With the registration of the first four Pioneer Investors, Law of the Sea developments and the work of the Preparatory Commission have entered a new phase. An Interim Regime for ocean mining is now in place, with the operational responsibilities of the Preparatory Commission clearly defined in para.12 of Resolution II: the exploration of the first mine site for the Enterprise; the availability of technology and trained manpower to the Enterprise, enabling it to keep pace with developments in the most advanced countries.

2. As the Preparatory Commission was about to enter this new phase, the Pioneer Investors already announced that they will fulfil their responsibilities and make joint arrangements for the exploration of the mine site as well as for the development of human resources which would have to be associated with the exploration of the mine site and, implicitly -- although this has not yet been stated explicitly by the Pioneers -- with the testing and upgrading of the technology employed for the exploration of the mine site.

3. to determine the mechanisms and modalities for these arrangements will have to be a priority task of the Preparatory Commission during its next sessions. For this purpose, the Preparatory Commission may avail itself of much work already accomplished. In particular, reference should be made to the Secretariat Papers...and to the Austrian and Colombian Working papers....

4. It is the thesis of the present paper that the shape of these arrangements will have a determining influence on the shape of the initial or "nuclear" Enterprise upon the coming into force of the Convention; and that, in turn, the Prep.Com.'s concept of the future Enterprise will have an influence on the shape of the interim arrangements. In conclusion some immediate next steps will be suggested.

CONCEPT OF THE ENTERPRISE

5. Some of the features of the Enterprise, though perhaps not the most important, or the most operational ones, are clearly determined by the Convention.

- . The Enterprise shall be the organ of the Authority which shall carry out activities in the Area directly, and this will include "activities in the area" (exploration, mining) as well as transporting, processing and marketing of minerals recovered from the Area.
- . For these purposes, the Enterprise must be provided with initial financing as well as technology. The authority and States Parties shall cooperate in these undertakings. Obviously, there are many ways in which this can be done. With regard to the financing, the Prep.Com. will have to determine the amount of needed funding and the criteria and factors for its adjustment (Annex IV, Art. 11, 3 (a)). With regard to technology transfer, The Convention spells out some modalities in Art.5 of Annex III, but the Convention also foresees other ways, e.g., in conjunction with Joint Ventures between the Enterprise and States or Companies, and in this case, modalities are left wide open, to be determined by the Joint Venture agreements from case to case (Annex III. Art.5, para.6).
- . The Enterprise shall have legal personality and such legal capacity as needed for the exercise of its functions and the fulfilment of its purposes.
- . The Enterprise will be governed by a Governing Board of 15 highly qualified members, elected by the Assembly upon the recommendation of the Council. The Board will elect its own Chairman.

. The Enterprise will be administered by a Director-General, also elected by the Assembly upon recommendation by the Council. The Director General shall be responsible for the organisation, management, appointment and dismissal of the staff of the Enterprise. The size, the nature, the functions of the staff are left wide open.

6. There is consensus in the Preparatory Commission as to what the Enterprise shall not be:

. It shall not be an international bureaucracy organised and financed for functions which it cannot exercise, due to economic conditions prevailing today and in the foreseeable future.

. Although it shall operate "on sound commercial principles," it cannot be organised like an entity, e.g., a mining company, which, as demonstrated so strikingly in the Australian Working Paper () would be incapable of developing the requisite technologies.

7. Discussions on what the Enterprise shall be have barely begun. It should not be difficult to reach consensus on the principle that the Enterprise must be based on the experience of the most advanced systems of international high-technology management.

8. The Colombian Working Paper drew attention to the EUREKA/EUROMAR structure as an example of an advanced system of high-technology management where the private and the public sector cooperate effectively on the international level.

9. A Feasibility Study on the establishment of a Mediterranean Centre for Research and Development in Marine Industrial Technology, undertaken by the International Ocean Institute for UNEP and UNIDO in the context of the possibilities of implementing Articles 276 and 277 of the Convention, develops this paradigm in greater detail. Since many of the concepts advanced in this study apply to the

Enterprise and the Authority as well, the study is attached in Annex 1.

10. The function of the Enterprise, during its first phase upon coming into force of the Convention, would be -- as also suggested by the Austrian and Colombian Working Papers -- deep sea-bed exploration and research on, and development of, technologies for exploration, mining, and processing deep seabed minerals through joint arrangements between seabed mining States and companies who would participate with 50 percent of venture capital and existing technology, and developing countries, whose participation would be financed by public international funding institutions such as the World Bank, UNDP, the European Investment Bank, etc., or national development cooperation institutions such as CIDA, IDRC, SIDA, NORAD, etc.

11. The Enterprise would have all the attributes enumerated in para.5 above. In addition, it would have

- . Information gathering and conferencing facilities where groups of outstanding scientists and technicians from all parts of the world could meet periodically to keep the Enterprise up-to-date on the state of the art of seabed mining technology and lay the foundation for a data base.
- . its own R&D facilities where scientist and technicians from the industrialised countries would work together with scientists and technicians from developing countries in upgrading existing technologies and developing new mining concepts: participation in R&D being the most cost/effective and productive form of "training;"
- . Its own training programmes, in high-technology management, the interactions between all high technologies and ocean mining technologies; the interactions between nodule mining technologies and the technologies required for the mining of other resources available on the deep seabed (crusts, sulphides), etc.

12. It may be premature to speculate on the size of the initial core staff and budget of the Enterprise as this will be determined by the stage of work reached by the Prep.Com. at the moment of the coming into force of the Convention and the establishment of the Enterprise (see below, para.). This budget may range anywhere between \$150,000 per annum and half a million dollars, as indicated in the feasibility study for the Regional Centres (see para.60 of that study), or it could be 5 million dollars a year, as indicated in the Colombian working paper.

13. The three functions mentioned in para.11 above should be embodied in separate modules financed independently.

- . Conferencing and information gathering activities should be carried out in cooperation with the Fridjof Nansen Institute whose already existing programme in this field is attached in Annex 2.

- . R&D activities should be financed on the basis of approved and viable projects, jointly by industrial companies and their Governments and international or national funding agencies (see para.10 above).

- . Training activities should be carried out in cooperation with and financed by, institutions such as the International Ocean Institute whose programmes are well known.

14. This concept of the Enterprise would also contribute to redefine, within the terms of the Convention and in the light of present realities, the initial functions of the Authority as a whole: The Authority, and, in particular, the Council, would play the role that the Conference of Ministers plays in the EURKEA/EUROMAR system. I.e., it would examine R&D projects preselected by National Coordinators; it would make the final selection; it would make arrangements for funding, and it would allocate projects to national R&D institutes, universities,, R&D departments of

industrial companies, associated high-technology institutes, or to the Enterprise itself. In other words, just like the Regional Centres for R&D in marine industrial technology, the Authority would act as a catalyst; it would arrange for the networking of various institutes through appropriate work allocation; it would act as a promoter and coordinator of technology development and exploration projects; and, through the Enterprise, it would also act as a developer of technology.

15. Undoubtedly there had been initial difficulties in getting the EUREKA concept off the ground in Europe. But today there can be no doubt that it has been a tremendous boon to high-tech development in Europe for which it has been able to mobilize billions of dollars. A similar boon can be anticipated for ocean-mining technology under an analogous system to which the structure of the Authority and the Enterprise can readily be adapted, fully within the terms of the Convention. The only difference between the two systems is that, in the ocean mining system, public international funding is to be used, from the very outset, to finance the participation of developing countries. This may eventually occur also in EUREKA, and especially in EUROMAR, perhaps through the establishment of Regional Centres, but for the Authority/Enterprise system, it is a foundational principle, benefitting developing countries, industrialized countries, and the international institution at the same time.

16. The essence of this concept of the Authority and the Enterprise is that it cannot be conceived in the traditional sense as an intergovernmental organisation: a financial burden on member States which they must bear to keep the organisation alive. Nor can it be conceived as a business which, according to "sound commercial principles," must yield an adequate return on investment. Nor is there any possibility of making a transition from one to the other. The concept of a non-productive "nuclear Enterprise" constituting a burden on States, which then should transform itself into a profitable business is an erroneous concept

that cannot work in practice.

17. The Enterprise and the Authority must be conceived as productive and financially beneficial to all parties concerned from the outset, and it must be built in such a way that subsequent stages can be integrated without a break in the fundamental structure. The Enterprise and the Authority must, from the outset, be conceived as a new form of scientific/industrial cooperation between North and South, beneficial to both.

INFLUENCE OF THIS CONCEPT ON PRESENT ARRANGEMENTS

18. Such a concept of the Enterprise and the Authority would be beneficial for the present work of the Preparatory Commission both conceptually and operationally.

17. Conceptually, it allows a somewhat broader definition of "sound commercial principles" to which the activities of the Enterprise are to conform (Annex IV, Art.1 (3)). For there can be no doubt that EUREKA is being operated in accordance with "sound commercial principles," even though these are not defined in terms of short-range financial returns on investment. EUREKA is based on the recognition that (a) the development of High Technology is crucial for industrial development and competitiveness; and (b) such development requires cooperation, and sharing of high risks and high costs, between the private and the public sector at the international scale. Otherwise high technology development remains the monopoly of superpowers who can finance it out of their State or military budgets. These are sound commercial principles. They apply to seabed mining technologies which belong to the family of High Technologies, and they are the principles on which this concept of the Enterprise and the Authority are based.

18. Operationally, this concept of the future shape and function of the Authority and the Enterprise should guide the Prep.Com's course of action in implementing para.12 of Resolution II so that it might lead directly and smoothly to

the establishment of the kind of institution envisaged upon the coming into force of the Convention.

INFLUENCE OF PRESENT ARRANGEMENTS ON THE SHAPE OF THE INITIAL OR "NUCLEAR" ENTERPRISE.

19. It is assumed now that the 4 Pioneer Investors proceed as they have announced with the implementation of para.12 of Resolution II: They make joint arrangements for the exploration of the first mine site for the Enterprise. Such arrangements, obviously, can take a great variety of forms, and the Pioneer Investors will negotiate the one that will appear most beneficial to all parties concerned. It is assumed, for illustrative purposes only, that they will elaborate a plan of work for the next three years, providing for about three months ship time and nine months of laboratory time per year. The cost -- again, for illustrative purposes only -- is projected at \$20 million.

21. This includes provision of a research vessel which will be selected from one of the four countries. The contribution of the ship, at \$10,000 per day (exclusive of the cost of the international crew) is budgeted as \$2,700,000.

22. It also includes the selection of exploration technology and its "transfer," at fair commercial prices, to the joint undertaking. The terms of this "transfer" can be freely negotiated among the Pioneer Investors. During the exploration, this technology will be tested and projects will be formulated for its upgrading at the laboratory.

23. A typical plan of work for the next three years, based on "sound commercial principles," will include testing of mining and processing technology as well transport logistics and market surveys and studies on the interaction between other technologies, e.g., materials technology, synthetics, and recycling, and economic studies on the interactions betweenland-based and ocean mining.

24. The Pioneers have announced that their responsibility

for the training of personnel from developing countries for the Enterprise will be undertaken jointly, and in conjunction with the exploration of the mine site for the Enterprise. The most cost/effective and "organic" way of providing such training would be to select a small number -- probably around fifteen -- highly qualified scientists, technicians, managers, economists, from developing countries on a competitive basis, and let them participate in these testing, upgrading and study activities. The cost for this would be very modest, especially if shared among the four pioneer investors, on their common research ship or in their separate but well co-ordinated laboratories, and the result would be beneficial not only for the "trainees" and their countries, but to the joint venture itself as these "trainees" would contribute actively to the implementation of the plan of work.

25. It is assumed that it will take about a year to make arrangements for this joint undertaking and formulate a plan of work. this plan of work, obviously, has nothing to do with the kind of plan of work to be submitted by contractors and approved by the Council upon the coming into force of the Convention. It is a plan of work formulated by the Pioneer Investors to facilitate implementation of para.12 of Resolution II: It is sui generis, and the Pioneers are free to give to it whatever form they think most suitable.

26. The work could be completed at the end of 1991, at which time, approximately, the Convention might come into force. The following elements will now be in place:

- . A mine site, fully explored;
- . a management system, including a complete crew capable of performing all the functions of exploration, technology R&D, planning and projecting;
- . state of the art technology, which was used and developed during the exploration of the mine site for the Enterprise;

. an information network based on the experience of years of cooperation and mutual training.

27. All that has to be done, at this point, is to complete the institutional framework as prescribed by the Convention and outlined in para.5 above. This Enterprise will be entirely functional; it will not be "nuclear"; it will not be interim; it will not have to wait for changes in the market: it will generate such changes; it will fulfill its tasks like any other scientific/industrial project, be it EUREKA or EUROMAR.

IMMEDIATE NEXT STEPS

28. Within this broad concept, and strictly within the terms of the Convention and of Resolution II, the following immediate next steps could be envisaged:

29. OVER-ALL IMPLEMENTATION OF PARA.12 OF RESOLUTION II.

The Prep.Com. and the First Group of Pioneer Investors should elaborate a Memorandum of Understanding on the modalities of the exploration of the first mine site for the Enterprise, the testing and upgrading of technology and of training manpower in this connection. This should be based on a plan of work for these interrelated activities for the next three years.

30. Training:

- (a) Invitation should be issued to all Members of the Prep.Com. to nominate candidates for training. Each State should nominate two candidates;
- (b) a Commission should be appointed to organise a system of examinations for the final selection of candidates, in cooperation with the Pioneer Investors. This could be a Special Subcommittee of

the General Committee, or the Second Special Commission's Advisory Committee on Training should be given this mandate.

31. Technology Transfer

The mandate of the Committee of Experts should be expanded to include the following:

- (a) gathering of information on the state-of-the-art of seabed-mining-related technologies, and preparation of an annual report to the Under-Secretary General;
- (b) co-ordinating efforts to bring developing countries as partners into international undertakings in R&D in seabed-mining-related technologies and assisting in making arrangements for the financing of such participation.

Note: The Reports of the Committee of Experts on the state of the art of seabed-mining-related technologies should also be submitted to the Committee on Disarmament for the periodic Revision Conferences on the 1971 Seabed Treaty. These Revision Conferences, according to that Convention, are to be based on an examination of the state-of-the-art of the relevant technologies. Delegations have frequently complained about the lack of pertinent information.

ANNEX 1: Feasibility Study on the Mediterranean Centre for Research and Development in Marine Industrial Technology

ANNEX 2: Fridjof Nansen Proposal for a series of Conferences on Seabed Mining

ANNEX 3: IOI paper on principles, guidelines and policy on Training, Prep.Com, 1987.

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With the Compliments
of
the Permanent Mission of Jamaica
to the United Nations

We spoke.

A handwritten signature in blue ink, appearing to read "Dennis Francis".

Dennis Francis
12 January 1988

New York

TRAINING REQUIREMENTS

Introduction

Working Paper (WP) 13 provided the philosophical framework together with some of the guiding principles for the implementation of paragraph 12 of Resolution II of the Convention on the Law of the Sea. The principles which are at the heart of the concept of training are the following:

- (1) Training must be planned and carried out in close collaboration with the registered pioneer investors and, as appropriate, the certifying States on the one hand and the Preparatory Commission on the other, bearing in mind the provision on training established in the interim regime and its intimate link to the parallel system set forth in the Convention;
- (2) Training must help fulfil the purpose of ensuring the Enterprise's ability not only to carry out activities in a timely manner but also to keep pace with States and other entities operating in the area;
- (3) Training must cover all levels and aspects of the sea-bed mining activities;
- (4) Training must aim at helping the Enterprise to recruit a sufficient geographically representative number of personnel of high qualifications and technical competence.

With registration of the first four pioneer investors, no time should be wasted in the preparation of a framework for the implementation of those relevant provisions of the Convention relating to training, which is an essential part of the mandate of the Preparatory Commission.

In WP.13 a general approach was taken to the needs of the Enterprise and the obligations of the pioneer investors. It is now important to take a more focussed view and to establish priorities. While not losing sight of the bigger picture which includes the overall long-term needs of the Authority and the Enterprise, this paper will give greater attention to the immediate primary needs of the Enterprise and fulfilment of the mandate in paragraph 12 of Resolution II.

TRAINING MUST BE PLANNED AND CARRIED OUT IN CLOSE COLLABORATION WITH THE REGISTERED PIONEER INVESTORS AND THEIR CERTIFYING STATES ON THE ONE HAND AND THE PREPARATORY COMMISSION ON THE OTHER

Paragraph 3 of LOS/PCN/SCN.2/WP.13 outlines the objective behind the provision of the Convention as far as the exploration of a deep seabed mine site was concerned. The scope of the training to be offered by the pioneer investors would have to have regard for the state of the technology at the time of the training and, therefore, the provisions of paragraph 12 of Resolution II need no amplification in this regard. To the extent, however, that current technology may be superseded in later years by new technology, obsolescence can always be rectified by refresher courses of a practical nature to those who receive basic theoretical training in the know why and practical training in existing technology and its application.

There is the need to begin the training process immediately but the pioneer investors have virtually concluded their evaluations of selected areas within the purview of an integrated venture as revealed in their applications for registration as pioneer investors. A training programme therefore undertaken within the context of paragraph 12 of Resolution II should, of necessity, have as its priority those disciplines associated with

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link to ex-
ploration

with exploration of the Enterprise's mine site!!

exploration. This obligation may be achieved nonetheless by way of paragraph 7(c) of Resolution II which provides for the incurring of periodic expenditure, with respect to the area allocated to the registered pioneer investors until approval of its plan of work pursuant to paragraph 8, of an amount to be determined by the Commission. The amount should be reasonably related to the size of the pioneer area and the expenditure which would be expected of a bona fide operator who intends to bring that area into commercial production within a reasonable time. Consequently, there exist reasonable opportunities for the kind of training needed.

TRAINING MUST COVER ALL STAGES AND ASPECTS OF THE DEVELOPMENT AND CONDUCT OF SEA-BED MINING OPERATIONS SO AS TO ENSURE THE VIABILITY OF THE ENTERPRISE

1. Scope and Nature of a Training Programme

Training in the areas of transportation, processing, marketing and management was not examined in WP.13 because these areas do not have the same priority as exploration (in spite of the fact that a project has to be seen from the perspective of an integrated venture). In examining training needs of the Enterprise, it is important to make certain assumptions on operational options in the pre-exploration phase of the Enterprise in order to elaborate a training scheme which will meet the objectives of the chapeau to paragraph 12 of Resolution II. These options are broadly the following:

- (a) Exploration by the Enterprise
- (b) Exploration by contract
- (c) Exploration by joint venture.

Although option (b) and (c) may be employed, for the purposes of designing a training programme, the assumption has to be option (a).

Much attention has been given to limiting cost especially in the initial stage of the life of the Enterprise, when the organization would be solely dependent on the membership to meet its operating expenditure. Many suggestions have been made regarding the limits which may be placed on the structure of the Enterprise. Against this background, it is necessary to lay emphasis on the pre-production manpower requirements of the Nucleus Enterprise within the framework of potential operational options having the maximum input by the Enterprise (i.e., all the technical aspects of exploration done by the Enterprise).

The technical areas involved are the following:

A. Survey and Exploration

- (i) Sampling of Nodules (Grab operation)
- (ii) Spot Photography
- (iii) Bathymetry (Echo-sounding operation) (Seabed morphology)
- (iv) Bulk Sampling

B. Technical Design Data

- (i) Physical and Chemical Oceanographic Data (Waves, currents, temperature, salinity, weather, etc.)
- (ii) Geotechnical Data

C. Overall Assessment

- (i) Resource Evaluation
- (ii) Design Parameters

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2. Minimum Number of Disciplines to be Covered

Paragraphs 5-7 of document IOS/PCN/SCN.2/WP.13 outlines some of the disciplines for which training would be required initially. Based on the proposed configurations for an integrated deep seabed mining venture a new category (c) should be added to fill out skills required in the exploration phase. Paragraph 5 of WP.13 should therefore include (c) - Satellite data recovery and interpretation - as part of the disciplines for which training would be provided.

While WP.13 in its relevant parts would cover the general need for training the more immediate needs when focussing on the priorities of the pre-production phase are the following areas which flow from the activities outlined previously:

Disciplines Needed

A. Survey and Exploration

- (a) Marine Surveyor/Geodetic Engineer for position fixing
- (b) Marine Geologist ((i), (ii) and (iv) of A)
- (c) Marine Geophysicist ((iii) of A)
- (d) Mechanical Engineer ((iv) of A)

B. Technical Design Data

- (a) Physical Oceanographer
- (b) Chemical Oceanographer (Required only partially, physical oceanographer may handle this also)
- (c) Geotechnical Engineer (A Geologist with necessary background is suitable)

Planning Engineer - to plan total quantum of work and its scheduling

In paragraph 12 of WP.13 the number of individuals to be trained was identified as a minimum of three within each job category. The numbers to be trained for the preproduction Nucleus Enterprise are those classified as

priority and due regard should be given to the obligation under paragraph 12(a) (i) and (iii) of Resolution II.

This raised the question of cost of a training programme, its distribution between the first group of pioneer investors and the obligations of any other pioneer investor to share in this cost if registration occurs in the future under the pioneer investor provisions of the Convention. These are questions which will relate to the method used by the pioneer investors to fulfil their obligation either individually or collectively.

RECOGNIZING THAT THE INTERIM REGIME MUST REAFFIRM AND SUPPORT THE PARALLEL SYSTEM SET FORTH IN THE CONVENTION, TRAINING MUST HELP FULFIL THE PURPOSE OF ENSURING THE ENTERPRISE'S ABILITY NOT ONLY TO CARRY OUT ACTIVITIES IN A TIMELY MANNER BUT ALSO TO KEEP PACE WITH STATES AND OTHER ENTITIES OPERATING IN THE AREA

1. Nature of Training

There are two (2) types of training to be provided by the pioneer investors under the terms of paragraph 12 of Resolution II.

- (a) Training to be provided free of all costs to the Preparatory Commission as part of the pre-enterprise programme. This is intended to provide a pool of skills for the Enterprise, so that when the Convention enters into force there would be a core of personnel available to staff that organization, whose skills would enable the Enterprise as a fledgling organization to keep pace with the activities of the pioneer investors. The important term is being able to perform the same functions and make decisions as necessary in the light of prevailing circumstances; and
- (b) Training to be provided at the request of the Preparatory Commission/Enterprise/Authority in accordance with Article 15 of Annex III.

The training to be provided through the Preparatory Commission is not contingent on anything. It is part of the contract between the pioneer investors and the Preparatory Commission. You accept pioneer status, you accept the obligation to provide training prior to the entry into force of the Convention to trainees selected by the Preparatory Commission for the purpose of staffing the Enterprise.

2. Duration of Training

Paragraph 15 of WP.13 addressed that question. It was generally agreed that individuals to be trained are those with the necessary academic training in the disciplines identified in paragraph 5 of WP.13. They are to be trained in the specialities associated with their disciplines relevant to the operation of a deep seabed mining venture.

Of necessity some training programmes would require more time than others and this distinction between the length of programmes should be determined by the pioneer investors offering the training and the body in the Preparatory Commission responsible for the selection of trainees for the programme. It should however be understood that training to staff the Enterprise under terms established in paragraph 12 (a) (ii) of Resolution 11 remain in force until the entry into force of the Convention.

In paragraph 6 of WP.13 reference was made to the training of technicians who represent a different level of skill to be provided for the Enterprise. This group of trainees would have a lower priority to that of the professional group outlined earlier. Besides, most of the technicians would be employed in the land-based operation, primarily in the fields of transportation, processing, research and development. Skills involved in many of these areas are already widely available in countries with land-based mining


operations. The training therefore to be provided to technicians would be of a shorter duration and would primarily relate to general orientation.

TRAINING MUST AIM AT HELPING THE ENTERPRISE TO RECRUIT A SUFFICIENT AND GEOGRAPHICALLY REPRESENTATIVE NUMBER OF PERSONNEL OF HIGH QUALIFICATIONS AND TECHNICAL COMPETENCE


II. SELECTION OF CRITERIA AND PROGRAMME IMPLEMENTATION

Section III, paragraphs 13 and 14, of WP.13 dealt with this question. What remains to be addressed is the mechanism for selecting the group to be responsible for administering the training programme and the procedure for nomination and selection. In addition what costs will the training programme cover and what costs are to be borne by the nominee, the Preparatory Commission or the nominating body or State.

(i) Administering Body

 The programme of selecting suitable candidates for training should be carried out by a representative group of the Preparatory Commission made up of experts in the field of mining education and selected on the basis of equitable geographic distribution.

(ii) Who may Nominate Candidates for Training

 Nominees may be sponsored to the roster of the potential trainees by member states of the Preparatory Commission, academic institutions, (registered contractors) and specialized agencies of the United Nations.



OUR REF. NO. LOS/6

January 19, 1988

YOUR REF. NO.

Dear Madame Borgese:

I am passing to you the attached draft paper on Principles, Policies and Framework of a Training Programme in accordance with the provisions of paragraph 12 of Resolution II, which I have taken the liberty of drafting in the hope that it may give us a running start for the meeting of the Ad Hoc Working Group during the Spring Session.

You will observe that the section on Principles corresponds to the agreed draft on this section by the Ad Hoc Working Group, and that the section on Policies is, to a large extent, consistent with the French draft. It takes the main points as the policies with some amplifications and borrows from the conditions in the French draft for the section on Framework. Obviously, it needs some refinement and possible additions.

I have passed copies to some members of the Working Group, including the Chairman, for their comments and would be very grateful for yours and any suggestions you may have to expedite the work at the upcoming Session.

Yours sincerely,

D.I. Francis

Prof. Elizabeth Mann Borgese
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PRINCIPLES, POLICIES AND FRAMEWORK OF A
TRAINING PROGRAMME IN DEEP SEABED MINING
FOR THE ENTERPRISE

I. PRINCIPLES

- (1) Training must be planned and carried out in close collaboration with the registered pioneer investors and, as appropriate, the certifying States on the one hand and the Preparatory Commission on the other, bearing in mind the provision on training established in the interim regime and its intimate link to the parallel system set forth in the Convention;
- (2) Training must help fulfil the purpose of ensuring the Enterprise's ability not only to carry out activities in a timely manner but also to keep pace with States and other entities operating in the area;
- (3) Training must cover all levels and aspects of the sea-bed mining activities;
- (4) Training must aim at helping the Enterprise to recruit a sufficient geographically representative number of personnel of high qualifications and technical competence.

II. POLICIES

- (1) Pioneer investors will provide training in accordance with paragraph 12 of Resolution II.
 - (a) Training to be provided prior to entry into force of the Convention for the purpose of enabling the Enterprise to keep pace with registered pioneer investors will be free of cost to the Preparatory Commission;

- (b) Training subsequent to the entry into force of the Convention will be on the basis of cost plus 10% chargeable to the Authority/Enterprise.
- (2) Training obligations within the meaning of paragraph 12(a) (ii) are not open-ended. They are limited in time and will lapse with other provisions of Resolution II when the Convention enters into force. However, training as outlined a 1(b) above is to be a continuing process as provided for in article 144, paragraph 2(b) of the Convention.
- (3) Personnel to be designated for training under category at 1(a) above will be designated by the Preparatory Commission.
- (4) The framework of a training programme will be established by the Preparatory Commission.

III. FRAMEWORK

- (1) The Preparatory Commission will establish a roster of potential candidates for training, bearing in mind the following list of priority activities to be undertaken by the Nucleus Enterprise.
 - (a) Survey and Exploration
 - (i) Sampling of Nodules (Grab operation)
 - (ii) Spot Photography
 - (iii) Bathymetry (Echo-sounding operation) (Seabed Morphology)
 - (iv) Bulk Sampling
 - (b) Technical Design Data
 - (i) Physical and Chemical Oceanographic Data (Waves, currents, temperature, salinity, weather, etc.)
 - (ii) Geotechnical Data

(c) Overall Assessment

(i) Resource Evaluation

(ii) Design Parameters

- (2) Individuals selected for the roster should have appropriate educational and professional background and be no older than 30 years of age.
- (3) Nominations to the roster should be made by signatories or states parties to the Convention.
- (4) A Special Selection Committee of the General Committee shall meet annually to select from the roster an appropriate number of candidates for training.

Selection should be based on merit. Due regard should be paid to equitable geographic distribution.

- (5) The pioneer investors' obligations to the trainee will only begin upon the signing of an agreement with the Preparatory Commission regarding the specific areas of training to be received and the commencement of said training programme.
- (6) Trainees should be bonded and would require the approval of the Selection Committee before accepting employment within [10] years after receiving training. Approval to seek alternative employment should however not be unduly withheld.
- (7) Training need not be a continuous process and may bear a relationship to activities undertaken in conformity with the provisions of paragraph 7(c) of Resolution II.



Dalhousie University

International Ocean
Institute



I.O.I. - Malta

January 31, 1988.

Mr. Dennis Francis
Permanent Mission of Jamaica
to the United Nations
New York, N.Y.

Dear Dennis:

Thanks for the paper, which arrived on Friday. I have studied it immediately. It's good. It's sound. But at this point I like to see less theory and more action. The final pages of both your documents are the crucial ones, and this is the direction in which we must push.

I think the point, which was in the Pioneers' (French) paper, that training will be conducted in conjunction with the exploration of the mine site is very important and very practical. I think you should include that.

I am enclosing three recent items. The letter to Satya was very well received, and we shall continue this dialogue. The other paper, written for the Government of Colombia, is still in draft form. I have it on the computer and am working on it. So therefore it is still confidential. I hope we will introduce it in Jamaica. I would be most grateful for your reactions.

The third item is the draft agenda for the forthcoming Pacem in Maribus Conference. I am very excited about that. I think this will take the place of the "seminar" I had proposed to our Advisory Committee. All the majors have already accepted -- and this is my invitation to you.

It seems to me, it all fits together. It will take time.

All the best,

Yours as ever,

Dr. Elisabeth Mann Borgese



Dalhousie University

International Ocean
Institute



I.O.I. - Malta

February 7, 1988

Mr. Tadashi Ikeda
Deputy-Director-General
Office for the law of the Sea
Ministry of Foreign Affairs
Government of Japan
Tokyo, Japan

Dear Mr. Ikeda:

You certainly are familiar with the proposal put forward by the Delegation of Colombia during the last session of the Prep.Com.

The moment has come when the Prep.Com is to become operational, and has to decide on its options as to how to do it.

I have drafted a little paper which I am enclosing, indicating some possibilities. It is still in draft form, without annexes. But I thought it might be of interest to you, in this preliminary stage.

I am much impressed by the ocean-ming related activities in your country.

With all good wishes,

Sincerely yours,

Elisabeth Mann Borgese
Professor



International Ocean Institute

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February 7, 1988

H.E. Igor K. Kolossovsky
Ambassador Extraordinary and Plenipotentiary
Ministry for Foreign Affairs
Moscow, USSR

My dear Igor:

I have tried to draft a little working paper indicating some possible new steps to take for our Prep.Com., now that we have reached a new stage. The registration of the Pioneer Investors is an event of enormous importance, and this new phase of our work will challenge our creativity even more than the previous phases. We now have an interim regime for exploration, research and development, and training in place, and we must show the world that it works. I think the future of the Convention hinges on that.

I am not sure yet in what form this paper will be introduced at the forthcoming Prep.Com. Session, but it will be introduced. INcidentally, although it is more comprehensive and "systemic," it harmonises well with the paper the G77 are preparing.

Looking forward to seeing you,

Yours cordially,

Elisabeth Mann Borgese
Chairman



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February 7, 1988

Mr. Vladimir S. Kotliar
Legal and Treaty Department
Ministry of Foreign Affairs
Moscow, USSR.

My dear Vladimir:

Enclosed please find a letter I am sending to Igor Kolossovski. It is self-explanatory, and I hope we shall have occasion to discuss these proposals in Jamaica.

With all good wishes,

Yours as ever,

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I.O.I. - Malta
February 7, 1988

Personal and confidential

Mr. Denis Tytgat
Directorate General "Internal Market
& Industrial Affairs"
Commission of the European Economic Community
Brussels, Belgium

Dear Mr. Tytgat:

I would like to explore with you the possibilities of further developing the approach attempted by the "Colombian working paper" last year in the prep.Com. I have drafted a new little paper indicating some steps that might be taken now.

We really have entered a new phase: reached a new plateau, and we ought to use it constructively.

Last year -- and this is confidential even though I think you are quite aware of it already -- the Delegation of Colombia was approached by the Spanish Ambassador who expressed his interest in the Colombian proposal and thought that a unified text could be arrived at between the EEC and Colombia. I think that would be a marvellous step forward, and the little paper I have enclosed might point in the direction in which one might proceed. Incidentally, I think that the "Enterprise" will have many features in common with the Regional Centres to be established under Art. 276 and 277, for which our proposed Mediterranean Center is a pilot project. In both cases the main thing is to introduce the most advanced thinking about high technology development and management into Law of the Sea thinking which tends to be a little sluggish in this respect. This is a technological and economic necessity.

Looking forward to seeing you in Jamaica and to discussing these questions further with you.

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Ministry of Foreign Affairs
Quai d'Orset
Paris, France

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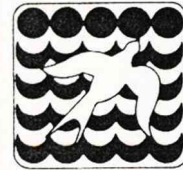
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Professor



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I.O.I. - Malta

February 7, 1988

Personal and confidential

Dr. Gaetano La Pira
Commission of the European Economic Community
Brussels, Belgium

Dear Dr. La Pira:

Dr. Saigal has reported about his talks with you which he found most helpful and constructive. I very much hope the EEC will take an active part in the establishment and operation of the Mediterranean Centre for Research and Development in Marine Industrial Technology.

Last year, the Delegation of Colombia introduced a working paper in the Law of the Sea Preparatory Commission in Jamaica, concerning ways and means of organising the Enterprise of the Seabed Authority. This study was based very much on the same principles on which we based our proposal for the Mediterranean Centre.

I would like to explore with you the possibilities of further developing the approach attempted by the "Colombian working paper" last year in the prep.Com. I have drafted a new little paper indicating some steps that might be taken now.

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At the same time, I would like to invite you most cordially to

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participate in the forthcoming Pacem in Maribus XVI Conference which will be held here in Halifax on August 22-25. It will deal very much with these same problems. They have become very crucial and burning.

With all good wishes,

Sincerely yours,

A handwritten signature in cursive script, reading "Elisabeth Mann Borgese".

Elisabeth Mann Borgese
Chairman

Encl: ENTERPRISE
P.i.M. xvi



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I.O.I. - Malta

February 7, 1988

Dr. S.Z. Qasim
Secretary
Department for Ocean Development
Government of India
New Delhi, India

Dear Dr. Qasim:

I am sure you are familiar with the proposal introduced by the Delegation of Colombia at the Prep.Com. last year.

It received quite a bit of attention and certainly will come up again at the forthcoming session.

How are we to move on from here?

I have drafted a little paper which will be introduced this year, and I would love to have your reaction and suggestions.

This new phase of the work of the Prep.Com., I think, challenges our creativeness even more than the previous phases. With the registration of the 4 pioneer investors, we have an interim regime for exploration, research & development and training in place -- and we have to show to the world that it works. The future of the Convention very much depends on that. I wish you would give me an opportunity to discuss these matters with the Indian Delegation.

I am happy to hear that plans for our training programme in Madras are progressing.

All the very best,

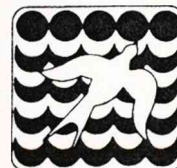
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