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DEVELOPMENT OF A REGIONAL OIL-COMBATING  
CENTRE IN THE MEDITERRANEAN

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Secretariat

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DEVELOPMENT OF A REGIONAL OIL-COMBATING  
CENTRE IN THE MEDITERRANEAN

I. INTRODUCTION

1. The Inter-governmental Meeting on the Protection of the Mediterranean held in Barcelona from 28 January to 4 February 1975 recommended in Section IV.A.4 of the Action Plan (UNEP/WG.2/5) that the Executive Director of UNEP should have early consultation with governments of the Mediterranean region on the possibility of setting up a regional oil-combating centre and took note of the proposal of Malta to host such a centre.
2. Pursuant to this recommendation, arrangements are being made for a consultation of Mediterranean States, with a view to defining the objectives and functions of such a regional centre.
3. In order to assist the work during the consultation the IMCO Secretariat has prepared the present document, which describes the technical aspects involved in the development of the proposed centre.

II. OIL POLLUTION - THE NATURE OF THE PROBLEM

4. In order to assess the objectives and functions of a regional oil-combating centre, it would be useful to review briefly the nature of the problems which might arise from oil spillages of different magnitudes.

(a) Small spillages: By far the largest number of incidents fall into this category. Fuel or lubricating oil finds its way into the bilges of yachts and barges and is pumped overboard. Careless handling of hoses at bunkering and oil handling jetties can result in dozens of minor spillages per year. The consequent oil pollution is usually confined to the locality of the source and the remedial action can be taken by the national or local authority.

(b) Significant spillages: One cannot put a typical size, or a size range against spillages which become individually significant. A few tons of persistent oil spilled in the vicinity of a high amenity beach can have greater repercussions than several hundred tons of light oil spilled far from land. In general, those spills which taken on their own are considered to have serious national or, on occasions, international consequences, fall into this category. The majority of such incidents would probably be dealt with by the national authority, but in cases where more than one country is threatened, some co-operation would be advisable.

(c) Catastrophic spillages: Events such as the "Torrey Canyon" tanker disaster, or the Santa Barbara oil-well blow-out fall into this category. In many cases the shores of more than one country are threatened, and in most cases the resources required for dealing with the emergency are likely to be beyond the means or state of readiness of a single country. International co-operation is therefore desirable to share the resources available among a number of threatened countries and to formulate appropriate contingency plans so that available resources may be deployed in the most effective way in such an event.

5. Oil also finds its way into the marine environment from shore-based installations, refinery processing, and cooling water discharges, etc. and from operational discharges arising from de-ballasting of ships. The prevention and control of these discharges, which contribute significantly to the background level of hydrocarbons in the Mediterranean, is the subject of other international initiatives, such as the International Convention for the Prevention of Pollution from Ships, 1973. Means for preventing operational discharges or accidental spillages are therefore outside the scope of a regional oil-combating centre, but the centre might play a useful role in promoting international activities in this field being carried out by other organizations, such as IMCO.

### III. RELEVANT DOCUMENTATION

#### (a) Protocol

6. As discussed in Section II, pollution incidents of both significant and catastrophic proportions frequently require international co-operation to deal with them effectively. The Draft Protocol on Co-operation in Combating Pollution of the Mediterranean by Oil and Other Harmful Substances in Cases of Emergency forms the legal basis for providing effective regional arrangements for combating spillages of oil and other noxious substances resulting from accidents to ships. The Protocol identifies the seriousness of the threat to the marine environment and commits Parties to the preparation of effective counter measures.

7. In order to facilitate a co-ordinated international effort to deal with the problem, Parties to the Protocol will agree to an exchange of information concerning their general state of readiness and their competence to deal with specific emergencies as they arise. In the event of an emergency the Protocol further emphasizes the need for speedy and reliable means of communication which would obviously be needed if counter measures involving more than one country are to be effective. In this context (see Articles 6 and 7) the Draft Protocol introduces the concept of regional or sub-regional centres to facilitate effective communications between parties and also (see Articles 8 to 11) to ensure that mutual assistance by countries when a threat has occurred can be efficiently administered.

#### (b) IMCO Paper submitted to the Barcelona Meeting

8. A Paper submitted to the Barcelona Meeting by the IMCO Secretariat entitled "Prevention and Control of Marine Pollution from Ships in the Mediterranean" gave details of other possible practical considerations which might also fit into a regional approach to the problem of marine pollution from ships. The suggestion was made that a better understanding of the character of the Mediterranean, both in terms of the resources and amenities needing to be protected from marine pollution and with respect to the principal movements of shipping and the hazards therefrom, could result in the recognition of a practical need for equipment and manpower for combating pollution on a regional basis. It was indicated that recognition of a need could then lead to the preparation of a regional contingency plan which would specify the most suitable locations of equipment, transport and trained personnel. In this context the designation of a focal point or centre was proposed to decide what equipment is needed, where it should come from, how it should be transported and how other matters pertinent to particular situations should be dealt with.

#### IV. OBJECTIVES AND FUNCTIONS OF A REGIONAL CENTRE

9. In his letter of information addressed to the Mediterranean States, the Executive Director of UNEP expressed certain preliminary views on the objectives and functions of a regional centre, which are cited hereunder:

##### Objectives:

- A. The establishment, development and management of operational activities for the prevention, control and combating of massive pollution by oil and other noxious substances in the Mediterranean region, especially in the case of emergencies.
- B. Assistance to coastal States of the Mediterranean region, in the development of their own national capabilities to deal effectively with oil pollution problems through information exchange, technological co-operation and training.

##### Functions

- A. The preparation and periodical review of Contingency Plans for the Mediterranean, which should include:
  - (i) Designation of areas requiring special protection.
  - (ii) Availability and location of experts, equipment and facilities for oil-combating operations in the event of major oil spills.
  - (iii) Co-operative arrangements between the regional centre and sub-regional and national anti-pollution units in the Mediterranean.
- B. The management of an adequately equipped "oil-combating unit" with a regional or sub-regional capacity to undertake oil clearance operations on the high seas, to keep oil spills under observation, and to co-ordinate major operations when requested to do so by coastal States.
- C. The development and operation of a Communications/Information system.
- D. The development of technological co-operation and training programmes in connexion with oil pollution prevention and control, oil clearance techniques, etc.
- E. The development and maintenance of a regional focal point for oil pollution information within the network of the International Referral System of UNEP.
- F. The maintenance of a close working relationship with other Mediterranean centres, especially with the "lead" scientific institution within the regional network being developed by UNEP and IOC/UNESCO for baseline studies and monitoring of oil and petroleum hydrocarbons in marine waters.
- G. The promotion of activities directed towards preventing and reducing maritime accidents and other incidents which cause massive spills.

10. The nature of the problem of oil pollution and the relevant documents described in Sections II and III above appears to accord fully with the objectives and functions of a regional centre proposed by the UNEP Executive Director. Suggestions made in the following Sections on the practical ways and means for development of a centre correspond, therefore, to these functions.

11. Although the objectives of the centre mentioned in paragraph 9 refer to combating of pollution by other noxious substances, the development of a regional centre dealt with in the following Sections is designed to cover primarily oil. Combating of pollution by other substances would involve many complex problems and require different facilities and expertise, and it would be more practicable to concentrate initially on oil and to consider at a later stage further development of a centre to be capable of handling pollution by other substances.

12. It should be emphasized that the present document would in no way suggest that a centre should undertake all the functions mentioned in paragraph 9, nor indicate priority of each function the centre might undertake. These would be left to the decisions of coastal States, taking into account the practicability of making appropriate arrangements for performing respective functions and the availability of financial and other resources available.

13. This document assumes that the Mediterranean States would decide to establish one regional centre with the possibility of being supplemented by one or more sub-regional centres. If they decide on other arrangements, e.g. more than one centre in the region, the approaches suggested in the following sections would still be applicable in general.

#### V. DEVELOPMENT OF A REGIONAL CENTRE

14. Each of the possible functions of a centre would require, in a varying degree, arrangements for facilities and manpower. Assuming that as a long-term project the centre should aim at performing all the proposed functions, it would not be practicable to attempt to develop a centre which would be ready to perform all of these functions at the same time. With this in view, the present document suggests the following logical stages through which the development of a centre could proceed:

STAGE I To identify the tasks to be performed by the centre in the field of contingency planning and training. The Centre would establish channels of communication with Mediterranean countries through which it could receive early warning of major spillages and subsequently facilitate the co-ordination of co-operative effort in clean-up operations. Functions A, C, D and G described in paragraph 9 are covered by this Stage.

STAGE II To consider the additional facilities required to give the Centre an Information role in technical and scientific aspects of marine pollution. Functions E and F described in paragraph 9 are covered by this Stage.

STAGE III To consider, in some detail, what would be involved in setting up an Operational Unit to combat oil pollution. This would cover the requirement of Function B described in paragraph 9.

15. The Stages given are merely a grouping of possible functions of the Centre, and are not intended to suggest a chronological order for the establishment of facilities or necessarily the order of importance of the functions, although there are bound to be views on this latter point. In fact, it would be possible that all three stages could come into existence together, although such an approach would cause a delay in bringing a centre into operation.

#### VI. STAGE I TASKS

16. Stage I Tasks would be:

- (a) To institute a working relationship between the Regional Centre and national governments in the Mediterranean and sub-regional centre(s), if established;
- (b) To develop an oil pollution contingency plan;
- (c) To establish means of communication between ships, aircraft, national governments and regional centre on matters pertaining to a reported sighting of marine pollution and subsequent counter measures; and
- (d) To develop technological co-operation and training programmes.

(a) Working relationship between the regional centre and national governments

17. It is recommended that each national government should designate an appropriate officer who should maintain liaison with regional or sub-regional centres.

(b) Oil pollution contingency plan

18. The development of an oil pollution contingency plan for the Mediterranean would include:

- (1) To identify coastal areas requiring protection, for example:
  - (a) because of the high risk of oil spillage; or
  - (b) because of vulnerability of the coast line;
- (2) To assess the present level of preparedness to combat a massive spill of oil in the Mediterranean, namely, by reference to participating countries' own contingency plans. Results should list equipment, stocks of chemical dispersant and trained manpower available in an emergency;
- (3) To recommend, in the light of results of studies made under paragraphs 4(a) and (b) above, desirable equipment levels and training requirements for the region;
- (4) To recommend in the context of a developing contingency organization whether oil combating units should be set up on a regional or sub-regional basis, supported by studies justifying the alternative courses of action.

19. It is emphasized that the Centre should be planned on the basis that it achieves its objectives by complementing existing national contingency plans and equipment levels. Except perhaps for preparations which governments might already have made to deal with an event of catastrophic proportions, the Centre would in no way displace or render invalid preparations made by a government to deal with its own oil pollution problems.

(c) Communication network

20. The communication network between ships, national governments and regional centre would include:

- (1) an arrangement by which ships involved in maritime accidents or sighting spillages would report by radio to the nearest coastal radio station;
- (2) an arrangement by which the coastal station receiving such a report would transmit the information to a national co-ordinating centre or to other authorities of States which are likely to be affected and to the regional or sub-regional centre;
- (3) an arrangement by which the regional centre receiving the information would communicate to other governments or sub-regional centre(s), in order to organize or assist the oil combating operation.

21. A similar communication system could be established by aircraft sighting spillages through their radio link with air traffic control centres.

22. Shore communication would be made through established telecommunication channels, e.g. telephone, telegramme or telex.

(d) Technological co-operation and training programmes

23. It is recommended that the staff in the regional centre include a technically qualified and practically oriented Training Officer with responsibility for instituting a training programme for pollution officers and operatives in the region.

24. The first priority of the training programme might be to administer an arrangement by which, say, three officers a year from the Mediterranean countries attend specialist courses in certain existing institutions which would fit them for the role of on-scene supervisor in anti-pollution operations.

25. At the same time, the Training Officer might possibly arrange practical training sessions at operative level in conjunction with one, or more, of the co-operating countries. For convenience this might be the country hosting the Regional Centre. In such an event, a grant would be made to the host country for the use of amenities and equipment.

26. By the means described in paragraphs 25 and 26 above, the countries would themselves eventually accumulate the expertise and experience which would allow the region to become self sufficient in its training needs.

27. The estimated cost for Stage I of the Centre is less than one hundred and seventy-five thousand US dollars (\$175,000). Approximately forty per cent (40%) of this estimated total would be expended on salaries for the personnel outlined above. A possible Organizational Structure for Stage I of the Centre is shown in Appendix A(1).

#### VII. STAGE II TASKS

28. Stage II Tasks would be

- (1) To develop and maintain an information service on technical and scientific aspects of marine pollution, including participation in the International Referral System of UNEP. Although UNEP/IRS does not act as a repository for substantial information, many of its constituent focal points will do so. It is therefore proposed that an IRS Regional/Sectoral Focal Point be established as part of the Regional Oil-Combating Centre operations. This would necessarily perform all of the functions of an IRS Focal Point (as set out in the IRS Focal Point Guide - EP/IRS/M-F) in relation to the problems of oil pollution, and would also presumably maintain a substantive information capability on this subject. The Focal Point would work in close technical liaison with appropriate governmental, non-governmental and international organizations or departments including libraries, documentation services, laboratories, monitoring facilities and oil spill prevention and combating units. The information capability of the Focal Point would supply the necessary basis for decisions at policy and technical level on problems of the Mediterranean and for action to combat these problems.
- (2) To maintain a close liaison with the pilot projects developed as part of the Co-ordinated Mediterranean Monitoring and Research Programme, implemented by UNEP in close collaboration with FAO (GFCM), UNESCO (IOC), WHO and UNDP, as part of the "Action Plan" adopted at the Barcelona meeting. The pilot projects will be executed by networks of national research centres which will be headed by "lead" institutions. Within the framework of this Programme the following four pilot projects are relevant to the planned activities of the proposed oil-combating centre:
  - baseline studies and monitoring of oil and petroleum hydrocarbons in marine waters;
  - coastal transport problems of pollutants;
  - research on the effects of pollutants on marine organisms and their populations;
  - research on the effects of pollutants on marine communities and ecosystems.

29. The estimated annual cost for Stage II is an additional forty thousand US dollars (\$40,000) to the annual cost of Stage I : thus an estimated total of less than two hundred and fifteen thousand US dollars (\$215,000), of which approximately fifty per cent (50%) would be expended on salaries for the personnel. The recommended organizational structure for this Stage is shown in Appendix A(ii).



### VIII. STAGE III TASKS

30. Stage III Tasks would be to establish an operational oil combating unit equipped to undertake oil clearance operations on the high seas. In deciding how and when to set up such a unit there appear to be two options, depending on the urgency with which the facility is required, namely:

- (1) For instance, if it is decided that having such a unit is of the utmost urgency, and cannot await the outcome of studies carried out by Stage I of the regional centre, then the unit might be set up immediately on the understanding that a later decision could result in the unit being (a) re-designated sub-regional and (b) that relocation might be required;
- (2) Alternatively it may be decided that the setting up of a unit can await the findings of studies made by Stage I of the regional centre.

### Functions of an Operational Unit

31. It is anticipated that the Operational Unit will only engage in combating the effects of major spillages of oil, i.e. that up to a certain size of spill national governments will have their own organizations for dealing with the problem.

32. Since the incidence of major spillages is not high, members of the Unit will be available to perform other duties, providing that they are available in cases of an emergency.

33. One such duty will be the maintenance of equipment in a state of readiness backed by frequent rehearsals in its use.

34. A secondary role might be assistance in the training of national oil pollution operatives previously described under paragraph 23 above.

35. Further roles are anticipated for the Unit which are reflected in the following recommended material and equipment list:

Back-up stocks of concentrated oil dispersing chemical (10,000 Imp. gallons);

Permanent storage tanks for dispersant;

6 sets of tug-mounted dispersant spray gear;

1 set of ADAPTS pumping apparatus for emergency removal of oil from stricken tanker;

1 Vikoma Seapack, Seaskimmer and associated power pack, lifting gear, etc.;

6 Flexible "pillow" tanks for storing dispersants on vessels;

Yokohama fender for tanker lightning operations under emergency conditions;

Stock of surface active chemical ("Herder") to protect beaches from contamination by oil;

Aerial applicator for surface active chemical;

For example, in the event of a serious threat of oil pollution from a grounded or otherwise damaged tanker the most appropriate action is to bring another ship alongside and to transfer the cargo. Possession by the Unit of suitable pumps and fenders would facilitate participation in such action.

#### Costing of an Operational Unit

36. In order that there can at least be an approximate understanding of what proceeding to Stage III might imply, the estimate of equipment and manpower requirements is based upon proprietary methods used in other parts of the world. The estimated cost at current prices of the recommended materials and equipment listed in paragraph 35 is less than four hundred thousand US dollars (\$400,000), with an amortization of the equipment over five years of fifty thousand dollars (\$50,000) per year.

37. Only major items of material and equipment have been costed. It is assumed that less expensive items will be provided by national governments on a "mutual aid" basis in the event of an emergency.

38. No provision has been made for equipping the Unit with special vessels - it is assumed that vessels normally having some other function, e.g. naval patrol boats, tugs, etc. will be commandeered in times of emergency. However, there will be a requirement for vessels in support of the Unit's normal routine, e.g. practice outings, training demonstrations. It would therefore seem reasonable to set aside \$35,000 p.a. for this purpose.

39. Some of the items of equipment have been designed to be transported by air in an emergency, for example the ADAPTS pump and the Vikoma oil recovery system.

40. An agreement could be entered into between the Oil-Combating Centre and an air charter firm that not more than a set amount of time would be allowed to elapse between notice of an emergency being given and an aircraft being made available. However, the need to have such a facility would have to be ascertained before a value could be put against it. The cost of such an arrangement would, of course, be dependent upon the extent to which air charterers would be prepared to guarantee the service.

41. In the absence of cost/benefit figures on which to base such a decision it might be desirable to station the oil-combating unit in the vicinity of an airport having facilities to land transport aircraft of the "Hercules" type. Thus there would be the opportunity to develop this capacity at a later date.

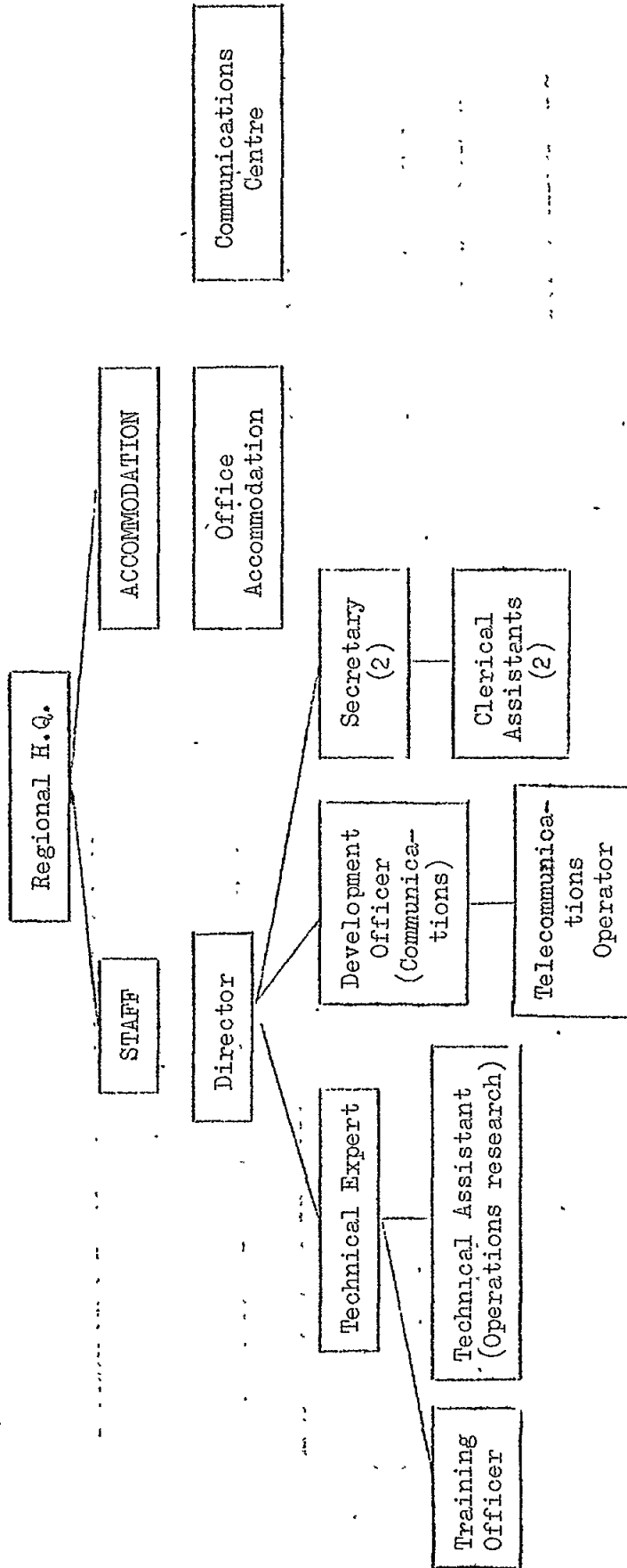
42. A benefit of giving the Unit an air-borne capacity would be that its scope would extend beyond the Mediterranean region. Since the type of emergency which the Unit is set up to guard against happens only rarely, and even then possibly in other seas or oceans of the world, there would be an advantage both financial and in terms of experience gained from offering the service to a wider community. For the time being no cost has been put against air transport.

43. An estimated total annual cost of implementing Stage III, including the equipment costs, is less than two hundred thousand US dollars (\$200,000). This would make the total estimated annual cost for the fully-developed Centre less than four hundred and fifteen thousand US dollars (\$415,000), of which approximately forty per cent (40%) would be expended on salaries for the personnel. The recommended Organizational Structure for this Stage is outlined in Appendix A (iii).

44. The recommended organization structure including all stages is shown in Appendix A (iv).

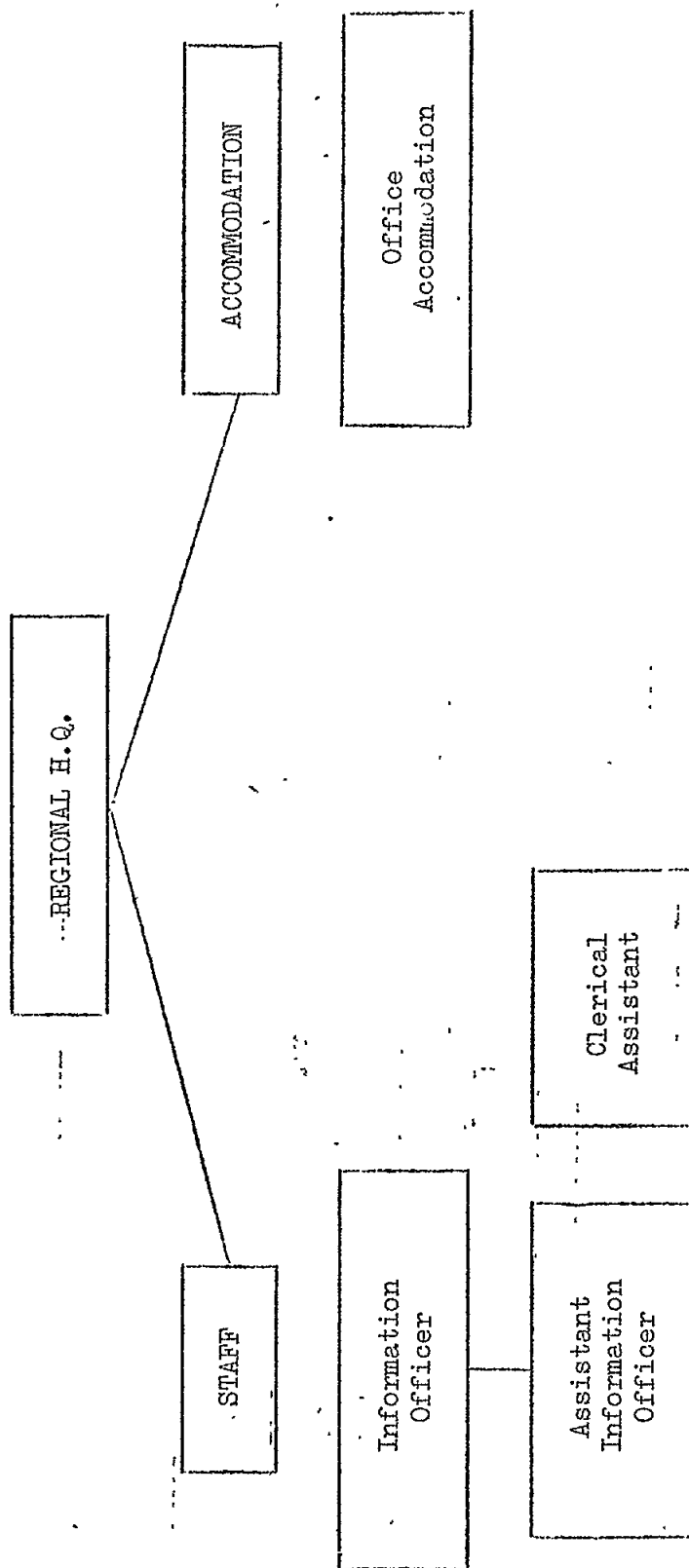
Appendix A

(i) Recommended structure - Stage I



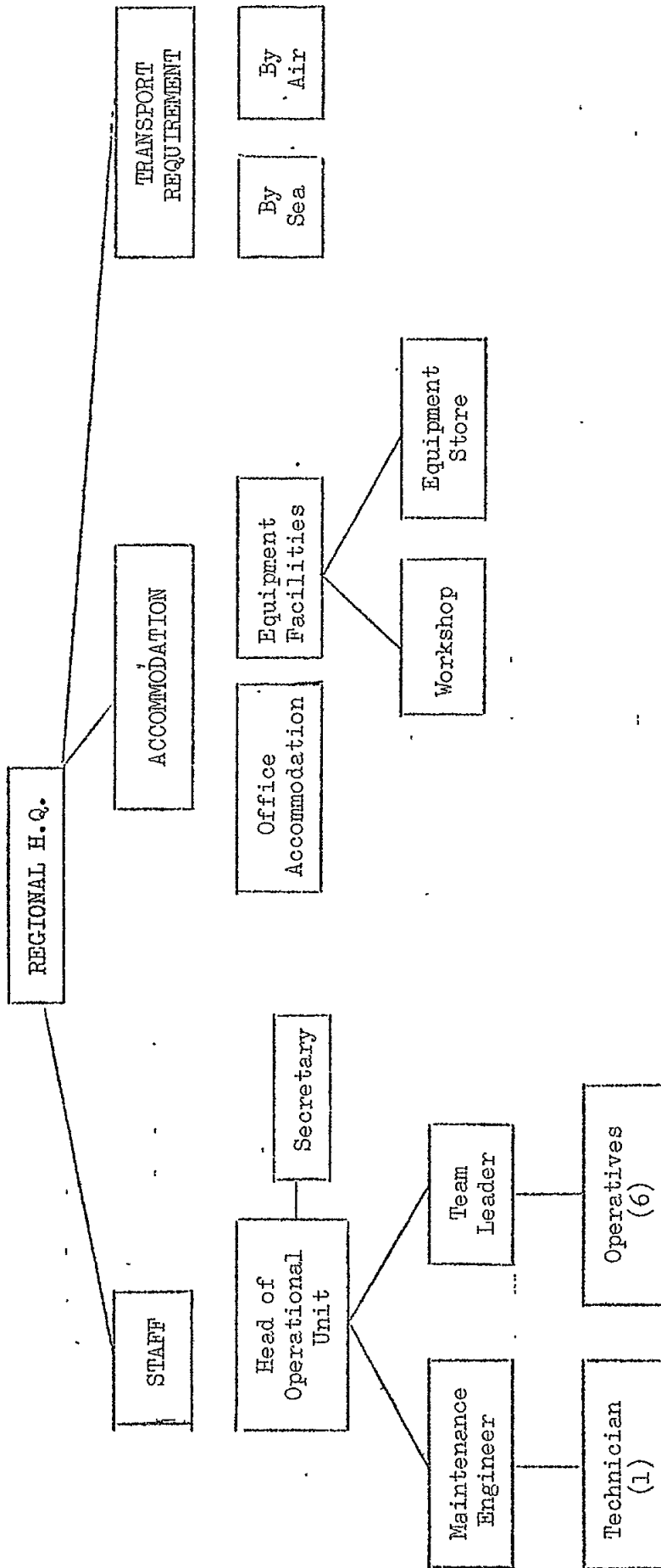
Appendix A (continued)

(ii) Recommended structure - Stage II



Appendix A (continued)

(iii) Recommended structure - Stage III



(iv) Recommended Structure - All Stages combined

