AN EVALUATIVE ASSESSMENT OF THE TECHNICAL CO-OPERATION ACTIVITIES OF THE INTERNATIONAL MARITIME ORGANIZATION IN RELATION TO MARITIME TRAINING

Prepared by Richard V. Hennes and Kahono Martohadinegoro

Joint Inspection Unit



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I. INTRODUCTION

1. In November 1986 the Secretary-General of the International Maritime Organization (IMO) wrote to the Joint Inspection Unit (JIU) concerning its future work programme. He stated that

"maritime training has been given the highest priority in the IMO technical co-operation programme, which aims at promoting effective and global implementation of the technical standards and regulations developed by this Organization. To this end a major part of the technical co-operation programme is directed at the provision of advice and assistance to developing countries in the field of training."

2. The Secretary-General felt that it was time to examine the technical co-operation activities of IMO in regard to maritime training, to establish whether the programme was proceeding in the right directions and was achieving IMO's objectives. He proposed that the study concentrate on major sectors of the programme rather than on individual projects, and requested that the JIU undertake this task.

3. The JIU has prepared two recent related reports on IMO activities. In 1984 it reviewed various general aspects of IMO operations - technical co-operation, relationships with other organizations, and organization and management matters in the IMO Secretariat (JIU/REP/84/1). In 1987 it provided the Secretary-General, at his request, with proposals for the establishment of an internal evaluation system in IMO (JIU/NOTE/87/1).

4 . This study was conducted between April 1988 and February 1989. The Inspectors reviewed and analyzed a large amount of documentation, particularly inter-agency project evaluation reports, mission reports, and programme statistics; assessments of the general worldwide maritime situation; evaluations made by IMO and others of training activities; reports on technical co-operation activities made by the IMO Secretariat to the Assembly, Council, and Technical Co-operation Committee; and other relevant IMO documents, training materials and publications. In addition, the Inspectors held a lengthy series of discussions with present and past Secretariat officials, with government representatives familiar with IMO's work and with maritime training activities in general, with officials of the World Maritime University and with other United Nations system agencies and non-governmental organizations involved in this field. They are very grateful to all these individuals for the many useful ideas, perspectives, and observations which they contributed.

II. THE IMO ROLE AND STRATEGY

A. International Maritime Affairs

5. During the past 20 to 30 years shipping has changed more than in any other period in history. The ships that sail the world's oceans today are much faster, larger, more complex and more varied than ever before. In 1959, for example, there were about 36,000 ships of 100 gross tons and above: at the beginning of 1989 there were over 76,000 such ships. Total tonnage of the world merchant fleet also has risen from 326 million dead weight tons in 1970 to more than 632 million in 1987, while goods loaded increased from 2.6 billion to 3.5 billion tons during the same period. In addition, during the 1950s there was not a single container ship, chemical or gas carrier. But by 1984, for instance, there were 900 fully cellular container ships, and another 150 were added by 1987.

6. These changes have greatly increased the traffic density in sea lanes. Since shipping is international by nature, a great deal of its success and safety depends on international co-operation among national maritime administrations and on properly trained and fully qualified senior maritime officials in all countries.

7. IMO, UNCTAD, ILO, and industry groups have highlighted the major current problems in the worldwide shipping scene. UNCTAD reports in 1986, 1987, and 1988 cited the dominant and continuing problem of the past decade: surplus tonnage in almost all sectors, which is primarily due to subsidized excess shipbuilding capacity. This surplus rose from less than 1 percent of total tonnage in 1970 to a high of 28 percent in 1983, and was still estimated at about 20 percent for 1987 (and around 30 percent for tankers and liner shipping). The problem has been made worse by sluggish economic conditions which hampered international trade growth and related shipping requirements. However, during 1987 and 1988 the depressed shipping conditions eased somewhat and ocean freight rates improved.

8. Another development has been worldwide shifts in ship ownership and registry. More than half the world's ship tonnage sails under developing country registry. Primarily this is a "flag of convenience" arrangement, whereby ship owners obtain more relaxed maritime controls while the countries gain some foreign exchange revenue. Ships registered in Liberia, Panama, Cyprus, and the Bahamas, none of which has any significant home fleet, make up about two-thirds of the nominal tonnage of the developing world. Recently, other countries have begun setting up their own competitive open (or "offshore" or "international") registers. They include Luxembourg, the Netherlands Antilles, Norway, and the Kerguelen Islands (a French Antarctic territory).

9. Beyond these registry changes, however, some developing countries have considerably increased their fleets. UNCTAD set a target in 1980 for developing countries to increase their overall share of world merchant tonnage to 20 percent by 1990. By 1987, however, their share had already reached 21 percent, even after open registry countries were excluded. Thus the People's Republic of China, the Philippines, Hong Kong, the Republic of Korea, and Brazil have almost doubled the tonnage of their merchant fleets to join the world leaders in the last 10 years. At the same time, while the merchant fleets of Japan, the Soviet Union, Greece, and the United States have remained among the world's largest, the fleet tonnages of the United Kingdom, Italy, Norway, France and Spain have declined sharply.

10. Not only have developing countries increased their share of ships, but their seamen and officers increasingly make up the crews. Thousands of jobs once held by seafarers from industrialized countries have been abolished. But seamen from the Philippines, Indonesia, the People's Republic of China, Sri Lanka, the Republic of Korea, Bangladesh and Burma now fill most of the berths on vessels flying open registry flags. This increased intermingling of crews, ships, and national registers, when combined with new skill requirements and the traditional rigours and hazards of long periods of life at sea, underscores the continuous need to enhance ship and shipboard safety and to improve the quality of life at sea.

11. All these factors pose both opportunities and difficulties for many developing countries. They recognize that a strong and efficient merchant marine can make a significant contribution to their national growth and economic development. Yet these countries find it very difficult to build up an adequate maritime infrastructure, and particularly to cope with the acute shortage of national maritime expertise. Dependence on expatriates has proven very expensive and has not provided a long-term solution. The only effective course is to train their own nationals in various maritime disciplines.

12. But maritime training needs are very dynamic. Technological improvements in ships (such as computer-controlled navigational systems) have continued at a rapid rate, requiring ever-higher standards of qualification and training. Yet the decline in merchant fleets of many of the traditional maritime countries has led them to sharply reduce their training institutes and programmes. In the developing countries, the equipment needed for effective training has become more and more expensive, a problem overcome to some extent by establishing regional training facilities. At the same time, however, economic pressures have forced shipping firms to reduce crews to cut costs, which requires individual crew members to take on a wider range of responsibilities and tasks. There is thus a need for regular retraining to acquire new skills and keep up with the latest technological developments, not only for crews but even more for the senior administrators, teachers, inspectors and other key figures on whom each country's shipping industry (and the international maritime network) depends. In addition, in recent years both traditional and developing maritime countries have been reviewing their legislation on training and certification to bring it into line with existing international standards.

13. All these economic, political, social, and technological factors have severely strained the shipping industry in the last decade. They have strongly affected people in the industry, damaging shipowners and shipbuilders but also leaving many seafarers stranded without jobs while greatly changing the working conditions of others.

14. ILO has concluded that future success in maritime affairs will require concerted, co-ordinated efforts to stabilize supply and demand for shipping services and thus seagoing labour. It will require more uniform conditions and standards for seafarers around the world. And given the ceaseless flood of new technologies and shipping practices, seafarers and administrators will require constant improvements in their training to provide them with up-to-date knowledge and skills. United Nations system organizations, especially IMO, UNCIAD, and ILO, will play a key role in these major tasks.

B. IMO Role and Purposes

15. Although more than a score of international agencies are significantly involved with maritime affairs, IMO is the only agency of the United Nations system devoted exclusively to this area. Its principal objective is to promote intergovernmental co-operation for the adoption and implementation of international treaty instruments; regulations, codes, and recommendations relating to maritime safety; prevention of marine pollution, and related technical aspects of shipping and ports. In recent years, IMO's chief concern has been to ensure that the instruments already adopted are effectively enforced and implemented, a trend which was formally emphasized by the IMO Assembly in its resolution A.500(X1) of 1981.

16 . In 1978 LMO developed the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (the SICW Convention), which came into force in 1984. The aim of the Convention is to establish, for the first time, minimum mandatory professional standards which are acceptable on an international basis. Article XI of the Convention urges its parties to promote technical co-operation in training, taking into account the special needs of developing countries. 17. Accordingly, the major portion of IMO's global, regional and national technical co-operation activities is devoted to various aspects of maritime training. The activities are designed to enhance the maritime facilities and capabilities of the developing countries so that they may train their own nationals effectively to promote maritime safety: safer shipping for seafarers, the ships, their passengers and their cargo, the ports and coastal installations, the marine environment and ocean resources.

C. IMO training strategy

18. In May 1988 IMO published a "Strategy for Maritime Training", as well as similar strategy statements on "Integration of Women in the Maritime Sector" and "Protection of the Marine Environment." The maritime training document states that IMO has developed a co-ordinated and pragmatic strategy for maritime training, based on global standards and a network of national, regional, and global maritime training institutions.

19. The strategy document begins by reviewing the complex shipping industry, the importance of the human element, and the problems of developing countries in establishing their own maritime skills. It cites the IMO emphasis on implementing existing conventions and protocols through the transfer of expertise and techniques, with maritime training as the first priority.

20. The strategy then identifies four general levels of formal maritime training.

(a) <u>Basic training</u>. IMO generally provides assistance to national maritime training academies (and to regional academies and to associations of these national academies). These academies in turn provide pre-sea maritime training for nautical and engineering cadets, in accordance with the professional standards prescribed in the 1978 STCW Convention, followed by alternating phases of experience at sea and further training at the academies.

(b) <u>Training for certificates of competence</u>. Cadets and officers who have obtained their basic professional certificates train at sea and take examinations to obtain certificates of competency in various categories, such as Master Chief Mate, Second Engineer, or Chief Engineer.

(c) <u>Specialized training</u>. This involves specific areas under the 1978 STCW Convention (such as fire fighting), complements to long-term training (such as oil tanker familiarization), and specific seafaring and shore-based topics (such as hazardous cargoes or fleet maintenance). IMO is now developing some model courses in this and other areas for worldwide implementation.

(d) <u>Post-graduate training</u>. Maritime teachers, administrators, examiners, surveyors, inspectors and shipping managers who are responsible for the marine programmes of their countries need high-level courses. IMO provides 2-year Master of Science programmes at the World Maritime University in Malmö, Sweden. It has also established an International Maritime Law Institute, located in Malta, to train specialists in shipping law and related international maritime law.

21. The strategy statement briefly reviews the types of assistance that IMO has provided to various developing countries and to the network of maritime training centres worldwide. During the 1980's, available donor funds and in-kind contributions have been used to develop a global network of maritime training institutes encompassing the World Maritime University and its various Regional Branches, the IMO International Maritime Law Institute in Valetta, Malta, the IMO International Maritime Academy in Trieste, Italy, and other maritime training academies throughout the world.

22. The strategy concludes that regular, stable funding support from the various voluntary fund donors is very much needed so that IMO can implement its maritime training activities on a medium-term basis in the most cost-effective and efficient manner. The following areas are identified as the most urgent training requirements for the developing maritime countries: (a) first and foremost, increasing the number and professional competence of maritime teachers in the national and regional maritime centres;

(b) achieving regular financial support for the World Maritime University;

(c) providing training equipment to the centres to allow them to attain required standards of training;

(d) developing well-stocked libraries in the centres so that they can keep abreast of the latest technological developments;

(e) supporting implementation of short courses at the new regional branches of the World Maritime University and providing such further support at the national level as may be necessary; and

(f) promoting the provision of sea-training berths by maritime countries so that developing country personnel can acquire the sea-time they need to attain certificates of competency.

23. The Inspectors believe that this recent IMO strategy document provides a very informative overview of the basic situation and IMO's approach in the maritime training field. It also clearly highlights the major initiatives that IMO has taken to deal in a coherent and systematic way with training requirements. The challenge now is to refine further this basic strategy and focus it on those specific opportunities, needs, and problem areas where the scarce resources available to IMO can best be applied; to improve the evaluation, monitoring and reporting mechanisms for training activities; and to more closely assess the maritime training needs of the developing countries. In the following chapters, the Inspectors present their assessment of the overall programme and its major components as a part of this ongoing improvement effort.

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III. OVERALL TECHNICAL CO-OPERATION PROGRAMME

24. The IMO technical co-operation programme was introduced more than 20 years ago to bridge the gap between developed and developing maritime countries. This technical co-operation directly benefits both groups. Developed countries gain from a steady improvement in international maritime safety and pollution prevention and control, while developing countries obtain access to the high technology world of modern international shipping. As part of its implementation emphasis, IMO was the first United Nations system organization - in 1977 - to institutionalize its Technical Co-operation Committee, which meets annually in London.

25. The major area in which IMO assists the world maritime community is shipping and the development of national merchant marines, which includes maritime safety, maritime training, and maritime administration; the handling of dangerous and harmful substances; radiocommunications and navigation; search and rescue; facilitation of international transport; and shipbuilding and ship repair. Other areas of IMO assistance are ports and harbours, multimodal transport, maritime legislation, and marine pollution prevention.

26 . However, the "heart" of the IMO technical co-operation programme is maritime training. IMO training efforts have four basic components (plus special activities discussed in the following Chapters).

(a) <u>Technical advisory services</u>. IMO has six "specialist" <u>interregional advisers</u>, based in London, two of whom are consultants in maritime training (one for deck and one for the engineering field). These advisers help maritime training centres with feasibility studies and plans, the development of courses and facilities, the establishment of maritime examination systems, etc. From 1980-1988 these two advisers undertook 194 missions and visited 63 different countries. IMO also had five "general practitioner" <u>regional advisers</u>, usually stationed in the field, who advised countries on all aspects of maritime safety and related matters. Both groups of advisers have had particularly important roles in maintaining continuous contact to keep emerging shipping nations aware of the requirements of international maritime conventions and the progress and actions needed to implement them.

(b) <u>Projects</u>. IMO acts as an implementing agency for technical co-operation projects financed by various donors. Some of these projects aim at establishing or assisting maritime training centres. These projects tend to involve three principal elements: experts; equipment and/or publications; and training and fellowships. During 1987 IMO was supporting 24 maritime training experts in field projects. IMO also maintains a central register of over 1500 consultants who are specialists in shipping and related industries. They carry out short advisory missions of several weeks in specific areas within the framework of approved projects. During 1983-1986, nearly 40 percent of IMO experts and consultants came from developing countries.

(c) <u>Seminars and workshops</u>. These processes are a cost-effective means for the direct training of groups of 25-50 people in intensive programmes usually lasting one week. They provide an important opportunity for cross-fertilization of ideas at national, sub-regional, regional, or global levels on the implementation of IMO instruments or on specialized topics. During the past decade IMO has organized some 195 seminars, symposia, workshops, or training courses, rising from an average of about 6 per year in the early years to about 27 per year recently.

(d) <u>Fellowships</u>. IMO implements more than 100 fellowships a year to train personnel in developed and developing countries. The fellowships seek to enhance candidates' technical and managerial skills, typically through short courses but occasionally through several years of long-term sea training or university-based education. The objective is not only to increase the fellows' personal knowledge, but also to transfer their knowledge and experience to associates and colleagues at home, a task aided by the fact that the majority of fellowship candidates come from senior management posts.

27. At present, IMO does not maintain separate statistics on maritime training activities within the total technical co-operation programme. As already noted, however, maritime training is the top priority in the programme and it receives the majority of the resources. The following graphs, tables, and analysis, although based on total programme data which IMO provided to the Inspectors, nevertheless provide a representative picture of the key relationships and trends found in maritime training activities as well.

28. Graph 1 shows that total annual expenditures on IMO technical co-operation have grown quite substantially over the past decade. From a very modest initial level of about \$3 million in 1977 and 1978, the total rose sharply to about \$10 million in 1980 and has since increased fairly steadily to about \$14 million in 1987. UNDP funding rose sharply from 1979-1981, but has since leveled off. From 1977 through 1987 Norway and Sweden increased their funding from only \$0.1 million to fully \$5 million, and other donors increased their funding from \$0.2 million to \$2.1 million.

Graph 1



Total Expenditure on IMO Technical Co-operation Activities, by Donor in \$US, from 1977-1987

29. Even more interesting than the very substantial total funding rise is the drastic change in its composition. Graph 2, based on the same financial data, shows that in the earlier years IMO technical co-operation activities were almost totally dependent on UNDP financing. Whereas UNDP (and UNEP)provided 89 percent of total funds in 1977, its share has fallen consistently in subsequent years and amounted to only 50 percent in 1987. During this same period, however, Norway and Sweden increased their share of the total funding from 5 percent to 35 percent. All other donors doubled their share, rising from 6 percent to 14. What seems most striking, however, is the degree to which the IMO technical co-operation programme has become dependent (over one-third of total funding) on the very generous support from only two national donors, Norway and Sweden.



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<u>Total Expenditure on IMO Technical Co-operation Activities</u>, by Major Donors' Percentage Shares, 1977-1987

30. Graph 3 indicates that the total number of technical co-operation projects being executed by IMO has increased slightly in recent years, averaging about 70 per year with a low of 56 in 1983 and a high of 80 in 1987. Approximately two-thirds of the projects are national projects, with 20 percent on average being regional and 11 percent inter-regional. However, national projects have declined somewhat year by year as a proportion of the total projects, and inter-regional projects have maintained the same share. The only significant trend has been in regional projects, which have increased from a low of 9 projects in 1983 to a high of 21 in 1987, and which have almost doubled their proportion from 16 percent to 26 percent of the total projects being executed.

Graph 3





31. Table 1 gives a generalized picture of the pattern in which these IMO technical co-operation projects are distributed around the world. More than half are concentrated in Asia and the Pacific and Africa, although the number of projects in Asia and the Pacific has declined slightly in the past few years while those in Africa have increased. The number of projects in Latin America and those which are interregional has remained quite stable. Because of their maritime traditions and situation, the Arab States and Carribean regions have a relatively high proportion of projects - about 20 percent of the IMO total - and they have both increased their share during the past few years.

<u>Table l</u>

Year	Africa	Arab States	Asia & Pacific	Caribbean	Latin America	Inter-	Totals
(Ca)	ATTICa	JLALES	raciiiic	Cal ibbean	America	Regional	IUCAI
1982	14	9	27	2	9	7	68
1983	11	7	19	3	8	8	56
1984	22	8	24	2	10	9	75
1985	22	9	16	9	10	6	72
1986	15	8	15	6	11	9	64
1987	21	13	23	6	10	7	80
TOTALS	105	54	124	28	58	46	415

Number of IMO Technical Co-operation Projects Being Executed Annually, by Geographic Region, 1982-1987

32 . Although IMO has the relevant statistics only for its UNDP-financed projects, Graph 4 shows that there have been quite significant changes in the nature of IMO projects over the past decade. Expenditures on experts have declined quite drastically, falling from 65 percent of the total in 1979 to only 25 percent in 1987. Much of this drop has been accounted for by a switch to sub-contracting which has risen from a less than 10 percent share in the late 1970s and early 1980s to more than 20 percent recently, and in expenditures on equipment, which have fluctuated considerably from year to year but generally amount to about a 25 percent share.

33 . Expenditures on direct training, in contrast, have increased fairly substantially, rising from a steady 10 percent in the early years to around 30 percent in 1986 and 1987. This overall pattern in IMO project components is very much consistent with, and probably even exceeds, general efforts in the United Nations system to reduce the role of long-term experts in projects in favor of other, more flexible modes of assistance.



<u>Graph 4</u>





** 1977 and 1981 data not available

34. Finally, the data indicate important reductions in IMO's support cost expenditures (Table 2). UNDP provides IMO and other small executing agencies with support costs of 13 percent of total project value plus certain "flexibility" allowances. IMO charges its funds-in-trust donors a similar 13 percent amount. However, during the past decade, IMO has reduced its total support costs, as a percentage of total technical co-operation expenditures, from over 20 percent in the late 1970s to about 11.5 percent in the mid-1980s. This trend is consistent with the data which JIU developed in a 1986 report on ITU, which disclosed that for 1982-1983 IMO had the third-lowest ratio of total support costs to total project expenditures among the 11 smaller executing agencies of UNDP, trailing only WMO and the United Nations' regional Economic and Social Commission for West Asia (ESCWA).

35. As a consequence of this tight control of support expenditures, IMO has also been able to reduce the amount of regular budget funds which it spends on technical co-operation support. Such funding dropped from about 30 percent of the total in the late 1970s to only about 5 percent (and a much smaller actual dollar total) in the mid-1980s. In 1987 regular budget funding support rose again due to the effect of exchange rate fluctuations (expenditures denominated in Sterling and income denominated in US Dollars).

<u>Table</u>2

Support Cost Expenditures for IMO Technical Co-operation Activities, 1977-1987, \$US

	Income from	Support	As percent of	Total Sup-	As percent of total TC expenditures (3)÷(Graph 1)	
	Support	from Regular	support	port cost		
Year	Costs	Budget	expenditures	expenditures		
	(1)	(2)	(2) ÷ (3)	(3)		
1977	407,148	169,365	(29.4%)	576,513	19.7%	
1978	487,079	248,241	(33,8%)	735,320	23.4%	
1979	615,175	432,697	(4).3%)	1,047,872	22.6%	
1980	1,031,788	265,586	(20.5%)	1,297,374	13.5%	
1981	1,197,138	272,782	(18.6%)	1,469,920	14.2%	
1982	1,467,120	253,062	(14.7%)	1,720,182	15.0%	
1983	1,372,096	243,896	(15.1%)	1,615,992	14.4%	
1984	1,331,597	1,658	(0.1%)	1,329,939	9.9%	
1985	1,146,189	58,465	(4.9%)	1,204,654	11.7%	
1986	1,524,071	100,566	(6.2%)	1,624,637	11.6%	
1987	1,483,3/8	355,709	(19.3%)	1,839,087 12.8	~/o	

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IV. NATIONAL AND REGIONAL TRAINING EFFORIS

36. The Inspectors concentrated their evaluation of IMO national and regional training efforts on 30 projects related to maritime training which IMO was implementing during 1987. Of these projects, 20 were national (in 18 countries), eight were regional, and two were inter-regional. The projects had a total cost of \$29 million (not counting government contributions), ranged from as large as \$5.8 million to as small as \$5,500, and averaged about \$980,000 each. The programme components included experts and consultants, fellowships, equipment, advisory services, and various forms of training: institutional training, work-study, sea training, certificate courses and seminars and workshops.

A. Recent IMO Evaluations

37 . In 1986 IMO evaluated the <u>fellowship programme</u>, which had provided 508 fellowships for 51 countries during the 1978-1984 period (document 1C 21/6 of 4 April 1986). An evaluative questionnaire, to which 37 of the countries responded, disclosed that training of maritime instructors and examiners was the highest priority need, and that IMO was felt to be doing a good job in reacting promptly to fellowship requests and choosing the right training institutions and courses. These courses in turn were considered relevant and useful to the fellows' subsequent work. The large majority of the fellows continued to work in the same field and posts for which they had been trained, and many received subsequent promotions. The study recommended that more systematic internal evaluation procedures and substantive follow-up with former fellows be established, and that the scope and funding of the fellowship programme be enhanced.

38 . A second evaluation in 1986 reviewed <u>advisory services</u>, including the 175 missions to 66 developing countries which IMO's inter-regional advisers had carried out from 1982-1984 (document IC 27/6/1 of 15 May 1986). The study found that these services had accelerated the ratification of IMO conventions and had improved the effectiveness of their implementation. Maritime safety administration and maritime training were identified as priority areas for future assistance, but the countries concerned also highlighted the need for more help in drafting maritime legislation and updating maritime training syllabuses. The study recommended once again that built-in self evaluation be established, that the Secretariat improve its provision of information on the status of implementation of IMO conventions and other instruments, and that more systematic procedures be used for advisers' visits and their consultations in country. The IMO Technical Co-operation Committee considered these two reports, added comments, and recommended that the recommendations they contained be progressively implemented by the Secretariat, within existing resources.

39 . A third evaluation in 1987 covered the <u>IMO/Norway co-operation programme</u> of 29 national and regional projects and other activities from 1978-1985 (document TC 29/4 of 27 April 1987). The study reviewed in some detail programme activities, recent project evaluations, and - again through questionnaires - the progress and results of six projects. The study found that project objectives were relevant, and that the projects were generally quite well administered. Their value was demonstrated by follow-on or complementary activities, and by various concrete and quantifiable results in improved maritime training and maritime safety. The study recommended that future IMO assistance expand its support to networks of regional training institutions; provide training fellowships in other developing country training institutions; improve individual seminar organization and plan regional seminars on a more coherent, longer-range basis; and increase advisory services in specialized maritime activities. The Technical Co-operation Committee cited the quality and depth of this evaluation report and endorsed implementation of its recommendations.

B. Progress Made

40. Before summarizing their own analysis of the IMO programme, the Inspectors wish to note some particular difficulties in the evaluation of training. Assistance to training institutions seeks (a) to help develop their capacity to train, (b) to help them actually train people, and then (c) to achieve the desired training effect - in the IMO case, providing skilled manpower to operate the international shipping industry safely and effectively. The training itself can be evaluated at four levels of increasing complexity: (a) obtaining people's immediate reactions to the training and making corrections to the training process; (b) determining the new knowledge that the trainees have acquired; (c) finding out whether they actually use their new knowledge in their subsequent jobs; and (d) assessing whether, in the longer term, their subsequent job performance improves the productivity, efficiency and quality of operations of their department or organization.

41. These determinations, particularly for the latter steps in each of these two sequences, could prove very costly in terms of the extensive follow-up, data collection, and analysis measures required. Furthermore, skills training is of course only one factor influencing a person's subsequent performance. Other factors - such as economic conditions, supervisors' support, or the person's own interpersonal skills and attitude - can be much more dominant elements.

42. Certain fairly accessible and simple indicators, however, do help indicate the value and quality of training: the number of applicants for training places available; the willingness of trainees and their organizations to share training costs; statements by applicants of why they need the particular training; institutional interaction with the appropriate industry to respond to real-world training needs; questionnaires and self-appraisals; visits to, and observation of, graduates back at work; systematic follow-up contacts with graduates; and academic examination results. When these techniques are applied in a judicious and organized way, they can be very useful to steadily improve training effectiveness.

43. However, the dominant conclusion that must be drawn about "traditional" IMO maritime training projects is how very thinly the modest IMO resources are stretched. IMO has assisted or established no less than 81 national maritime training centres over the years. Its pride in this accomplishment is well-deserved. The national centres create a basic network for maritime training in all parts of the world. They now provide training for almost all developing countries, following global standards of safety and gradually replacing expatriate trainers with qualified national experts. The most gratifying development is that some of the maritime training centres which IMO aided in the 1970s, particularly in Latin America but in other regions as well, have become strong enough to play important roles in assisting other countries in maritime training as well as in training their own nationals.

44 . On the other hand, however, the continuing needs and assistance possibilities of many of these 81 national maritime training centres still far outstrip IMO resources. Almost three-quarters of the \$17 million of national maritime training projects that IMO was implementing in 1987 involved large projects in only two countries: Bangladesh and Cape Verde. The remaining quarter was spread among only 13 other countries, at an average total project cost of about \$320,000. To cite another traditional project measure, 1MO had only 24 maritime training experts in the field in 1987: half in Bangladesh and Cape Verde, seven in regional projects and the remaining five in five other countries.

45. Mission and evaluation reports, project documents, and IMO staff assessments indicate that the projects that JIU reviewed (which were in various stages of implementation) were generally progressing satisfactorily. International and national experts were being fielded. Fellowships and sea training were provided. Counterpart training was underway. New specialized training courses were being established, and existing courses and curricula were being updated. Procedures and syllabuses for certificate examinations were being developed and installed. Advice on equipment procurement, publications and computerization was provided. And steps to help establish some new maritime training centres were taken.

46. These diverse activities generally address the highest priority need identified in the new IMO maritime training strategy: training and assisting maritime teachers in national and regional maritime training centres. They also clearly support the important process of establishing courses and syllabuses in accord with the STCW Convention, and developing and implementing the structures and processes needed for national certification examinations.

47. Inevitably, the projects also confront the problems found in most technical co-operation projects aimed at institution-building. Project objectives were sometimes not realistic and clear, leading to project extensions and revisions and uncertainties about the roles and responsibilities of the project participants. Project outputs, milestones, and targets were occasionally not well-defined, leading to delays and deviations which were not reported or quickly corrected. Both international experts and national counterpart staff are not always promptly identified or appointed, and experts can bog down in multiple subsidiary tasks rather than carrying out their key training function.

48. Maritime training equipment needs are often substantial and this equipment can prove difficult to procure, use, and maintain. Inadequate facilities can seriously hamper project progress. Economic difficulties – decline of overall shipping demand, laid-off seamen, a weak maritime infrastructure, a lack of ships – can all cripple national maritime training plans. And the effort to establish comprehensive, full-scale national maritime training programmes, develop certification processes, and attract and maintain good maritime teachers as part of a sustainable, self-sufficient national maritime industry is clearly a challenging, long-term task.

49. IMO's inter-regional advisers in maritime training are spread even more thinly than the project resources. Maritime training academies in the developing world are admittedly much more knowledgeable and competent than in the past. But there is still much work to be done, and since IMO has no field offices the regional and inter-regional advisers serve as its "eyes and ears" around the world. IMO now has only a small fraction of the advisers which UNDP used to fund for it (and for other small technical agencies). The two advisers in maritime training, in particular, spend about 50 percent of their year "on the road" in 15 to 20 missions to many countries to consult with governments, academies and training centres, and to participate in training courses. The Inspectors believe that it is very important that these advisers receive stronger support in their substantive maritime training work, and that the many observations, ideas, recommendations, and follow-up efforts that they generate during their missions are systematically incorporated into the IMO maritime training programme (see paragraphs 38 and 160).

50. Finally, the many IMO seminars, workshops and government meetings are also an important element of information exchange at the national, regional and global levels and an important tool of direct training. It may take several months to plan such events, with a host country providing facilities and administrative arrangements while IMO provides one or more lecturers and course materials. In this area as well, demand outstrips IMO resources. Because these courses are rather <u>ad hoc</u> and specialized, it is more challenging to ensure that the courses given respond directly to top priority training needs; reach those who can best use them; are of the right length, scope, and level of sophistication; and that IMO can in some way follow-up on their results and determine how best to improve them in the future. The Inspectors agree with the recommendation in the 1987 IMO evaluation of the IMO/Norway programme (see paragraph 39) that seminars (and workshops and other meetings) would have greater impact if they are organized on a coherent, region-by-region basis, with a timetable and a medium-term perspective.

C. <u>New Directions</u>

51. Development co-operation projects and programmes are above all intended to be catalytic, that is, they should be carefully directed toward critical problem areas so that their limited funds can bring about the greatest possible improvement in the overall development situation which they address. This principle is especially important for IMO, given its very modest funds versus the many maritime training opportunities and needs around the world. To move away from a reactive, <u>ad hoc</u> approach, IMO has taken a number of new general initiatives during the 1980s.

52. As noted earlier, IMO has been expanding its <u>evaluation activities</u>. The Secretary-General, with the approval of the Council, established an Evaluation Unit for technical co-operation activities in his Office in 1984. This Unit is preparing four programme evaluation reports over the 1985-1989 period. The Council further requested in 1986 that the Secretary-General expand evaluation coverage to all aspects of IMO work. In the framework of observations from JIU (JIU/NOIE/87/1 of April 1987), he established a new internal evaluation system during 1987, added a professional staff member to the Evaluation Unit, and included a requirement for in-built internal self-evaluation in all new IMO technical co-operation projects. During 1988 instructions for the new system and an IMO manual on evaluation were issued, an internal system was developed to monitor project execution in the Technical Co-operation Division, and the Directors of Secretariat Divisions submitted their first reports on self-evaluation of sub-programmes in their Divisions to the Secretary-General. A short seminar on project design and procedures for UNDP-financed projects was also held with a senior official of UNDP.

53. The Inspectors believe that the steps IMO has taken to establish and use evaluation are already significantly improving the design and effectiveness of its technical co-operation activities. For instance, some recent project documents identify in detail the various project objectives, inputs, and outputs, and for each of these give the "success criteria" by which they will later be assessed, the "verifiers" that will demonstrate such success, and the "external factors" essential to (or which could jeopardize) success. In Chapter VIII the Inspectors note several ways in which this evolving evaluation system can provide help to further improve information on IMO performance, strengthen quality control and reporting to governing bodies, and increase the coherence of, and staff capacities for, IMO technical co-operation work.

54. IMO has also sought with some success to increase its activities in promoting and implementing <u>technical co-operation among developing countries (TCDC)</u>. Many IMO projects have aided maritime training institutions that can now develop their own TCDC activities. During 1983-1986, almost 40 percent of IMO experts and consultants were drawn from developing countries. More recently, four TCDC mechanisms have been found particularly useful: fellowships for training at maritime training facilities in other developing countries; regional training seminars/workshops where the host country provides all facilities and all or some of the other costs; experts from developing countries providing short-term advisory services without fees; and the use of existing arrangements at the regional level with TCDC inputs.

55. For example, during 1988 the Brazilian Nautical School offered 50 full fellowships in maritime training courses to students from Latin America and Portuguese-speaking countries in Africa, and it also offered several short maritime courses under the Latin American regional network ROCRAM. Argentina, China, Egypt, India and Singapore have similar fellowship programmes. As another example, a 1987 IMO evaluation mission concluded that four Egyptian maritime training experts had been a key factor in progress made in a project at the Regional Maritime Academy in Accra, Ghana from 1984 through 1987, both through their development of course material, syllabuses, and administrative procedures and as lecturers.

56 . In 1986 IMO established a Focal Point for TCDC within the Technical Co-operation Division, and during 1988 and 1989 it is organizing several in-house workshops on TCDC. The Organization plans to add a special section on TCDC in its new comprehensive report on technical co-operation activities, and to report more systematically on TCDC activities in IMO brochures and publications.

57. Closely related to TCDC but somewhat broader in scope is the concept of <u>regional networks</u>. A 1980 JU report on this topic (United Nations document A/36/101 and Add. 1) stressed the development benefits of building up not merely regional institutions but a network of co-operative links and channels connecting them with national institutions in order to pool experience and human and financial resources for common development activities. The report urged United Nations system organizations to carefully analyze, appraise, and programme their regional activities to help establish and strengthen such networks. It also recommended innovative approaches such as "twinning" (co-operation among related national institutions), and overall emphasis on the goals of self-reliance and self-supporting institutions in a region.

58. IMO has taken a number of initiatives in this area. It has expanded its regional project activity (see paragraph 30 and Graph 3). In its comments to the JIU on the above report it observed the special advantages of regional projects under the right circumstances: sharing the cost of expensive training equipment; achieving economies through larger-scale operations; standardizing the training given across a region; fostering regional co-operation; and making more economic use of limited resources.

59. IMO officials point out that the political complexities of establishing self-sustaining regional institutions can be considerable, and thus IMO has encouraged such alternatives as the Brazilian/latin American and Egyptian/Ghanaian examples cited above (paragraph 55). Most directly, the 1987 IMO/Norway programme evaluation observed that a co-operative project among training institutions in the Asia and the Pacific region had brought closer teacher contacts, exchanges of experience, updating of information, and better implementation of the global standards. It therefore recommended that regional networks and related initiatives be extended to other regions as well.

60 . Recent examples of IMO maritime training activities which have incorporated this networking approach, beyond those already mentioned, would include the following:

(a) a comprehensive manpower survey and programming mission to quantify maritime training requirements of the 15 countries participating in the Regional Academy of Maritime Science and Technology based in Abidjan, Cote d'Ivoire.

(b) quantification of maritime manpower and training requirements throughout the Arab States to manage, operate, and man fleets and maritime infrastructures, including training institutions.

(c) four subprojects in a subregional project supporting the maritime sector of the Association of South East Asian Nations (ASEAN) through specialized maritime training, short courses, and seminars in shipbuilding safety, pollutant databanks, patrolling, and remote-sensing surveillance of pollution activity.

(d) assistance to the Regional Network of Maritime Co-operation among South American Countries, Mexico and Panama (ROCRAM) and ROCRAM Central America to formulate and implement programmes of regional co-operation.

(e) elaboration by experts of the most urgent training programmes identified by a manpower survey among participating countries in the Regional Maritime Academy in Accra, Ghana.

(f) as mentioned above, a programme to establish a regional network of maritime training centres in Asia and the Pacific, through regional seminars hosted by various national organizations for participants from 27 countries in the region.

(g) assistance to members of the Association of African Maritime Training Institutes (AAMII) to meet specific training needs by upgrading expertise, and adopting common and standardized training programmes with mutual recognition of certificates of competency to enable trainees to work or teach in any member country.

61. These various projects show an increasingly systematic approach by IMO to structure and apply its limited resources in the most effective way among the many competing possibilities. In fact, however, the most significant initiatives and potentials for further improvement in the IMO maritime training programme lie not at the individual project level, but in broader activities: the World Maritime University, model courses, regional branches and new institutions, inter-agency co-ordination with ILO and UNCTAD, and internal programming changes. These matters are discussed in the following four Chapters.

V. WORLD MARITIME UNIVERSITY

62. International development assistance projects attempt to use very limited resources in a catalytic way to help solve large-scale, long-term, complex economic and social problems. This is inherently very difficult, and it makes one very cautious about claiming success. In the case of the World Maritime University (WMU), however, almost every aspect, result, and review which the Inspectors found during their assessment confirms that this institution has made remarkably rapid progress. Not only is it a unique "world university" in the development assistance field, but it has thus far been a quite significant and successful undertaking.

A. Establishment and Operations

63. IMO had long recognized the critical need to train senior officials in national shipping industries, not only to advance economic development but also to help ensure success in international maritime safety and pollution control efforts. The speed and power of the shipping revolution meant that these key officials required far greater skills than their predecessors to take advantage of new technological opportunities in shipping. Despite IMO training assistance, however, the shortage of qualified senior staff was becoming more and more critical, and the alternative - hiring expatriates was a costly, stop-gap action.

64 . It was clear that a new approach for high-level training of senior maritime officials was needed. In 1976, with major support from Sweden, IMO began a series of technical seminars. This led to the idea of setting up a permanent centre where eligible students could receive the advanced training that was not possible at home. At a November 1980 seminar on implementation of global training standards, held in Malmö, Sweden, Swedish officials made proposals for an international maritime university, and participants from 45 developing countries urged IMO and UNDP to support this idea to meet an "enormous need."

65. Subsequent events moved very swiftly. Sweden volunteered Malmö as the site, and IMO Committees and the IMO Assembly (in November 1981) formally endorsed the proposal. Operating costs were estimated at about \$3.6 million a year, and UNDP, Sweden and others made the necessary initial commitments. An agreement on establishing the WMU was signed by IMO and Swedish authorities in February 1983, approved by the Swedish Government, and became effective on 1 May. On 4 July 1983 the WMU opened in Malmö with 12 students from 42 different countries. (Total cumulative enrollment as of May 1988 had risen to over 500 students from 97 countries).

66. The primary objective of the University is to provide developing countries with an up-to-date curriculum, a highly competent teaching staff, and modern facilities for the training of top-level national maritime experts. Other objectives of the WMU are to help close the technological gap between international requirements and maritime administrator shortages in many countries, to advise developing countries on complex safety and environmental protection problems, and to facilitate international co-operation in shipping by adopting a uniform system of training of top-level maritime experts.

67. WMU presently offers two-year courses leading to a Master of Science degree in seven fields of maritime administration and education. All instruction is in English. Courses run from February/March to mid-December each year, preceded by English preparatory courses if needed. The University is administered by a Rector, who is assisted by a Vice Rector, eight resident professors and seven resident lecturers, and many visiting professors or lecturers. Teaching methods combine lectures, demonstrations, projects, field trips and field studies at other maritime and shipping centres, case studies, tutorials, and on-the-job training. Above all, WMU is a practical rather than a research institution.

68. The city of Malmö has given extremely generous support to the WMU. It provided and maintains the former Malmö Merchant Marine Academy and all its facilities and equipment for the WMU free of charge. This five-story building with its two annexes includes classrooms, a library, administrative and tutor space, laboratories, equipment rooms, moving circular navigation platforms, radar telephone stations, ship's engines, and testing facilities. The city has also provided an excellent building in the centre

of Malmö which contains 160 individual flats with cooking and bath, plus a restaurant and common facilities, for student use at very low rates. The city initially spent almost \$1 million to upgrade these facilities, and continues actively to support University operations and student needs.

69. The top official of the WMU is a Chancellor (currently the Secretary-General of IMO) who is appointed by the IMO Council. He presides over the Board of Governors, which meets annually in Malmö to set policy and adopt the work programme and budget of the University. Its 56 members are eminent persons from all regions of the world and all sectors of the world maritime industry, plus ex officio representatives from other United Nations system organizations. A small Executive Council normally meets three times a year in London or Malmö to implement Board decisions and to consider policy recommendations to the Governors. In addition, an Academic Council assists the Rector in overseeing the academic workprogramme, a Management Body of senior staff meets weekly with the Rector, and a Student Council represents student interests.

B. Progress Made

70. The close attention to orderly development and operation of the University which these oversight activities demonstrate is further evidenced by careful reviews of progress made. The Secretary-General provided the IMO Assembly with an extensive report on establishment of the WHU in September 1983. The Board of Governors reports each year to the IMO Council on the work of the University. In 1985 the Secretary-General arranged for two consultants to review the financial procedures, controls, and accounts of the University, which led to revised Financial Rules adopted by the Board. A review mission of officials from UNDP, Sweden, Norway, and IMO assessed WHU operations after two years in an October 1985 report to the Board. And at the Board's request an academic review of the University, made by six outside experts after five years of operation, was published in May 1988.

71. The relevance and success of a training institution is largely determined by how well its graduates can apply their new knowledge. The WMU Board of Governors requested a formal survey of the 199 Master of Science graduates (and 13 one-year diploma recipients, a course no longer given after 1985) of WMU during the initial 1983-1986 period of operations. A 1987 report to the IMO Assembly stated that, of the 178 graduates on whom information was gathered (84 percent of the 212 total), almost three-quarters had been given promotions or new responsibilities in their former or new assignments. Most of the rest retained the same responsibilities, and only a few had diminished responsibilities or had left the maritime field. It was particularly encouraging that many of those promoted or transferred had moved into maritime training centres as teachers or senior educators, or into important posts with port authorities, maritime administrations, or shipping companies.

72. WMU wants to maintain and improve this initial success and to fully re-integrate its graduates into their national maritime systems. The WMU asks sponsoring authorities to clearly indicate what future role they expect nominees to play in national maritime development, as a priority factor in allocating limited student places. In addition, both the Board and the 1988 academic review have stressed the need for WMU to closely monitor the progress of its graduates. Accordingly, WMU has begun a regular newsletter, is preparing a directory of graduates, and plans to formalize alumni affairs and maintain regular contacts with graduates as an important activity. The objectives will be to monitor graduates' progress, encourage and urge sending governments and organizations to use them fully, and interact with them to obtain continuing feedback to improve WMU programme content.

73 . Demand for the University's services has also increased substantially. The number of student admissions has risen fairly steadily: 72 in 1983, 65 in 1984, 81 in 1985, 85 in 1986, and 102 each in 1987 and 1988. Since the WMU financial resources, staff and facilities have reached full capacity, class size is expected to stabilize at about the 100 level. The University has also had to introduce a limit on attendance: no more than three students per country per year. (And to ensure the international character of WMU, the Board decided in 1984 that 10 percent of each class could be from developed countries: in 1988 six WMU students came from developed countries). Senior IMO officials estimate that if the situation permitted, demand for places at WMU might be two to three times the 100 spaces per year now available.

74. WHU has also been successful in retaining students through to course completion. Including the 101 students who graduated in December 1988, 397 of the 405 students enrolled in the first five years completed their long and challenging academic programmes, a rate of about 98 percent. This rate has been very high throughout these five years. /5. WMU's success thus far is also attested to through the old adage that "imitation is the sincerest form of flattery." Many interested parties have inquired about the University and this unique approach to international training. Among others, the International Air Transport Association (IATA) has considered the idea of setting up a "World Aviation University." WHO has considered possibilities for an institute to train administrators in the maintenance of hospital equipment. And IMO itself has concluded an agreement with the Government of Malta to establish an IMO International Maritime Law Institute along the lines of the WMU model (discussed further in the next Chapter).

16 . A last very important consideration in assessing WMU progress is the question of <u>cost-benefit</u>. As noted earlier (paragraphs 11, 63), a major reason for launching IMO maritime training and eventually founding the WMU was the recognition that many developing countries lacked top-level maritime expertise and that relying on experts was very costly: an expatriate senior maritime expert can cost some \$125,000 per year. However, a developing country national can now be trained at the WMU for a total two-year cost of about \$60,000, following which he can work productively in maritime affairs in his home country for another 20 years. Particularly now that the WMU has established itself and is producing 90 to 100 graduates each year, this form of maritime training is clearly quite cost-effective, even when the costs to developing countries of utilizing their UNDP Indicative Planning Figure (IPF) funds for WMU fellowships and defraying the salaries of their students are taken into account.

C. Areas for Continuing Improvement

17. The 1988 academic review team concluded that the progress made by the University, despite its newness, clearly met the aims set forth in its Charter, not only in imparting advanced skills and greater knowledge but as a special contribution and impetus to international co-operation in the maritime field. The Inspectors share this view. In addition, the academic review report, interviews which the Inspectors held, and their own observations suggest three major areas where excellent progress has been made but, as University officials are well aware, many challenges remain.

18. <u>Student selection and qualifications</u>. WMU has attracted highly competent people, and the quality of the average student admitted has risen year by year. Nevertheless, it is inevitable that students from 97 different countries may differ widely in their technical and academic backgrounds, and particularly in their mastery of English, mathematics, and economics. Both the WMU and governments must continue to publicize, make explicit, and raise WMU entry standards and requisite academic qualifications. At the same time, WMU must continue to make available sometimes extensive preparatory courses and tutoring for those with the weakest backgrounds in English as a key part of its programme, because English is the international maritime language and thus necessarily the language of WMU instruction. The emphasis on continually upgrading entry-level quality will benefit the countries, the faculty, and the students themselves by allowing courses to progress rapidly and efficiently so that students can obtain the maximum possible benefits.

79. <u>The curriculum</u>. Establishing courses <u>de novo</u> during the first few years has been an enormous challenge for WMU faculty. It is important to standardize the courses and programmes, but professors also want and need to work individually with students on their specific needs and interests. The many visiting lecturers and field trips are a great and useful asset, but they can cause confusion and duplication if not carefully integrated with the ongoing programme. And in most courses the professors are still seeking the right balance of theory versus operational knowledge, of lectures versus "hands-on" experience, and of general background information versus specialized techniques.

80. The basic WMU course structure and content has now been established, the permanent faculty is stabilizing, and the University has built up some hard-earned experience. These factors should make it easier for the Academic Council and the students to smooth out and co-ordinate course content to eliminate irrelevant material and enhance the most meaningful training experiences. The processes of grading and examinations need to be similarly adjusted and refined, and computer training and computer use - which are of great interest to many of the students - need to be better integrated in the curriculum. The academic review report made numerous suggestions to improve specific courses, and the Academic Council of WMU will have the key role in further developing and harmonizing these improvements.

81. <u>Adaptive planning</u>. Even as WMU is painstakingly establishing and adjusting its programme and courses, the international maritime transport industry continues to undergo tremendous change. The WMU, as part of its own academic programme and also as the "apex" of the IMO worldwide maritime training system, must develop planning and foresight processes which respond to changing economic realities, new technologies, and training needs around the world. The Inspectors return to this important topic in Chapters VII and VIII.

D. <u>Success Factors</u>

82 . As these considerations show, the task of transforming the "World Maritime University" from a mere idea in 1980 to a successful six-year old institution today has been an enormous intellectual, logistical, and operational effort. In addition to the clear dedication, hard work, and deep personal involvement of the faculty and staff of the University, the Inspectors think that there are three important factors which have contributed greatly to the achievements that WMU has recorded.

83. <u>Coherent global training framework</u>. Admittedly, the world maritime community is only in the early stages of implementing global professional standards, and WMU must still cope with considerable variations in the technical skills of its new students, as discussed above. However, WMU is the last, "apex" level of an orderly pyramid and progression composed of basic maritime training at academies and at sea, training for certificates of competency, and specialized training. All this training is related to the 1978 STCW Convention of IMO, which established minimum professional standards on an international basis (see paragraphs 16, 20, 97–99, 120–121).

84 . The WMU application forms require that prospective students specify (and provide certified copies of all diplomas/certificates for) their university education, degrees, and major subjects; formal technical training schools attended; and professional (seafaring) and other relevant institutional training received. The forms also request information on professional society memberships, publications produced, employment records, language skills, personal references, and their sponsoring organization's specific future plans for them. The WMU student thus arrives in Malmö already having achieved considerable technical proficiency, and as part of at least a <u>relatively</u> standardized and certified international professional background.

85. <u>Student maturity and motivation</u>. The average WMU student is about 35 years old. Roughly one-third of the students are already top administrative people; another third are in middle management; and the last third are master mariners. They need this maturity, since they are embarking on a long, demanding, post-graduate academic programme requiring much hard work in legal, economic, mathematical, engineering and other areas. On a personal level, they are committing almost two years of their lives to a programme far from home, with only a brief two-month break in the middle and often personal pressures as well because of the lengthy separation from their families and regular jobs.

86 . The key to the students' success, therefore, is their strong motivation. The 1985 report of the WMU Board of Governors stated that "perhaps the greatest strength of the University is the excellence of its student body", and that maritime people coming in contact with them particularly recognized their "seriousness and diligence". The students know that the WMU training and degree is a significant opportunity to advance to better and more important assignments in their careers at home, that it provides a concentration of advanced technical training and experiences that they could never acquire at the national or even regional level, that it will probably be the last study opportunity in their lives, and that their country, their organization, and any fellowship donor have invested a considerable stake in them and are expecting them to succeed.

87. <u>Networks</u>. The 1980 JIU report on regional institutions as well as many other sources have stressed the value of networks – the informal co-operative links, relationships and information exchanges among participants in a field of activity – to enhance the role and effectiveness of development training institutions. WMU provides a very solid example of how this process works for mutual benefit. The University brings together students from all over the world, who jointly work their way through a long and difficult course of study. In so doing, they not only exchange ideas and their own considerable personal experiences, but develop a spirit of teamwork (WMU faculty stress co-operative efforts - a "happy ship" - rather than competition for grades) and friendships and associations for use in their subsequent international maritime careers. In addition, through the 150 visiting professors and lecturers on the WMU roster and the many governments, maritime administrations, academies, organizations, and companies that they encounter on WMU field trips and field studies, the students can build up a considerable set of worldwide maritime contacts for future use.

88 . The students not only learn from the faculty and other sources at the University, but convey considerable feedback to these people on training needs, interests, and issues in their home countries. They also become an important part of the worldwide training structure which is feeding students into the WMU: for instance, one maritime training academy already has five WMU graduates on its faculty. All these interactions also enhance the overriding objective of implementing IMO's international conventions and adjusting and strengthening them: increasingly, WMU graduates are attending IMO meetings and governing body sessions as members of their countries' delegations.

89 . In future, 90 to 100 new WMU graduates will be returning home to maritime careers every year. As a group with a shared WMU experience and moving steadily into more senior positions, they will be an increasingly significant and influential force in the specialized and relatively small world of global maritime affairs leadership in the future. As the Class of 1987 concluded its message in that year's WMU Yearbook:

> "Finally, we emphasize that our departure from WMU marks the beginning of our global co-operation in all spheres of maritime activity."

> > E. Future Financing

90. The most serious problem in this otherwise quite positive situation is that of stable financing. The WMU was launched with major parallel contributions from the Government of Sweden and from UNDP. The University continues to be dependent on annual voluntary contributions, even though total expenditures have risen from about \$3 million per year to some \$6 million as the University has gradually reached its full complement of about 40 staff and 200 students. Approximately half the current \$6 million goes for operating costs, with the other half for that portion of student costs which are paid as fellowships.

91. The major WMU funding sources have been as follows. (Items (a) through (d) represent recorded cash costs: item (e) summarizes non-recorded contributions).

(a) <u>Sweden</u> agreed when the WMU was founded that it would pay one-third of the total budgeted cost each year. Through 1985 this amount had a ceiling of \$1 million a year, but the ceiling was then removed and the Swedish contribution rose to \$1.2 million in 1986 and \$1.8 million in 1987.

(b) <u>UNDP</u> participated in the initial preparatory funding and fund-raising efforts, and paid \$800,000 each year during the 1982-1986 programme cycle from its inter-country funds. UNDP initially agreed to increase its contribution for the 1987-1991 cycle, beginning at \$1.2 million per year but declining steadily thereafter to encourage other donors to provide additional recurrent support. However, with only limited additional recurrent budget support mobilized from other donors, UNDP agreed to maintain its support at \$1.2 million for 1988 and 1989.

(c) <u>Norway</u> has provided recurrent contributions to the WMU which began at \$100,000 a year and have since grown to \$500,000 in 1987. (Other countries have provided lesser amounts. Thus Sweden, UNDP and Norway have provided more than half the total funding for WMU in its first years of operation.)

(d) <u>Fellowships</u> have provided about 45 percent of the University's income. Two-year fellowships are required for the approximately 100 students entering each year, now amounting to \$28,000 for students from developing countries and \$52,000 for those from developed countries. (The two-year cost for fellowships for developing countries was set initially at \$20,000, but gradually increased to the present figure). The Federal Republic of Germany has financed some 15-20 fellowships each year, with other countries also contributing. The European Economic Community (EEC), DANIDA (Denmark), CIDA (Canada), non-governmental organizations, shipping industry groups, and foundations have all been increasing their fellowship financing. Most significantly, however, developing countries provide about half the total fellowship funding by using some of the funds UNDP provides for their total development efforts (the IPF) as well as financing by governments and national organizations: this large collective allocation of scarce resources indicates the value of the WMU training to these countries.

(e) <u>Non-recorded contributions</u>. In addition to the some \$6 million of recorded contributions toward the operation of the WMU each year, many other contributions are made. The City of Malmö continues to provide and maintain the academic facilities (free to the WMU) and residential facilities (at a low cost), and gives other generous support for WMU students and staff. The many visiting professors and lecturers are provided free of charge by their sponsoring institutions and governments or by themselves, with WMU paying only their travel and per diem (they generally stay in the WMU student residence building). Maritime institutions in more than 20 countries have made their facilities available free of charge and drawn up well-received programmes for practical training on maritime field trips, which are a key element of the WMU programme. Developing countries also contribute meaningfully, since they continue to pay the student's salary during two years of study while also filling his or her vacant post in the interim.

92 . All these generous efforts have kept the University moving forward, but year-to-year financing is not secure enough to assure the University's long-term future. In 1984 IMO launched a World Maritime University Capital Fund with an eventual target of \$25 million in contributions. Although several major donors have voiced support for this Fund, total donations thus far have been disappointing, amounting to only something over \$300,000.

93. Because of this unstable funding situation, the 1985 review team encouraged WMU to prepare a Five-Year Plan for the 1987-1991 period. The projections of income and expenditure in this Plan are based on a stable student body and staff (zero real growth), an inflation allowance of five per cent a year, and contributions as presently anticipated. The projections indicate annual deficits beginning in 1989 and increasing substantially year by year thereafter. Thus there is an urgent need for the university to secure assured financing so that it can continue to maintain its programme.

94. WMU officials feel that the fellowship portion of WMU financing is relatively solid. The challenge is on the operational side, where a declining contribution from UNDP would be especially felt. It is UNDP policy to help bring development projects to the "self-sustaining" stage, and then to withdraw support in favor of funding from other donor countries or the country(ies) involved in the project. This is sometimes a complex judgement, however, since UNDP also has a new emphasis on "sustainable" project activities, and does not want to withdraw prematurely when a project is still too fragile to stand on its own. In addition, the major potential bilateral donors also tend to be major providers of UNDP funds, so that a shift from one to the other does not change much in the way of real financial burdens.

95. Several possible solutions, or combinations, exist.

(a) A renewed systematic fund-raising effort could be made to expand the WMU Capital Fund toward its \$25 million target, citing the success achieved by WMU thus far.

(b) The dollar amount of fellowships could be gradually increased, but it should not be too high. Otherwise, it might discourage developing countries which have greatest need of the University, students from developed countries who are needed to ensure the universal character of the WMU, and private sponsors of fellowships who might withdraw their support if the fellowships became too expensive. (c) Other major donors could again be systematically approached to finance, on a recurring basis, the shortfall caused by UNDP's prospective funding reduction.

(d) Companies and groups in the shipping industry could be approached for increased contributions, given recent improvements in the depressed worldwide shipping situation.

(e) Senior IMO and WMU officials could encourage and establish the funding of endowed professorial chairs at the WMU by countries, organizations, or individuals.

(f) However, while all the foregoing suggestions are being implemented, UNDP could be further requested to maintain its funding support levels, given the success of the WMU thus far, its clear value as a human resources development effort benefitting many countries, and the way in which UNDP's overall share of the IMO technical co-operation programme has been drastically reduced by increased funding from Sweden, Norway, and other donors in the past few years (see para. 29 and Graph 2).

96 . All these ideas have merit, but they must also be considered in light of further recent IMO maritime training initiatives, which create other new funding needs. These efforts are discussed in the next Chapter.

VI. MODEL COURSES

97. Since its inception in 1958 IMO has stressed the need for all governments to ensure that education and training of seafarers is comprehensive and up to date. IMO has sought to attain this objective through joint efforts with the ILO (see following Chapter) and under the STCW Convention of 1978, which entered into force in 1984 (see paragraphs 16-20).

98. In order to overcome the wide variance in standards and procedures which were established by individual governments, the STCW prescribed minimum universal standards for seafarers which all Contracting Parties are obliged to meet or exceed. The basic control provision of the STCW is certificates, which are issued only to those who meet STCW requirements and which authorize them to serve in stated capacities in sea-going shipping. The Convention applies to all sea-going shipping, including ships engaged in domestic coastwise or inter-island trade. The Convention also applies to ships (even of non-Party States) visiting ports of Contracting Parties: if the personnel on board do not hold the appropriate certificates and the deficiencies are dangerous, officials of the port State are required to ensure that the ship will not sail until basic Convention requirements are met.

99. Certificates issued before the STCW Convention entered into force for each Party concerned are recognized under the Convention. However, they are subject to the revalidation provisions of the Convention to ensure the continued competence of their holders. Subject to a five-year period of grace to allow those already undergoing training to complete their training under the prior "national" system, all further certificates must be issued in accordance with the STCW requirements. To accomplish this, Governments must assist each other with training.

A. Development of Model Courses

100 . Several Member Governments encouraged IMO to develop model training courses to help implement the Convention and improve the transfer of information, skills and new developments in marine technology. After investigation and discussions with developing countries, IMO decided that a comprehensive set of well-designed model courses based on careful job analysis, a logical teaching sequence, and the best available teaching materials could significantly assist trainers in maritime training institutes and help trainees achieve the appropriate levels of competence.

101. In early 1985 IMO established a project to produce 66 model courses during the 1985-1987 period, with Norway providing the necessary funding support of \$600,000. There would be 58 short model courses (1 to 3 weeks long), 4 long model courses (up to two months), and four full-time, longer certificate courses. The courses would include:

- (a) those mandatory under the 1978 STCW convention (such as fire fighting, or personal survival), which all maritime centres should thus provide;
- (b) those which complement the long-term training of seafaring personnel (such as oil tanker familiarization and the advanced training programme on oil tanker operations); and
- (c) those which provide some specialization for seafaring or shore-based personnel (such as dangerous cargoes, or planned fleet maintenance).

102 . In September 1986 the programme and its design priorities were revised to provide 54 short model courses of 5-15 days duration, divided into those for seagoing staff, advanced seagoing staff, maritime safety/pollution control administrators, the technical staff of port authorities, and shipping company technical staff; seven long model academic courses; and four certificate courses. The project was subsequently extended into 1988 and 1989, the number of short courses was increased to 62, and the total five-year project budget was increased considerably, to a current estimate of \$1.9 million.

103 . At the end of 1988, 15 of the 62 short courses were available for use. A further 20 courses will be produced during 1989, with about 12 to be printed in 1989 and the rest in 1990. The remaining 27 courses are presently in different stages of design. Subject to the availability of funding, they will

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be printed by IMO in 1990 or later. It is expected that the majority of these courses, when provided with the course material and supporting textbooks, could be implemented by qualified staff locally, provided that any necessary equipment is also available.

104 . All courses which touch on any training area covered by the STCW Convention are subject to validation by the IMO Sub-Committee on Standards of Training and Watchkeeping, which has established a Validation Group comprised of 4 ILO representatives (two shipowners plus two seafarer representatives) and two representatives from IMO Member States. The Validation Group seeks to ensure that the content and level of the IMO courses concerned reflect, as truly as possible, the compromise reached in 1978 between the representatives of developing countries and those of the developed countries. Those courses which have been or will be validated under this process include the four certificate courses (comprising a total of 59 modules) and 15 of the model short courses. All other courses are validated either by international organizations having expertise in the subject area concerned or by an educational institution recognized in the field concerned, each with the purpose of ensuring the accuracy of the course content.

105. The short courses are not intended as a rigid "teaching package" for instructors to follow blindly, but as materials to help them improve the quality and effectiveness of their training course. IMO recognizes that educational systems, cultural backgrounds, and maritime industry needs vary considerably from country to country. Each model course is thus designed to identify basic entry requirements and the target student group in universally applicable terms, and to clearly specify the technical content and levels of knowledge and skills that the related Convention or other applicable guidance requires. The instructor is expected to assess and adjust course content in light of these factors, and then draw up lesson plans to ensure that each learning objective in the course syllabus is attained by the trainees.

106 . During 1986, 1987 and 1988 13 trial courses were tested at different locations around the world to determine whether the course designs and formats were useful and effective in helping instructors teach their students to the level necessary and to attain course objectives. The course participants were mostly teachers, and professional course evaluators attended all but one trial course. The evaluators identified two major needs: to provide more training material and to strengthen the teaching.

107 . Subsequently, IMO has prepared a guidance booklet to help teachers thoroughly prepare and implement the courses, and has prepared a specialized course on teaching methods for instructors. In addition, during the spring of 1988 a small team made a desk and field evaluation of the model course programme, including the development process and the end products. They concluded that the courses and supporting materials produced were of a high quality, but that much work and time were still required to complete the production, review, validation and printing of all the courses. They cited the need to provide infrastructure development and support to WMU branches to teach the courses initially, and to establish a small expert group, resources, and reporting and follow-up processes needed to more widely and effectively implement the courses, particularly those related to the needs of the least developed countries.

108 . In January 1989 IMO established a comprehensive testing and implementation plan for the model courses for the 1989-1990 period. Fifty-five courses, costing some \$2,560,000, will be taught at national and regional institutes, and three sessions (each consisting of eight courses) will be tested and implemented at the new Academy in Italy (see next section), at a cost of \$2,000,000. International experts will be required only for the initial implementation stages, with local experts used thereafter. Each WMU Branch will nominate a "Focal Point" expert to co-ordinate model course implementation, and these experts will also meet annually to share experiences and promote further co-operation.

109. IMO officials emphasize that the approach they are putting in place is carefully planned to resolve:

(a) the twin human resource problems of improving pedagogical expertise and providing up-to-date technical experience for the lecturing staffs at national maritime academies; and

(b) the material resource problem at the academies in developing countries which results in a need for teaching material, equipment and teaching aids appropriate to the level of technical training required; maintenance of installed equipment and teaching aids; and adequate library facilities.

B. Short Course Branches and New Institutes

110 . As these steps indicate, the priority has now begun to shift from designing, developing and producing the model courses to using them successfully around the world. IMO has already taken three innovative steps to support implementation. First, IMO has designated <u>branches of the WMU</u> in maritime training centres where appropriate facilities and equipment are available to conduct the model courses for national as well as regional maritime personnel. From among the 81 national and three regional training centres assisted or established by IMO, it has established ten WMU Short Course Branches. $\frac{1}{2}$

111. Representatives of these Branches met in Malmö in October 1988. They cited the considerable potential value of the model courses within their training programmes; requested financial assistance from donor countries with course material, training aids, lecturers, and student travel and other costs; and recognized the benefits of strengthening co-operation and information exchanges between themselves and with the WMU. In February 1989 IMO developed and sent to the branches a framework which specified in some detail the organizational relationship between the WMU and its Short Course Branches and the co-operative activities which will be undertaken. It is hoped that a seminar can be held in the late spring of 1989 in Malmö for the co-ordinators of the short courses in the Branches to promote the effective implementation of these courses.

112 . Second, during 1987 the Government of Italy and IMO developed a proposal to establish an <u>International Maritime Academy</u> at the University of Trieste in Italy to offer the new model courses and other high-level, mainly short-term courses for personnel from developing countries. The Italian Government will grant scholarships for the courses, will work jointly with IMO on course implementation, and may in future set up similar courses at other Italian centres. Operations began in late February 1989.

113 . Third, although it is not part of the model courses effort, IMO is adding one more new institution to its global maritime training network. The WMU is fully occupied with its present programme, yet it is considered important to provide specialized training in the field of maritime legislation. Thus, in September 1987, the Government of Malta agreed to host a new institution, called the IMO International Maritime Law Institute.

114 . The Institute will offer a ten-month course for at least 20 lawyers from developing countries (50 percent of whom must be women). After course completion, they will be able to review and update their country's maritime legislation in accord with the relevant international maritime conventions. Administrative and financial arrangements would follow the procedures used at the WMU. The buildings are already available, the course structure has been established, and operations are to begin in early autumn 1989.

115. These new institutional arrangements are a significant step forward, but the task of successfully implementing the model courses is still a daunting one. Nevertheless, it is a task of great urgency. International shipping already relies heavily on officers and crews drawn from the developing world. That reliance can only increase (for instance, India is already experiencing a serious manpower drain and is taking steps to conserve its trained personnel for service in Indian ships). Meanwhile, in the traditional maritime countries flagging out and general fleet reduction continues; demographic changes, already evident in many developed countries, drastically reduce the number of young people available for training in any career; and the public interest in, and attraction of, seafaring continues to decline.

116 . IMO officials observed that the suitability of the various courses for presentation at the national, or WMU branch, or subregional level is governed by three factors: the size of the target group; the availability of any special facilities which are required (such as radar simulators); and the availability of gualified instructors.

^{1/} In Algeria, Brazil, China, Côte d'Ivoire, Egypt, Ghana, India, Mexico, Morocco, and the United Arab Emirates.

117 . The IMO officials believe that the phased approach which they are now putting in place offers the most cost-effective solution to these needs. It consists of four elements:

(a) Strengthening the human resources of national academies by training their lecturers in teaching techniques and improving or updating their technical knowledge through attendance at carefully selected model courses. (These courses will generally be implemented at WMU Branches. They will ensure that the national academies involved will have the capability to use the IMO model courses to improve their own syllabuses when they already cover the subject area of the IMO model course, and to implement new courses within the total programme of courses which their institution offers).

(b) Providing the course material itself and associated text books, and ensuring the completeness of the local library regarding the referenced bibliography.

(c) Assisting in the development and strengthening of Maritime Training Academy Associations, and all other means to encourage the exchange of experience among lecturers and the dissemination of information.

(d) Updating the model courses following any revisions of the 1978 STCW Convention, and to keep abreast of the commercial application of technological developments.

118. By presenting the teaching syllabus in a detailed, learning-objective format, IMO expects to achieve a strict control over the technical content and level of each course while leaving local instructors free to impart the specified knowledge or skill in ways appropriate to the cultural and educational background of the trainees. Under this system the means of evaluating the success or lack of success of the teaching process is built in, since each objective can be used in the interrogative and the references made to the supporting compendium or text book provide immediate access to the appropriate answers.

119. By these means a high level of quality control can readily be achieved by any competent teacher. In addition, the system itself allows a teacher to upgrade his own knowledge on a "self help" or "teach yourself" basis provided he has the necessary industrial experience and basic knowledge of the subject. Quality control should be further strengthened through the activities of the Maritime Training Academy Associations. Additionally, the national authority vested with the responsibility of issuing certificates under the STCW Convention is required by that Convention to establish a national examination system for each certificate issued. (Thus, the model certificate courses and 17 of the short model courses will be subject to these further controls).

120. IMO officials emphasize that all but a few of the model courses are based on global requirements which have been identified over a number of years by the Sub-Committee on Standards of Training and Watchkeeping, an international forum of developing and developed countries. They point out that the use of learning objectives in standardizing teaching curricula in general education is a well documented and proven technique in a number of countries. Therefore, they state that in each course the detailed syllabus has been arrived at through task analysis and it is therefore firmly based on the knowledge and skill requirements of the job concerned, in a strictly disciplined and highly objective approach. The IMO aim is to achieve "common core syllabuses" which reflect established or accepted global standards: all institutions and instructors are then free to augment these syllabuses if they wish. Finally, limitations on training time and cost mitigate against overexpansion of the training.

121. The Inspectors caution that, during the next few years, much operational effort and quality control work will clearly be required from IMO, the WMU, the new Short Course Branches and the Trieste Academy to make the model courses a successful tool for transferring modern maritime technology and implementing international maritime conventions worldwide. The Inspectors would note, however, that only a short time ago the idea of a world maritime university seemed to be at least as intimidating a challenge. They believe that, as with the establishment of the WMU, the production of the model courses and the arrangements for the new training structure are highly commendable IMO initiatives. With careful attention to implementation, these courses can achieve the same rapid and significant progress that the WMU has attained.

122. It must also be noted, however, that the model courses and new maritime training institutions will require new financial commitments from donors to IMO maritime training activities. But the nature and size of these needs is not yet fully apparent, nor is their priority clear relative to stable financing for the WMU or new national or regional maritime training projects.

VII. INTER-AGENCY CO-ORDINATION

123 . In 1983 the United Nations made a detailed "cross-organizational programme analysis" of the activities of the United Nations system in marine affairs (document E/AC.51/1983/2 of 15 March 1983). The analysis disclosed that 28 agencies were undertaking 456 distinct marine affairs activities during the 1982-1983 biennial period, at a total cost of \$371 million. Some \$220 million of this was a "special case" - large capital projects for ports and fisheries funded by the World Bank. The rest was divided between regular budget programmes for research, standard setting, and intergovernmental meetings (\$80 million), and technical co-operation (\$70 million), with about half of the latter coming from funds-in-trust and most of the rest from UNDP. IMO was implementing about \$9 million of activities, or 13 percent of this technical co-operation total.

124 . The study also found that the five areas of greatest technical co-operation activity were fisheries, shipping, research, ports, and "institutional control", with IMO active in each area. In some major areas, a single agency is dominant, such as FAO in fisheries, the United Nations in law of the sea and offshore mineral resources, and UNESCO in scientific reseach. For shipping and ports (and especially for maritime training activities), however, the activities of the system are divided among three major organizations: IMO, ILO, and UNCTAD. (In two other areas of importance to IMO, institutional control and marine legislation and regulation, activities are even more crowded with nine agencies involved).

A. <u>ILO</u>

125. The maritime activities of the International Labour Organization (ILO) deal with four different industries; merchant shipping, maritime fishing, ports, and inland water transport. The objective of the programme is to enhance social and economic progress in these industries, and particularly to provide better conditions of work and life to the workers concerned. The means of action are similar to those of all ILO activities, e.g. research, studies and technical reports, technical advisory services, standard setting, technical meetings, dissemination of information and technical co-operation.

126 . A major activity of the ILO in the shipping sector is to assist (through technical advisory services, seminars, workshops and technical assistance projects, etc.) Member States in establishing, developing, or improving their shipping industry by the practical implementation of international maritime labour standards. Furnished at the request of Governments, this assistance covers the wide fields of labour legislation administration and conditions of employment, maritime manpwer, vocational training and certificates, occupational safety and health, welfare, social security, and labour-management co-operation. Up to the middle of the 1970's the ILO also provided substantial technical assistance in seafarers training.

127 . Between 1920 and 1987 the International Labour Conference - normally at special maritime sessions - adopted a total of 36 Conventions and 27 Recommendations relating specifically to seafarers (most recently in 1970, 1976 and 1987). These standards deal with a multitude of questions concerning the working and living conditions of seafarers and have directly or indirectly influenced both the terms of collective agreements and national legislation. At regular intervals the Conference convenes a Joint Maritime Commission (which most recently met in 1980, 1984 and 1987). The 11.0 also maintains joint conmittees on maritime matters with IMO (see below) and with WHO (discussion of various health problems of ship personnel including the preparation of the International Medical Guide for Ships). The 11.0 with its tripartite representatives - governments, shipowners and seafarers - participated actively in the preparation of the 1978 IMO STCW Convention and continues to participate in sessions of the IMO Sub-Committee on Standards of Training and Watchkeeping.

128 . An International Conference on the Safety of Life at Sea in 1960 initially recommended that ILO and IMO co-operate in training. The two organizations established a Joint Committee on Training, which met for the first time in 1964 and prepared a "Document for Guidance" for the education and training of masters, officers, and seamen in safety at sea. The Joint Committee amended, expanded, and supplemented this document in 1975, 1977, and 1985. The Committee itself has held seven sessions over the years, the last one in 1985 and the next one proposed for 1990 or 1991.

129 . In 1971 some difficulties developed concerning the respective roles of ILO and IMO in the training of seagoing personnel, especially for technical co-operation activities, because the standards adopted by each organization were general and at times overlapping. They therefore agreed in 1972 on a joint effort to assist developing countries in the training of maritime personnel, instead of taking the definition of their individual roles as a starting point. The key elements of this arrangement were prompt consultation on any major, relevant technical co-operation project; direct technical staff contacts; information exchange on exploratory and evaluation missions; and annual review and reporting on implementation of the arrangement. In 1974 the two organizations also agreed that proposals concerning standards of maritime training, qualifications, or certification would be submitted, when possible, to the Joint Committee on Training for its advice and recommendations.

130 . The ILO technical assistance programme in the maritime sector now concentrates primarily on the port industry. In recent years major projects as well as fellowship programmes, advisory services, and workshops have been executed by the ILO. The assistance provided covers such matters as management and supervisory development, systems of recruitment and payments, labour-management co-operation, and establishment of port training centres (e.g. assessment of training needs, training of trainers, curricula development certification, rationalisation of cargo-handling methods, incentive schemes, safety and health aspects, and equipment).

131. This technical assistance programme draws upon ILO's cumulative experience of many years of operational activities. Substantive support is given by the Maritime Industries Branch at ILO headquarters in Geneva. In addition, headquarters units responsible for recruitment of experts, project evaluation, procurement of equipment, relations with donor agencies and regional banks, etc. work closely with the technical unit. ILO has in recent years had several Regional Advisers and Associated Experts in maritime activities, who provide advisory services in this field. ILO's more than 40 offices worldwide and its regional training institutes provide further technical and administrative support.

132 . The ILO brings to these projects extensive expertise in training programme design and operation. For instance, based on an analysis of supervisory training programmes around the world, it has completed and rigorously tested a series of 34 modules for supervisory training, 12 of which have been adapted for the specific needs of port supervisors. In addition, a number of specific courses have been prepared, some relating to a special TCDC programme for Latin America. ILO's manpower development programme stresses incentives, interrelated training courses, and career mobility for successful trainees. Close collaboration has been established with the ILO International Centre for Advanced Technical and Vocational Training in Turin, Italy ("the Turin Centre") and ILO regional training institutes in developing tailor-made courses for port personnel, thereby helping to establish national port training institutes.

B. UNCTAD

133 . The United Nations Conference on Trade and Development (UNCTAD) is the United Nations organ concerned with promoting international trade and economic development, especially that of developing countries. In this respect, UNCTAD deals <u>inter alia</u> with the economic, operational, and commercial aspects of maritime transport. Its stated objectives are to increase the efficiency of maritime transport as the major carrier of international trade, and to increase developing country participation in the international shipping industry.

134 . UNCTAD has a Committee on Shipping with 93 Member States, which has developed a comprehensive work programme on shipping and ports since its first session in 1965. The Committee also has a Working Group to review economic and commercial aspects of international shipping legislation and practice. In addition, UNCTAD makes recommendations to governments to harmonize policies in the field of shipping and ports, and (as in IMO and ILO) elaborates international conventions, the most important being those on a Code of Conduct for Liner Conferences and on International Multimodal Transport of Goods.

135. The Shipping Divison and Technical Co-operation Service of UNCTAD provide technical assistance, particularly in the formulation of shipping and port policies and the implementation of UNCTAD conventions. Once again (as in ILO and IMO) UNCTAD has used interregional and sectoral advisers in shipping and ports to aid developing countries, and it also has extensive related research, publications, and training programmes.

136 . From 1970-1979, four Nordic countries and the Netherlands financed a "Ports Project" in which UNCTAD and a Norwegian institute prepared a series of analytical studies on port statistics, operations, investment and development, following which UNCTAD conducted ten training courses and 30 specialized seminars for some 800 senior port managers and officials from almost 80 developing countries. In 1978, UNCTAD surveyed maritime management training requirements and evaluated its training experience. It concluded that future port training should concentrate on the more than 30,000 junior and mid-level port managers who rarely receive any formal training, by upgrading and supporting port training centres and encouraging them to develop locally-oriented training courses. This has led to two important longer-term projects: Improving Port Performance (IPP), financed by Sweden; and Training Development in Maritime Transport (TRAINMAR), financed by UNDP with contributions from the countries themselves.

137. The IPP involves centrally-produced, generally applicable training materials for use by local instructors. TRAINMAR, in contrast, began as a UNDP pilot project to test new training concepts: decentralized production of training materials using a common methodology and standards, and the exchange of such materials between different centres. Since 1980, 17 port training centres have become participants in the TRAINMAR programme, training about 4,000 maritime managers a year through about 30 training packages in the fields of training technology, ports, maritime legislation, shipping, and multimodal transport.

138 . TRAINMAR seeks to produce problem-solving, job-oriented training packages; develop a co-operative network of training materials, courses, and trainers through national and regional projects; establish regional resource centres and experts in support of these processes; mobilize complementary training opportunities through developed country maritime training institutions; and aid countries in related human resources development areas (manpower planning, training strategies, etc.). Many of the port training centres use IPP materials or actual courses, and UNCTAD also provides parallel specialized seminars, fellowships, study tours, regional and national training advisory services, and national projects as well.

139 . UNCTAD believes that this training approach has provided a solid framework for identifying and eventually meeting developing country training needs in port management, as discussed in two assessment reports to the Committee on Shipping in 1985 (documents TD/B/C.4/AC.7/2 and /3 of 30 November and 13 December 1985). In the future, UNCTAD hopes to develop additional IPP courses and make them available in languages other than English; to increase the number of training centres participating in TRAINMAR and organize them into technically and financially self-sustaining networks; and to consider using both IPP and TRAINMAR materials for diploma courses which can transmit the advanced skills that port managers will increasingly need.

140 . In February 1989 UNCTAD launched a new programme named JOBMAR to improve maritime industry performance in developing countries by transferring up-to-date management skills to middle/senior managers in "on-the-job" situations. UNCTAD will co-operate with the International Chamber of Commerce's Centre for Maritime Co-operation (CMC) to identify host companies and ensure successful placements.

141. JOBMAR will also aid co-operation and business opportunities through a Maritime Short Term Advisory Service (MARSTAS). This programme will second senior maritime executives to developing countries for a one-week to three-month period, in co-ordination with similar programmes of UNDP and other maritime industry organizations. UNDP is providing initial funds to permit about 25 JOBMAR fellowship participants during 1989 and 1990, and supplementary sponsorships will be sought from other public and private donors.

C. <u>Co-ordinative Mechanisms</u>

142. The 1983 United Nations report on system-wide programmes in marine affairs observed that it was a complex, technical, and crowded field of activity. The report concluded that co-operation and co-ordination in the shipping field in particular was unavoidably a very dynamic process which demanded continuing awareness and direct involvement and consultations among the organizations concerned.

143. Based on this report, the Committee for Programme and Co-ordination recommended in 1983 that IMO and UNCTAD increase their level of co-operation to ensure that duplication and overlap of activities would be avoided. The 1984 JIU report on IMO endorsed this recommendation, and urged the two organizations to review continually and carefully their programmes and any possible conflicting mandates.

144. During 1988 the Inspectors discussed current working relationships and procedures with IMO, ILO, and UNCTAD staffs. The latter cited satisfactory personal inter-agency contacts in the field and among headquarters staff when needed on day-to-day project matters, respect for the technical competencies of their counterparts, and various individual cases in which the organizations have conducted joint maritime training projects or have otherwise specifically arranged and co-ordinated their efforts. In addition, in the fall of 1988 a discussion was held among the three organizations to enhance the co-operative arrangements referred to above. As a result, a joint group is being established to promote inter-agency co-operation for the implementation of technical assistance projects, starting with the area of ports. The group is scheduled to meet in the near future.

145. Staff in all three organizations and in other organizations familiar with the situation, however, felt that relationships could and should be improved even further. As the brief summaries above indicate, there are many parallels in the objectives, training processes, topics, and arrangements for implementing the IMO, ILO, and UNCTAD activities in the maritime training field. These similarities can lead to problems of overlap and friction, but they could also lead to a co-operative strengthening of the programmes, and better delivery of much-needed training services.

146 . Several factors make inter-agency co-operation even more important now than in the past.

(a) All three programmes have expanded substantially during the 1980s, with IMO establishing the WMU, Malta and Trieste institutions and the model course programme; UNCTAD launching and implementing the IPP, TRAINMAR and JOBMAR programmes; and ILO expanding its training materials and courses in the ports sector. The old co-ordinating arrangements, relating mostly to individual national-level technical co-operation projects, are less and less relevant to these new, systematic, global programmes.

(b) All three agencies have legitimate, experienced maritime training programmes and processes. They could learn a great deal from exchanging their hard-won experience about what works and what does not, and improve their operating efficiency and effectiveness by sharing teaching methods, training materials, experts and lecturers, research work, and other elements, rather than each developing or maintaining these resources separately.

(c) As already noted, shipping is a very dynamic, complex field with many participants. By sharing knowledge and experience, the three agencies could be better informed on changing maritime training problems and needs as fed back from the field, develop a stimulating cross-fertilization of ideas, and also be less likely to confuse the developing countries with different programmes and competing course content.

(d) The 1980 JIU report on regional institutions concluded that they function best when developed on an integrated basis by the United Nations system agencies, providing joint financial support, expertise, and training technologies to develop a few well-endowed and well-defined subregional or regional institutions that can work effectively and play significant leadership roles in regional networks. Given the rapid expansion of IMO, ILO and UNCTAD global training structures, the need to harmonize such training efforts has become much more pressing.

(e) As a specific example, ILO has participated in the work of the WMU Board of Governors and has provided introductory lectures on ILO activities to WMU students. UNCTAD, however, has not participated at all. The 1988 academic review of the WMU recommended that the University significantly extend its range of teaching through contacts with other United Nations agencies, which could provide competent people to teach in the areas of ports, logistics, and the exploitation of resources of the sea, both at WMU and in field training as well.

147. The Inspectors believe that improved co-ordination and inter-agency results cannot be achieved through further specification of mandates and responsibilities alone. A 1981 brochure on "Technical Co-operation in Maritime Transport" prepared by the three agencies already specifies their roles, areas, and processes in some detail, and has been widely distributed in four languages. Instead, what is needed is a more systematic interchange and follow-up among the organizations, which in fact was called for in the 1972 ILO-IMO agreement but is not presently practiced.

148 . The Inspectors therefore recommend that the Secretary-General of IMO continue his efforts to strengthen co-operation in maritime training by seeking to establish and institutionalize an IMO-ILO-UNCTAD inter-agency contact committee at the programme level. If all parties are willing, this group could be chaired by UNDP. It should be composed of officials directly responsible for maritime training activities in each organization. The group should meet twice a year to assess on-going technical co-ordination; exchange information on results, proposals, new training techniques, and new developments; discuss support to developing country and training institutions networks; and submit an annual report to the heads of their organizations on progress achieved and difficulties encountered. Joint working groups on significant matters should be encouraged (using mail and telecommunications rather than travel funds), and other organizations - such as FAO, the World Bank, or the International Standards Organization - might be invited to participate depending on the subject matter.

VIII. PROGRAMMING

A. Present Operations

149. The Technical Co-operation Division, which administers the IMO technical co-operation programme, has altered its structure and staffing only slightly in recent years, with little prospect of additional staffing in the future. Basically, the Division has a Director and Deputy Director, four regional sections (Latin America, Africa, Arab countries and Asia and the Pacific), and a Special Projects section. Each of these five units has a P-5 head, a P-1 or P-2 programme officer, and one or two clerks or secretaries. The inter-regional advisers are also based in the Division in London, with several General Service support staff. Three Professional staff and eight General Service staff in the IMO Administrative Division handle technical co-operation finance and personnel matters.

150 . Within the total annual administrative costs of about \$2 million in 1988, 12 of the 19 Professional posts and 20 of the 24 General Service posts were financed by general support cost funds. However, UNDP directly finances the inter-regional advisers (with two of the four posts remaining vacant), Norway finances the three posts in the Special Projects Office, WMU finances a senior clerical post, and - since 1985 - five senior General Service or junior Professional posts are financed by the IMO regular budget.

151. Technical co-operation activities also appear to be carried out largely as in the past, along the lines discussed in Chapter IV. More attention is being given to TCDC matters, to project evaluation, and to information and technical exchanges in the regions. But the primary work of the staff is general backstopping and administrative activities in support of the various national and regional projects, seminars and workshops, and fellowships which IMO has traditionally carried out. Especially in light of the close control which IMO has maintained over staffing levels, it appears that these activities have been efficiently managed.

152. While staff, structure, and operations have remained stable, however, the scope, complexity, and focus of the IMO maritime training activities have changed tremendously during the past few years. As discussed in Chapters V, VI and VII of this report, IMO has established the WMU as the apex of a global maritime training structure. It has almost completed the model courses design process, has established the Short Course Branch arrangements, and has launched the Trieste and Malta institutions. It has begun to address the need for closer work with UNCTAD and ILO on all aspects of maritime training efforts. Equally importantly, during 1988 IMO elaborated its initial maritime training strategy.

B. A New Approach

153. The Inspectors believe that IMO should recast its internal technical co-operation operations to allow it to better follow up on and revise the new strategy, co-ordinate and implement its complex new global training structure, build closer relationships with the many participants in these activities around the world, and keep up with continual rapid change in the shipping field.

154. The most obvious course of action would be that IMO add highly-skilled new staff to carry out these tasks, but given the very tight funding situation this is not possible at present. IMO does have two important elements which facilitate a solution, however. The Inspectors were favorably impressed with the capacities, skills, attitudes, and motivation of the technical co-operation staff officers whom they met in London - at both senior and junior levels. In addition, top IMO officials are receptive to new arrangements, processes, and techniques which can increase operational productivity and effectiveness, and enable IMO to obtain better results from the same level of resources. 155. The Inspectors therefore recommend that the Secretary-General of IMO establish a system to assign responsibility for top priority maritime training and other technical co-operation areas directly to specific staff members in the Technical Co-operation Division (and as needed in other divisions), who will serve as "focal points" and "resource persons" in IMO on these issues. (IMO has already taken one step in this direction by establishing a Focal Point for TCDC activities). Each such person would be responsible, as part of his or her overall duties, for gathering status information, keeping informed of developments, performing analyses, and preparing forecasts and possible lines of action in the area. These functions would not replace the structure of regional and other subsections and responsibilities which is currently in place, or even require any formal organizational change at all (although IMO might wish to make some such changes as well).

156 . This arrangement sounds simplistic on the surface, but the Inspectors believe that it is well suited to IMO's circumstances and could bring substantial programme improvements. In broad terms, it would sharpen IMO's foresight and ability to meet changing needs in maritime training and other fields; encourage networking with other organizations and national and regional training institutions, critical to a well-informed and responsive future programme; and clarify important topical responsibilities which are now scattered rather vaguely throughout the Technical Co-operation Division. Most significantly, it will require all IMO staff responsible for the programme to systematically broaden their perspectives, and to balance traditional project support work with the new global initiatives - WMU, model courses, TCDC, Trieste, regional branches, Malta, inter-agency activities - to find those priority areas within the total programme where the very scarce resources available to IMO can best be applied to meet urgent maritime training needs.

157. This set of assignments should not be rigid and bureaucratic, but flexible enough to adjust to changing conditions over time. The Inspectors thus do not offer a detailed blueprint: IMO should decide how many total tasks can be assigned; which are the top priorities; which should be assigned to which staff in light of their individual backgrounds, skills and workloads; and exactly how the new assignments are to be implemented and related. However, the Inspectors do wish to cite a few important elements.

(a) IMO now has a written maritime training strategy, and maritime training comprises "most of" its total technical co-operation programme. Yet there is presently no person or subunit in the Secretariat specifically responsible for maritime training work. It seems essential to set up a maritime training steering committee or working group to meet regularly, assess progress, and identify needed changes in implementing the new strategy.

(b) Members of this group should each have a specific responsibility for an important component of maritime training: such as the WMU, model courses, regional branches, or teaching techniques.

(c) The 1988 academic review of the WMU cited two important needs which IMO staff co-ordinators could follow through on: as an immediate task, an updated, in-depth survey of the developing countries to determine their training needs and the training facilities available in their own institutions; and as a continuing effort, the need to harmonize links between the WMU and emerging national maritime universities, and to ensure that courses at WMU and other institutions are adjusted and co-ordinated to meet changing training needs in a global training context.

(d) A staff member, preferably with an information systems background and familiarity with the computerized systems IMO is now using, should be tasked with developing systematic data bases on maritime training institutions and courses, financial sources and interests, shipboard training opportunities, lecturer and expert rosters in various subject fields, and other areas. Such data bases would allow IMO to operate much more effectively as a central clearing house and information resource in the global maritime training network.

(e) A staff member should be responsible for detailed knowledge of the UNCTAD and ILO maritime training programmes, materials and methods, activities, and responsible staff members, to facilitate meaningful inter-agency co-ordination and avoid duplication or overlap.

(f) Someone should be specifically assigned to support the inter-regional advisers with substantive and systematic follow-up on their activities. Many officials felt that these advisers are presently stretched so thin (as discussed in Chapter IV) that their work, information, leads, ideas and contacts are not used as they could be to ensure a stronger and more responsive IMO technical co-operation programme.

C. Rationale for Change

158. The Inspectors believe that this system of topical responsibilities, rather than merely conferring additional staff titles, can significantly strengthen the future maritime training programme and other technical co-operation activities in IMO, as an ongoing process of improvement in Technical Co-operation Division operations. This would occur in four major, interrelated ways.

159. First, the new assignments would <u>help refine the IMO maritime training (and other) strategies</u>. Since IMO has no programme budget structure to organize, interrelate, and prioritize its activities, the new system would be especially important to bring the strategy to life. Being assigned to major areas, analyzing them, and assessing progress in them will make the IMO Secretariat much more able to make the strategy specific; to identify key areas, gaps, and bottlenecks where IMO skills and funds can be best applied; and to use foresight to adapt the strategy to changing situations. In particular, the continuing analytical work should help the Secretariat better advise Member States on priorities. For instance, it should be able to specify how the financial support for the new institutional training arrangements (paragraphs 121-122) ranks with the urgent training requirements already stated in the 1988 strategy document (paragraph 22). The Secretariat should also be able to address, with steadily increasing specificity, the fundamental overall questions: Who needs maritime training, in what subjects, for how long, by whom, from what resources, where, how, and why?

160. Second, the new system should <u>stimulate steady improvement in status and performance information</u> on IMO technical co-operation activities. Chapter IV discussed the substantial progress that IMO has made recently in project, built-in, and programme evaluation. Yet the initial efforts showed that much work is needed to improve the amount and quality of status, monitoring and evaluation information in IMO files as a basis for more solid performance review and improvement in the future. In addition, as cited above, there is a strong need to provide more regular and systematic follow-up on such important efforts as the work of the inter-regional advisers. Finally, a sound data base structure on maritime training and related technical co-operation matters would allow IMO to better interact with, stimulate, and share training and status information with other participants, in both developing and developed countries, in the global maritime training network.

161. Third, the new system of assignments should <u>enhance internal reporting and reporting to governing</u> <u>bodies and thereby strengthen quality control of Secretariat work</u>. The periodic IMO reports on "Technical co-operation in a family of nations" and the annual reports to the Technical Co-operation Committee have steadily improved in analytic content. But they still contain a considerable amount of descriptive, diffuse "activity" material rather than specific information on progress made, results achieved, and problems to be overcome. If staff members are made responsible for analyzing and assessing priority maritime training and other areas on a continuing basis and regularly reporting thereon, internal reports and reports to IMO governing bodies should become much more substantive. Past JIU evaluation reports, and recent UNDP guidance, have stressed that these are not reports for reports' sake. They should be actively used and managed to provide status information on progress toward achieving stated objectives, prompt feedback to identify and act on problems encountered, better design of future activities, and an orderly flow of results information to decision-makers.

162. Fourth and finally, the new assignments should help to <u>launch a significant organizational</u> <u>development process</u> to improve capacities, knowledge, and teamwork in the Technical Co-operation Division. Inherent in the process is the idea that every professional staff member would have at least one such assignment, and would have considerable flexibility and initiative in dealing with it. The process should be an open, information-sharing one, in which status and progress data, contacts, and forecasts in one area are available on a regular basis to staff working in related areas. It should be a team-building process as well, with working groups assembled to deal with specific issues as the need arises. Finally, it should above all be creative and forward-looking, encouraging fresh analysis and ideas from staff to ensure that the IMO maritime training programme remains responsive and adapts to changing maritime training needs and priorities.

IX. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

163 . The preceding Chapters demonstrate that IMO has moved very rapidly during the 1980s to effect major changes in the nature and scope of its maritime training activities. What was formerly a collection of thinly-stretched national projects, advisory services and seminars has been actively adapted and reshaped in response to a dynamic and changing international maritime environment. IMO is now evolving a well-structured network of national, sub-regional, regional, and global maritime training activities guided by the global standards of the STCW convention and by the new maritime training strategy.

164 . The Inspectors believe that IMO's maritime training efforts have responded to the technical co-operation objectives set by the &TCW Convention (see paragraph 20) in two major ways. First, the projects and advisory services of the past two decades, the more than 80 maritime training centres aided by IMO, and the World Maritime University have made an increasing contribution to promoting maritime safety and preventing maritime pollution. Second, and even more importantly in the long run, IMO has shown much initiative and foresight in moving beyond traditional project assistance activities to encourage regional networks, TCDC approaches, model courses, the Short Course Branches, and the WHU and other new training institutions as part of a systematic, worldwide maritime training structure.

165. The Inspectors do not think that they should dwell on past activities or new initiatives, since IMO has already moved effectively to supplement its national projects and institution-building efforts with a new global maritime training framework.. But a third critical phase is now needed: to refine and strengthen this new framework in order to achieve and enhance the global standards set forth by the STCW Convention. The Inspectors' recommendations to aid this process are summarized below.

166 . <u>Consolidation</u>. The innovations of the past few years have led to a global structure for maritime training, but there is an inevitable risk of trying to do too much in too short a time with too few available resources. Just as overall IMO activities have shifted from formulating international conventions to ensuring that those adopted are effectively enforced and implemented (as stressed by resolution A.500(XI) of the IMO Assembly in 1981), so too could IMO maritime training activities benefit from a period of consolidation after their recent rapid expansion in scope.

<u>RECOMMENDATION 1</u>. Rather than adding any major new initiatives, IMO should now concentrate on ensuring that the existing and already-planned maritime training activities – in particular implementation of the model courses and further development of the Short Course Branches and the new institutes – are firmly established and operate as effectively as possible.

167 . <u>Funding support</u>. IMO technical co-operation resources are still very limited relative to maritime training needs. Although UNDP funding has remained stable in absolute terms, it has fallen from 90 to 50 percent of the total IMO programme, with only two countries - Norway and Sweden - providing another 35 percent. Not only are additional funds needed on an assured medium-term basis, but sharpened priorities and broader participation are important as well. If regular financial support for the WMU is the top priority as stated in the IMO maritime training strategy, then the options for improving the WMU situation given in paragraph 95 should be carefully considered (paragraphs 21-23, 28-29, 43-44, 90-96, 108, 121-122, 156, 159).

<u>RECOMMENDATION 2</u>. Using and updating the new IMO maritime training strategy, the Secretary-General of IMO should regularly assess and then consult with donors on the most pressing maritime training funding needs, and then present them to the IMO governing bodies, to encourage not only an expansion but a diversification of funding support to supplement the present narrow funding base.

168 . <u>Inter-agency co-ordination</u>. Maritime affairs and shipping are highly complex, dynamic fields, and many organizations are involved in the related technical co-operation efforts. IMO, ILO, and UNCTAD all have active, experienced, worldwide training programmes in this area which have moved in new directions and which could operate more closely to mutually enhance maritime training results worldwide (paragraphs 5-14, 123-148).

<u>RECOMMENDATION 3</u>. The Secretary-General of IMO should seek to establish and institutionalize an IMO-ILO-UNCTAD inter-agency contact committee at the programme level to exchange information and ideas on maritime training programmes and plans and to monitor and assess co-ordination in the maritime training field. Other organizations should be involved as necessary, and the group should report annually to the heads of their organizations on progress made and difficulties encountered (paragraphs 147-148).

169. <u>Programming</u>. To properly support each of these three recommendations and the major changes which have taken place in the maritime training programme in the past few years, the Technical Co-operation Division of IMO needs to evolve as well. Adjusting assignments to the new maritime training strategy and its priorities should permit the TCD to further refine the strategy, improve status and performance information, enhance reporting internally and to governing bodies and thereby strengthen quality control, and improve overall TCD staff capabilities (paragraphs 149-152, 158-162).

<u>RECOMMENDATION 4</u>. The Secretary-General of IMO should assign "focal point" responsibilities for top priority maritime training and other technical co-operation areas directly to specific TCD staff members, in order to broaden staff perspectives, balance traditional project support work with the new global initiatives, and identify and develop key issue areas in the total programme on a continuing basis (paragraphs 153-157).