REPUBLIC OF THE MALDIVES

HUMAN RESOURCE NEEDS STUDY

FINAL REPORT MARCH 2005

PINZ
Education... Global Specialists

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1. INTRODUCTION

This consultancy has been commissioned as a component of the IDA Third Education and Training Project to obtain a clearer view of training needs of the population**.**

The objectives of the Study are:

- Design a survey of the workforce
- Design a questionnaire
- Estimate the proportion of expatriates and Maldivians workforce in key sectors
- Identify skill and training needs
- Make projections on future supply of skills
- Compute rates of return to higher education and training
- Contribute to the proposed labour force survey
  [The last is in a separate document]

The consultancy was executed in close collaboration with MoEL in two stages; the first to design the survey and questionnaire (between Feb 22 and March 31 2004), the second to analyse the findings (between Aug and Sept 28, 2004).

1.1. BACKGROUND

The Maldives has been propelled from a quiet fishing economy into a modern economy within a generation. This very rapid transition has generated a host of problems in the labour market.

The major problem

Various studies have identified critical labour market issues,[1] in particular two inter-related problems.

(a) **Expatriates**

In general there is a serious gap between the skills required to operate a modern economy and the nationals actually trained to the required skill level. This gap is filled by expatriate workers.

Despite the regulations which stipulate that employers have to apply for quotas for expatriates and to prove that they have failed to find Maldivians for the jobs, by advertising vacancies, the in-ward flow of expatriates continues to increase. The past decade has seen a steady rise in the number of expatriates employed in the country, from 26,468 (in 1999) to 35,294 (in 2004) to the extent that the economy has become heavily dependent on expatriate labour; approximately 22% of the workforce.

The majority of expatriates are to be found in the hotel and tourist sector (33 %), followed by construction (19 %), social (13 %) and business (13%) services. In terms of occupational groups the majority of expatriates are to be found in the semi-skilled and unskilled categories (44%), followed by craft (13%) and service (16%) workers (see Annex 2).

The dependence on an expatriate workforce is undesirable because not only does it create social problems but 'siphons out a significant proportion of limited foreign exchange' in remittances (estimated at US$ 350 million in 2001). Moreover the increasing dependence on foreigners prevents locals from obtaining skilled jobs There are several examples elsewhere of the dangers of such a reliance on foreign skills[2].

[1] Summarized in the 6th National Development Plan

[2] Several of the countries belonging to the Gulf Co-operation Council have introduced measures to reduce their dependency on expatriates in order to avoid heavy indigenous unemployment, particularly since their governments can no longer provide public sector jobs.

There is a serious danger of purchasing skills and services of others rather than learning to do things for themselves. Given that the Maldives has few natural resources, its people will be its main asset and its niche in the world economy will ultimately depend on the quality of its own labour force not that of foreigners. [On the other hand, a decline in cheap foreign labour will almost certainly raise the wages of national workers, whose income has been suppressed by the extensive use of expatriate workers].

Since sustainable long-term economic development will depend on a well-trained Maldivian workforce and the steady absorption of school-leavers into that workforce, the key issue is the localization of the work-force.

(b) **Unemployment**

The growing number of unemployed school leavers. 'Over the next five years, an unprecedented number of school leavers are expected to look for work. It is anticipated that there will be approximately 10,000 school-leavers each year'. Many recent school leavers cannot compete against foreign labour in numerous occupations, particularly in the middle and high level occupations to which many, with school leaving qualifications, aspire.

1.2. POLICY

The Government of the Maldives (henceforth GoM) is well aware of the problem. The Government's development strategy clearly states its concern about 'the long-term economic and social consequences and costs of an ever increasing expatriate labour-force'[3]. Policy will be focused on:

- 'identify jobs that employ a significant number of expatriate labour, study reasons for low participation in such jobs, and facilitate the development of salary structures and the employment conditions to attract local people to take up these jobs'[4].
- The government intends to boost the formal training institutions to deliver 'employment-orientated skills development, vocational, technical and continuing education' to Maldivians.
- 'to increase training opportunities both locally and internationally. The first step to this objective is the preparation of a Human Resource Development Master-plan.

In the formulation of policy, it is necessary to acquire appropriate data. This Study hence contributes to (i) the collection of data on expatriates and (ii) advises on the design of a labour force survey in order to obtain more information on the unemployed.

(i) **Expatriates**

Although the GoM has good data on the number of expatriates (see Annex 2), absolute data is insufficient; what is needed is an indication of the proportion of expatriates/locals by occupation (i.e. the degree of localisation) to determine whether there is a serious skill shortage. It was decided that a manpower study (henceforth called the 'Study'), including a survey, be undertaken, primarily to determine the more serious skill shortages in the economy, which could be filled by Maldivians.

The Study is seen as a *first step* towards the identification of skills in short supply, measured according to the rate of localization. Subsequent steps[5] need to be taken to scrutinise the

[3] 6th National Development Plan 2001-2005
[4] 6th National Development Plan
[5] occupational task analysis for key occupations

specific training requirements believed to be necessary for the performance of different jobs in short supply, which can only be undertaken at the sub-sectoral level (see Section 9).

In addition, the Government intends to reduce *'gender disparity in employment'*. The 6th National Development Plan notes that 'when compared with men, fewer women seem to participate in the employment market' and 'gender equity is an issue that needs to be addressed.' Since gender imbalances are also a major concern, the Study collected data on the distribution of the work-force by gender.

(ii) **Unemployment**

The Study attempts to elicit information on the workforce, not the labour force. The consultant gave advice on the design of a labour force survey, for use in the preparation of the HRD Master-plan.

The Study and Labour force surveys are to be used by an inter-ministerial committee in devising a suitable strategy and formulating a Human Resources Development Master Plan, which will address the issue of expatriate employment and training for locals.

2. APPROACH

2.1. RATIONALE

The main purpose of a skill needs assessment survey is to help planners to identify potential areas for further investment in post secondary training and higher education. 'Occupation' is not in itself a policy variable. One can have a policy that varies admissions to a tertiary institution but not to produce executive workers. Analysis on skills leads directly to policies on training institutions and employment conditions

Nationwide manpower surveys have been severely criticized for being too comprehensive, ambitious, expensive and ultimately ineffective (see Annex 1). Although the conventional manpower requirements approach (MRA) has great appeal to policy makers because of its apparent simplicity of determining skill requirements and hence training need, it has many serious limitations. At the national level the occupational groups are too highly aggregated. Even the two-digit international classification jumbles together many occupations of a similar level but with very different training requirements. Since in many instances, even more specific occupational categories cannot be linked with particular skills, surveys can rarely capture the exact training required.

The widespread tendency of national manpower planners to recommend training for skill shortages hits against severe obstacles, when their practical aspects are considered. Who to train? How to train? In what fields to train? At what level to train? The who, what, where and how questions are highly relevant but can only be addressed at the sector or sub-sector level.

Sector approach

At the sectoral level the planner can more easily identify the key (as opposed to all) skill shortages, identify the training priorities and advise on the allocation of funds for training purposes.

(a) Traditionally manpower planners have advocated that investment in the training sector should be determined by skill shortages, irrespective of whether those shortages were important to the economy. Under the sectoral approach, training investment allocations reflect development priorities because manpower assessments are only made in *high priority sectors*, which are considered important for economic and social development.

(b) Furthermore, data, which at the national level would be cumbersome and costly to collect (with a high probability of low response rates), can be obtained more easily at the sectoral

level. For the purpose of planning vocational training, it is better to rely on higher quality data which can be obtained at the sectoral level than to rely on poor data for the whole of the labour market.

(c) Many skills fall into specific sectors (e.g. doctors, teachers, tour guides) and thus can be better studied in the context of the main employing sector. Some skills are cross- sectoral. For example the management field stretches over a wide spectrum of disciplines (e.g. production, financial, human resource, retail, tourism, construction etc. Similarly technicians and mechanics are cross-sectoral. In-depth studies on important cross-sectoral occupations (and related occupations) can be very useful in determining skill needs and reasons for shortages.

Sector Employment Councils (SECs):

MoEL has agreed, with ADB assistance, to the establishment of sector councils for the Transport, Fisheries and Tourism sectors on a pilot basis[6] to inter alia facilitate, develop and co-ordinate employment-linked education and training in the Maldives.

The sectoral approach, adopted in the Study, is consistent with the SEC's approach, namely to identify the critical skill shortages in sectors and sub-sectors. The SECs will be expected to examine more closely (through occupational task analysis) the actually skills required and also the level of credentials. [In addition to questionnaires, the SECs will also hold formal interviews, focus groups, examine records etc which can only be done at a sub-sectoral level]. The proposed MNET (Maldives Network for Education and Training) will provide the requisite training.

Hence this Study should be seen as a first step towards more in-depth analyses by the SECs. In addition it will provide an indication of priority areas for further analysis and/or training in the some non-SEC sectors.

2.2. TARGET GROUP

Training Priorities

It is not necessary to collect data on *all* the skill shortages in a country. Even if this were possible, Maldives has not the resources to rectify all the skill shortages through training programmes. Consequently priorities have to be set. These should reflect economic and social goals.

Expatriates

It cannot be assumed that all expatriates should be replaced by nationals[7]. However the number of expatriates in relation to locals in certain occupations is a good indicator of market demand. Therefore the Study focuses on the *proportion* of expatriates rather than the absolute numbers. [Expatriate rate refers to the proportion of expatriates in the total occupational category and localisation rate refers to the proportion of locals or nationals].

Higher- level manpower

The Study focuses more on higher level skills. The Maldives is no longer a low wage economy and cannot be expected to compete in low skilled manufacturing activities[8] and will increasingly move into more service-orientated sectors. The Government recognises the critical importance of this level to the development of the economy and social services. According to Vision 2020,

[6] ADB 'Post secondary Education and Skills Development'. TA3826-MLD Dec.14, 2002

[7] Apart from the enormous cost, the Maldives will continue to depend on expatriates for certain advanced skills.

[8] The attempt to become a low-cost producer of labour-intensive mass produced garment items was not successful.

'there will be extensive development of higher-level skills and core competency among the people'[9]

For middle-level and high-level skills (referred to as higher-level skills) there is a longer-term 'gestation' period of planning and delivering courses at this level, whereas lower level skills can be rectified by ad hoc short-term courses (if the training institutions are sufficiently flexible).The study therefore focuses more on higher level skills[10], which take longer to replace.

For most *low- level skills* there is little doubt that a lot of professional energy is expanded on planning that is not really necessary. Since a certain set of skills can be acquired in a course that last only for a few weeks or months, there is no need to plan intake and output for years ahead. Hence, short- term training should be left to company managers and managers of training institutions to ensure that training projects are sufficiently flexible and responsive to the changing needs of the formal sector.

There is an army of low level jobs (approximately 15,000) held by expatriates but it appears that most school leavers (even those without any academic qualifications) are not interested in taking up semi-skilled jobs[11]

Sectors

The approach focuses on only priority sectors of the economy[12]. The priority sectors were selected according to the following criteria; contribution to (a) GDP, (b) exports (c) employment and (d) social development.

(1) **Tourism**

Tourism is the most dynamic sector. It was (and still is) the prime source of economic expansion. The country is heavily dependent on tourism, which is a precarious situation to be in. By 2001 there had been a fivefold increase in tourism compared with the mid-1980s. By 2002 it accounted for 34% of GDP. It also has substantial links to other sectors of the economy, such as construction, transport and distribution. Service exports (predominantly earnings from tourism) account for 80% of foreign exchange earnings.

(2) **Fishing**

Fishing is the traditional mainstay of the Maldivian economy. There has been a noticeable diversification from traditional dry fish production towards fish processing for developed-country markets. However the relative importance of fishing has declined (from 30% of GDP in the mid 1980s to 6 % in 2001) and account for only 10% of foreign exchange earnings. The sector is critical to the Maldivian economy since it provides jobs, accounts for approximately 68 percent of domestic exports and provides essential food to the local populace

(3) **Construction**

The sector has grown rapidly in recent years in response to the expansion of the tourist industry and the housing boom.

(4) **Air transport**

The sector is critical for the development of the tourism sector.

[9] Vision 2020
[10] Higher level skills refer to at least 3 years post- matric qualification at a higher educational institution.
[11] 'Job-Centres as a part of a National Job-Information Network'. MOEL 2004
[12] Manufacturing has not been included in the Study since many of the garment companies which came to the Maldives to take advantage of its quotas have since closed down

(5) **Education**

Education is a crucial sector since it has an enormous influence on the future quality of the workforce. As with all post-secondary education, the critical first step in improving training outcomes is to strengthen primary and secondary education.

(6) **Health**

The Ministry of Health (MoH) is responsible for the management of health care in the Maldives. There is a small non-government sector, which is regulated by MoH.

2.3. METHODS

The study attempts to

- Define skill shortage
- Verify extent of skill shortage
- Investigate where possible the reasons for the skill shortage
- Propose best practice for overcoming the skill shortage

Skill shortage

The purpose of the Study is to verify and describe the extent of skill shortages. Skill shortages are defined as those jobs currently occupied by foreigners. Hence to assess the extent of skill shortages the Study ascertains the rate of localization, i.e. the proportion of locals (Maldivians) in the total for each occupation or occupational group.

Extent of skill shortage

To avoid the problems associated with the discredited national manpower plans, it was decided to undertake the HRD Study at two levels; the macro and micro.

National

- skill gaps; degree of localisation by broad occupational group and sector
- priority sectors for skill development
- possible reasons for skill shortages

In the absence of any data on enterprises in the Maldives, the consultants were forced to survey only those firms, which were currently using expatriate labour[13]. This is far from satisfactory because it excludes firms which do not employ expatriates and therefore may well distort the degree of localisation.

Sectoral

- localization by specific skills
- priority occupations
- potential supply
- training constraints
- possible measures to overcome constraints

The Study is essentially a broad survey at the national level and a more in-depth survey of key economic and social sectors, which identifies skill shortages for specific occupations

Cause of skill shortages

In many countries, much emphasis has been given to quantifying occupational imbalances but too little to the causes of the imbalances. A numerical statement is insufficient because of the danger of implying that imbalances can be rectified by a quantitative increase/decrease in

[13] Identified by work permit applications in MoEL

enrolments in training institutions[14]. Not infrequently the reasons are related to non-training factors such as poor wages, working conditions and career prospects.

Matching requirements with output

Job titles may not be a satisfactory indicator of the kind and level of skill required. Since it is unrealistic to specify precise educational and training qualifications for occupations, except in a few cases, it is not possible to match exactly occupations with training requirements, especially at the higher levels. Hence it follows that statistics of workers numbers and composition according to job slots cannot be used alone for deciding on training needs.

Future

In the absence of detailed plans, either national or sectoral, it is not possible to determine future requirements, i.e. those skills needed to achieve specific future objectives. Furthermore very few companies have made forward projections of skill needs, partly because they are uncertain about future developments but mainly because they can easily fill vacancies with expatriates. The Study requested information on anticipated demand in the next three years[15] as an *indicator* of growing demand for certain skills.

The Study's prime focus is on current rates of localization, from which future rates can be established as desirable targets. The Study identifies where expatriate replacement should take place, where skills need to be strengthened, where new training programmes might be introduced, consistent with overall national HRD policy.

[14] Development practitioners have often advocated the facile of recommending additional training whenever there are skill shortages.
[15] Accuracy diminishes with longer-term horizons

PART 1

3. GENERAL FINDINGS

3.1. SAMPLE

A survey of 316 companies was undertaken, of which 238 responded giving a response rate of 75%, which was high (see Table 1) but the quality of the response was very mixed. Firms are classified under industrial groupings (ISIC headings).

In the absence of any reliable data on enterprises, the Study had to select firms which employed expatriates[16]. Consequently some firms, which did not employ expatriates, were excluded from the Study. Whilst recognising that these firms only account for a proportion of the total workforce, they do represent a good sample of the private sector. Inevitably given the lack of enterprise data, the survey discovered that some firms had gone out of business (especially in the manufacturing sector) and others that had transferred to a different sector activity, both of which affected the sector and total response rate.

Table 1: No. of establishments in the sample and actual returns

ISIC	Description	In Sample	Actual Returns
1	Agriculture	12	2
15	Food products and beverages	16	13
18	Readymade garments	4	2
20	Manufacture of footwear	21	13
21	Paper and paper products	1	0
35	Ship building and repair	1	0
45	Construction	33	21
50	Sale and repair of motor vehicles	5	10
51	Wholesale trade	1	21*
52	Retail trade	24	23
55	Hotels and restaurants	110	57
60	Land transport	1	0
61	Water transport	10	6
62	Air transport	3	3
63	Travel agencies and auxiliary activities	11	8
71	Renting of machinery	3	3
72	Computer and related services	3	3
74	Other business activities	14	11
75	Atoll and municipal administration	4	2
80	Education	1	1
85	Health and social works	7	2
92	Recreational and sport activities	10	3
93	Other service activities	21	34**
Total		**316**	**238**

** State Trading Organization Branch Offices*

*** State Electric Company Branch Offices*

[16] Based on information obtained from the work permit scheme (in MoEL), which registers all expatriate employees.

3.2. COMPOSITION OF THE WORKFORCE

The following section describes the findings on the workforce.

3.2.1. BY SECTOR

Table 2 shows the distribution of occupations by sector. The major sectors in terms of employment are tourism, education, construction and food processing. At least 40% of the occupations require education or training beyond secondary school.

Table 2: No. of Person engaged by major occupational group

ISIC	Sector	Managers & Senior Officials	Professional	Technician / associate Professional	Clerical	Service & sales Workers	Skilled Workers	Plant Operators	Semi Skilled & Unskilled Workers	Total
1	Agriculture	1	0	0	0	0	0	0	7	**8**
15	Food products and beverages	165	83	92	155	112	247	319	1138	**2311**
18	Readymade garments	7	0	1	0	0	65	0	0	**73**
20	Manufacture of footwear	21	7	11	1	7	108	13	93	**261**
21	Paper and paper products	0	0	0	0	0	0	0	0	**0**
35	Ship building and repair	0	0	0	0	0	0	0	0	**0**
45	Construction	123	84	115	105	530	588	69	947	**2561**
50	Sale and repair of motor vehicles	24	4	27	39	44	38	9	69	**254**
51	Wholesale trade	36	5	18	12	127	15	35	252	**500**
52	Retail trade	129	38	29	24	55	40	10	279	**604**
55	Hotels and restaurants	359	289	392	606	2278	419	280	2480	**7103**
60	Land transport	0	0	0	0	0	0	0	0	**0**
61	Water transport	14	5	19	5	33	2	12	52	**142**
62	Air transport	42	112	23	36	95	79	24	41	**452**
63	Travel agencies & auxiliary activities	33	7	6	8	62	4	1	16	**137**
71	Renting of machinery	11	3	14	12	9	2	13	53	**117**
72	Computer and related services	18	19	15	1	16	0		1	**70**
74	Other business activities	29	64	32	64	46	8	8	123	**374**
75	Atoll and municipal administration	40	24	29	84	10	3	16	67	**273**
80	Education	9	2422	1407	595		1	0	143	**4577**
85	Health and social works	6	13	9	10	5			2	**45**
92	Recreational and sport activities	16	32	5	6	1	1	5	23	**89**
93	Other service activities	70	7	140	180	398	141	223	112	**1271**
Total		**1153**	**3218**	**2384**	**1943**	**3828**	**1761**	**1037**	**5898**	**21222**
Percentage		**5**	**15**	**11**	**9**	**18**	**8**	**5**	**28**	

3.2.2. BY EXPATRIATE AND LOCAL

Out of a total of 21,221 persons covered in the survey, there were 8,701 expatriates, 41% of the total. According to the HRD survey there were low levels of localization[17] (or high expatriate rates) in the following sectors; construction, air transport, education, tourism, machinery renting, manufacturing [18] and the retail trade.

Table 3: No. of surveyed establishments & no. of person engaged

ISIC	Description	No. of Establishments	No. of Person Engaged			
			Local	Expat	Total	% Local
1	Agriculture	2	2	6	8	25
15	Food products and beverages	13	1566	745	2311	68
18	Readymade garments	2	15	58	73	21
20	Manufacture of footwear	13	72	189	261	28
21	Paper and paper products	0	0	0	0	0
35	Ship building and repair	0	0	0	0	0
45	Construction	21	502	2059	2561	20
50	Sale and repair of motor vehicles	10	187	67	254	74
51	Wholesale trade	21	396	104	500	79
52	Retail trade	23	366	238	604	61
55	Hotels and restaurants	57	4235	2868	7103	60
60	Land transport	0	0	0	0	0
61	Water transport	6	114	28	142	80
62	Air transport	3	177	275	452	39
63	Travel agencies and auxiliary activities	8	70	67	137	51
71	Renting of machinery	3	51	66	117	44
72	Computer and related services	3	45	25	70	64
74	Other business activities	11	245	129	374	66
75	Atoll and municipal administration	2	241	32	273	88
80	Education	1	2941	1636	4577	64
85	Health and social works	2	36	9	45	80
92	Recreational and sport activities	3	46	42	88	52
93	Other service activities	34	1213	58	1271	95
Total		**238**	**12520**	**8701**	**21221**	**59**

3.2.3. BY EXPATRIATES AND OCCUPATION

The Maldives retains an imbalanced occupational structure with a low proportion of skilled artisans compared with a higher proportion of sub-professional/professional workers and unskilled workers, see Table 4(a). In terms of broad occupational groups, the rates of localisation were low for professionals, skilled craft workers and semi/unskilled workers.

[17] Defined as less than 66%

[18] The garment factories, which imported much of their labour, are being rapidly closed down.

Table 4(a): No. of person engaged by occupational group by nationality & by gender

ISCO	LOCAL			EXPAT RIATES			GRAND TOTAL*	% LOCAL
	TOTAL	MALE	% FEMALE	TOTAL	MALE	% FEMALE		
Managers/ Senior Officials	931	863	7	222	200	10	1153 (5%)	81
Professional	1435	1041	27	1783	1306	27	321 (16%)	45
Technicians (& assoc. professionals)	1796	1005	44	588	448	24	2384 (11%)	75
Clerical	1776	1054	41	167	138	17	1943 (9%)	91
Service & sales workers	2408	2105	13	1419	1358	4	3827 (18%)	63
Skilled craft workers (inclng fishery)	682	667	2	1079	1078	0.1	1761 (8%)	39
Plant operators	841	840	0.1	196	195	0.5	1037 (5%)	81
Semi-skilled & unskilled	2650	2300	13	3247	2994	8	5897 (28%)	45
Total	**12519**	**9875**	**21**	**8701**	**7717**	**11**	**21220 (100%)**	**59**

* including percentage of total workforce

Table 4(b): No. of person engaged by sector & gender

ISIC	Sector	Locals			Expatriates		
		Total	Male	% Female	Total	Male	% Female
1	Agriculture	2	2	0	6	6	0
15	Food products and beverages	1566	1422	9	745	506	32
18	Readymade garments	15	6	60	58	58	0
20	Manufacture of footwear	72	72	0	189	189	0
21	Paper and paper products	0	0	0	0	0	0
35	Ship building and repair	0	0	0	0	0	0
45	Construction	502	441	12	2059	2057	0.1
50	Sale and repair of motor vehicles	187	145	22	67	62	7
51	Wholesale trade	396	312	21	104	104	0
52	Retail trade	366	344	6	238	234	2
55	Hotels and restaurants	4235	3949	7	2868	2739	4
60	Land transport	0	0	0	0	0	0
61	Water transport	114	106	7	28	28	0
62	Air transport	177	157	11	275	271	1
63	Travel agencies and auxiliary activities	70	56	20	67	50	25
71	Renting of machinery	51	39	24	66	63	5
72	Computer and related services	45	34	24	25	21	16
74	Other business activities	245	170	31	129	123	5
75	Atoll and municipal administration	241	162	33	32	32	0
80	Education	2941	1412	52	1636	1088	33
85	Health and social works	36	11	69	9	7	22
92	Recreational and sport activities	46	41	11	42	27	36
93	Other service activities	1213	995	18	58	52	10
Total		**12520**	**9876**	**21**	**8701**	**7717**	**11**

3.2.4. BY OCCUPATION AND GENDER

The survey established that overall women constituted 21% of the local workforce and 11% of the expatriate workforce Women are to be found in most occupational groups, especially in clerical and associated professional categories[19] (see Table 4 a).

3.2.5. BY SECTOR AND GENDER

In general women were a minority in most sectors except Education and Health[20] (see Table 4b). Most of the expatriate females are to be found in education and tourism (hotels and restaurants).

3.2.6. BY INDUSTRY AND OCCUPATION

The percentage of local citizens, cross classified by occupation and industrial sector, is shown in Annex 3 (Table 1). The data (see Table 5 for a summary) shows that:

(a) In general the localization rates were high for management in most sectors, except air transport and tourism.
(b) Professional category: low localization rates in air transport, construction and education.
(c) Associate professionals: low localization in transport
(d) Clerical occupations were highly localised.
(e) Service workers are highly localised except in the construction sector
(f) Skilled craftsman/artisans: low levels of localization in many sectors, especially construction and the tourist industry
(g) Plant operators: low levels in the construction sector.
(h) Semi and unskilled: low proportion of nationals in most sectors, particularly construction.

Table 5 Localization rates by major sector (percent)

ISCO Sector	Food & bev	Const	Hotels & rests	Air trans	Educ	Total (all sectors*)
Managers/Senior Officials	88	83	66	43	89	81
Professional	63	48	48	21	45	45
Technicians & assoc. professionals	59	61	64	17	80	75
Clerical	99	90	79	53	100	91
Service & sales workers	49	21	62	96	na	63
Skilled craft workers	85	6	55	15	100	39
Plant operators	94	13	82	21	na	81
Semi-skilled	52	4	51	10	94	46

Source: Annex 3 Table 1 *including other sectors

3.3. RATE OF LOCALIZATION

Overall the key sectors (in terms of low levels off localization) are tourism, construction, air transport and education. These are examined in greater detail in Section 4.

[19] E.g. teachers, staff nurses, senior secretaries pharmaceutical assistants and technicians
[20] Returns for the Health sector (except for the Dept of Public Health) were only made available after the end of the survey but could not be incorporated into the Table.

3.4. SKILL SHORTAGES

The number of establishments that reported skill shortages is shown in Table 6. Their methods of coping with skill shortages varied. The majority of companies, as one would expect, tended to recruit expatriates. In tourism where there is a restriction on the proportion of expatriates employed[21], more attention is given to upgrading staff and in-company training.

Table 6: Percentage distribution of establishments facing skill shortages in the Maldives & coping methods

ISIC	Description	Have skill shortage	No skill shortage	Coping Method			
				Recruiting Expatriates	Upgrading Staff	In-house training	Outside training
1	Agriculture	1	50	50	0	0	0
15	Food products and beverages	62	38	62	23	31	0
18	Readymade garments	50	50	50		50	0
20	Manufacture of footwear	69	31	62	15	8	0
21	Paper and paper products	0	0	0	0	0	0
35	Ship building and repair	0	0	0	0	0	0
45	Construction	95	5	76	33	24	10
50	Sale and repair of motor vehicles	20	80	20	10	0	10
51	Wholesale trade	5	95	0	0	0	0
52	Retail trade	61	39	52	4	9	4
55	Hotels and restaurants	75	25	47	42	30	4
60	Land transport	0	0	0	0	0	0
61	Water transport	50	50	33	0	17	0
62	Air transport	67	0	67	67	0	0
63	Travel agencies and auxiliary activities	75	25	38	38	13	0
71	Renting of machinery	67	33	67	33	0	0
72	Computer and related services	33	67	33	33	0	0
74	Other business activities	91	9	36	55	36	18
75	Atoll and municipal administration	50	50	0	0	50	50
80	Education	0	33	0	0	0	0
85	Health and social works	100	0	50	50	0	0
92	Recreational and sport activities	100	0	33	33	67	0
93	Other service activities	15	85	15	3	0	0

[21] Resorts are limited to 50% expatriates per resort. This regulation does not apply to specific occupations, only totals.

3.5. FUTURE DEMAND

Very few companies know what their future skill requirements will be[22].This is not unusual since few companies plan staffing requirements, particularly in the Maldives where foreign labour is so available. The Study sought 'an indication' of the likely increase in the demand for additional labour (whilst recognising that some companies have a strong incentive to exaggerate their future demand to ensure the future availability of workers to reduce wage pressure). Companies were asked to indicate in which broad occupation groups they expected rising demand (see Annex 3, Table 2).

In the construction sector, 21% of companies anticipated an increase in demand for semi-skilled workers and 30% expected an increased demand for technicians. In the tourist sector 23% of companies expected an increase in demand for sales and service workers. In air transport the main occupational groups in demand are technicians and semi-skilled workers (67% of companies).

3.6. REASONS FOR SKILL SHORTAGES

To merely identify skill shortages is not sufficient; it is necessary to determine the cause(s) of the shortages. In the 6th National Development Plan, it was assumed that the reason for increase in the expatriate work-force was the 'unavailability of adequately trained locals'[23]. To just assume that skill shortages can be rectified by expanding the output of the training institutions is too simplistic. There may be other reasons, besides the lack of qualified Maldivians, such as (a) the cost of Maldivian labour compared with expatriate and (b) the quality of the Maldivian workers, to mention the more important.

At the enterprise level, through face to face interviews, it is often possible to determine the reasons but at the national level this is virtually impossible. Nonetheless the Study in an attempt to uncover the reason(s) for skill shortages included a question relating to the preference for local and expatriate workers[24].

Since the majority of companies used foreign labour to overcome skill shortages, even when local labour was available, companies were asked to indicate the characteristics, which made foreign or local labour more attractive. The intention was not to belittle the qualities of either foreign or local workers but to determine why there seemed to be a strong preference for foreign labour. Many employers refused to answer this question on the grounds comment on the grounds that the information would not be treated in confidence.

3.6.1. EMPLOYERS' PERCEPTIONS

The Study found that more than a quarter of the companies surveyed claimed that locals were more reliable; better at following instructions and easier to recruit. Moreover, employers thought that locals had better theoretical and practical knowledge than expatriates (see Table 8).

[22] Very often there is confusion over the term 'skill needs'. A need is not the same as actual demand. The former is what a company may want, the latter refers to what it can actually afford to employ.

[23] Yet in the same document, the Plan also refers to 'the unwillingness of local people to work in certain jobs for the salaries and benefits provided for such jobs'.

[24] Terms such as reliability (i.e. punctuality, commitment to job roles, quitting at short notice), theoretical and practical knowledge (i.e. skill literacy) and following instructions (i.e. following organisation's rules and obeying superiors), easier to recruit (i.e. availability and process of recruitment) were used.

Table 8: Percentage distribution of establishments by preference of recruitment		
Reason of Preference	**Local**	**Expat**
They have more theoretical knowledge	10	4
They have more practical knowledge	19	9
They are more productive	18	13
They are more reliable	25	16
They follow instructions better	28	15
They are easier to recruit	28	12
Their starting salary is lower	11	15
Other (Specify):	9	1

These findings are at variance with 'private communications' to the Study team and also a recent study on job centres in the Maldives[25] which found the following:

(i) Skill literacy: 'education too academically orientated….employers, government authorities and school principals were unanimous in their opinion that low levels of skill literacy contributed significantly to the rising unemployment rates among the youth on the focus islands'

(j) Work culture: 'low levels of commitment to job roles…quitting at very short notice….absenteeism and poor punctuality.'

3.6.2. MINDSET

The alleged work culture was attributed to a particular mindset; 'young people… do not seem to experience urgency in relation to finding a job. Two factors seem to contribute to this mindset. Firstly, the young person has high expectations of a job and tends to reject opportunities because they do not measure up to expectations. Secondly the young person is cushioned by highly supportive parents and families. Voluntary unemployment does not seem to be disapproved or criticised by the community'.

In short the 'employer seems to be confronted by an indigenous work force that offers low skills but has high expectations'. Informal discussions with employers by some of the Study team confirm these findings.

3.6.3. ATTITUDE TO TYPES OF EMPLOYMENT

Overall it seems that school leavers have high and somewhat unrealistic expectations. The same study[26] found that;

(a) Many of the youth aspire to 'white-collar' rather than blue collar (e.g. artisans) jobs, which were considered of low prestige (see also section 4). Teachers, principals and atoll authorities pointed out that occupations requiring manual effort (blue collar jobs) were not preferred. 'Training programmes that offered skill opportunities for such occupations (e.g. masonry, carpentry…) tended to be avoided by those who had completed their 'O' levels'.

[25] 'Job centres as part of a National Job-Information Network' by Gideon Arulmani, March 2004 MoEL

[26] 'Job centres as part of a National Job-Information Network', March 2004, MoEL

(b) The main types of work perceived by the young, as being most appropriate to their qualifications were, in the case of females, home based (40%), teaching (13%), administration (12%) and business (8%). In the case of males the preferences were for tourism (20%), engineering (12%), IT related (9%) and business and trade (7%).

A study on youth and the employment situation in the islands[27] found that two-thirds of the sample (school leavers and school students) expected to be provided with government jobs**.** Job status is important in Maldivian society (as elsewhere) and government positions in particular have high status.

Perhaps also the lack of employment opportunities in the islands, ignorance of job vacancies in Male and the problems of support mechanisms (e.g. accommodation) in Male deterred some school leavers from seeking employment. Nonetheless the majority surveyed (75%) were not 'orientated to self-directed job search'.

At the sectoral level, by gauging the types of training courses offered and the demand for places on courses (see Section 4) and by examining in some cases salary ranges it was possible to uncover some reasons for the employment of expatriates.

3.7. GOVERNMENT SECTOR

Classification

Owing to the complex structure of the civil service classification it was not easy to classify government personnel according to ISCO categories used in the Study.

Expatriates

According to the returns for most the government departments, there were very few attached expatriates (i.e. more than 5), apart from a large group of semi and unskilled labourers (see Table 9). The only major employers of skilled expatriates are the Ministries of Education and Health, both of which are assessed in Section 4 (Sectoral Analysis).

[27] Male Youth Employment Survey Report , 2003

Table 9: Expatriates Employed in the Government Sector

ISCO / Government Office *	Professionals (2)	Technicians and Assoc. Professionals (3)	Service and sales workers (5)	Skilled agricultural and fishery workers (6)	Craft related workers (7)	Plant machine operators/ assemblers (8)	Semi skilled/ skilled workers (9)	TOTAL
Min of Construction and Public Works	2	0	4	0	2	4	608	**620**
Min of Fisheries, Agriculture and Marine Resources		1	5			1	16	**23**
Min of Women's Affairs & Social Security			5					**5**
The Presidents Office							7	**7**
Min of Youth and Sports		1					27	**28**
The Presidents Palace	1		1			3	32	**37**
Min of Home Affairs, Housing and Environment	2							**2**
Selected Islands Development Unit			1				1	**2**
Maldives Customs Service							5	**5**
Male Municipality		1				9	65	**75**
Total	**5**	**3**	**17**	**0**	**2**	**17**	**772**	**816**

Source: Ministry of Employment and Labour

4. SECTOR ANALYSIS

Introduction

At the sectoral level it is easier to identify areas where expatriates can be replaced by local personnel. In order to determine the current localisation rate in the key sectors of the economy, the HRD Survey requested more data on specific occupations.

The sector analysis attempts to:

- Identify skill shortages as reflected by low localisation rates
- Identify the reasons where possible
- Assess the potential output to match the skill shortages
- Ascertain constraints on supply and the problems associated with increasing supply
- Examine the planning mechanism
- Draw the relevant implications for guiding policy.

Sectors

The Study focuses on *key* economic and social sectors and important skills within the selected sectors, to determine the more critical areas for training.

Although most sectors would have sector specific skills, some sectors employ the same skills**.** Cross-sectoral skills can be examined on a specific occupation basis (see section 9, Sustainability), which is beyond the scope of this Study. Nevertheless a critical occupation, accountancy, is included because of its importance in several sectors.

Specific occupations- Priorities

Priorities are determined on the basis of the degree of localisation and the importance of certain occupations to the development of a specific sector. Hence attention is focused only on *priority skills* within the sector not all skills.

Matching

Although at the four-digit occupational group, each occupation is translated into an educational profile which corresponds to that particular occupation. However there are many less clear-cut occupations, such as middle-level technician that do not correspond to a particular educational level. Hence it is not always possible to match exactly the occupations with the training requirements, especially at the higher levels.

Moreover one cannot assume that educational qualifications determine supply by occupation. Courses at training institutions concern academic specializations, not occupations.

Future

The Study cannot predict what will happen. It could simply show what would happen if the various assumptions about the future (i.e. plans) made prove to be correct and the proposals are implemented. In the case of the key sectors, the Study found that there were no plans on which to base future estimates. Fisheries sector has a draft HRD document in the pipeline but no details on manpower have yet been released. The existing Health Plan ends in 2005 and current discussions are taking place on the next plan. The Minister's statement on 5 new hospitals has been incorporated into the sector study. Tourism does not have a plan but the President's statement on the development of 9 new resorts has been included in skill requirements. Education sector has no major expansion plans because of the declining school age population.

However given the openness of the economy, the small domestic market, the heavy trade dependence[28], the reliance on tourism and the decline in the share of fish product exports to the

[28] WTO, *Trade Policy Review of Maldives 2003 (*Geneva WTO)

EU, the very liberal regime on foreign direct investment (FDI), it would be difficult to forecast the future of many sectors in the next five years.

Qualitative aspects of Supply

Since one of the purposes of sectoral analysis is to *indicate* where training resources are likely to be inadequate, unless corrective measures are taken, the Study identifies possible constraints on the supply of skills. The decision as to which courses to implement expand or contract lies with the training institutions.

ECONOMIC SECTORS

4.1. TOURISM

Introduction

The tourism industry is the core of the Maldivian economy. At present there are 87 resort islands and 5 city hotels, plus 21 guest houses and another 11 resorts are planned.

4.1.1. SKILL-SHORTAGES

The sector is obligated by law to 50% of the total workforce in each resort are locals. Consequently, the rate of localization is higher than in some other sectors. There are many occupations for which the localization rate is less than 70% (see Annex 6). However since the Faculty of Hospitality and Tourism (FHTS) cannot replace expatriates in all these occupations, attention is focused on those occupations for which the localization rate is less than 60%.

4.1.2. SURVEY:

According to the HRD Study, the occupations with high expatriate rates are shown in Table T1. In addition to the skills identified on the basis of low localisation, the staffing requirements for the planned expansion of the tourism sector (which will comprise 11 new resorts) are included.

Table T.1: Localization 2004 Key occupations

ISCO	Occupation	Expats. (Survey) (a)	Expats share (%)	Expats (MoT) (b)	Expats Share (%)	New resorts
	Managers*	91	29	98	38	92
2	Accountants	54	87	142	83	16
2	Auditors	12	60	38	51	11
2	Engineers	19	35			16
3	Ass. Accountants	43	60			11
3	Instructors (diving)	91	55	137	84	66
3	physiotherapist	32	100			na
5	Sports staff	102	48	147	68	na
5	Bar keepers	188	98	351	100	40
5	Cooks (excluding asst cooks)**	328	63	548	73	51
5	Tour guides	144	56	92	59	53
5	Security guards	128	81	195	80	na

Sources; (a) Annex 11, (b) Tourist sector Statistics, 2003

* Department managers (production, sales, personnel), assistant managers

** Cooks in both restaurants and staff messes

In addition there are shortages of craft level skills (see Table below)

ISCO	Occupation	Expats. (Study)	Expat %	Expats. (MoT)	Expat %
6	Carpenters	41	46	136	52
6	plumbers	16	34	66	68
6	Mech. (aircon.)	44	56	72	69
6	Masons	26	55	121	80

4.1.3. PRIORITY OCCUPATIONS

The priority occupations are accountants, assistant accountants and auditors; instructors (mainly diving), cooks and tour guides.

4.1.4. GENDER

The proportion of local females in most occupations is very low, 249 out of a total of 4105 local staff (or 6%), see Annex 6, except for receptionists but even here the proportion is low (21% of local staff). The reason is partly cultural in that island females prefer to seek home-based employment[29] (and some parents are reluctant to allow their daughters to stay on resort islands) and partly because island based resorts are in general not female friendly.

4.1.5. SUPPLY

Faculty of Hospitality and Tourism (FHTS) offers a wide range of long, full-time courses and a range of short courses (i.e. less than one semester), see Annex 3. The focus is on general courses (i.e. relevant to the tourism industry as a whole). Resorts are expected to train staff in specific courses relevant to their special requirements. The output from FHTS is shown in Table 4.2.

Table 4.2 Planned output (2004-2007)

Level	Course	Relevant Occupation*	Output
Nat Dip	Catering and Instit.	General	337
"	Hosp.Management	Management	100
"	Travel & tourism	Retail, marketing etc	131
Adv Cert	Cookery (commercial)	cooks	44
Cert 3	Accommodation.	Room boys	97
"	Front office	clerical	364
"	Food & drink	waiters	184

*It is not possible to match exactly the occupations with the training requirements, especially at the higher levels (see the BTEC National Diploma programmes)[30].

It would seem that the planned outputs from FHTS are insufficient to meet the demand for cooks (and assistant cooks) and tour guides. The former does not include the 115 expatriate chefs (localization rate of 55%) where one gets the impression that expatriates are preferred for cooking foreign cuisine. However students completing the national diploma as well as the Cert 3 will be able to work fully as cooks, which will drastically cut down the apparent shortage.

In the case of tour guides, very often foreign tour operators (which are responsible for employing 99% of the guides) insist on using their own employees. .

[29] Male Youth Employment Survey Report , 2003

[30] For example Nat Dip in Travel and Tourism offers a variety of core and optional modules from air ticketing to animation and visitor attractions.

Other skills in demand (for example engineers and accountants) are trained in other faculties. Diving instructors are currently being trained with funds from the Skills Development fund (MOEL). Sports instructors could be trained at Faculty of Education for employment in tourism.

The planned output of some courses for example Front Office (Cert 3) and Catering and Institutions (Nat Dip), would seem to be rather excessive given the high degree of localisation in general hotel duties.

4.1.6. SUPPLY CONSTRAINTS

There is no shortage of applicants, particularly for the diploma courses. All applicants are interviewed and most have the requisite entry qualifications.

(a) FHTS is seriously constrained by the lack of space. Moreover the training facilities (few small classrooms, lack of a dining room, poor staff facilities etc) are woefully inadequate to meet the expected demand.

(b) Although there appears to be a demand for part-time courses, these would be difficult to run because of the faculty's geographical distances from the islands. Nevertheless FHTS is about to undertake a survey to determine convenient times for potential students on part-time courses in the resorts and in Male[31].

4.1.7. PLANNING PROCESS

There is no formal system of training needs assessment (TNA). The Faculty Advisory Board meets irregularly and does not advise on skill requirements[32].Although the Faculty does have close ties with the tourist sector, especially with Maldives Association of Tourism Industry (MATI), neither organisation has discussed how they might support each other.

The Faculty responds to requests for short-term courses in the resorts**.** Although initiated by the resorts, the funding (for the teaching) is provided free by the faculty.

The sector will be included in the SEC pilot project (see Section 9, Sustainability). This study only considers the needs of the employers. In the SEC project it is hoped that the views of the employees will also be considered.

4.1.8. IMPLICATIONS

- The Faculty needs to be urgently upgraded and expanded. Although discussions are continuing with the Government of India on an aid-funded project, the long delay has serious implications for sector training.
- Planned enrolments should be revised according to low localization rates for which data are available on annual basis from the Ministry of Tourism.

4.2. FISHERIES

The success of the expansion of fish product exports depends on its ability to meet increasingly more stringent food safety standards imposed in developed countries. To meet such standards, it will be necessary to upgrade the quality of workers in the fishing processing sector.

[31] The definition of part-time will be different since resort employees are resident in the resorts unlike workers in Male.

[32] Neither of the two members representing the private sector are actually from the industry and therefore in a position to advise on skill requirements.

4.2.1. SKILL SHORTAGES

Recently a study[33] undertook a training needs assessment of the sector as part of a project to substantiate the need for a fisheries institute. The TNA focussed more on the necessary skills, knowledge and attitudes for specific jobs (e.g. skilled process worker). Data on the actual numbers required have not yet been released.

The Study found that the majority of occupations had above 75% localization rates (see Annex 12). The only areas where it was low and significant (in terms of numbers) were cooks (37%) and semi-skilled and unskilled labour (49%). In addition there were several occupations, which employed a small number of expatriates (e.g. accountants).

4.2.2. SUPPLY

In the absence of specific training programmes for fishery workers, it is not possible to estimate future supply. Currently some skills are acquired at the Centre for Maritime Studies, which provides general seamanship courses. A proposal has been made to establish an Institute of Fisheries and Marine Science (IFMS).

4.2.3. CONSTRAINTS

Attitude

There is some confusion about the attitude of school leavers to work in the fishing industry**.** One study claimed that the "majority of secondary school students are interested in taking jobs in the fisheries industries"**.** However the sample seems to be skewed towards those already working in the fishing industry and responses could be influenced by a 'halo effect', i.e. people already committed to a career in fisheries see the more positive aspects. The same study found that '38% of male students and 28% of female students would not want to work in the fishing industry upon graduation even if good jobs were available' on the grounds that 'educated people do not work in the fisheries industry, few opportunities for gaining further training and for career progression'[34].

Another study of grade 10 students and school leavers in the focus islands[35], found that two-thirds preferred not to venture into self-employment and 43% of the sample group indicated that jobs that required manual effort were not 'good jobs'.

Planning

Currently there is no formal assessment of skill requirements. However this will be rectified since Fisheries has been selected as one of the pilot sectors for the ADB funded project[36].

4.3. CONSTRUCTION SECTOR

4.3.1. SKILL SHORTAGES

Contractors rely heavily on the labour markets of neighbouring countries (India, Sri Lanka and Bangladesh). In many occupations the localisation rate is very low (see Table C.1).

Localization rates below 50% includes civil engineers and surveyors, most of the skilled craft level category, in particular masons, carpenters (furniture and shuttering) metal workers and the semi-skilled. The MoEL's data base show large numbers of expatriates in all these occupations.

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[33] Feasibility report for the establishment of an Institute of Fisheries and Marine Science (IFMS), Ministry of Fisheries (draft) 2004

[34] IFMS (draft) 2004)

[35] 'Job centres as part of a National Job-Information Network', March 2004, MoEL

[36] ADB; 'Postsecondary Education and Skills Development' 2003

Table C1: Critical skill shortage				
ISCO	Occupations	Expats (Study)	Expats % share	Expats. (MoEL)*
1	engineers (civil)	33	85	66
7	bar benders	109	100	NA
7	masons	279	99	1507
7	carpenters	291	93	1002
7	plumbers	25	92	85
7	welders &	}24	} 92	}86
7	metal workers			
9	semi-skilled	255	89	300

Source: Annex 11 * based on the number of work permits issued

4.3.2. REASONS FOR LOW LOCALISATION

Employers appear to have a strong preference for expatriate employees for the following reasons:

(1) It is alleged that the expatriates are more disciplined than locals.

(2) Expatriates have fixed contracts and are therefore 'guaranteed' for a specific period.

(3) Local workers expect a higher wage (to meet the higher cost of living in the Maldives), whereas expatriates (from the SADECC countries) can be recruited for lower wages (plus accommodation and daily allowance for food); despite the overheads for the foreign worker (e.g. air-fares home, which are sometimes deducted from wages).[37]

Table C2: Examples of different rates							
Occupation	Salary	Food	Med	Accom	WP*	Air fare	Total
Store keeper (expat)	2,200	750	75	200	250	180	3,655
Store keeper (local)	2,800	1,500					4,300
Carpenter (expat)	1,650	750	75	200	250	180	3,105
Carpenter (local)	2,500	1,500					4,000
Labourer (expat)	1,500	750	75	200	250	180	2,755
Labourer (local)	2,000	1,500	75				3,575

Source: company records
* Work permit

(4) Often contractors have to arrange large numbers of skilled personnel at short notice for limited periods. There are insufficient skilled Maldivians, especially in the craft skills for many of the larger contracts.

(5) Since construction contracts are usually determined on the basis of cost, companies are compelled to keep labour costs low by employing foreign labour. To do otherwise would reduce their competitive position.

(6) It is alleged that the standard of local craftsmen is low. Employers state that recent graduates from MCHE cannot match certain standards[38]. In fairness to FET, it is virtually impossible to produce the requisite skills to satisfy the many demands of

[37] Both foreign and local masons would earn Rf 3000 per month but the foreign mason would after deductions earn about Rf1600.
[38] See Kluck R. Draft Report 'Mechanical Engineering', Adviser (Post secondary Education Development Project) MCHE 2002

diverse work practices (private workshops, State Electrical Company, regional hospitals etc). FET's task is to provide basic skills and knowledge and not competencies in all the different workplace tasks as desired by industry.

(7) Employers are reluctant to train locals because the latter are inclined to 'job-hop' (seek employment elsewhere).

Most probably the real reason is the easy access to the largest and cheapest labour market in the world. Nevertheless despite the alleged advantages of expatriate labour, a recent tracer study of FET students found that 76% had gained full-time employment in their related fields prior to their graduation[39]. Therefore an additional reason is an insufficient output of trained workers.

4.3.3. FUTURE DEMAND

Assessments of future demand cannot be estimated because many companies, which are awarded contracts, sub-contract work to firms from third countries with a foreign work force. In terms of skills, a lot of companies indicated an increase in demand in the following occupations in the next three years: civil engineers, carpenters (mainly shutters), concreters, bar benders, masons and tilers (see Section 3 Table 7).

4.3.4. SUPPLY

The Faculty of Engineering Technology (FET) is primarily responsible for most craft and technician level skills.

Long courses: Output is inadequate to meet the requirements for carpenters and welders. Moreover there are no courses for plumbers, masons and tilers.

Short courses: FET conducts a large number of short courses (828 trainees in 2003), most of which are between 5 and 28 days, many of which are carried out in the islands.

Table C3: Planned output (2004-7)

Level	Courses	Output*	Relevant Jobs
Diploma	Civil Engineering	30	Technicians, supervisors
	Electrical Engineering	16	electricians
Adv Cert	Electrical engineering	95	electricians
Adv Cert	welding	29	metal workers
Cert 3	welding	58	welders
Adv Cert	furniture carpentry	24	carp. furniture
	furniture carpentry & joinery	40	carp. shutters
Cert 3	carpentry	60	self-employed; artefacts
Cert 3	furniture carpentry & joinery	NA	carp. shutters

* assuming a pass rate of 80%

4.3.5. SUPPLY CONSTRAINTS

a) **Lack of Interest**

There appears to be a general lack of interest in 'blue collar' jobs, despite the efforts of FET. For example:

(i) FET was prepared to initiate several diploma courses but was unable to proceed because of lack of suitably qualified candidates. The Diploma in Building Construction (2-year) suffered the same fate.

[39] Mohamed & Shujau *'Tracer study for graduating class of 2003'* FET Male, 2004.

(ii) FET in close consultation with MACI, which represents most of the employers in the Construction sector, arranged a set of short courses in key skill areas (such as welding, bar bending, tilers, plumbers, masons, carpentry) but MACI was unable to find sufficient applicants, even with company sponsorship and the benefit of 3 months work experience with the sponsor, after training.

(iii) FET provides a wide range of courses but many (42%) of the 69 short courses are 'under-subscribed', with less than 11 students. Enrolments on some of the long courses (in Advanced Certificate) are also low, reflecting the lack of suitable applicants.

The Low application rates can be partly attributed to:

- Cultural attitude towards 'blue collar jobs': it seems that 'craftsman and technicians are not valued in society'. Students with the requisite O and A levels, tend to prefer non-technical jobs. Since only a few grade 10 students obtain sufficient O levels to proceed to higher education, there would appear to be opportunities for school leavers (from grade 7 to 10) as skilled and semi-skilled craftsmen to replace the approximately 24,000 expatriates. Nonetheless it would seem that even those without O levels are uninterested in blue-collar jobs. As a recent study stated; 'Most importantly, it was pointed out that there is a growing demand in the area of skilled trades (e.g. masonry, carpentry, plumbing, electrical wiring). However this area was not of interest to Maldivian youth, since blue collar jobs are perceived to be of low prestige'[40].
- Low wages: the wages offered are too low for Maldivians. To cover the high cost of living a craftsman would expect Rf 5000-6000 per month, whereas employers can employ foreigners at half that rate.
- Few opportunities for taking up second jobs to augment their wages because of the long working hours (10-12 per day)
- Working week usually 6 days but for specific projects can be extended to 7 days.

Overall the lack of interest in craft skills can be attributed to a mixture of low wages, long hours and the lack of promotional prospects as perceived by school-leavers. In addition working conditions are very poor, which few Maldivians would tolerate. In contrast the tourism sector offers higher pay, service charge, food and accommodation, plus annual return fares to home islands.

b) **Quality of students**

The lack of interest is reflected in the quality of the students, judged according to their academic performance (e.g. O levels), since the Faculty does not assess aptitude as a criterion for entry.

- The faculty has difficulty in attracting suitable students. Often it has to admit students without the requisite O levels, i.e. grade 10 leavers. For example, the Diploma will accept less than the required A levels; the Adv. Certificate require O level but accepts grade 10 and the Certificate 3 course only requires grade 7, which is too low for a certificate course[41].
- It seems that training in the lower level courses is not considered terminal but as a means of entering a more advanced programme[42].

[40] Job Centre Network, MoEL 2004

[41] Many countries stipulate grade 10 as the minimum entry qualification for basic artisan courses.

[42] Anecdotal evidence would suggest that several students on the Advanced Certificate courses are using the course as a stepping stone to the diploma programmes.

- Some students attend courses merely for something to do.

c) **No part-time courses**

Companies would like to see more part-time training offered but since local employees are considered too footloose, they would prefer to support training for those employees that had entered into a contract with the employer, so that the costs of training could be partly recuperated, if the employee left the company shortly after receiving training.

d) **Skill levels**

There are some doubts about the standards of 'trained workers' It seems that many of the craftsmen from India and Sri Lanka are better trained. The Certificate 3 (with one semester and low entry qualifications) is seen as inadequate as a qualification for a good quality craftsman. Electronics (at the craft level) is not the same standard as for example the City and Guilds (London). Short courses in basic skills, e.g. brick masonry (10 days) and arc- welding (10 days), are too short to produce skilled artisans.

Unfortunately a trade test system cannot be administered at present because of the lack of non-MCHE staff to undertake the testing**.**

e) **Lack of suitable TVET staff.**

It is difficult to attract qualified and experienced staff.

f) **Quality aspects**

- There is insufficient space (and materials) for training of basic skills (carpentry masons, plumbing) at the Faculty. This reflects underinvestment in training facilities in these skill areas.
- There is an imbalance between theory and practical (work experience). MACI (which represents the industry) believe that trainees have insufficient practical experience.

g) **Fees**

All courses are free except for the diploma courses. Fees and allowances are paid by the Government. Such generosity reflects the interest by the government in producing skilled craftsmen but clearly it is not enough.

4.3.6. PLANNING

h) **Skill needs assessment:**

Although FET recognises that the country needs "trained manpower to replace the expatriate worker", there has been no attempt to assess training needs, according to the degree of localization. The Faculty Advisory Board has not been very active in determining training priorities. Although the Faculty continues to consult employers on curriculum, there appears, according to recent research, to be some problems between what employers want and what FET produces.[43]

[43] Haleen A. *Issues in contemporary vocation education and training; A case study of Marine engineering in the Maldives.* Master's thesis Griffith University Australia, 2004

i) **Implications for planning and training**

(1) Need for financial incentives to encourage the FET to become more market orientated, especially in the launching of short, part-time and company sponsored courses.

(2) Pre-employment courses (as provided by FET) are insufficient. An official arrangement whereby trainees receive both institute training and substantial workplace experience is needed[44]. This could be the basis for a formal apprenticeship scheme. If such an integrated scheme is introduced a placement service would have to be developed.

(3) Attitudes towards vocational training and blue collar jobs could be modified by providing more publicity on vocational training in schools (plus site visits).

(4) Part-time training for the employed who wish to upgrade their skills should be introduced[45]. In the case of company sponsorship, part-time training could be linked to specific employment contracts.

(5) Aptitude tests should be introduced for student selection on craft courses.

(6) Given the lack of facilities and experienced non-faculty staff, it is not possible to introduce testing for all skills. Nevertheless a start could be made by introducing trade testing for a few selected craft skills.

(7) The inadequacies of the existing consultative process with industry could be remedied by a more formal relationship, such as a sector council, with representation from MACI and other employers, to inter alia, advise on skill requirements, curriculum and course organisation. A sector council should replace the current Faculty Advisory Board and be linked to the ADB's Sector Employment Councils to be introduced in 2006.

4.4. AIR TRANSPORT

Although the internal airline service (Island Aviation) is highly localised, the other seaplane operators (covered in the Study) show lower levels of localization. The localization rates for specific occupations are shown in Annex 10. The localisation rate for managers (66%), supervisors (81%), ground crew (92%), stewardesses (100%) and aircraft mechanics (100%) is high. On the other hand, there are low localisation rates for key skills, such as pilots and aeronautical technicians and flight engineers (see Table A1).

Table A.1: Main skill shortages

ISCO	Occupation	Total	Expats (Study)	Local % share
3	Pilots*	117	75	36
3	Technicians (aeronautical)	61	53	13
3	Technicians (others)	20	15	25
3	Flight engineers	21	13	38

Source Annex 10
* aircraft, seaplanes, and helicopters

[44] For example job attachments for artisans in Namibia (which has a German based system) constitute half the training programme.
[45] Particularly for those that wish to move up from trade-level to supervisory and junior- technician level.

4.4.1. TRAINING

Given the cost of training pilots and aeronautical technicians and the small numbers involved, there is no strong case for developing training facilities in the Maldives. The proposal to establish an Aviation Training Centre at Hulhumale would seem to be unjustified. Current arrangements[46] of using outside professional training instructors and/or airlines should be continued.

SOCIAL SECTORS

4.5. EDUCATION SECTOR

4.5.1. INTRODUCTION:

Inevitably the rapid expansion of the educational system in the last two decades has produced enormous problems not least that of staffing. Another major predicament created by expansion is the quality of school-leavers. Employers who complain about the academic levels of Maldivians are not mistaken[47].

Moreover many of the students who leave secondary school are ill prepared for the work environment since they lack not only formal academic qualifications but also any vocational skill.

4.5.2. TEACHING FORCE; GENDER

Females account for a very high proportion of the teaching force, 82% for permanent (see Table E1) and 69% for temporary staff.

Table E1: Teaching force; gender distribution

Level	Females			Female Share (%)
	Trained	Untrained	Total	
Pre-primary	241	75	316	98
Primary	1093	200	1293	68
Lower primary	179	13	192	53
Higher secondary	12	-	-	75
Total	1525	288	1813	82

Source Annex 13

4.5.3. CURRENT SHORTAGES

The data from the HRD Study (see Table E3) and Educational statistics (Table E2) confirm two key problems.

1) **Secondary school teacher shortage**

There are very high levels of expatriates in the trained graduate teacher force in both higher (84 %) and lower secondary (94 %). If the trained non- graduate teachers are added, the expatriate rates fall slightly to 83% and 76% respectively (see Table E2a).

[46] For example the Maldives Airport Company, which is responsible for airport services employ a large number (39) of technicians, who have attended special training programmes

[47] GCE passes expressed as a percentage of total entries. The pass rate for English was recently (2003) 6%, maths 25%, Biology 19%, chemistry 26%

Table E2(a) Education Sector (Trained staff)

Level	Permanent							
	Trained Graduate			Trained Non - Graduate			Total Expat	% Local
	Total	Expat	% Local	Total	Expat	% Local		
Pre- Primary	**1**	1	0	**247**		100	1	100
Primary	**430**	417	3	**1786**	201	89	618	78
Lower secondary	**934**	881	6	**501**	215	57	1096	57
Higher secondary	**94**	79	16	**1**		100	79	55
Total 2003	**1459**	**1378**	**6**	**2535**	**416**	**84**	**1,794**	**69**

Source Annex 8

There is no clear policy on qualifications required for the teaching force but if one assumes that all secondary schools need graduate teachers, then the overall demand is as follows[48]:

(a) Replacement of expatriates (graduates and non-graduates) secondary = 1096

(b) Replacement of non-graduate locals, secondary = 286

(c) Replacement of untrained non-grads = 59

(d) Replacement of higher secondary expatriates = 82

Total = 1516

2) **Untrained teachers**

The number of untrained teachers is very high.

Locals Primary (graduates and non-graduates) = 30

Locals Secondary (graduates and non-graduates) = 52

Table E2(b)Education Sector (Untrained staff)

Level	Permanent							
	Untrained Graduate			Untrained Non- Graduates			Total Expat	% Local
	Total	Expat	% Local	Total	Expat	% Local		
Pre- Primary	**2**		100	**80**	2	98	2	98
Primary	**146**	104	29	**293**	5	98	109	75
Lower secondary	**181**	167	8	**59**	22	63	189	21
Higher secondary	**4**	3	25	**0**		0	3	25
Total 2003	**333**	**274**	**18**	**432**	**29**	**93**	**303**	**60**

Source: Ministry of Education, 2003

[48] Calculations based on data in Annex 8

4.5.4. HRD STUDY (2004)

As Table E 3 shows, senior executives, principals and supervisors are heavily localised. Primary education also has a high localization rate (80 %). The Study confirms that there is a grave shortage of secondary teachers (localisation rate of 5%). Serious shortages exist in the following subject areas:

- English teachers (2%)
- Maths teachers (12%)
- Computing (0%)[49]

Table E3 : Education Sector

ISCO	Occupations	Grand Total	Expat	Local	% local
1 / 2	Managerial and professional staffs				
1	Senior Executives	17	0	17	100
1	School principals	113	7	106	94
2	Supervisors	585	52	533	91
2	Accountants	1	0	1	100
2	Teachers (secondary schools)	709	673	36	5
2	Teachers (Islam)*	157	3	154	98
2	Teachers (English)*	352	346	6	2
2	Teachers (Maths)*	226	198	28	12
2	Teachers (Dhivehi)*	46	0	46	100
2	Teachers (Computing)	13	13	0	0
3	Technicians/associate professionals				
	Health Assistant	4	0	4	100
	Sport Instructors	4	3	1	25
	Teachers (primary)	1396	284	1112	80
4	Clerks				
	Clerks (accounts & finance)	250	0	250	100
	Assistant Teachers	144	0	144	100
9	Elementary occupations				
	Semi-skilled and unskilled workers of all kinds	136	2	134	99
Others		13			
Total		**4167**	**1581**	**2573**	**62**

* Some teach in primary schools

Source: HRD Study, Ministry of Employment and Labour

The main issue is the dependence on 1,367 trained and untrained permanent expatriate teachers at the secondary level and 727 at the primary level. The extensive use of foreign teachers is not recommended partly because (a) at the salaries currently offered, the Maldives can not compete for high calibre teachers, who are attracted by much higher salaries elsewhere (e.g. Middle East and Africa), (b) the expatriate command of English, the medium of instruction, is not particularly good and (c) the expatriates' lack of familiarity with the cultural milieu of the pupils.

[49] The teaching of computer skills is frequently contracted out to private companies.

4.5.5. SUPPLY

The planned output from the Faculty of Education (see Table E5) and the Centre for Open Learning will create sufficient teachers with diplomas (primary and secondary), which will replace the number of expatriates at the primary and secondary levels.

The lack of English teachers which is a serious constraint would be partly addressed by the introduction of a BA and Diploma courses.

Table E5: Planned output

Level	Course Title	Output 2004-7
	BA (TEFL)	57
H. Sec.	B Ed (Sec)	237
L. Secondary	Adv Dip (Sec)	32
L. Sec	Diploma (Sec)	2350
L. Sec	Dip. Conversation	166
L Sec/Primary	Diploma (TEFL)	60
Primary	Diploma (primary)	330
Primary	Advanced Cert. Primary	401
English	English Centre	424
English	BA TEFL & Dip TEFL	117

Source: Annex 4

4.5.6. SUPPLY CONSTRAINTS:

a) **Faculty staff**

(1) Salaries of Faculty staff are too low to attract well-qualified local and foreign lecturers. Most staff receives less than many school principals (who also receive an accommodation allowance).

(2) The staff-student ratio has increased recently (see Table E6) mainly because some FE staff has to be sent overseas for higher studies (MAs and PhD). However it disguises the low teaching load (approximately 10 periods per week) and the hiring of sessional staff to make up the shortfall.

Table E6 Staff-student ratios

year	total Enrolment	Staff*	Staff – student ratio
2003	416	24	17
2004*	986	24	41
2005	1042	26	40

Currently out of a full establishment of 56, 32 are on overseas scholarships

b) **Students**

(3) Although salaries of teaching staff (at 2335 Rf per month plus allowances[50]) is not particularly attractive the FE has no difficulty in attracting students

(4) The quality of students appears not to be a problem. Most have the requisite O levels.

[50] see Table 6.3b

4.5.7. COMMENT

a) **Graduates**

There is no policy on the qualifications of teachers required at lower secondary level. Consequently it is not clear whether more graduates should be produced for lower secondary level or whether to recruit graduates at higher secondary level and diploma holders in the lower secondary and primary levels.

If one assumes graduates for all secondary schools, then the required number of graduates would be more than 1500. Clearly this would be an impossible target for the next 5-10 years, given the limited facilities of FE and the few staff qualified to teach on degree programmes.

Instead it would be preferable to adopt a two step approach. In the short-term, FE could produce diploma teachers and then in the longer-term upgrade the diploma teachers to graduates. This would imply a freeze on the existing graduate programmes and placing the spotlight on a system of upgrading teachers (see below)**.**

Priority for replacement of should focused on the untrained and the non-graduates expatriates, particularly in the islands, where expatriates have experienced difficulties in assimilation.

b) **Upgrading**

(i) There are 300 untrained teachers who would benefit from upgrading programmes.
(ii) Owing to the logistical difficulties of running part-time courses in Male, these teachers should be released from teaching for 2 semesters to attend a full-time course in one of the Atoll centres
(iii) Primary Cert 3 teachers should be upgraded through a diploma programme. If a teacher cannot be released for a full-time diploma course then a modular system should be introduced whereby the teacher is released for a short intensive period (one semester) to undertake part of the course to be repeated over a 3-4 year period.
(iv) Teachers with diploma (secondary school) could be steadily upgraded to degree by obtaining 'advanced standing' through the diploma and 2-3 semester top-up to obtain a degree.
(v) FE could provide overseas scholarships for graduates in teacher training (combined with a subject area, especially English and maths). The focus initially should be on graduates' teacher trainers for the primary level, particularly in literacy and numeracy.

Since those that fail to learn the basics at primary school usually do badly for the rest of their school career, priority for training and upgrading should initially be given to the primary sector.

c) ***Incentives***

Although there is a strong demand for places in FE pre-service courses, financial incentives will have to be given to those identified for upgrading in-service courses.

Currently a diploma teacher receives an extra 20% and a graduate 40% pay supplement. Since there is no reason why teachers' salaries should be similar to the civil service, these could be reviewed. Incentives in the form of higher pay or allowances (e.g. a hardship allowance) are also needed if the Government is to persuade teachers to work in the islands instead of Male. Some of the incentives currently offered to the expatriates could be offered to locals, especially an

accommodation allowance and return trip home for those teaching on other than their home islands.

There is a need to revise salaries of expatriate teachers to attract better qualified teachers from overseas, particularly from India.

4.5.8. PLANNING

a) **Needs Analysis**

There is currently no satisfactory planning system (with regard to future requirements) in place. It seems that planning is carried out more on 'reactive' basis, to problems as they arise. FE would like clear guidelines on how many, in what areas, at which level, by whom and what support will be forthcoming. The Faculty Advisory Board on the other hand tends to discuss issues related to course content/curriculum. In the absence of any specific guidelines FE is forced to make guesstimates of likely demand[51] and create room in the budget estimates for 'new courses' for unforeseen eventualities.

b) **Autonomy**

FE, as the leading educational teaching institution in the country, could run upgrading courses, which are also open to those in the private teaching profession. However there is little incentive for the FE to take the initiative in introducing courses where it has considerable expertise (e.g. methodologies, new technologies), unless the fees accrue to FE. Such ad hoc courses should not be subject-related, where other faculties have the relevant expertise. Where such expertise is lacking then FE could consider outside requests (for example, a recent Dip.in Advanced Statistics).

4.5.9. IMPLICATIONS

a) **Teacher training**

Upgrading: Given the large number of untrained teachers there is a need to upgrade their teaching skills by providing in-service part-time training. Currently this is partly undertaken on a limited scale by EDC (the MoE's curriculum centre) for short-term ad hoc courses. The Faculty concentrates on credit bearing long-term courses. Although this division of labour appears logical it duplicates resources. Whether short-term or long-term, some of the inputs will be similar. Since FE has the expertise, equipment and staff and EDC the expertise in curricula development, the in-service programmes could be more effectively applied by through close co-operation between FE and EDC.

FE courses: Graduate programme: Given the number of degrees required it would be seem more cost-effective to run degree courses in education in the Maldives than to send students overseas. However the degrees are required in different subject areas, few of which can be provided by MCHE. It is therefore recommended that FE focuses on degrees in key subjects (e.g. English) and arrange overseas training for other subjects.

Planning: The Planning Division (MoE) could meet more frequently to discuss targets for teacher training.

Staffing: Currently FE staff is under-qualified. In view of the fact that a large number of teachers need to be upgraded through Faculty programmes, FE staff should be upgraded as rapidly as possible.

[51] based on the Ministry's policy to localise all teaching staff.

Schools: The inadequate levels of English (confirmed by the O level results) could be partially remedied by a special language programme and also by a change in the O level exam to English as a second language[52].

Vocational orientated-courses: The educational system is heavily slanted towards academic subjects. There has been much discussion on the need to introduce basic skills (such as practical commerce, office work, artefact skills and cloth related skills, e.g. sewing) in the school curriculum, to provide useful skills (for employment) for those that are unlikely to continue in the more academic studies.

Experience elsewhere[53] shows that attempts to inject a technical content into formal education have not been successful, partly because much of the craft level training has made little contribution to skills development[54]. Evidence from developing countries[55] supports the view that vocational courses can improve the chances of the academically disadvantaged when unemployment is low, which is not the case in the Maldives. A policy of developing an awareness in secondary schools of the industrial and office environment is preferable.

4.6. HEALTH SECTOR

Introduction

The Health Master Plan, 1996-2005 places high priority on human resources development; "Development of a sustainable health system by mobilising resources, developing human resources and utilising them efficiently"[56]. The main emphasis of the Plan is to achieve a greater measure of self-sufficiency by training a large number of health personnel through in-country and overseas training.

4.6.1. SKILL SHORTAGES

The Health sector is heavily dependent on the expatriates. Data on both the public and private sectors is shown in Table H1. There are a high percentage of expatriates among doctors (72%), specialists (79%), staff nurses (55%), pharmacists (100%) and physiotherapists (90%).

MoH will be expanding health facilities (a new hospital for Hulhu Male' and 4 additional atoll hospitals). Data on staff requirements for new facilities are also included in Table H1. These figures should be regarded as minimal since attrition (due to retirement etc) is not included.

Table H1: Staffing estimates

Staff	No. of staff Public 2003)	No. of expats. (public)	% Local (2004)	% Local (2001)	No. Expats (private)	No. of Add. Staff* (public)	Total Add.Govt Staff** 2007
specialists	117	92	21	}15	19	35	127
doctors (MBBS)	160	131	18		8	15	146
staff nurses	435	240	45	34	37	65	305
nurses	304	20	93	81	1	145	165
physiotherapist	10	9	10	62	2	4	15

[52] Under the present system students take English as the first language (Cambridge Board).
[53] See for example many Caribbean islands.
[54] And partly because of the difficulties of attractive staff with technical skills *and* professional experience, who can normally earn more in the private sector, the problems of obtaining up-to date equipment, timetabling and fitting courses into a demanding curriculum.
[55] Middleton et al, *'Skills for Productivity'* World Bank 1993
[56] Master Health Plan 1996-2005

lab technicians	103	55	47	85	NA	5	52
pharmacists & asst.	-	-	0	NA	174	8	182***
CHW	119	-	100	100	-	-	-
FHW	333	-	100	100	-	-	-

Source; Annex 9(a)

* based on staffing norms for hospital size, ** assuming 100% localisation. ***including private sector

The Department of Public Health (DPH), a division in the MoH, is responsible for delivering preventative health programmes and for delivering basic health care to islands and atolls. DPH has low localization rates in the islands, in the following occupations; doctors, staff nurses and laboratory technicians [see Annex 9 (b)].

4.6.2. DISTRIBUTION BY REGION

The current shortages are compounded by an inadequate distribution of staff. As can be seen in Table H2, there are difficulties in staffing island posts with local doctors, probably because there are too few patients in the islands for the job to be interesting and few opportunities for private work. Specialists prefer Male partly because there is a better 'learning environment' and partly because many islanders seek more specialised medical treatment in Male. The predominance of staff nurses in Male is partly explained by the fact that graduates often prefer to work in Male, despite the Ministry's preference in awarding placements to island applicants (with the expectation that they will serve in the islands after graduation).

Table H2: Ministry of Health work force, local and expatriate personnel by location

Medical Manpower	**Male'**		**Islands**	
	Total	**% Local**	**Total**	**% Local**
Doctor (MBBS)	47	57	113	2
Doctors (specialists)	73	34	44	-
Staff Nurse	284	57	151	22
Nurse (Adv. Cert)	75	95	229	93
Lab Technician	55	69	48	21
Lab Assistant	13	100	9	89
Physiotherapist	7	14	3	-
CHW	10	100	109	100
FHW	-	-	333	100
Total	**568**	**62**	**1448**	**77**

4.6.3. LOCALIZATION

Policy: The main target of the Plan's HRD programme was to replace 50% of the expatriates employed in 1996 by 2005[57]. Between 1996 and 2001 the Plan intended to reduce the number of expatriates by 25% by 2001. However the Mid-Term Review discovered that the 25% reduction of expatriates by 2001 had not been achieved, 'due to limited resources to train doctors, nurses and CHWs'. The Faculty only managed to produce about 30% of the planned targets for 2001[58], which is not altogether surprising given the very ambitious targets. Instead of attempting to localise all the positions as rapidly as possible, it would have be preferable, given limited resources to focus on priority skills[59], based on the current degree of localisation and the importance of certain occupations.

According to the above localization rates (Table H1), the priority skills are doctors, staff nurses and pharmacists.

4.6.4. SUPPLY

The Faculty of Health Science is responsible for training medical personnel. The expected output is shown in Table H3.

Table H3: Output 2004-2007

Occupation	Relevant Course	Entry Qualification.	Total expected output
Staff nurse	BSc Nursing	Reg. staff nurse + Eng O level	40
Staff nurse	Diploma	4 O levels/ Found*	111
Staff nurse	Dip. in Nursing. Conversion.	Adv. Cert. + 2 yrs experience	25
Nurse	Adv. certificate.	3 O levels /Found.	220
Lab. technician	B Sc. (lab tech.)		47
Lab. technician	Dip. (med. lab)	4 O levels/ Found	10
Pharmacist	Diploma	4 O levels/Found	25
Pharmacy assist.	Adv Cert	3 O levels /Found	88

Source: see output tables Annex 4

*Foundation course

In addition to the above courses, overseas scholarships are offered to senior medical personnel, especially for degree and post MBBS specializations.

[57] Health Master Plan 1996 –2005, Ministry of Health
[58] Health Master Plan, Mid-term Evaluation Report.2003
[59] In the Plan, priority had been given to produce doctors, community health workers (CHWs), nurses, paramedical, management and technical personnel[59]. Since this list includes most of the health care personnel, it is difficult to describe it as priority.

Table H4: Scholarships; on-going (2004)		
Field	Level	Number
Specialists	MD	29
Doctors	Degree	73
Nurses	Cert/Diploma	41

4.6.5. IMBALANCES OF SPECIFIC SKILLS

(a) Specialist; initially more doctors are required so that a pool can be created for specialist training abroad at a later date.

(b) Doctors; with planned output, a localization rate of 50% will be achieved by 2007-8.

(c) If a higher localisation is to be achieved (and doctors released for specialist training), then the output of doctors (through the scholarships programme) should be increased.

(d) Staff nurses; planned output will create a localisation rate of 57% by 2007-8. More nurses could be placed on the conversion course.

(e) Nurses (adv. Cert. level); 100% localisation rate will soon be achieved

(f) Laboratory technicians; a high localization rate (95%) will be attained by 2007.

(g) Pharmacists; pharmacy is largely left to the private sector. Currently many untrained assistants are employed partly because the law requires interpreters for the expatriate pharmacist**.** With increased localization of pharmacists, trained assistants will be required to support the pharmacist. Planned output should lead to a localization rate of 70% by 2007-8, for the combined category of pharmacists and their assistants[60].

4.6.6. CONSTRAINTS ON SUPPLY

Senior medical staff is trained aboard. All other health care staff is trained by the Faculty of Health Science (FHS). For Faculty courses there is no shortage of applicants.

1. **Senior** medical; there are limited overseas scholarships. Already MoH takes approximately 25% of the scholarships financed by the National Scholarships Fund. Moreover some of the scholarships depend on offers made by foreign donors.

2. **Other staff**;

   - Staff nurses: there are a large number of applicants and qualifications of applicants are generally satisfactory.

   - Nurses: no shortage of applicants but low levels of education. There is a problem of allocation in islands because students are selected on basis of home islands but cannot be compelled to return after training.

   - Pharmacists: a new course is to be launched in July 2005.

3. **Quality of teaching**: attracting qualified staff is a serious problem because of low salaries offered by MCHE.

4. **Physical facilities**: equipment seems to be satisfactory but the lack of space limits the intake of students. New facilities to be opened in 2005 should remove this problem.

[60] Unfortunately separate data was not provided on the staffing of pharmacists and pharmacists assistants.

5. **Clinical experience**: although the government hospitals are used for training , the clinical areas available are becoming inadequate for the increasing number of students. Consequently students have to be placed for 2-3 months in India and Sri Lanka at considerable cost.

4.6.7. PLANNING

Institutional: In the past there was a close association between the then Institute of Health Sciences and the MoH. The Faculty Advisory Board, which meets irregularly, has not addressed the issue of identifying priority training needs. The responsibility for determining public sector needs should be the MoH.

Process: The Health Plan Mid-Term Review recommended that 'FHS should address the needs of the health sector in training health personnel' but does not explain how. In addition to the Plan a National Health Workforce Plan (NHWF)[61], was commissioned but was never followed. Although the methodology of forecasting requirements was sound, there were no proposals on localization rates. Instead a series of options were presented according to different percentage replacement rates.

4.6.8. IMPLICATIONS

Planning*:*

a) **Institutional arrangements**

In the absence of any effective TNA, it is proposed that the health sector becomes one of the Sector Employment Councils, to be established in 2006. The SEC should produce a workforce plan to reflect the anticipated requirements of the next master health plan and also the needs of the non-government sector.

b) **Methodology**

The approach adopted should (1) be workload based (i.e. include such factors as demographic changes, scale and efficiency of services and changes in public demand) and (2) use staffing standards/norms for given types of facilities. One factor (among several), which should be used to determine priority occupations, is the degree of localisation attained and required.[62]

The broad-brush approach adopted in the Health Plan towards localization is not recommended because of the lack of staff and resources to localize rapidly all occupational categories. Instead different targets of localisation should be determined according to (1) importance of skill and (2) extent of current localisation.

Part-time courses: such courses should be considered for the conversion programmes to enable nurses (especially married) to upgrade their skills without loss of time with families or loss of earnings**.**

Faculty staffing: The hiring of expatriate lecturers is too expensive, given the salaries expected and the high cost of housing. University exchange programmes could be encouraged to enable visiting lecturers to assist Faculty staff.

Island staff: The current 'hit and miss' approach, of recruiting mainly applicants from the island who may not return to the islands, should be discontinued. Senior staff (doctors) and staff nurses should be given an 'island financial incentive' in the form of special allowances, to work in non-home islands.

[61] National Health Workforce Plan MoH, May 2001

[62] A rapid localization of doctors may be considered to be higher priority than localization of specialists.

CROSS- SECTOR SKILLS

4.7. ACCOUNTANTS:

4.7.1 SKILL SHORTAGE

There is a serious shortage of professional chartered accountants.[63] This is not altogether surprising given the recent surge of business activity and the long gestation period to produce a chartered accountant[64].

There is not a shortage of middle level (or junior/assistant accountants). Indeed the lower levels are becoming overcrowded in that graduates have difficulty in finding employment. However there is a need for middle-level training of assistant accountants to provide a potential training pool for professional accountants (through the requisite experience and professional examination).

There also a problem of under-qualification. Many of those expatriates classified as professional are not qualified (i.e. not chartered).

4.7.2 REASON FOR SHORTAGES:

(a) **Preference for Expatriates:**

It seems that employers prefer trained accountants/auditors with qualifications and experience, even where their salaries are higher than those paid to nationals, with similar qualifications.

(b) **Possible reasons:**

- Some employers prefer foreign accountants for 'reasons of confidentiality'
- Several employers complain that nationals do not stay long[65].

4.7.3 SUPPLY AND DEMAND IN ACCOUNTANCY

Accountants and auditors are trained by the Faculty of Management and Computing.

The planned output is shown Table C2. The courses do not exactly match the occupational classification. For example some graduates from the Adv Cert will become assistants and some from the Adv Diploma act as accountants.

There is a serious shortage of professional accountants and a growing surplus of assistant accountants. The demand for auditors will be matched by the planned output. A major problem confronting FMC is the creation of professional accountants from assistant accountants. Of course this does not depend on qualifications alone, since one of the major differences between expatriates and locals is the exposure to different business environment.

[63] Which in the Maldives take the CIMA (Chartered Institute of Management Accountants) qualifying exam.

[64] Moreover until the recent introduction of the Company Law (and hence statutory annual accounts) there was no need to produce chartered accountants.

[65] Presumably because the skill shortage encourages higher turnover.

Table C2 Output of accountants and auditors

ISCO	Level	Course	Demand (Expats)	Output 2004-7
	1. Accountancy			
2411	Professional*		326	-
3434	Assistant accountants}	Adv Dip in accountancy		77
3432	Bookkeepers }	Dip Accountancy	}46	188
4121	Accounts clerks	Adv Certificate	14	59
	2. Auditors			
2411	Auditors	ACCA	153	150
	Audit officers/technician	CAT		125
	Total		539	540

*management consultant, chartered accountants

4.7.4 Constraints on Supply

1) Applications; there appears to be no shortage of applicants. The rewards of the profession are high (management accountants can earn $1000-1,400 per month). There is a strong demand for courses despite the fact that, unlike some other MCHE programmes (education and health), there is no guarantee of government employment on graduation.

2) Student quality; many students lack the requisite O levels (GCE).

3) Staff quality; FMC has difficulty in attracting and retaining full-time staff with professional experience and qualifications because of the low salaries offered. Most of the very few Maldivian with professional accounting qualifications lack the time (and financial incentive) to contribute to part-time courses over a long period. Many of those that do teach part-time are not fully qualified- a situation which will be partly remedied[66] by staff currently on overseas scholarships (on professional CIMA or ACCA courses).

4) Lack of part-time courses; several of the courses experience a high failure rate because it is alleged that some students, employed in the private sector cannot attend during the stipulated time period..

5) Fee structure; FMC charges fees, which in order to cover the costs to professional organisations, are considerably higher than for other courses.

4.7.5 Planning

Auditors: FMC liaises closely with the Audit Office on the public sector needs.

Accountancy (and other courses): There is no regular system of TNA to prioritise course needs[67]. Currently FMC, which would prefer clear directions on the numbers to be trained,

[66] Qualifications are not the only criterion, professional experience is essential.
[67] Although it has on occasions undertaken TNA, for example as part of the Wollongong University Link programme.

at the appropriate level, has to make guesstimates for three years, to be submitted with the budget.

The Faculty Advisory Committee (FAC), with representatives from various organisations (such as the Chamber of Commerce) meets twice a year to discuss training related issues. In the case of public service skill training, the FMC collaborates closely with the Public Service Division (President's Office) in preparing short–term training programmes.

4.7.6 Implications

Planning: The FAC could be reconstituted with wider private sector participation, since currently there is only private sector member. Since the FMC provides a variety of courses, which are relevant to several sectors, it would be preferable to establish three subject committees for accountancy and related subjects, IT and business management (see Section 9).

Priority: The priority area should be professional accountancy. There are two routes to this qualification; (a) degree plus experience and the final CIMA or ACCA exam or (b) the Adv Diploma (which qualifies for the intermediate CIMA or ACCA, plus experience and the final examination. Given the large number of expatriates that should be replaced, FMC should give priority to developing courses for this level. Ideally the professional accountant should have a degree but given the lack of local accountants with professional experience and need for programme credibility, it is not possible to run a degree in accountancy except through a university link programme.

Alternative approach: To enable those with the qualification to take the final CIMA/ACCA exam to qualify as a chartered accountant, the FMC should enable junior accountants to progress up the training ladder from the diploma to the Adv Diploma and to the final professional exam.

(a) Transition from Dip to Adv Dip; part-time course (2-3 years) for those in employment, many of whom cannot afford a unpaid leave and subsidised fees (or fee repayment from future earnings), plus approved work experience.
(b) Transition from Adv. Dip to final CIMA or ACCA exam; Part-time course (1 year) in one of the three CIMA or ACCA subjects at FMC, plus approved work experience.

Part-time courses: A study should be undertaken to determine whether potential students see part-time courses (i.e. duration twice as long as the full-time course) as attractive. If so, more part-time evening courses should be considered to enable those in the private sector to upgrade their qualifications. Alternatively a full-time course could be offered in the evenings, subject to a revision of the government's ruling on public servants undertaking full-time courses, albeit outside working hours (7.30-2.30).

In the case of the private sector, it would seem that the teaching hours (4.00-9.00 pm) clash with business hours. A way round is problem is for employers to give time off (one hour per day) to both sponsored and non-sponsored students.

Fees: Given the high fees for the courses, private sector sponsorships should be encouraged**.**

Other Skills

Although it was beyond the scope of this Study to undertake in-depth studies of specific occupations, it did note that since everything (except fish) is imported, there is an increasing cross-sectoral demand for maintenance skills to service imported equipment and machinery.

5. SECTOR TRAINING

Introduction

Unfortunately in the absence of any baseline survey of company training, it is not possible to determine the extent of private sector training. The Study, as a pointer to the possible expansion of company training, also attempted to determine, in the case of two key economic sectors[68], whether companies had recently undertaken training, what factors inhibited training, what type of skills were considered high priority and the preferred type of training.

5.1 COMPANY TRAINING

Since the educational system is highly orientated to academic qualifications (the Cambridge O level) and employers complained (in a recent survey[69]) of the lack of skill literacy, it was assumed that employers would invest time and resources in training. To test this assumption, supplementary questions were asked about staff training.

The tourism sector undertook formal in-company training (i.e. not on-the-job) for 967 staff (23% of the total). The construction sector trained 15% of its staff through formal in-company training programmes.

Table 5.1 Company supported Training

Economic Sector	No. of Estab.	Total local Staff	In-company		Out-of-company	
			Maldives	O'seas	Maldives	O'seas
Construction	17	496	40	32	20	4
Hotels and Restaurants	23	4242	917	50	46	25

5.2 INCENTIVES

Incentives for Companies

Most companies in the two sectors claimed that there were very few obstacles to training (see Table 5.2). Unofficially some employers stated that a main barrier to training new staff is the cost and the risk that a competitor will immediately poach them and thus eliminate their investment. For this reason, some would prefer training contracts with their local employees. A World Bank study of enterprise training in developing countries[70] found that the majority of small firms and between 20-70% of larger firms employees did not give their employees formal structured training primarily because of the problem of free riding (i.e. trained labour leaving for higher wages in another firm), limited resources and lack of knowledge about training methods. This also appears to be the case in the Maldives.

[68] Data for the two other economic sectors are not available
[69] *Job Centres as a part of National Job-information Network*, MoEL, 2004
[70] World Bank *'Enterprise Training in Developing countries'* 1995

Table 5. 2 Factors inhibiting training			
Factor	**No Influence**	**Moderate**	**Strong**
Lack of funds	73	0	0
High cost of training	64	0	0
Lack of suitable training courses	51	0	0
High turn-over of staff	53	0	0
Employees sufficiently skilled	80	0	0
Too busy to be released	64	0	0
Availability of trained expatriate	65	0	0
Other	40	0	0

5.3 SKILL UPGRADING PREFERENCES

NON-TECHNICAL SKILLS

It is now widely accepted that workers need 'soft' (non-technical) skills as well as hard (technical) skills if they are to adapt to a changing economic environment. Soft skills are often built into training programmes. For example in Australia, key competencies that underpin all vocational and training programmes, include the following: collecting, analysing and organising information, communicating ideas and information, planning and organising activities, working with others and in teams, solving problems, using technology. The South African NQF refers to seven critical cross-field (and almost identical) outcomes for training and education. These include identifying and solving problems, working with others, organising and managing oneself, good communication etc.

Such skills are becoming gradually more important in the Maldives. For example, in relation to the service sector (mainly tourism), the Strategic Economic Plan stressed 'Training to inculcate a mindset change to deliver high quality service in the services economy and the right ways to deliver high quality service is also very important. In connection with this, there is a need to extend the courses offered by the vocational institutes to train Maldivians'[71].

The Study also included questions related to non-technical soft skills or 'work culture', which can be defined as patterns of literacy, numeracy, work habits, attitudes, practices and behaviour and subdivided into attitudes to work, and behaviour at the workplace (i.e. responsibility, diligence, co-operation, and willingness to learn) and interpersonal skills. Unfortunately soft skills are intangible and not easy to measure, which may account for the poor response.

There was a clear preference for the hard skills. However many companies also stressed the need for better English language skills**.**

[71] Strategic Economic Plan , Government of Maldives, July 31, 2001

Table 5.3: Preference of skill upgrading needs of the Maldivian employee (% to the total number of establishments)

[1 = Highest]

Skill	1	2	3	4	5
Specific Manual skills related to the job	41	14	11	5	7
Specific Knowledge related job	25	23	11	7	2
English language skills	23	16	16	14	11
Numeracy	2	11	9	5	14
Interpersonal skills	2	20	18	23	7
Industrial IT skills	9	5	11	11	20
Health and safety skills	9	7	20	14	20
Others	5	0	2	2	2

5.4 PREFERRED FORM OF TRAINING

In both the construction and tourist sectors there was a strong preference for part-time training.

Table 5.4: Preferred form of training (% to the number of establishments)

Sector	Full Time	Part Time	Distance	Others
45- Construction	7	24		2
55- Hotels and restaurants	11	24	9	4
85- Health and social works	7	2		
Total	**24**	**53**	**9**	**7**

5.4.1 PART-TIME COURSES.

In some faculties (at MCHE) there are a substantial number of short-term full-time courses but no part-time courses. It was claimed that part-time courses are not offered because of a government regulation prohibiting civil servants from undertaking part-time training[72].

Nevertheless this regulation should not prevent courses being arranged for the private sector. Much would depend on the viability of the courses (costs of recruiting additional staff and the numbers enrolled). The running of such courses should not require a major overhaul since many of them are run in the evenings (5.00-9.30) to fit in with the availability of part-time lecturers.

[72] This refers to the prohibition on civil servants doing full time courses for longer than 3 months, even if the courses are offered outside office hours.

5.4.2 INCENTIVES TO STUDENTS TO STUDY

In addition to providing financial incentives for companies to train staff, it is also desirable to encourage school leavers and workers to invest in the development of their skills. It does seem on the basis of anecdotal evidence that many potential students/trainees would prefer part-time courses so that they could earn at the same time to pay for the courses.

Financial Contribution of employers

Since there is no reason why the government should bear the heavy expenditure on training, companies were also asked whether they would contribute to the cost of training. In both the Tourism and Construction sectors, the Study found that approximately a third of companies stated that they would be prepared to sponsor training for staff if suitable training facilities were available in the Maldives. Nearly a third of companies in both sectors expressed an interest in having trainees on attachments for work experience in their companies.

Table 5.5: Employers willingness to support training (% of the total number of establishments)

	Sponsor		Short term attachments	
Sector	**Yes**	**No**	**Yes**	**No**
45- Construction	33	0	29	6
55- Hotels and restaurants	29	4	32	1
85- Health and social works	22	22	33	11

Source: HR Study, Ministry of Employment and Labour

6 HIGHER EDUCATION & TRAINING

There are two main public providers of post secondary education and training, the Maldives College of Higher Education **(**MCHE) and the Centre for Continuing Education (CCE). The former was established in 1999 through the merger of several tertiary institutions in the Maldives and is the key institution for training most of the skills required by the workforce. In the private sector a number of small training institutions have emerged in the postsecondary sector, mainly in the field of computer studies.

A. MALDIVES COLLEGE OF HIGHER EDUCATION

6.1 ENROLMENTS

Overall enrolments are shown in Table 6.1

Table 6.1 : MCHE Enrolment, 2003

Faculty	Total Students	Total Academic Staff	Staff Student ratio
FHS			
Long Term Courses	**313**	29	11
Short Term Courses	**98**		
COL			
Long Term Courses	**227**	2	114
FE			
Long Term Courses	**510**	33	15
FSL			
Long Term Courses	**42**	6	7
MCHE(foundation Studies)			
Long Term Courses	**347**	16	22
FHTS			
Long Term Courses	**97**	13	7
Short Term Courses	**106**		
FET			
Long Term Courses	**341**	23	15
CMS			
Long Term Courses	**22**	5	4

Source: MCHE

6.2 PLANNING OF ENROLMENTS AND COURSES

Each faculty is required to submit its own 'estimates' of courses[73] along with the annual budget request. The projections are based on the assessments of future needs by the individual faculties. There is no standard method of identifying training needs. The Faculty Advisory Boards, which advises the faculty Dean on curricula and development plans, often lack information (from the government or other agencies) on priority training needs. Planned intake and output is shown in Table 6.2.

Table 6.2 MCHE Input - Output (2004 -2007)

Faculty	2004	2005	2006	2007	Total Intake	2004	2005	2006	2007	Total output
	INTAKE					OUTPUT				
FHTS										
Long Term Courses	330	417	417	417	**1581**	179	335	429	417	**1360**
Short Term Courses	700	1067	987	1037	**3791**					
FE										
Long Term Courses	801	1924	2282	1937	**6944**	167	1818	1777	1927	**5689**
CMS										
Long Term Courses	18	50	50	50	**168**	16	50	50	50	**166**
Short Term Courses	2479	2600	2648	2748	**10475**					
FSL										
Long Term Courses	14	55	45	55	**169**	10	35	44	45	**134**
COL										
*Long Term Courses**	321	205	385	515	**1426**	294	288	175	235	**992**
FMC										
Long Term Courses	320	640	605	550	**2115**	118	330	519	500	**1467**
Short Courses	211	370	420	445	**1446**					
FET										
Long Term Courses	218	424	440	373	**1455**	115	309	408	405	**1237**
FHS										
Long Term Courses	120	341	294	351	**1106**	178	254	274	332	**1038**
Short Courses		390			**390**					
Grand Total (Long Term Courses)	**2142**	**4056**	**4518**	**4248**	**14964**	**1077**	**3419**	**3676**	**3911**	**12083**

Source: Annex 4

[73] There is a standard methodology in MCHE for developing courses.

6.3 CONSTRAINTS ON SUPPLY

(a) Quality of entrants

(b) Staff

(c) Lack of part-time short courses

(d) Training facilities (discussed under each sector)

(e) Flexibility

(e) Monitoring and evaluation

6.3.1 QUALITY OF ENTRANTS

In most faculties the entrance requirements are low because many applicants lack the requisite O levels. To overcome the dearth of good O level candidates the College has introduced foundation courses to bring the students up to the required level [O and A levels recognized by the Maldivian Accreditation Board]. Some faculties interview candidates.

6.3.2 STAFFING:

Quantity

There does not seem to be a problem in the quantity of staff (judged according to staff-student ratios), although in some faculties, the staff is over stretched (to compensate for colleagues on overseas training programmes) in others the teaching load is quite low. The ratio between support and professional staff is also generous.

Quality

The full-time staff is highly localized. The temporary employment of expatriates has not been encouraged because of the high cost involved (salaries, accommodation etc).

In 2003, 66% of the academic staff had a bachelor's degree or above (see Table 6.3a below). This rose to 73% in 2004. Since not all staff need a degree (for some disciplines skilled trainers are sufficient), there is no serious under-qualification problem. MCHE is continually upgrading its staff through overseas training[74].

[74] In 2004 there were a total of 37 staff on overseas scholarships; 6 on postgraduate studies and 29 attending degree courses.

Table 6.3(a): MCHE Academic Staff Qualification

Faculty	Total	Cert. / Dip	Degree	Post graduate
Centre for Maritime Studies	**5**	3		
Centre for Open Learning	**2**		2	
Faculty of Education	**33**	4	11	18
Faculty of Engineering Technology	**23**	15	8	
RVTC- Alifushi	**2**	2		
RVTC- Hithadhoo	**3**	3		
RVTC- Kulhudhufushi	**4**	3	1	
RVTC-Thulusdhoo	**3**	3		
Faculty of Health Sciences	**31**	7	8	16
Faculty of Hospitality & Tourism Studies	**13**	4	6	3
Faculty of Management & Computing	**14**		9	5
Faculty of Sharia & Law	**6**	1	1	4
Total	**139**	**45**	**46**	**46**

Source: MCHE, 2003

6.3.3 STAFF SALARIES:

MCHE salaries are not competitive (see Table 6.3.b)[75]. Although staff can undertake an extra 5 hours (at 100 Ruf per hour) per week, in addition to a basic 15 contact hours per week and do outside tutoring, the salary scale for teaching staff is inadequate to attract qualified and experienced staff.

[75] All public service salaries were increased (in 2004) after the Study was completed.

Table 6.3(b) : Comparison of Monetary Benefits across Educational sector

Educational Attainment	MCHE		Government		Education		
	Position	Salary	Position	Salary	Position	Salary	Allowance
Masters Degree+ Experience	Senior Lecturer	3290-3650	Director	3275-3625	Principal	2430- 7640	special allowance
Masters Degree *	Lecturer	2860	Asst. Director	2225-2450	Supervisor	2110- 2560	special allowance.
First Degree, Post graduate Diploma *	Asst. Lecturer	2560-2640	Officer	1880	Teacher, Secondary	2110-2560	-
Diploma **	Instructor	2110	Asst. Officer	1530	Teacher, Primary	2110-2560	-

* Allowance - 40% of the basic salary

** Allowance - 20% of the basic salary

Salaries are stated at the time of the Study. Later (September 2004) public servants were granted salary increases.

6.3.4 PART-TIME COURSES

There is a heavy emphasis on pre-service full-time courses. Except in two faculties (Maritime Studies and Management and Computing) most of the students attend long-term courses.

Anecdotal evidence would suggest an interest in part-time courses, which enable trainees to support themselves (and others) from their work and also acquire a higher qualification(s)[76].

6.3.5 TRAINING FACILITIES

These are discussed under the different sectors.

6.3.6 MONITORING & EVALUATION

The 'internal efficiency' of MCHE pertains to the input-output relations. There are several ways in which this relationship can be captured. Much depends on how internal efficiency is defined. One definition is 'productivity' that is output in relation to enrolments. Wastage rates (which currently appear to be low) would provide a ratio. These should be monitored. A more useful concept of internal efficiency focuses on the cost of providing training, so that its cost-effectiveness can be determined. For the second approach unit costs are required. The MCHE is in the process of establishing a management data base and in 2004 the central administration introduced the concept of unit costs, in order to study the costs of individual courses and hence efficiency of programmes. However there appears to have

[76] The Government has no restriction on public servants participating in part time courses, short-term full-time courses, or even long-term full-time courses. However, public servants are not allowed to attend long-term full-time courses on part-time basis since the course requirement cannot be fulfilled if attended on such a basis. Hence, public servants are required to take study leave if attending a long-term full-time course.

been some difficulty in implementing this programme[77]. Only two faculties (Tourism and Engineering Technology) have completed the requisite forms. The MCHE's central administration needs a more practical system to determine unit costs.

The lack of data on actual enrolments for 2004 at the time of the Study, prevented crude estimates of unit costs being made. In the absence of a workable database, it is difficult to see areas where cost reductions might be achieved without reducing the quality of the product. In future, it is proposed that until a satisfactory system of estimating unit costs is established, MCHE should estimate unit costs annually by dividing the recurrent cost per faculty by the number of full-time and part-time students (on an equivalent full-time basis).

Ultimately the effectiveness of planning depends on how many graduates of the different courses fare in the labour market, namely the 'external efficiency'. Evidence of employment (and incomes) can be obtained by using tracer studies to be undertaken by individual faculties. MCHE is encouraged to continue this practice on an annual basis.

6.3.7 FLEXIBILITY AND LIMITED FINANCIAL AUTONOMY

Efficiency measures could yield some savings which could be applied to other parts of a faculty. In reality such savings under the budgeting system are usually reclaimed by the Treasury (and a reduced rate of growth of the budget). An agreement would have to be made so that some savings could be transferred in the form of cash for the purchase of important items, such as books and teaching aids. Without such an incentive there would be little inducement to reduce costs

6.4 IMPLICATIONS

For MCHE to introduce relevant training programmes, the faculties will have to be responsive to market demand. This can be achieved by (a) changing the planning system so as to involve the employers and by (b) granting the faculties a greater degree of flexibility in establishing short and part-time courses. The latter can only be realized by conceding to the faculties more financial autonomy

6.4.1 STRENGTHENING THE PLANNING MACHINERY

MCHE has an established course development process. However the record of the Faculty Advisory Boards in advising on the content of courses and quantity of trainees/students required is very mixed. On some boards, employers have only a token participation. To ensure greater employer involvement, there should be more regular consultations with employers[78] and an increase in the number of representatives from industry. Furthermore the boards should be given more power over critical rules and regulations. Weak boards tend to end up with weak representatives (as both private and public sector send less eminent substitutes). Where possible the boards should appoint representatives to focus on narrower slices of training rather than all the training in a faculty. International experience shows that the representatives that have a more focused activity tend to be of greater help in bringing the institutions closer to market demand.

Those faculties that will be linked to the ADB-funded Project[79] should merge their FAB with the SECs which should provide basic quantitative data (on unfilled vacancies and the degree of localization) and qualitative data on employers' opinions.

[77] MCHE's Monitoring and Evaluation Form' was first used in 2002
[78] Than the current practice of meeting twice a year.
[79] 'Postsecondary Education and Skills Development project,. ADB TA 3826-MLD

In the planning of short courses, the decision making *and* financial responsibility (see 6.4.2) should be devolved to the Deans of the faculties but also involve the employers in their design and content of courses.

6.4.2 FINANCIAL AUTONOMY

To be more flexible and responsive to the changing situation in the national labour market, MCHE needs more financial and administrative autonomy. If initiatives are to be rewarded more control over its finances is required. It is recommended that a committee be established to reach an agreement with Treasury whereby some fees, particularly for short courses, evening classes and tailored-made courses, can be paid directly to the faculties concerned.

6.4.3 PART-TIME COURSES

The current approach towards long-term pre-service training should to be re-evaluated.

(a) Increasingly qualifications for one course are becoming requirements for more advanced courses and modules completed in one programme can be used to contribute to another.

(b) If lifelong learning is to be more than a desirable objective, attention should be given to the many who would like to upgrade their skills but lack the time and financial resources (i.e. to forego their salaries) to attend full-time courses.

Consideration should be given to the means of offering part-time courses to the private sector and the possibility of offering part-time courses to civil servants outside working hours, as well as the staffing and cost implications.

B. SCHOLARSHIPS PROGRAMME

There are a large number of overseas scholarships in higher education and advanced skills for the public sector. Apart from some donor tied scholarships, the government offered 75 scholarships in 2004. An additional 25 scholarships were offered to private applicants. The funds will be disbursed by the Dept. of Higher Education on the advice of the Scholarships Advisory Committee. The MoEL is responsible for advising on training needs.

C. CENTRE for CONTINUING EDUCATION

Courses

CCE runs a number of basic courses in academic (e.g. maths, English, as a second language) vocational and secretarial skills for special groups (failed school leavers, students with social problems and slow learners) and for adults**.** In addition it responds to requests for short courses (e.g. air-conditioning maintenance).

Planning

Until April 2004, the number and type of courses was decided by the deputy director but this arrangement has been replaced by an Advisory Committee. It is too early to assess its effectiveness.

Facilities

At the Centre the facilities are very inadequate. Classrooms are far too small and cramped to run classes even for 10-12 students (the minimum for a viable class).

Staffing

Most of the teaching staff is contracted for specific programmes as and when they are needed.

Comment

Since the Centre is open from 2.30 to 9.30 pm it does provide opportunities for workers and school leavers to acquire basic skills. However the facilities are so inadequate that an expansion into new programmes would be unrealistic. Any proposals for expansion should be closely co-ordinated with the MCHE to prevent wasteful duplication (for example, both institutions run courses in air-conditioning).

7 TRAINING: SHARING THE COST

Although the option to rapidly expand the local workforce at the expense of the expatriates may be commendable for political and social reasons, it is necessary to also consider the costs to the country of a rapid transfer of skills.

The Government is primarily responsible for training programmes in the Maldives. However with increased demands for training locals to steadily replace expatriates, the responsibility should be shared with the private sector. Therefore in addition to improving public sector higher education and training, planners should also seek to improve company in-plant and company sponsored training, thereby reducing the burden on the government of the cost of training.

7.1 PUBLIC SECTOR

Budget for Higher Education and Training

After a fall in 2001-2 the budget for MCHE, the institution responsible for most of the training in the Maldives, has increased by 9% (2003-4), which was about 15% less than requested.

The expected increased intake of 4,056 (in 2005) and 4,518 (in 2006), compared with 2142 (in 2004)[80], a doubling within 2 years, will be difficult to sustain without a substantial increase in funds, which given the recent cutback in what was requested (15%) may not be forthcoming. Moreover since recent changes in the management structure of the MCHE could accelerate the shift towards university status, it is very probable that the future budgets will be used for the development of higher education programmes. It is possible that the ambitious targets set by MCHE may not be achieved.

A comparison of the staff budget and the recurrent budget (see Table 7.1) suggests that there is scope for staff expansion, since the proportion allocated to permanent staff is relatively low.

(b) **Training Funds**

Currently there are two funds for the development of skills.

(i) National Scholarship Fund, which is managed by the Department of Higher Education, for overseas scholarships in higher education and advanced skills. Until recently the fund consisted entirely of scholarships offered by overseas donors. In 2004 the Treasury made a substantial contribution. This fund (renamed National Training and Higher Education Fund) has recently been upgraded to include training.

Funds are available for approximately 75 scholarships for public servants, who will only be expected to repay 15% of the scholarship but will be bonded to serve the Government for several years (depending on the duration and cost of the scholarship[81]). An additional 25 study loans will be offered to private applicants, who have been accepted for an overseas course and who will be expected to repay the full cost within ten years.

(ii) Skills Development Fund (SDF), which was set up to fund specific one-off short-term courses in basic skills (e.g. diving instructors), initiated by the MoEL. The initial fund

[80] The intake will be in addition to courses continuing from the previous year.

[81] Except in the case of World Bank scholarships, where the beneficiary is expected to repay 15%

was Rf 1 million. It now stands at approximately Rf. 300,000. During its 10 years of operation, only two courses (4 batches) have been conducted for Dive Masters and one for Wood Lacquer skills). The reasons for the low output are not clear. As an internal memo states "Due to some reason, up to now, SDF has not been able to do much to this end", namely to prepare locals "to fill up skilled and semi-skilled jobs occupied by expatriates".

Comment

The Fund requires information on priority skill needs, which should be partly based on expatriate replacement, according to the localization rate.

The HRD Study shows that although shortages exist at the higher manpower level, there are also serious shortages at the skilled levels, for which special funding arrangements are required. Since the SDF has not on its admission been able to develop skills, a new form of skill fund needs to be considered.

Table 7.1: Allocated budget for MCHE (2004)

			2004			
Faculty	**2000**	**2003**	**Total**	**Capital**	**Recurrent**	**Staff ***
Central Administration	3,687,500	8,360,610	7,757,202	1,180,310	6,576,892	
Faculty of Education	13,641,278	9,586,314	15,857,213	3,117,213	12,740,000	4,382,345
Faculty of Engineering Technology	10,120,078	13,278,584	12,432,650	4,403,100	8,029,550	3,657,949
Faculty of Hospitality & Tourism Studies	3,725,654	3,413,134	3,667,442	361,526	3,305,916	1,366,744
Faculty of Health Sciences	8,530,265	9,921,563	10,317,718	532,875	9,784,843	2,863,829
Faculty of Management & Computing	8,059,667	4,192,793	4,053,125	234,600	3,818,525	2,219,079
Faculty of Sharia & Law	1,022,651	2,392,887	2,200,000	150,000	2,050,000	850,587
Centre for Maritime Studies	3,117,628	3,566,428	2,597,196	418,955	2,178,241	1,134,295
Centre for Open Learning	1,465,962	1,259,732	1,232,383	100,900	1,131,483	657,291
Island campuses			1,087,389	25,170	1,062,219	481,554
Grand Total	**53,370,683**	**55,972,045**	**61,202,318**	**10,524,649**	**50,677,669**	**17,613,673**

* Permanent staff only

Furthermore since there is no reason why the Government should be responsible for financing training, new methods for the transfer of some of the financial burden of higher education and vocational and technical education and training should be explored. Basically the cost of training should be shared by three parties; the government, the companies (which benefits from increased production) and the employee (who benefits from enhanced skills) and who may pay fees or accept reduced wages. The main issue is the appropriate division of the cost burden between the beneficiaries of training (students and employers) and the state.

7.2 PRIVATE SECTOR

(a) In the absence of any baseline study on company training, the extent of company training is not known. Clearly some companies undertake training, for example the Study showed that two sectors Tourism and Construction undertake in-company training. However it is generally thought that company training in the Maldives is not widespread

(b) Villa companies provided 114 scholarships in 2004. Successful applicants have to repay 50% of the total amount in equal instalments, not exceeding ten years.

Anecdotal evidence suggests that employers are too prone to poach workers from one another. It solves their immediate problem but worsens the situation because their poaching has encouraged a labour turnover, which discourages any initiative on the part of employers (since the employer paying for the training may well subsidise a competitor.

Moreover conventional wisdom holds that employers will rarely finance the acquisition of skills because after completion of training, the employee has to be paid the going market wage and hence investment costs cannot be recouped by paying less than the going wage, otherwise the newly trained worker will move on to a competitor. On the other hand employers will usually pay for firm-specific skills which are less portable between rival employers. The problem lies in getting employers to finance (or contribute to the cost of) the more general and transferable skills

7.3 POSSIBLE SCHEMES

The country needs a mechanism to encourage employers to train personnel and/or make contributions to the cost of training. But without financial incentives it is unlikely to happen. Therefore these two aspects, contributions and incentives, must be considered jointly.

There are a wide variety of schemes based on a levy, i.e. a tax on employers, which are used to partially finance training. In the Maldives, it would be difficult to apply and police a nation-wide training levy on all firms, partly because the country does not tax individuals or companies and secondly many companies would be too small to contribute (and benefit). Moreover such a levy would be regarded as a tax, unless an incentive scheme was also put in place.

A sectoral levy approach should be considered. The levy should initially be restricted to key sectors since the administrative costs of applying it to all sectors would be excessive and in the absence of a company tax structure and a proper system of registration, very difficult. The sectoral approach, to be tried on a pilot basis in PSESDP (see below), is therefore strongly recommended.

Post-Secondary Education and Skills Development Project (PSESDP)

The private sector's skills needs are expected to be addressed by the ADB's PSESDP[82], which includes a component on the funding of training for skilled workers. The Workforce Development Fund (value $1.75 million) will provide funding for skill training to three sectors, Tourism Transport and Fisheries on a pilot basis for three years. The project hopes to place 6,400 men and women in employment-orientated training.

After the end of the project it is not clear whether the WDF will be continued as a separate training fund for skills development in the Maldives or merged with the scholarship fund. During the life span of the project, consultants will "provide recommendations to the government regarding the future public funding of training".

It would therefore be premature to advise on funding schemes at this stage.

Interim Subsidy

Until the pilot project starts (late 2004) and the fund component becomes operational (2006-7), it would be useful to devise a scheme, which would incorporate the private sector and could be easily modified to fit PSESDP scheme. The proposal below relates to the fees charged by the country's only significant training institution, MCHE.

Currently the MCHE is examining its fee structure. MCHE does not charge fees for courses that are targeted on government services (e.g. education and health). The course fees and the living allowances are paid for by the government. On the other hand students attending courses orientated towards the private sector have to pay fees, although there are some major exceptions. For example, most courses at the Faculty of Engineering Technology do not charge fees.

Discounted courses

As a step towards a more employment orientated approach it is proposed that courses should only offer 'discounts' for courses related to critical skills.

Critical skill courses (CSCs):

High priority (or critical) skills should be identified according to the degree of localisation by sector. Less critical skills should also be identified. It is recommended that CSCs based on the survey findings should be given higher priority in the MCHE and students applying for such courses should be subsidized. It is proposed that students attending such courses receive a 50-70% discount of the standard fee.

Company sponsorship

According to the Study, not a few companies (in two major sectors), were prepared to sponsor training. It is proposed that companies sponsoring employees on the CSCs should also receive a training discount. For example those sponsoring trainees on critical list A could be entitled to a rebate of 70% of the course fee and trainees on list B could be entitled to a 50% discount.

[82] Postsecondary Education and Skills Development, ADB TA 3826-MLD, Dec. 2002

	Occupations	List A: Critical	List B: Less critical
1			
2			
3			
4			
5			
6			

Conditions

For such an approach to work it is necessary to:

(1) **Constantly update the localization rates**.

Since regular manpower surveys would not provide the information required (i.e. details of specific skills) and would be too expensive and cumbersome to undertake, it is proposed that the key sectors take responsibility for determining the localisation rates.

(2) **Monitoring and evaluation**

Where the government is responsible for the financing of training, expenditure should be justified in efficiency terms. This requires evaluations of internal efficiency and external efficiency (namely how the trainees are employed). The former can be achieved through the establishment of a monitoring system and the later through tracer studies.

Consequently courses run by the MCHE should be constantly monitored for both internal and external efficiency (see above). Each year the finances of the College should be examined as part of the budgetary process with regard to (staff-student ratios, use of facilities, attrition rates etc). MCHE has shown interest in reducing costs but the system for calculating unit costs has not been successful because of its complexity and the extraordinary amount of data required. In addition there should be regular assessments of graduates in terms of their employability through tracer studies of specific courses.

7.4 STUDENT CONTRIBUTION

In principle cost sharing is desirable since it creates incentives for students to carefully choose their programmes and to complete their studies rapidly and effectively. However it would be considered iniquitous for students in developing countries to have to pay commercial fees for post-secondary training, since those from poor families would be discriminated against. Moreover the scope for raising private internal student fees is very limited because of the high cost of living in Male.

Given the lack of data on household incomes and no income tax, it would be problematical to establish a means-tested (tuition fees) grant scheme. In the absence of any taxes on personal income, it would also be difficult to introduce a graduate tax, namely to repay a *proportion* of the costs of the graduate's higher education/training after graduation. An interest-free student loan scheme could be considered if the government was prepared to support the small banking sector, with guarantees and finance. This does have the advantage of ensuring 'up-front' tuition fees. However in some quarters there may be objections because of a cultural bias against debt.

8 RATE OF RETURN ANALYSIS

Introduction

Training and higher education is of course undertaken for a number of diverse reasons, including economic. This section looks at the benefits from an economic perspective. Since it is widely

assumed that manpower development, namely investment in education and training, results in benefits to the individual and society, it is useful to test this assumption.

8.1 RATES OF RETURN TO EDUCATIONAL INVESTMENT

There are two types of return; the social and the private.

Social cost-benefit analysis:

Although the education and training costs can be easily measured (from the budget of educational institutions), difficulties arise in measuring the social returns. Since there is no form of income tax in the Maldives, the direct benefits to society through increased government revenue cannot be calculated.

Private cost-benefit analysis:

Private rates of return are included because they draw attention to the impact of subsidies and enable planners to monitor the incentives for individuals to enter some professions and avoid others. The Study provided data on which to estimate the private rate of return to investment in education.

8.2 METHODOLOGY

The rate of return is the discounted rate which equates the present value of the benefits to the present value of the costs. The standard method is to divide benefits [annual earnings of graduates minus earnings of non –graduates] by costs [period of study x (earnings of a non-graduate + direct costs)]. Measurement depends on having data for earnings differentials in terms of both educational attainment and of work experience, which is currently lacking. Such computations will inevitably contain a good portion of speculation.

8.2.1 COSTS

The costs include the following:

(a) fees for the course over a the entire period of training/education

(b) wages (which could be expected by a school-leaver) foregone by attending the course (26,000 ruf. per annum)

Other costs such as books (and photocopying) cannot be estimated. Transport costs in Male are negligible. Accommodation is a cost both to the student and employee and therefore not included in direct costs.

8.2.2 BENEFITS

Whilst the costs can be established, the opposite is true of the corresponding flow of income.

Wage/salary*:* Unfortunately there is no data on wages/salaries, hence some very crude estimates have to be made about potential income. In this case it is assumed that the salary benefit will be for a twenty-five year period. The overall salary is that over and above what would have been earned had not the earner received any further education/training (660,000 Ruf)

Allowances*:* In some sectors allowances include food, medical benefits and travel. However, although such allowances make a substantial difference to income, it is not possible to include them since there is a large variation. Moreover some are paid in kind and therefore difficult to quantify.

8.3 RESULTS

The rate of return will be the difference between the cost and the benefit. On its own this is not useful information. What is significant is the difference between two (or more) streams of

subsequent earnings to be taken as a measure of net pay-off from proceeding to the next higher level of education. Therefore the net pay-off is compared with the direct cost of education to see whether the return on that investment is satisfactory from the investor's point of view.

The results show that the returns are much higher for more managerial and professional positions, although there are interesting sectoral variations. For example the returns to health care workers and teachers are low. Substantial differences in annual earnings can be achieved through an additional year of higher education/training.

Table 8.1 : Estimated Cost Benefit ratio across some key economic sectors

Sector	Occupation	Educational Attainment	Duration of course(yrs)	COSTS			BENEFITS		
				Wages Foregone	Fees	Total Cost '000*	Salary **	Salary Total (for 25 yrs) '000	Cost-Benefit Ratio
Tourism	Dept. Managers (production, operation, sales)	MA Hospitality Management (+degree)	4	105,600	4000	106	14000	3,500	32
	Assistant Managers	Degree	3	79,200	-	79	9800	2,280	29
	Supervisors	BTEC National Diploma	1.5	39,750	2195	42	5000	840	20
	Cooks	Certificate III	3 months	6,600	-	6.6	7500	1,590	241
Education	Principals	Degree	3	79,200	-	79	7000	1,440	18
	Secondary School Teachers	Diploma in Secondary Teaching	2	52,800	-	53	3000	240	4.5
	Primary School Teachers	Diploma in Primary Teaching	2	52,800	-	53	2800	180	3.4
Health	Specialists / Consultants	MBBS + Specialisation in one field	7	184,000	-	184	14000	3,540	19
	General Doctors	MBBS	5	132,200	-	132	8400	1,860	14
	Staff Nurses (Professional)	Diploma in Nursing	3	79,200	-	79	3920	516	6.5
	Assistant Nurses	Advanced Certificate in Nursing	3	79,200	-	79	2280	24	0.3
	Pharmacist	Diploma in Pharmacy	3	79,200	2500	82	3600	420	5
	Laboratory Technicians	Diploma in Medical Lab. Technology	3	79,200	-	79	3600	420	5
Air Transport	Aircraft Pilots	Pilot Training	1	26,400	-	26	9120	2,076	80

	Technicians (Engineering / Aeronautics)	Diploma in Engineering	1.5	39,600	-	40	4800	780	20
Cross-sectoral occupations	Managers	First Degree	3	79,600	-	80	14000	3,540	44
	Accountants Assistants	Diploma in Accountancy	2	52,800	5875	59	6000	1,140	19
Construction	Engineers, Civil	Diploma in Civil Engineering	1.5	39,600	-	40	5400	960	24
	Supervisors	Diploma in Building Construction	2	52800	-	53	4200	600	11
	Carpenters	Advanced Certificate in wood carving and carpentry	1.5	39,600	-	40	4000	540	24
	Electrical Engineers	Diploma in Electrical Engineering	1.5	39,600	-	40	4000	540	24

*rounded ** excluding allowances

9 SUSTAINABILITY OF HR PLANNING

Introduction

There is currently no systematic training needs analysis (TNA) in the Maldives. This is not altogether surprising since national assessments of manpower requirements in other countries have been faced with enormous problems (see Annex 1) to the extent that it has been largely discontinued. Given the major limitations to using the manpower requirements approach for national manpower assessments, it would be advisable to focus on the sectoral approach (see 9.2) for assessments of higher level manpower

Nearly twenty years ago the ILO[83] and the World Bank[84] recommended the switch from manpower surveys to manpower analysis. An important outcome of the ILOs assessment of manpower planning was the shift in emphasis to studies at the 'sectoral' level instead of concentrating on overall macro-planning exercises.

It is therefore proposed that much of the planning should be undertaken at the sectoral level. At the national level general data, which will be useful to an understanding of overall skill developments are identified. However the fine-tuning should be done at the sectoral level.

Data

To conduct effective manpower analysis there must be an adequate labour market information system. Good analysis depends critically on sound data.

This section proposes data requirements for nation-wide analysis and for sector analysis with regard to skill development. Given the staffing and financial constraints in MoEL, data gathering, collation and processing should be kept to the essentials. A comprehensive Labour Market Information system[85] was designed in 2002 but given the current staffing limitations (in number and expertise) may be too ambitious to implement. The comments below relate to assessments of skill requirements only, not other aspects of the labour market.

9.1 NATIONAL LEVEL

The recommended LMIS only makes scant reference to a nationwide Labour Demand Survey (see Annex of LMIS report), which would not be effective in extracting useful data on skill requirements. To request all enterprises (without a database on enterprises) to identify 'hard-to-fill' vacancies (without any directions on occupational classification) on an annual base is not very realistic[86]. Furthermore, the quality of response to this (and other) surveys suggests that such national surveys would not be particularly meaningful. Instead MoEL should collect the following information:

(a) **Workforce data**

If and when companies are officially registered and required to pay tax, then they should be required to submit an annual return on their workforce, which briefly states the total employment by sex and by local and expatriate, recruitment and terminations and data on localization for key occupations.

[83] ILO *Human Resource Planning : The Asian Experience* 1987
[84] Psacharopoulos and Woodhall, *Education for Development* World Bank 1985
[85] Econ Report 87/02, *Labour Market Information Systems(commissioned by ILO)*
[86] Section 8.5 of the Econ Report admits that this may not be a problem because 'expatriates are always on hand'.

(b) **Work permit data**

MoEL could also collect data on the total expatriates and locals (by sex) per company from application forms for work permits. The data are currently built-in to the application form but not recorded by the Ministry.

Furthermore MoEL should also insert a question on the number of employees by local and expatriate employed by the company for each occupation for which a work permit is requested. This would indicate the localization rate for specific occupations in particular companies, which could be aggregated by sector on an annual basis (or more frequently).It is therefore recommended that the existing application form for a work permit include information on the number of employees in the occupation for which a permit is requested.

(c) **Job advertisements**

MoEL could also conduct a 'Job Advertisement Survey' in one month of the year and compare it with the corresponding period in subsequent years to determine trends in demand for occupations**.**

Once job centres are established in the Maldives[87], it should be possible to monitor both requests by employers for certain skills and the preferences of those applying for jobs.

(d) **Case studies of cross-sectoral skills**

Where there are skill shortages across several sectors based on the numbers of expatriates, the MoEL could commission/undertake an in-depth study of specific skills (or group of related skills), such as engineers. For cost reasons these should be done consecutively, not concurrently.

9.2 SECTOR APPROACH

SECs

Under an ADB financed project[88] sector employment councils (SEC) are to be established in three pilot sectors; Fisheries, Tourism and Transport. It is anticipated that the SECs will be established in three key sectors and then extended to two other sectors, depending on the outcome of the pilot project. Once the merits of the approach are established one social sector, Health and an economic sector, Construction, should be included.

The major activity of each SEC 'is to prepare a human resource profile and strategy that includes an accurate profile of employment in the selected sector'. The emphasis should be on the identification of ***Priority*** skills. This means, inter alia, identifying key occupations and then preparing occupational task analysis for those occupations.

More specifically the SEC planners should:

(a) identify key occupations in the sector
- list all major occupations by number of employees, local and expatriate
- identify key occupations in each sector on the basis of proportion of skill shortages (defined by proportion of expatriates and vacancies) and importance to the sector

(b) determine the reason for the skill shortage

(c) recommend appropriate measures

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[87] *Development of Job Centres on focus Islands as part of a National Job Information Network*. MoEL, 2004

[88] Postsecondary Education and Skills Development ADB TA 3826-MLD, Dec 2002

- in the case of insufficient training (either pre-service or in-service), determine the required level of qualification for each occupation (see ISCO) based on task analysis of the particular occupation
- recommend suitable training programmes and assess the suitability of existing training facilities to provide such programmes[89]
- design training programmes and enrolment, jointly with training institution

There is no standard method for all sectors. Different methodologies are required for different sectors. [For example Health tends to use physical indicators (such as staff per hospital), or demographic norms (such as doctors per 1000 people). Tourism use norms (staff per x number of beds). Education uses demographic indicators (teacher per x number of students). Electricity supply sector uses physical indicators].

The approach should identify where skills need to be strengthened, where new training programmes should be introduced; where expatriate replacement should take place. Skills for certain occupations can be acquired in a variety of ways (on-the job, off the job, by companies, in private training institutions etc). At the sectoral and sub-sectoral level, the appropriate methods of training should be recommended.

The work (namely analysis and formulating 'action plans') should be carried out by a sector secretariat.

Areas 'deemed to require increased participation of qualified Maldivians' will be the subject of formal proposals for approval by the SEC board for submission to the Workforce Development Fund.

9.3 CROSS- SECTOR SUBJECT BOARDS

In certain instances where the key skills do not mainly fit into a particular sector but are spread through several sectors, then 'subject boards' could be established.

For example in the case of the FMC, 'subject boards', comprising of a small committee of representatives from the Faculty with 'practitioners' (not necessarily heads of companies but professionals in the respective field) from industry (from both large and small companies) could be convened to discuss the type of skills required and the curricula for a particular group of related occupations (e.g. accountants, auditors and accountant assistants).

9.4 FAST-TRACKING APPROACH FOR PROFESSIONAL SKILLS.

One way to ensure that the supply of labour can be made more responsive to the new demands in the labour market is through the fast tracking of skills. Essentially this implies speeding up the process of skill development through training and registration of professionals (e.g. accountants and engineers).This involves taking into account procedures for professional regulation, which is required before they are able to practice their profession. For example professional engineers have to complete four years of tertiary training and gain three years of work experience and in some cases take professional exams. Therefore in order to fast track it is important to involve measures whereby the training and regulation period are either shortened or accelerated. Since it is government policy to "establish regulatory bodies for professionals such as accountants…..engineers…. to raise the profile and to maintain standards"[90], such measures could be built into professional regulations.

Fast tracking can take numerous forms. For example the MCHE instead of using the Cambridge O and A level in the foundation year, use a more suitable qualification, recognised by the Maldivian Accreditation Board.

[89] Within the sector, analysts should attempt to gauge the percentage of employer satisfaction with the work readiness of school graduate and college graduates and the importance of soft skills.
[90] National Development Plan 2001-2005

10 POLICY RECOMMENDATIONS

Introduction

The Study was designed to assist an inter-ministerial committee in reaching a suitable strategy and the formulation of a Human Resources Development Master Plan. The Study points to some tentative policy recommendations, which the inter-ministerial committee may consider in the preparation of the Master Plan, in particular the practicality of their implementation in the prevailing social climate and the implications for employers. The main recommendations that emerge from this study are as follows:

10.1 EXPATRIATE REPLACEMENT

Many international firms have a tendency to fill management and specialised technical posts and also many craft and semi-skilled posts with expatriate personnel. A tendency that has been strengthened by the flexible approach of GoM towards expatriate labour[91]. It is inadvisable to adopt an 'open-door' policy to foreign workers. Other countries that have adopted such an approach have experienced long-term social problems, especially during periods of economic recession.

The need for expatriates to fill existing vacancies is an understandable objective but the practice of using foreigners in preference to available locals for short-term gain should be discouraged[92]. Although in the longer-term there is a need for an explicit comprehensive policy for expatriate employment, in the short-term a highly selective policy is required for the importation of foreign labour. Since for the next five years the Maldives will require certain categories of top-level expatriate manpower, policy should be focused more on the replacement of middle-level skills (accountant assistants, nurses, sales personnel, technicians, craft and service workers) and lower-level unskilled labour.

Replacing expatriates is not an easy task as the countries of the Gulf Co-operation Council have found. In the Gulf, companies had become so used to using cheap and hard-working[93] labour that they fought hard to keep it. Similarly it would be naïve to expect foreign employers to willingly replace expatriates with nationals in the Maldives.

It is not enough to focus on the supply side interventions (increasing the availability of skills). It is necessary to also consider the demand side, which can only be created by adjusting current labour policies. To replace expatriates it is necessary to provide a level playing field between local and foreign labour, so as to reduce the competitive advantage that most expatriates have. This can best be achieved by (a) determining minimum acceptable standards and (b) the removal of the expatriates' competitive position.

The 6th National Development Plan acknowledges that 'due to the difficulty enforcing labour regulations, the working hours tend to be long. And the working conditions also tend to be poor in many low-skilled and labour intensive jobs. Measures are therefore required to ensure that cheap expatriate labour does not usurp jobs for which local labour is readily available'.

Recommendation 1

In the case of minimal standards, labour legislation is required on:

- Socially unfriendly hours,
- maximum hours per week (48 hours?)[94], without overtime pay

[91] GoM stipulates that employers should advertise first for nationals but if companies can show –and often they can-that suitably qualified national are unavailable, they are permitted to employ foreigners.
[92] Despite possible pressures from neighbouring countries to export labour and use the remittances
[93] i.e. prepared to work long hours
[94] Represents 8 hours per day, for a six day week. Currently many workers appear to put in a 10 hour day .

- Period of notice (for dismissals)
- Annual return fares to home islands.
- A letter of agreement to be issued by employers to all new employees (after a probationary period of 3 months), stating the basic conditions of employment (e.g. pay, working hours)
- The establishment of a labour tribunal to adjudicate on breaches of labour legislation.

If the above labour legislation is implemented then workers will be provided with a reasonable degree of protection.

10.2 WAGE EQUALITY

Since there is a disparity between the wages acceptable to foreign and Maldivian workers, the cost advantage of employing foreign workers should be reduced. Many Maldivians are reluctant to work for the low wages that the expatriates are prepared to accept. There are three possible options of reducing unfair competition; a national minimum wage, a minimum wage in selected sectors or an employer tax. The first two would be difficult to administer, the last relatively straightforward.

Recommendation 2

It is recommended that consideration be given to the introduction of a tax on foreign workers in the middle and lower skill level categories[95]. It could be paid by the employer when applying for a work permit and could be set the region of 500-2000 Rf per month. The proceeds should be transferred to the Treasury.

10.3 CONTRACTS

Not a few employers would like the security of longer-term employment contracts from their employees, which is one reason for preferring expatriate labour. However much depends on the sector. Those which use seasonal workers would prefer non-contract employees, whereas sectors requiring a more permanent workforce prefer contract workers.

Recommendation 3

Since the system and enforcement of labour contracts would be difficult to introduce given the costs of litigation in civil courts and the lack of an inspectorate, it is recommended that letters of agreement be introduced to inform workers of the basic conditions of employment.

10.4 QUALITY OF LOCAL WORKFORCE

The other side of the coin is the improvement in the quality of the Maldivian workforce. Companies, unofficially, complain about the casual attitude of local employees to work. It is alleged they lack the 'soft' skills (e.g. punctuality, organization of time, giving proper notice).

Public exhortations to change such attitudes are very unlikely to be effective.

Recommendation 4

MCHE should consider introducing programmes on soft skills for all certificate and diploma courses. There are several international models which might be considered, for example the Australian and South African[96], both of which emphasise problem solving, working in groups, organisation of self, collecting and analysing statistics, communication, numeracy, using technology etc. Such outcomes are necessary for all types of work.

[95] It is assumed that the country will continue to depend on expatriates for certain high-level skills.

[96] Aspects of the English system might also be considered. The development of key skills has been encouraged in schools and colleges. Key skills are now highlighted in the national curriculum to show how they relate to subjects across the curriculum. See QCA (Qualifications and Curriculum Authority) Key skills Levels 1-3

10.5 CULTURAL ATTITUDES

Often the problem is not a matter of education or training but of cultural factors. There seems to be a cultural bias towards knowledge (therefore academic qualifications) rather than skills, which appear not to be highly regarded. Employers seemed dissatisfied with the academically-orientated O level examination, which has no inputs for skill development. They also complained of an 'attitude problem' to work. Clearly employers are ill-at-ease with some of the attitudes of young employees.

Moreover there are a large number of semi-skilled and unskilled jobs held by expatriates (15,356 in 2004). These jobs could be taken up the many school leavers[97] that fail to complete secondary education (grade 10). The problem is would Maldivian youth be prepared to accept lower grade jobs. The National Development Plan notes that "For reasons not understood a growing number of educated youth seem to be staying out of the labour force". It maybe that fixed jobs, with long hours have less appeal.

The introduction of training in specific vocational skills to the entire (or part of the) school population is not likely to be effective[98], especially given the demands of the current curriculum, presented in a foreign language. Instead a flexible approach designed to develop awareness of the industrial environment and industrial training would be desirable. It is preferable to prepare trainees for subsequent industrial training rather than take on the enormous problem of providing technical skills in secondary schools.

Recommendation 5

To facilitate the transition to the world of work, short ' awareness courses' on the industrial environment should be designed.

The Youth Employment Survey (undertaken in 2002), to find out employers attitudes to hiring Maldivians and young Maldivian attitudes to work and further studies, should be continued (possibly every 4 years).

10.6 CRAFT LEVEL SKILLS

There is clearly a large and growing demand in skilled trades (e.g. carpentry, masonry). However blue collar jobs have a low prestige. Lack of interest in craft skills partly reflects the low wages received by artisans and partly social attitude to manual labour. The former can be addressed by higher wage (see Recommendation 3), the latter perhaps through an advertising campaign, selective scholarships and awareness courses in schools (see Recommendation 5).

Recommendation 6

Publicity campaign to raise the status and awareness of vocational and technical education.

10.7 TRAINING

Part-time courses

(a) In some sectors the problem is not so much the shortage of skilled manpower but the under-qualification of existing manpower. Up-grading the under-qualified manpower, through short-term and part –time training programmes, can alleviate the problem.

(b) With rapid technological changes, learning cannot be limited to a particular period of life; for many skilled technical workers more than half of the skill acquired will be obsolete within seven years. For workers to update their skills, the training institutions will need to provide short-term pre-service and in-service up-grading courses.

There are currently few part-time courses at the MCHE

[97] See estimates by Dr Hameed *Youth Unemployment: the Real Issue* MCHE 2003
[98] Middleton, Ziderman and Adams, *Skills for Productivity*, World Bank 1993

Recommendation 7

Part times courses should be offered by MCHE faculties for both public and private sector employees.

10.8 ACADEMIC ACHIEVEMENTS

Training in specific skills is more effective when it builds on strong a strong foundation of education. Academic achievements in the Maldives are low. Empirical evidence for this proposition comes from:

(a) the achievement scores at O and A level

(b) the large investment in foundation courses at the MCHE to provide remedial education

(c) the many students, that enter the MCHE with no more than grade 10 education and for most certificate 3 courses with a grade 7 education.

This is largely a problem for educationalists and therefore not considered in this report. However the failure rate cannot be ignored in a comprehensive training strategy since the post-secondary training institution (MCHE) and employers depend on well–educated school leavers. To reduce the burden on MCHE of remedial education several measures are necessary including the following recommendation.

Recommendation 8

As part of the Ministry's improvements to the educational system, consideration should be given to the reassignment of the examination system to another examination board, which has a more international orientation (e.g. using English as a second language) or the Cambridge second language English syllabus.

10.9 SECTOR TRAINING

Under each sector a series of observations are made on how improvements might be made to the training system to facilitate output**.**

Recommendation 9

It is recommended that these proposals on ways of reducing the constraints on output from the MCHE faculties be considered.

10.10 COMPANY TRAINING

Although company training and company sponsored training can (and should) be a major source of skills, the government has hitherto largely ignored this area, partly because of the lack of data. Moreover it appears that employers need reassurances about training before investing in training.

Recommendation 10

A baseline survey should be undertaken for selected sectors to determine the extent of company financed training. As a pre-requisite all companies should be registered with the Ministry of Trade and Industries.

A training contract should be developed whereby a trainee enters into a formal agreement to work for a sponsoring firm for a period to be determined according to the duration and cost of training.

10.11 PLANNING SYSTEMS

An important issue is the lack of adequate planning for limited human resources in most sectors. If there is to a more pronounced shift from supply-driven to a demand-driven system that gives priority to employment-orientated training, then consideration should be given to improvements in skill needs assessments with a much larger involvement of employers. Without close consultation with employers, there is a strong possibility of 'standards being 'supply driven' and

not based on employment specifications. Currently several of the Faculty Advisory Boards (FAB) is not very representative[99]. It is hoped that the proposed SECs will develop an appropriate partnership mechanism to attract employers for active participation.

Recommendation 11

The ADB Project's SECs should be extended to the Health and Construction sectors.

The FABs should reconstitute their membership to include more representatives from the private sector.

10.12 AUTONOMY

To be more responsive to the market place, MCHE needs greater financial autonomy to finance non-government courses.

Recommendation 12:

Faculties within MCHE should be given a greater degree of control over part of their revenue, thereby providing the financial incentives to become more market orientated.

10.13 FUNDING

The fee structure needs to be revised. Some courses (and not necessarily those targeted on government service) do not charge fee, whereas others do. Until the sector levy system is established in 2006-7, fees could be adjusted to the importance of the skill towards which the course is primarily targeted and the 'importance' could be partly determined by the localization rate.

Recommendation 13

Consideration should be given to the introduction of critical training courses (CTCs), identified according to the degree of localisation by sector and students applying for such courses should be subsidized. It is proposed that students attending such courses receive a 50-70% discount on the standard fee.

10.14 MONITORING

MCHE has attempted to monitor courses by assessing the unit costs.

(a) ***Efficiency***: There are many ways of describing efficiency, none of them value free. In this case it is proposed that emphasis be placed on low cost, without reducing the quality of output. Unfortunately the assessment of unit costs, which would have been a very useful tool to measure efficiency, has proved to be too complex to administer and thus ineffective.

(b) ***Effectiveness***: To assess the effectiveness of training it is necessary to obtain feedback from graduates and/or their employers**.**

Recommendation 14

(a) MCHE should be assisted with the design and implementation of an effective monitoring system.

(b) Although MCHE has faculty review processes, a biannual inspection should be undertaken by an independent body. Public funding for courses, which have inadequate standards, low enrolments, not viable in the foreseeable future or where similar training can be more easily obtained in tertiary institutions in the region, should be withdrawn.

(c) Although some tracer studies have been undertaken, tracer studies of selected courses should be undertaken on a regular basis by individual MCHE faculties**.**

[99] Practices differ considerably. In some cases employers only have a token function and civil servants are uninformed and unmotivated.

ANNEX 1
MANPOWER PLANNING

ANNEX 1: CRITICISMS OF THE MANPOWER FORECAST TRADITIONAL APPROACH

Knowing which occupations to provide training for is one of the most important factors in the success of training programmes, but also one of the most difficult to determine.
The traditional approach (nationwide manpower forecasts) has proved unsuccessful during its widespread application in many developing countries in the 1960 and 1970s. It failed to take into account market forces and thus yielded inaccurate predictions of skill needs. Consequently it was rejected by the international agencies and leading academics (specializing in the economics of education). For example the World Bank after a thorough study of technical and vocational education, condemned classic manpower planning and instead recommended its replacement with labour market analysis[100]. The ILO has been equally critical of manpower requirements approach[101].

Essentially the conventional manpower approach has been abandoned in most countries for the following reasons:

- It requires immense data inputs (especially the occupational classification); the two digit ISCO is too limited and the four digit is too complex
- It concentrates on quantitative rather than qualitative measures,
- It relies on highly questionable assumptions, such as
  (a) *Forecasting of growth;* the size and structure of the labour demand cannot be forecast reasonably accurately because it is not possible to forecast economic growth rates and structural changes in various sectors
  (b) *Unchanged productivity rates*; it ignores technologies, which are changing so rapidly as to make it virtually impossible to quantify the future requirements for occupations.
  (c) *The reason for skill shortages is the lack of training facilities;* in other words it ignores other possible reasons for skill shortages.
  (d) *Supply by educational qualification determines supply by occupation*; except for very few cases, it is not possible to specify precise educational and training qualifications for occupations. There is rarely an education/training-occupation matrix.
- It ignores the cost of education and training,
- It ignores the different modes of training

The ILO has recommended more emphasis on

(a) the sectoral approach; " the more specific are the economic sub-sectors or occupational groups under study, the richer and more detailed are the outcomes of these studies from the qualitative or occupational point of view"[102]
(b) "shift from formal projection/forecasting modelling to the capturing and analysis of labour market signals,…. which is integral part of the overall system of labour market information"

[100] Middleton, Ziderman and Van Adams, 'Vocational and Technical Education and Training'. World Bank Policy Paper 1991
[101] Mr. Castro, head of the Training Branch stated, "We know fully well that most orthodox manpower plans were disastrous in market economies".
[102] 'Training Needs Assessment' ILO Turin, 2003

ANNEX 2

EXPATRIATE EMPLOYMENT TRENDS

ANNEX 2
TABLE 1: EXPATRIATES EMPLOYMENT TRENDS BY SECTOR

Sector	1999	2000	2001	2002	2003	2004	Annual growth rate(1999-2004)
Agriculture	227	312	350	318	347	400	**10**
fisheries	499	549	543	537	672	792	**8**
Manufacturing	2083	2487	2539	2567	2715	2329	**2**
Electricity, Gas & water	58	17	23	16	17	24	**-14**
Construction	5613	4607	4728	5175	6502	6767	**3**
Education	1474	1695	2028	2370	2488	2686	**11**
Wholesale & retail Trade	459	876	965	1026	1059	1095	**16**
Hotels & Restaurants	1164	1586	1823	2013	2132	2287	**12**
Tourism	8510	8568	8751	8826	9420	9400	**2**
Transport Storage & communication	644	587	559	521	502	502	**-4**
Financing, insurance, business and related estate	3161	3450	3711	4025	4031	4581	**6**
Community, social & personal service	2576	2982	3181	3270	3880	4431	**9**
Total	**26468**	**27716**	**29201**	**30664**	**33765**	**35294**	**5**

TABLE 2 : EXPATRIATE EMPLOYMENT TRENDS BY OCCUPATIONAL GROUPS 2000 - 2004

Occupation	2000	%	2002	2004	%	% Change 2000-2004
Legislators, senior officials & Managers	1070	4	1009	1183	3	**11**
Professionals	2479	9	3752	4383	12	**77**
Technicians & Associate professions	1589	6	2062	1919	5	**21**
Clerical & related	341	1	298	231	1	**-32**
Service workers	3801	14	3902	4496	13	**18**
skilled agricultural and fisheries workers	145	1	120	114	0	**-21**
craft related workers	4299	16	4565	5481	16	**27**
Plant, Machine Operators Assemblers	2052	7	2271	2131	6	**4**
Elementary Occupations	11940	43	12685	15356	44	**29**
Total	**27716**	**100**	**30664**	**35294**	**100**	**27**

Source: Ministry of Employment & Labour

ANNEX 3

NUMBERS ENGAGED BY INDUSTRY AND BY OCCUPATIONAL GROUP

ANNEX 3: TABLE 1: NO. OF PERSON ENGAGED BY INDUSTRY & OCCUPATION GROUP

ISCO / ISIC	Managers & Senior Officials			Professionals			Technicians & Associate Professionals			Clerical			Service & Sales Workers			Skilled Craft Workers			Plant Operators			Semi skilled & unskilled workers		
	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local	Expat	Total	%Local
1 - Agriculture	0	1	100	0	0		0	0		0	0		0	0		0	0		0	0		6	7	14
15 - Food products and beverages	19	165	88	31	83	63	38	92	59	2	155	99	57	112	49	37	247	85	19	319	94	542	1138	52
18 - Readymade garments	0	7	100	0	0		0	1	100	0	0		0	0		58	65	11	0	0		0	0	
20 - Manufacture of footwear	0	21	100	0	7	100	1	11	91	1	1	0	6	7	14	85	108	21	12	13	8	84	93	10
45 - Construction	21	123	83	44	84	48	45	115	61	11	105	90	420	530	21	551	588	6	60	69	13	907	947	4
50 - Sale and repair of motor vehicles	1	24	96	4	4	0	8	27	70	5	39	87	3	44	93	24	38	37	9	9	0	13	69	81
51 - Wholesale trade	0	36	100	0	5	100	0	18	100	0	12	100	0	127	100	0	15	100	0	35	100	104	251	59
52 - Retail trade	5	129	96	19	38	50	5	29	83	1	24	96	9	55	84	26	40	35	6	10	40	167	279	40
55 - Hotels and restaurants	122	359	66	149	289	48	141	392	64	125	606	79	866	2278	62	187	419	55	51	280	82	1227	2480	51
61 - Water transport	1	14	93	2	5	60	0	19	100	0	5	100	1	33	97	0	2	100	0	12	100	24	52	54
62 - Air transport	24	42	43	88	112	21	19	23	17	17	36	53	4	95	96	67	79	15	19	24	21	37	41	10
63 - Travel agencies and auxiliary activities	2	33	94	5	7	29	3	6	50	0	8	100	43	62	31	1	4	75	1	1	0	12	16	25
71 - Renting of machinery	0	11	100	0	3	100	1	14	93	1	12	92	3	9	67	2	2	0	13	13	0	46	53	13
72 - Computer and related services	3	18	83	13	19	32	8	15	47	0	1	100	0	16	100	0	0		0	0		1	1	0
74 - Other business activities	13	29	55	56	64	13	24	32	25	0	64	100	0	46	100	4	8	50	6	8	25	26	123	79
75 - Atoll and municipal administration	0	40	100	6	24	75	0	29	100	0	84	100	0	10	100	0	3	100	0	16	100	26	67	61
80 - Education	1	9	89	1339	2422	45	287	1407	80	0	595	100	0	0		0	1	100	0	0		9	143	94
85 - Health and social works	0	6	100	4	13	69	4	9	56	0	10	100	0	5	100	0	0		0	0		1	2	50
92 - Recreational and sport activities	9	16	44	23	32	28	4	5	20	4	6	33	0	0		1	1	0	0	5	100	1	23	96
93- Other service activities	1	70	99	0	7	100	0	140	100	0	180	100	7	398	98	36	141	74	0	223	100	14	112	88

ANNEX 3 TABLE 2: PERCENTAGE DISTRIBUTION OF ESTABLISHMENTS EXPECTING RISING LABOUR DEMAND BY OCCUPATIONAL GROUP

ISIC	Sector	Managers, Senior Officials	Professional	Technicians	Clerical	Service & Sales Workers	Skilled Agricultural & fisheries workers	Craft & related trade workers	Plant Operators	Semi-skilled & unskilled workers	Other
1	Agriculture	0	8	0	0	0	0	0	0	8	0
15	Food products and beverages	0	25	13	6	6	6	0	13	13	0
18	Readymade garments	0	0	0	0	0	0	25	0	0	0
20	Manufacture of footwear	5	5	5	5	0	0	24	0	33	0
21	Paper and paper products	0	0	0	0	0	0	0	0	0	0
35	Ship building and repair	0	0	0	0	0	0	0	0	0	0
45	Construction	3	24	30	6	0	9	9	3	21	6
50	Sale and repair of motor vehicles	40	40	0	0	40	20	20	40	20	20
51	Wholesale trade	0	75	50	25	25	0	0	0	50	0
52	Retail trade	4	21	25	13	21	0	8	4	46	0
55	Hotels and restaurants	10	9	13	5	23	0	3	1	15	0
60	Land transport	0	0	0	0	0	0	0	0	0	0
61	Water transport	10	20	20	20	10	0	0	10	30	0
62	Air transport	0	33	67	33	33	0	0	33	67	0
63	Travel agencies and auxiliary activities	18	18	9	9	18	9	0	9	18	0
71	Renting of machinery	0	0	33	67	0	0	0	33	33	0
72	Computer and related services	0	100	100	0	33	0	0	0	0	0
74	Other business activities	7	50	21	7	0	0	0	7	29	0
75	Atoll and municipal administration	0	25	0	25	0	0	0	0	0	0
80	Education	0	100	0	100	0	0	0	0	0	0
85	Health and social works	0	14	29	0	0	0	14	0	0	0

ANNEX 4
MCHE: INTAKE AND OUTPUT TABLE

ANNEX 4: MCHE INTAKE & OUTPUT TABLE

MCHE Enrolments (2004 -2007)

Faculty	2004	2005	2006	2007	Total Intake	2004	2005	2006	2007	Total output
	Intake					Out put				
FHTS										
Long Term Courses										
BTEC National Diploma in Hotel Catering & Institutional Operations	88	100	100	100	**388**	49	88	100	100	**337**
BTEC ND in Hospitality Management		50	50	50	**150**			50	50	**100**
BTEC Diploma Certificate in Travel & Tourism	31	50	50	50	**181**		31	50	50	**131**
MA Hospitality Management	12				**12**			12		**12**
BA (Hon) Hospitality and Tourism	12	12	12	12	**48**		12	12	12	**36**
Advance Certificate in Commercial Cookery	14	15	15	15	**59**		14	15	15	**44**
Certificate III Accommodation & Operation	22	25	25	25	**97**	22	25	25	25	**97**
Certificate III Food & Drink Service	54	50	50	50	**204**	34	50	50	50	**184**
Certificate III in Front Office Operation	82	100	100	100	**382**	64	100	100	100	**364**
Certificate III in Pastry & Bakery	15	15	15	15	**60**	10	15	15	15	**55**
Total	**330**	**417**	**417**	**417**	**1581**	**179**	**335**	**429**	**417**	**1360**
Short Term Courses	**700**	**1067**	**987**	**1037**	**3791**					
Certificate in Accommodation Operation	4	6			**10**					**10**
Certificate 2 in Food and Drinks Services	15	4			**19**					**19**
Certificate 2 in Front Office 1	52	25			**77**					**77**
Entry Level Front Office	71	26			**97**					**97**
Entry Level Food and Beverages	26	34			**60**					**60**
Entry Level House Keeping	15	0			**15**					**15**
Entry Level Tour Guiding	30	0			**30**					**30**
French Language	37	19			**56**					**56**
Hygiene Course	117	20			**137**					**137**
Japanese Language	58	14			**72**					**72**
Development Programme	26				**26**					**26**
SIC Hotel Reception Front Office Practices	18	5			**23**					**23**
SIC House Keeping Service Skills	15	0			**15**					**15**
SIC Pastry and Bakery	0	22			**22**					**22**

FED										
Long Term Courses										
Foundation level 1(For Dip T-s)		15			**15**		15			**15**
Foundation level 2(For Dip T-s)		530	520	520	**1570**		415	390	390	**1195**
Adv Dip in Applied Statistics		30	30	30	**90**			30		**30**
Cert in Laboratory skills		30	30	30	**90**		30	30	30	**90**
English Language Centre	64	120	120	120	**424**	14	170	120	120	**424**
New Course 1		30	30		**60**				30	**30**
New Course 2			90		**90**				90	**90**
New Course 3				90	**90**					**0**
Adv Certificate of Teaching(Primary)	169	90	90	90	**439**	52	169	90	90	**401**
Dip of teaching (Primary)	154	64	90		**308**		86	154	90	**330**
Dip of teaching (middle sch.)	67	60	60	60	**247**		39	67	60	**166**
B Ed (Primary Conversion)	34	30	30		**94**			34	30	**64**
B Ed (Primary Regular)		30	60	60	**150**				30	**30**
Dip of Teaching(Sec.)	196	700	742	712	**2350**	84	812	742	712	**2350**
Adv. Dip. Of Teaching(Sec.)	26				**26**	6	26			**32**
Bachelor of Teaching (Sec.)	35	135	135	135	**440**	11	56	35	135	**237**
Bachelor of Education(Sec.)			135		**135**					**0**
BA TEFL	27	30	30	30	**117**			27	30	**57**
BA (Dhivehi)	29				**29**			28		**28**
Dip TEFL		30	30	30	**90**			30	30	**60**
New Course 1			30		**30**				30	**30**
New Course 2			30		**30**				30	**30**
New Course 3				30	**30**					**0**
Total	**801**	**1924**	**2282**	**1937**	**6944**	**167**	**1818**	**1777**	**1927**	**5689**

CMS										
Long Term Courses										
Advanced Certificate in Marine Operation	18	25	25	25	**93**	16	25	25	25	**91**
Advance Certificate in Marine Engineering		25	25	25	**75**		25	25	25	**75**
Total	**18**	**50**	**50**	**50**	**168**	**16**	**50**	**50**	**50**	**166**
Short Term Courses	**2479**	**2600**	**2648**	**2748**	**10475**					
Advanced Fire Fighting	6				**6**					**6**
Coastal Navigation	47	2			**49**					**49**
Elementary First Aid	438	1			**439**					**439**
Fire Prevention & Fire Fighting	388	23			**411**					**411**
Global Maritime Distress Safety System	19				**19**					**19**
Life Guard Training Programme	10				**10**					**10**
Medical Care	10				**10**					**10**
Medical First Aid	12				**12**					**12**
Navigational Safety for Fishing Vessel Skippers	28				**28**					**28**
Oil Tanker Familiarisation	17				**17**					**17**
Proficiency in Survival Craft & Rescue Boat	184				**184**					**184**
Petroleum Safety & Quantity Assessment	12				**12**					**12**
Personal Safety & Social Responsibilities	365				**365**					**365**
Personal Survival Techniques	337	1			**338**					**338**
Rating Forming Part of an Engineering Watch	56				**56**					**56**
Rating Forming Part of a Navigational Watch	45				**45**					**45**
Radar Navigation at Management	9				**9**					**9**

FSL										
Long Term Courses										
LLB Shari'ah & Law	14	25	25	25	**89**	10	15	14	25	**64**
Grad. Cert. in shar'ah		10	10	10	**30**		10	10	10	**30**
Grad. Cert. in Law		10	10	10	**30**		10	10	10	**30**
MA Shari'ah		10			**10**			10		**10**
LLM				10	**10**					**0**
Total	**14**	**55**	**45**	**55**	**169**	**10**	**35**	**44**	**45**	**134**
COL										
Long Term Courses										
Advance Certificate of Teaching Primary	181	175	175	100	**631**	231	181	175	175	**762**
Dip Of Teaching			150	150	**300**					**0**
EFS	140				**140**	63	77			**140**
ECD III		30			**30**		30			**30**
Adv. Cert. of ECD			60	30	**90**				60	**60**
Dip Of ECD				25	**25**					**0**
New Course 1				90	**90**					**0**
New Course 2				60	**60**					**0**
New Course 3				60	**60**					**0**
Total	**321**	**205**	**385**	**515**	**1426**	**294**	**288**	**175**	**235**	**992**

FMC										
Long Term Courses										
Advance Certificate in Business Management	12	60	60	30	**162**		35	50	50	**135**
Diploma in Business	52	80	80	75	**287**		15	60	35	**110**
Advance Diploma in Business	5	40	40	40	**125**		5	15	15	**35**
Bachelor of Business		25	20		**45**					**0**
Advance Certificate in Information Technology	6	30	30	30	**96**		5	25	25	**55**
Diploma in Information Technology	61	30	30	30	**151**	19	61	30	30	**140**
Advance Diploma in Information Technology	6	30	30	30	**96**		6	30	30	**66**
Bachelor of Information Technology		30			**30**					**0**
Advance Certificate in Accounting	11	20	20	20	**71**	4	15	20	20	**59**
Diploma in Accounting	46	80	80	80	**286**	24	10	74	80	**188**
Advance Diploma in Accounting	14	25	25	25	**89**	14	13	25	25	**77**
ACCA	25	50	50	50	**175**		50	50	50	**150**
CAT	25	50	50	50	**175**		25	50	50	**125**
Advance Certificate in Clerical Staff Studies	22	30	30	30	**112**	22	30	30	30	**112**
Certificate III In Clerical Studies		25	25	25	**75**		25	25	25	**75**
Island Administration	35	35	35	35	**140**	35	35	35	35	**140**
Total	**320**	**640**	**605**	**550**	**2115**	**118**	**330**	**519**	**500**	**1467**
Short Courses	**211**	**370**	**420**	**445**	**0**					

FET										
Long Term Courses										
Dip . Building Construction	8				**8**					
Dip Architecture	16	16	16	16	**64**		16	16	16	**48**
Dip. Civil Engineering		15	15	15	**45**			15	15	**30**
Dip. In Mechanical Engineering		12	12	12	**36**			12	12	**24**
Dip. In Construction Management		15	15	15	**45**		15	15		**30**
Dip. In Electrical Engineering			16	16	**32**				16	**16**
Adv. Cert in Electrical & Electronic Engineering	32	32	32	32	**128**	23	32	32	32	**119**
Adv. Cert in Electrical Engineering	29	32	32		**93**	9	29	32		**70**
Adv. Cert in Welding & Metal Fabrication	6	12	12	12	**42**	6	6	12	12	**36**
Adv. Cert in Refrigeration & Air_ conditioning	17	19	19	19	**74**	10	17	19	19	**65**
Adv. Cert in Engine Repair & Maintenance	49	52	36	36	**173**	24	33	36	36	**129**
Adv. Cert in Machining & Mechanical Fitting	7	12	12	12	**43**	2	7	12	24	**45**
Adv. Cert in Wooden & Fibre Glass boat Building	14	14	14	14	**56**	8	14	14	14	**50**
Adv. Cert in Furniture Carpentry & Wood Carving		15	15		**30**			15	15	**30**
Adv. Cert in Electrical & Electronic Engineering	12	25	25	15	**77**	10	12	25	25	**72**
Adv. Cert in Furniture Carpentry & Joinery		25	25	15	**65**			25	25	**50**
Adv. Cert in Engine Repair & Maintenance	16	16	32	32	**96**	16	16	16	32	**80**
Certificate III In Engine Repair & Maintenance	12	16	16	16	**60**	7	16	16	16	**55**
Certificate III In Furniture Carpentry & Joinery		25	25	25	**75**		25	25	25	**75**
Certificate III In Wood Carving		15	15	15	**45**		15	15	15	**45**
Certificate III In Welding & Sheet Metal		24	24	24	**72**		24	24	24	**72**
Certificate III In Machining		20	20	20	**60**		20	20	20	**60**
Certificate III In Fluid Power		12	12	12	**36**		12	12	12	**36**
Total	**218**	**424**	**440**	**373**	**1455**	**115**	**309**	**408**	**405**	**1237**

FHS										
Long Term Courses										
Dip. Nsg. Batches	25	51	49	51	**176**	36	26	24	25	**111**
Diploma in Nursing Conversion		25			**25**		24	1		**25**
Diploma in Critical Care Nsg		10		10	**20**		10		10	**20**
Ad. Cert. In Nursing		40	60	60	**160**	57	41	59	63	**220**
B Sc Nursing		20		20	**40**		20		20	**40**
Dip Primary Health Care Batches	12	25	25	25	**87**	11	15	12	25	**63**
Cert. in Primary Health Care Batches	25	25	25	25	**100**	16	26	25	25	**92**
PHC Conversion		5	10		**15**	4		11		**15**
Bachelors in Primary Health Care			10		**10**				10	**10**
Dip. Medical Lab Tec. Batches	14	15	15	15	**59**	19		14	14	**47**
BSc Medical Lab Tech.			10		**10**				10	**10**
Ad. Cert. In Counselling	15	20	20	20	**75**		14	20	20	**54**
Ad. Cert. In Trade. Medicine -	15	15	15	15	**60**		14	14	14	**42**
Dip. in Midwifery (FHW)		15	15	30	**60**		15	15	30	**60**
Diploma in Midwifery			15	15	**30**	7		15	15	**37**
Ad. Cert in Family Health					**0**	14				**14**
Advance Cert. In Pharmacy	14	25		25	**64**	14	24	25	25	**88**
Diploma in Pharmacy		25		25	**50**			24	1	**25**
Ad. Cert. In Health Service Management		10	10		**20**		10		10	**20**
Cert. III Emergency Med Trt.		15	15	15	**45**		15	15	15	**45**
Total	**120**	**341**	**294**	**351**	**1106**	**178**	**254**	**274**	**332**	**1038**
Short Courses		**390**			**390**					
Grand Total (Long term courses)	**2142**	**4056**	**4518**	**4248**	**14964**	**1077**	**3419**	**3676**	**3911**	**12083**

ANNEX 5
FURTHER DEMAND
(BY KEY SECTOR)

ANNEX 5: FUTURE DEMAND FOR SOME OF THE KEY ECONOMIC SECTORS

SECTOR / ISCO	FUTURE DEMAND		
	Construction	Tourism	Fisheries (excluding MIFCO)
Managerial and Professional Staffs			
Accountants	14	12	3
Assistant Managers		6	
Auditors		3	2
Chief engineer (on board colletor and mother vessels)			2
Chief QC manager	1		
Department Manager (personnel)	0	7	2
Doctors		9	
Electricians	5		
Engineers (marine)	4		
Engineers (refrigeration)	3		
Engineers(Civil)	14	11	
Engineers(Electrical)	13		
Engineers(Mechanical)	5		5
Engineers(Plumbing)	12		
Managers	15	15	7
Marketing manager			2
Senior Executive			12
Supervisors	52	18	6
Supervisors (maintenance)			5
Surveyors	13		
Technicians			
Assistant accountants		6	3
Instructors		15	
Physiotherapist		5	
Quality inspectors			7
Radio operator			5
Skilled Seafood processing workers			4
Supervisors(maintenance)		3	
Technicians (laboratory)			3
Technicians(all)	10	3	21
Clerks			
Cashiers (on board collector vessels)			8
Clerks		7	3
Clerks (Accounts & Finance)	16	6	7
Office Supervisors	15		
Receptionists		15	
Storekeepers	16		
Service Workers			
Bar-keepers		2	
Cook	22		12
Cooks		26	
Housekeepers		54	
Sales Staffs / Cashier	21	8	
Security guards	16	11	12
Sport staffs		7	
Store keeper			3
Tour guides & Airport Representatives		33	
Waiters		53	
Craft and artisans			
Bar bonders	113		
Carpenters(Furniture)	48	12	10

Carpenters(Shulters)	123		
Collector vessel Skipper			10
Concreters	96		
Electricians	21	10	
Electricians			15
Fitters			10
Foreman			6
Maintenance worker			16
Masons	195	9	12
Mechanics		6	
Mechanics (automobile)			8
Mechanics (engines)			12
Mechanics (refrigeration)			10
Mechanics(including electrical)	6	7	10
Painter	51	6	
Plumbers	23		
Plumbers		7	
Structural metal workers/welders	32		
Tilers	96		
Welders			12
Plant/machine operators			
Able seaman			18
Crane operator			4
Deck crew (collector vessels, mother vessels, carrier vessels, etc)			20
Drivers	17	9	14
Earth moving equipment operator	3		
Lathe machinist			4
Machine operators		11	
Oilers			8
Elementary operations			
Semi skilled and unskilled workers of all kinds	358	9	83

ANNEX 6
TOURISM

ANNEX 6: TOURISM SECTOR

ISCO	Occupational Groups	Local		Local Total	Expatriates		Expat Total	Total	% Local
		M	F		M	F			
1	doctors	0	0	0	11	4	15	15	0
3	physiotherapist	0	0	0	6	26	32	32	0
5	bar keepers	3	1	4	182	2	184	188	2
1	accountants	8	0	8	51	3	54	62	13
5	security guards	24	0	24	104	0	104	128	19
5	cooks	185	2	187	323	0	323	510	37
3	assistant accountants	17	0	17	24	2	26	43	40
1	auditors	8	0	8	12	0	12	20	40
6	mechanics (electrical and aircon)	34	0	34	44	0	44	78	44
5	tour guides	62	1	63	42	39	81	144	44
6	masons	21	0	21	26	0	26	47	45
3	instructors	41	0	41	29	21	50	91	45
6	painters	18	0	18	20	0	20	38	47
1	Departmental managers (production)	1	0	1	1	0	1	2	50
3	technicians	40	0	40	37	0	37	77	52
5	sport staffs	49	4	53	35	14	49	102	52
9	semi skilled workers of all kinds	1139	139	1278	1103	3	1106	2384	54
6	carpenters	49	0	49	41	0	41	90	54
6	electricians	53	1	54	37	0	37	91	59
1	department managers (production, operation, sales)	100	3	103	52	13	65	168	61
1	supervisors	65	5	70	42	0	42	112	63
1	engineers (civil, mechanical, electrical)	35	0	35	18	1	19	54	65
6	plumbers	31	0	31	16	0	16	47	66
5	sales persons	96	8	104	32	21	53	157	66
6	mechanics	39	0	39	18	1	19	58	67
4	clerks	60	8	68	20	6	26	94	72
1	assistant manager	46	0	46	13	3	16	62	74
3	supervisors (maintenance)	112	4	116	32	1	33	149	78
5	waiters	522	11	533	133	7	140	673	79
8	machine operators	110	1	111	28	0	28	139	80
4	clerks (accounts and finance)	165	9	174	37	6	43	217	80
4	receptionist	136	29	165	23	13	36	201	82
1	Department manager (personnel)	70	1	71	7	3	10	81	88
8	drivers	129	13	142	17	0	17	159	89
5	house keepers	388	9	397	44	0	44	441	90
Total		**3856**	**249**	**4105**	**2660**	**189**	**2849**	**6954**	**59**

Source: HRD Survey, Ministry of Employment & Labour

ANNEX 7
TOURISM: NEW RESORTS

ANNEX 7: ESTIMATED EMPLOYEES FOR THE ELEVEN RESORTS

Occupation	Estimated employees for the new 6 resorts of 100 beds		Estimated employees for the new 5 resorts of 200 beds		Total
	Local	Expats	Local	Expats	
Managerial & professional staffs	**54**	**24**	**55**	**30**	**163**
Department managers (production, operations, sales)	18	12	30	10	70
Department managers (personnel)	6	-	5	-	11
Assistant managers	-	6	5	-	11
Accountants	6	-	5	5	16
Auditors	6	-	-	5	11
Doctors	-	6	-	5	11
Engineers (Civil, electrical, mechanical)	6	-	5	5	16
Supervisors	12	-	5	-	17
Technician & Associate professional	**24**	**24**	**25**	**30**	**103**
Assistant accountants	6	-	5	-	11
Instructors	12	24	5	25	66
Physiotherapist	-	-	-	-	0
Technicians	6	-	10	5	21
Supervisors (maintenance)	-	-	5	-	5
Clerks	**30**	**-**	**25**	**15**	**70**
Clerks	-	-	5	-	5
Clerks (accounts & finance)	6	-	5	-	11
Receptionist	24	-	15	15	54
Service / Sales workers	**162**	**102**	**130**	**50**	**444**
Bar keepers	-	30	-	10	40
Cooks	24	12	10	5	51
Waiters	54	-	50	10	114
Security guards	-	12	-	10	22
Sales persons	12	12	10	-	34
Housekeepers	48	-	60	-	108
Tour guides & airport representatives	12	36	-	5	53
Sport staff	12	-	-	10	22
Craft & artisans	**36**	**6**	**40**	**20**	**102**
Carpenters	12	6	10	-	28
Electricians	6	-	5	5	16
Masons	-	-	5	5	10
Mechanics (electrical & aircon)	6	-	5	5	16
Mechanics	6	-	5	-	11
Painters	-	-	10	-	10
Plumbers	6	-	-	5	11
Plant operators	**48**	**-**	**-**	**5**	**53**
Machine operators	6	-	-	5	11
Drivers	42	-	-	-	42
Elementary occupation	**114**	**96**	**75**	**50**	**335**
Semi-skilled & unskilled workers of all kinds*	114	96	75	50	335
Total	**468**	**252**	**350**	**200**	**1270**
Grand Total	**720**		**550**		**1270**

* labourers, gardeners

ANNEX 8
EDUCATION

ANNEX 8: EDUCATION SECTOR (STAFF TRENDS)

Level	Permanent								Temporary		Total
	Trained				Untrained						
	Graduate		Non- Graduate		Graduate		Non- Graduate				
	Locals	Expat	Locals	Expat	Locals	Expat	Locals	Expat	Locals	Expat	
Pre- Primary			194				90	1	125	1	411
Primary	15	367	1590	185	9	33	218	18	777	34	3246
Lower secondary	41	586	145	136	21	77	39	5	48	36	1134
Higher secondary	7	25	4	1	3	13					53
Total 2000	**63**	**978**	**1933**	**322**	**33**	**123**	**347**	**24**	**950**	**71**	**4844**
Pre- Primary		10	309	7			87	1	161	1	576
Primary	15	367	1558	172	6	53	184	12	767	21	3155
Lower secondary	62	704	243	136	19	91	18	4	12	5	1294
Higher secondary	6	33									39
Total 2001	**83**	**1114**	**2110**	**315**	**25**	**144**	**289**	**17**	**940**	**27**	**5064**
Pre- Primary		2	259	3			101		194	2	561
Primary	15	432	1525	205	4	66	236	9	889	30	3411
Lower secondary	53	864	255	156	15	145	20	6	42	34	1590
Higher secondary	5	43	2			4					54
Total 2002	**73**	**1341**	**2041**	**364**	**19**	**215**	**357**	**15**	**1125**	**66**	**5616**
Pre- Primary		1	247		2		78	2	169		499
Primary	13	417	1585	201	42	104	288	5	955	34	3644
Lower secondary	53	881	286	215	14	167	37	22	41	44	1760
Higher secondary	15	79	1		1	3			2		101
Total 2003	**81**	**1378**	**2119**	**416**	**59**	**274**	**403**	**29**	**1167**	**78**	**6004**

Source: Compiled from Education Statistic 2000-2003

ANNEX 9
HEALTH

ANNEX 9(A) HEALTH SECTOR

Public Sector				Private Sector			Both Sectors			
Medical Manpower	**Total No.**	**Expat**	**% Local**	**Total No.**	**Expat**	**% Local**	**Grand Total**	**Total Local**	**Total Expat**	**% Local**
Doctors (MBBS)	160	131	18	9	8	11	169	30	139	18
Doctors (Specialists)	117	92	21	29	19	34	146	35	111	24
Staff Nurse	435	240	45	38	37	3	473	196	277	41
Nurse	304	20	93	8	1	88	312	291	21	93
Lab Technician	103	55	47	11	10	9	114	49	65	43
Lab Assistant	22	1	95	-	-	-	22	21	1	95
Physiotherapist	10	9	10	2	2	-	12	1	11	8
Radiographer	24	19	21	6	5	17	30	6	24	20
Dentist	5	1	80	4	4	-	9	4	5	44
Pharmacists/ pharmacy Asst.	-	-	-	248	174	30	248	74	174	30
CHW	119	-	100	-	-	-	119	119	-	100
FHW	333	-	100	-	-	-	333	333	-	100
Foolhumas	409	-	100	-	-	-	409	409	-	100
Total	**2041**	**568**	**72**	**355**	**260**	**27**	**2396**	**1568**	**828**	**65**

Source: Ministry of Health, 2003

ANNEX 9(B) HEALTH SECTOR

ISCO	Occupations	Local		Local Total	Expatriates		Expat Total	Total	% Local
		M	F		M	F			
1	Anaesthetist	0	0	0	1	1	2	2	0
1	dentists	0	0	0	2	0	2	2	0
1	Gynaecologist	0	0	0	1	2	3	3	0
6	electricians	0	0	0	2	0	2	2	0
1	Doctors	1	1	2	83	3	86	88	2
1	Professional staff nurses	0	4	4	2	93	95	99	4
3	technicians laboratory	1	2	3	18	21	39	42	7
1	Accountants	0	1	1	2		2	3	33
3	physiotherapist	0	1	1	1	1	2	3	33
5	house keepers	1		1	2	0	2	3	33
3	technicians general	0	3	3	5	0	5	8	38
1	Specialist consultants	0	1	1		1	1	2	50
8	drivers	9		9	4	0	4	13	69
9	semi skilled and un skilled workers of all kinds	224	155	379	40	0	40	419	90
3	nurses	0	68	68	0	0	0	68	100
3	trained midwives	0	352	352	0	0	0	352	100
4	clerks (accounts & finance)	5	29	34	0	0	0	34	100
5	community health workers	76	64	140	0	0	0	140	100
5	family health workers	57	279	336	0	0	0	336	100
6	mechanics	1	0	1	0	0	0	1	100
1	Pharmacist	0	0	0	0	0	0	0	0
1	Radiologist	0	0	0	0	0	0	0	0
3	pharmacist assistants	0	0	0	0	0	0	0	0
6	laboratory assistants	0	0	0	0	0	0	0	0
6	plumbers	0	0	0	0	0	0	0	0
Total		**375**	**960**	**1335**	**163**	**122**	**285**	**1620**	**82**

Source: HRD Survey, Ministry of Employment & Labour

ANNEX 10
AIR TRANSPORT

ANNEX 10 AIR TRANSPORT

ISCO	Occupations	Local		Local Total	Expat		Total Expat	Total	% Local
		Male	Female		Male	Female			
6	electricians			0	1		1	1	0
6	mechanics (electrical)	1		1	16		16	17	6
3	technicians (engineers/aeronautics)	8		8	53		53	61	13
3	technicians (others)	5		5	15		15	20	25
8	drivers	9		9	19		19	28	32
3	pilots (flight)	41	1	42	74	1	75	117	36
3	engineers	8		8	13		13	21	38
9	semi skilled and unskilled	48	2	50	37		37	87	57
1	Accountants	3	2	5	3		3	8	63
1	managers	21	2	23	10	2	12	35	66
1	supervisors	18	4	22	5		5	27	81
5	ground crew	38	9	47	4		4	51	92
4	clerks	120	89	209	15	1	16	225	93
5	stewardess	53	10	63			0	63	100
6	mechanics (aircraft)	16	1	17			0	17	100
Total		**389**	**120**	**509**	**265**	**4**	**269**	**778**	**65**

Source: HRD Survey, Ministry of Employment & Labour

ANNEX 11
CONSTRUCTION

ANNEX 11 CONSTRUCTION

ISCO	Occupations	Local		Local Total	Expat		Expat Total	Total	% Local
		M	F		M	F			
5	cooks	0	0	0	19	0	19	19	0
6	bar benders	0	0	0	109	0	109	109	0
6	concreters	0	0	0	134	0	134	134	0
6	painters	0	0	0	27	0	27	27	0
8	drivers	0	0	0	26	0	26	26	0
6	masons	3	0	3	279	0	279	282	1
6	tilers	1	0	1	43	0	43	44	2
6	electricians	1	0	1	29	0	29	30	3
6	carpenters (shulters)	14	0	14	201	0	201	215	7
6	plumbers	2	0	2	23	0	23	25	8
6	structural metal workers	2	0	2	22	0	22	24	8
9	semi skilled workers of all kinds	32	0	32	255	0	255	287	11
8	earth moving equip operator	1	0	1	7	0	7	8	13
1	Engineers (civil)	6	0	6	32	1	33	39	15
6	mechanics	1	0	1	5	0	5	6	17
5	security guards	3	0	3	13	0	13	16	19
4	store keepers	5	0	5	9	0	9	14	36
6	carpenters (furniture)	31	0	31	45	0	45	76	41
1	surveyors	1	0	1	1	0	1	2	50
1	Engineers (electrical)	9	0	9	5	0	5	14	64
1	Accountants	21	2	23	10	1	11	34	68
3	Technicians	3	0	3	1	0	1	4	75
5	sales and staff / cashier	10	1	11	2	1	3	14	79
1	managers	34	2	36	5	0	5	41	88
1	Supervisors (site)	63	0	63	6	1	7	70	90
4	clerks (accounts and finance)	17	10	27	2	0	2	29	93
4	office supervisors	10	7	17	1	0	1	18	94
1	Engineers (mechanical)	1	0	1	0	0	0	1	100
1	Engineers (plumbing)	0	0	0	0	0	0	0	0
Totals		**271**	**22**	**293**	**1311**	**4**	**1315**	**1608**	**18**

Source: HRD Survey, Ministry of Employment & Labour

ANNEX 12
FISHERIES

	ANNEX 12 FISHERIES								
		Local		Local	Expat		Expat		
Isco	Occupations	M	F	Total	M	F	Total	Total	% Local
6	bait masters	0	0	0	0	0	0	0	0
1	chief QC manager	0	0	0	1	0	1	1	0
8	crane operators	0	0	0	0	0	0	0	0
6	filters	0	0	0	0	0	0	0	0
6	fishing masters	0	0	0	0	0	0	0	0
1	human resource manager	0	0	0	0	0	0	0	0
3	IT technician	0	0	0	1	0	1	1	0
8	lathe machinist	0	0	0	0	0	0	0	0
6	masons	0	0	0	13	0	13	13	0
5	secretary	0	0	0	0	0	0	0	0
3	skilled seafood processing workers	0	0	0	0	0	0	0	0
3	statistical officer	0	0	0	0	0	0	0	0
5	store keeper	0	0	0	1	0	1	1	0
5	security guards	6	0	6	15	0	15	21	29
5	cooks	24	0	24	41	0	41	65	37
1	Accountants	3	2	5	8	0	8	13	38
6	carpenters	7	0	7	8	0	8	15	47
3	clerks (accounts and finance)	1	0	1	1	0	1	2	50
9	semi skilled and unskilled workers of all kinds	326	88	414	162	239	401	815	51
6	welders	11	0	11	9	0	9	20	55
3	Quality inspectors	11	8	19	7	0	7	26	73
3	technicians	14	0	14	4	0	4	18	78
1	engineers (mechanical)	62	0	62	5	0	5	67	93
6	electricians	15	0	15	1	0	1	16	94
1	Senior executive	26	5	31	2	0	2	33	94
1	supervisors (first line)	24	1	25	1	0	1	26	96
6	foreman	27	2	29	1	0	1	30	97
6	mechanics (engines)	97	0	97	2	0	2	99	98
8	able seaman	9	0	9	0	0	0	9	100
3	accounts assistants	2	0	2	0	0	0	2	100
1	Auditor	1	0	1	0	0	0	1	100
8	bosun	30	0	30	0	0	0	30	100
3	cashiers (on board collector vessels)	9	0	9	0	0	0	9	100
1	chief engineers (on board collector and mother vessels)	8	0	8	0	0	0	8	100
3	clerks	114	21	135	0	0	0	135	100
6	collector vessel skipper	49	0	49	0	0	0	49	100
8	deck crew	467	0	467	0	0	0	467	100
8	drivers	37	0	37	0	0	0	37	100
1	electricians	3	0	3	0	0	0	3	100
1	engineers (marine)	10	0	10	0	0	0	10	100
3	laboratory technicians	0	1	1	0	0	0	1	100
6	maintenance worker	6	0	6	0	0	0	6	100
1	managers (factory, plant operators)	15	1	16	0	0	0	16	100
1	marketing manager	1	0	1	0	0	0	1	100
6	mechanics (automobile)	4	0	4	0	0	0	4	100
6	mechanics (electrical)	3	0	3	0	0	0	3	100
6	mechanics (refrigeration)	10	0	10	0	0	0	10	100
8	oilers	44	0	44	0	0	0	44	100
3	radio operators	3	0	3	0	0	0	3	100
1	supervisors (maintenance)	1	0	1	0	0	0	1	100
Total		**1480**	**129**	**1609**	**283**	**239**	**522**	**2131**	**76**

Source: HRD Survey, Ministry of Employment & Labour

ANNEX 13 TEACHING FORCE BY GENDER

ANNEX 13 TEACHING FORCE BY GENDER

Table: Teaching Force By Gender

Level	Total local	Female			Female share of %
		Trained	Untrained	Total	
Pre-Primary	247	241	75	316	98
Primary	1598	1093	200	1293	68
Lower Secondary	339	179	13	192	53
Higher Secondary	16	12		12	75
Total	**2200**	**1525**	**288**	**1813**	**82**

Level	Total	Temporary	Female share of %
		Female	
Pre-Primary	169	159	94
Primary	955	636	67
Lower Secondary	41	9	22
Higher Secondary	2	2	100
Total	**1167**	**806**	**69**

Source: Ministry of Education, 2003

ANNEX 14
ACTUAL EXPATRIATES
BY KEY SECTOR

ANNEX 14 ACTUAL EXPATRIATES BY KEY SECTOR

Actual Number of Expatriates by Key Sectors (2004)

TOURISM

Occupation	ISCO	TOTAL
Labourer, Maintenance	9312	3620
Waiter, Waitress	5123	1361
Cook	5122	1204
Labourer, Odd-Jobbing	9162	922
Instructor, Coach Sports/Diving	3475	525
Barkeeper	1315	378
Managers	1225	308
Guide, Travel	5113	267
Therapist	2221	219
Accountant	2411	176
Physiotherapist	3226	109
Barman	5123	103
Electrician	7137	88
Auditor	2411	79
Engineer, Electrical	2143	48
Assistant, Accounting	3434	38

CONSTRUCTION

Occupation	ISCO	TOTAL
Mason, Stucco	7133	1507
Carpenter	7124	1002
Preparer, Structural Metal	7214	329
Welder	7212	99
Plumber	7136	85
Engineer, Civil	2142	66
Electrician	7137	65
Supervisor, Construction	1232	59
Engineer, Electrical	2143	28

AIR TRANSPORT

Occupation	ISCO	TOTAL
Technician	3115	49
Pilot, Aircraft	3134	48
Technician, Engineering/ Aeronautics	3114	22
Engineer, Aeronautical	2145	13

HEALTH

Occupation	ISCO	TOTAL
Doctor, Medical	2221	266
Nurse, Associate Professional	3231	327
Pharmacist	2224	153
Nurse Professional	2230	52
Consultant	2221	164

EDUCATION

Occupation	ISCO	TOTAL
Teacher, Secondary Education	2320	2475
Teacher, Primary Education	3310	102

Source: Ministry of Employment and Labour

ANNEX 15

MONETARY BENEFITS ACROSS EDUCATIONAL SECTORS

ANNEX 15 MONETARY BENEFITS ACROSS EDUCATIONAL SECTORS

Table 6.3(a) : Comparison of Monetary Benefits across Educational sectors

Educational Attainment	MCHE		Government		Education		
	Position	**Salary**	**Position**	**Salary**	**Position**	**Salary**	**Allowance**
Masters Degree + Experience	Senior Lecturer	3290- 3650	Director	3275-3625	Principal	2430- 7640	special allowance for principal
Masters Degree *	Lecturer	2860	Asst. Director	2225-2450	Supervisor	2110- 2560	special allowance for supervisors.
First Degree, Post graduate Diploma *	Asst. Lecturer	2560- 2640	Officer	1880	Teacher, Secondary	2110-2560	-
Diploma **	Instructor	2110	Asst. Officer	1530	Teacher, Primary	2110-2560	-

* Allowance - 40% of the basic salary

** Allowance - 20% of the basic salary