

No.= 3/7

TERMINAL EVALUATION  
ON  
THE THIRD COUNTRY TRAINING PROGRAM  
IN THE MERCHANT MARINE FIELD  
BY THE HIGHER INSTITUTE OF MARITIME  
STUDIES (ISEM)

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Terminal evaluation on the third country training program in the merchant marine field by the higher institute of maritime studies (ISEM)

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## Project Summary

<b>I. Outline of the Project</b>	
Country : Kingdom of Morocco	Project title : Third country training program in the field of Merchant Marine
Issue/Sector : Transport	Cooperation scheme : Third country training program
Division in charge : 2 <sup>nd</sup> Team of Transport & Traffic, 3 <sup>rd</sup> Group, Social Development Department	Total cost : 41.7 million yen Cost per participant: 327 thousand yen Share of Japan's Contribution: 85%
Period of Cooperation	Partner Country's Implementing Organization : Ministry of Equipment and Transport. Higher Institute of Maritimes Studies (ISEM). Supporting Organization in Japan :
	(R/D): June 23, 2000 From JFY 2000 to JFY 2004 : - 15 <sup>th</sup> to 27 <sup>th</sup> January 2001 - 3 <sup>rd</sup> to 28 <sup>th</sup> September 2001 - 1 <sup>st</sup> to 23 <sup>rd</sup> October 2002 - 1 <sup>st</sup> to 26 <sup>th</sup> December 2003 - 22 <sup>nd</sup> November to 14 <sup>th</sup> December 2004
Related Cooperation	Technical Cooperation project (1 <sup>st</sup> April 1996 to 31 <sup>st</sup> March 2001) Dispatch of Senior Volunteers (December 2002 to March 2005)

### 1. Background of the Project :

Human element on board ship is the key to safer marine transport. It's widely estimated that 80 per cent of transport accidents are due to human error. That is why the international maritime community is more focusing on the role of human factors in maritime safety. The international convention on Standards of Training, Certification and Watch keeping for seafarers (STCW) set a baseline standard for the training and education of seafarers throughout the world.

Africans countries are facing a great challenge. They have to strengthen their merchant marine training system, which is not costly affordable for most of them. Therefore third country cooperation is an efficient alternative. The higher Institute of Maritimes Studies in Morocco (ISEM) established in 1978, possesses a long experience in the field of merchant marine training. It took advantage from five-year technical cooperation with Japan that allowed it to improve educational system and to acquire sophisticated didactical equipment. Thus, the ISEM is one of the indicated maritime training organizations in Africa that can secure a third country training in order to respond to the STCW requirements.

### 2. Project Overview :

The project is a third country training program organized at the ISEM from 2001 to 2004. It concerned 87 participants from 14 African countries: Algeria, Benin, Cameroon, Comoros, Djibouti, Gabon, Guinea-Equatorial, Guinea-Conakry, Ivory Coast, Madagascar, Mauritania, Senegal, Togo and Tunisia.

Five sessions were held, whose duration ranged from 13 to 26 days (average duration of 22 days). Each session encompassed one to three topics. The courses provided are: Personal survival techniques; Global Maritime Distress & Safety System (GMDSS)/RADAR; Marine Machine exploitation; Marine Automatic; Transportation of oil by sea; Transportation of chemical products.

#### (1) Overall Goal

The overall goal is to improve the knowledge and skills of African countries in the field of maritime training and safety at sea.

#### (2) Project Purpose

To provide participants from African countries with the opportunity to improve their knowledge and skills in the field of maritime training and safety at sea.

**(3) Outputs**

- Develop relevant skills and knowledge related to merchant marine field training ;
- Improve the knowledge, skills and the abilities of participants and transfer them to other trainees in their own countries ;
- Research of new regional cooperation in this area.

**(4) Inputs**

Japanese contribution: 3 314 000 Dh (Air fare, Perdiem, Training cost etc.) (41.7 million yen)

Moroccan contribution: 618 000 Dh (Training cost, Didactical Equipments and facilities, Instructors etc.)

**II. Evaluation Team**

Members of evaluation Team	JICA Morocco Office (entrusted to Mr. Mounir Zouiten : Professor, Mohamed V University and Mr. Mekki Zouaoui : Professor, Mohamed V University)	
Period of evaluation :	29 <sup>th</sup> November 2004 – 21 <sup>st</sup> January 2005	Terminal Evaluation

### III. Results of Evaluation

#### 1. Summary of Evaluation Results

##### (1) Relevance :

Merchant marine is very important for African countries economies. However, apart from North African countries, the others have not developed merchant fleets sector.

According to the survey, most African countries having benefited from the training have explicit policy in the merchant marine field. The participants said unanimously that the training objectives are in line with those of their governments' policy and that the contents of training met with their professional needs and with the needs of their organizations. So this training is judged relevant to the objective.

The profiles of participants are various, such as professors in maritime schools, maritime affairs administrators, maritime safety inspectors, ministries advisors and decision makers. They do have, for most of them, the requirements to follow this program.

##### (2) Effectiveness :

According to the participants interviewed, content of the courses is in line with the STCW, the project purposes are fully accomplished. 44% were satisfied and 56% were very satisfied from the training. Most of them considered that the quality of training in terms of teaching methods, lecturers, didactical equipment, facilities and documentations is high or adequate. Lecturers and the quality of the teaching methods were very appreciated by the majority of the participants who declared that they meet with the highest international standards. The rate of theory and practice in the course of training program is suitable. According to the participants, in addition to the didactic material etc., exchange of experiences among participants contributed to the training quality. Consequently, this course is evaluated effective.

##### (3) Efficiency :

Participants unanimously think that human and material resources were in sufficient quantity and quality. The training program was carried out almost as planned. The small changes that occurred were, due to Ramadan (the holy month), the field visits that could not take place as planned.

The input cost is mainly used for international transport, per diems and accommodations. The costs exclusively devoted to the pedagogic training represent only one third of the total input cost. It includes :

- training material and furniture (20% of the total input cost)
- Lecturers and personnel indemnities (13% of the total input cost), which is, according to ISEM officials, very low compared to percentages observed in other training institutes in developed countries (more than one third).

The training cost per participant is, on average, 26 000 Dh (around 3000 US \$), which is, by other international training standards, very low. Think about the input cost in terms of training effect, efficiency of this training course was evaluated high generally.

It is always possible to lower these costs, but the risk is that it might be at the expense of the training quality.

According to the above financial data, it does not seem wise to suggest cost reductions.

With regard to the documentation, a few participants said that if they had got the document since the start of the training, this would have allowed them to have a global picture of the contents of the courses and the training would be more efficient.

#### **(4) Impact**

The ISEM training contributed significantly to the improvement of the technical skills and the change of mentalities of the participants.

The ways they think they could use the benefits of their training, once back in their countries, are, for instance: to improve the everyday work's methods, to apply the examples of training. Most of participants said that they will utilize their training results by the improvement of everyday work technology and by transfer to a coworker.

The majority of participants did not know the ISEM before their training in Morocco. However, their judgments about this institute are more positive than those who had information about it. Technically High level, very good technical outputs are some of the opinions expressed by the participants. The fact that the Japanese cooperation, known for its technical cooperation project until March 2001 and this 5 year trilateral training program certainly helped ISEM to improve its reputation in Morocco and in African countries.

#### **(5) Sustainability**

All ISEM lecturers and administrators think that the present training could be maintained because the organization system, qualified personnel arrangement, financial capability, etc. of the ISEM is secured.

By its self-budget, ISEM is about to get a full mission simulator (a bridge, a navigational communication and pollution prevention and combating simulator). This investment is estimated at four millions Dh (around 476 000 US \$). Thus, ISEM makes an effort to ensure its sustainability. However, despite the recent investment efforts, due to limited investment budgets, the ISEM would be facing problems of getting additional equipments in order to maintain technologic update.

In order to continue to realize the Third country training program, it is difficult to finance totally by the Moroccan government and by African countries. Thus Japanese continuous assistance, additional financial support by the Moroccan government is needed. And also the contribution of the beneficiary countries to some extent is desirable.

### **2. Factors that have promoted impact and sustainability**

Availability of ISEM qualified instructors and didactical equipment, which allowed real simulations, proactive participants, well organized sessions and long ISEM experience in the field of merchant marine training etc. are to be listed.

### **3. Factors inhibiting impact and sustainability**

The major factor limiting the impact of the program is the difficulties of know-how transfer to co-workers, caused by the problems of work environment, budget and motivation etc. in their organizations once back in their countries.

Another factor is that the difficulties in setting course level because of the heterogeneous participants' levels.

### **4. Conclusions**

The ISEM training program was, generally, very successful.

Conclusions are summarized as follows; Training objectives are in line with those of African governments' policy. The quality of training is high and adequate. Teaching methods were much appreciated and lecturers meet the highest international standards. The training program was carried out almost as planned. Human, material and input costs fully justify the project achievements. The training cost of a participant is, by international standards, very low. The ISEM training contributed significantly to the improvement of participants' technical skills. The Japanese cooperation and this third country training program helped ISEM to improve its reputation.

In order to have better achievements, some elements have to be reinforced, for example, a less heterogeneity of participant profiles, efficient use of documentation, etc.

ISEM makes its effort to improve the facilities, but in order to continue the third country training program from now on in a sustainable manner, additional support by the Moroccan government and contribution from the beneficiary countries are desired.

Participating countries still have training needs. STCW requires additional trainings and certificates on safety like on the survival techniques at sea, Global maritime safety system operation, Radar and ARPA system operation and Chemical tanker's operation and pollution prevention. Therefore, it is desirable to continue this kind of third country training program.

## 5. Recommendations

Many recommendations were formulated by the participants in the questionnaire and during the meetings with the ISEM and the Ministry of Equipment and Transport managers. Based on the analysis of the whole evaluation process, we suggest:

- Improvement of the effectiveness of the training:
  - in order to have better achievements, more homogenize the group of participants
  - give to the participants the content of the modules before the beginning of the courses to allow them to prepare in advance
- Sustainability:
  - to maintain technological update, effort should be made to have necessary equipment continuously
  - in order to continue to realize the third country training program in a sustainable manner, additional *financial support by the Moroccan government and the contribution of the beneficiary countries* to some extent have to be examined

## 6. Lessons learned

- To avoid heterogeneity of the participants, it seems useful to write clearly in the “General information” about the requirements of the participants. This helps to improve selection procedure of the candidates.
- To reinforce the technical transfer after the participants return to their home countries, it seems useful to write clearly in the “General information” about the expectations of technical transfer, and about the execution of evaluation survey that will be carried out by the training institution in the near future.

## 7. Follow-up

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## Introduction

Human element on board ship is the key to safer marine transport. It's widely estimated that 80 per cent of transport accidents are due to human error. That is why the international maritime community is more focusing on the role of human factors in maritime safety. The international convention on Standards of Training, Certification and Watch keeping for seafarers (STCW) sets a baseline standard for the training and education of seafarers throughout the world.

All member States of the International Maritime Organization (IMO) have to comply with this convention. They must establish training structures that can ensure that required standards are met. Therefore, from 2002, seafarers without valid certificates cannot embark on the ships.

All African countries have signed the STCW convention but only 15 have so far demonstrated that full and complete effect is given to its relevant provisions. These countries are: Algeria, Côte d'Ivoire, Cape Verde, Comoros, Egypt, Ghana, Liberia, Morocco, Madagascar, Mozambique, Nigeria, Senegal, South Africa, Tunisia, and Tanzania.

African countries are facing a great challenge. They have to strengthen their merchant marine training system, but, for most of them, the cost of this strengthening is not affordable. Therefore, third country cooperation seems to be the only alternative to this challenge.

The higher Institute of Maritime Studies in Morocco (ISEM) established in 1978, possesses a long experience in the field of merchant marine training. In addition, it took advantage from a five-year technical cooperation with Japan that allowed to this institution to improve educational system and to acquire sophisticated didactical equipments. Thus, the ISEM is one of the indicated maritime training organizations in Africa that can secure a third country training in order to respond to the STCW requirements.

## 1. Outline of evaluation study

Morocco and Japan engaged in a five-year technical cooperation project in the field of merchant marine from April 1996 to March 2001. Under this cooperation, the Government of Japan sent Japanese experts to Morocco, invited Moroccan trainees to Japan and supplied equipments to the Higher Institute of Maritime studies (ISEM) in Casablanca. The purpose of the project was to improve the level of training up to the STCW international standards.

Based on this project achievement and in order to encourage efficient South-South cooperation, the two governments launched in 2000 a third country training program at the ISEM. This program aims at transferring technology to 13 African countries by improving the knowledge and skills of their participants in the field of merchant marine.

This terminal evaluation study, commissioned by the JICA, seeks to examine the relevance, the effectiveness and the efficiency of this third country training program and to assess its effect on beneficiaries in terms of impact and sustainability. It also analyzes its promoting and inhibiting factors, extracts lessons learned and makes recommendations for more effective and efficient future training program.

The evaluation study was carried out by two independent Moroccan consultants: M. Mounir Zouiten and M. Mekki Zouaoui, from 29<sup>th</sup> November 2004 to 21<sup>st</sup> January 2005.

## 2. Outline of evaluated project

The third country training program named "Training and updating in the merchant marine field" aims to improve the francophone African countries participants' knowledge and skills in the field of maritime training and safety at sea. Its objectives are:

- Development of relevant skills and knowledge of participants, related to the merchant marine field training ;
- Improvement of the participant skills and knowledge and their abilities and transfer them to other trainees in their own countries ;
- Research of new regional cooperation in this area.

The training program was held from Japanese Fiscal Year (JFY) 2000 to JFY 2004 and concerned 87 participants from 14 African countries<sup>1</sup>(if Morocco is included, 105 participants in total.)

. The countries concerned are: Algeria, Benin, Cameroon, Djibouti, Gabon, Guinea-Equatorial, Madagascar, Mauritania, Senegal, Togo and Tunisia. Upon the request of Moroccan Ministry of Equipment and Transport, Ivory Coast was added. Participants from Guinea-Conakry, Comoros and Morocco were specially invited by the government of Morocco to attend the courses. The regional distribution of trainees is as follows:

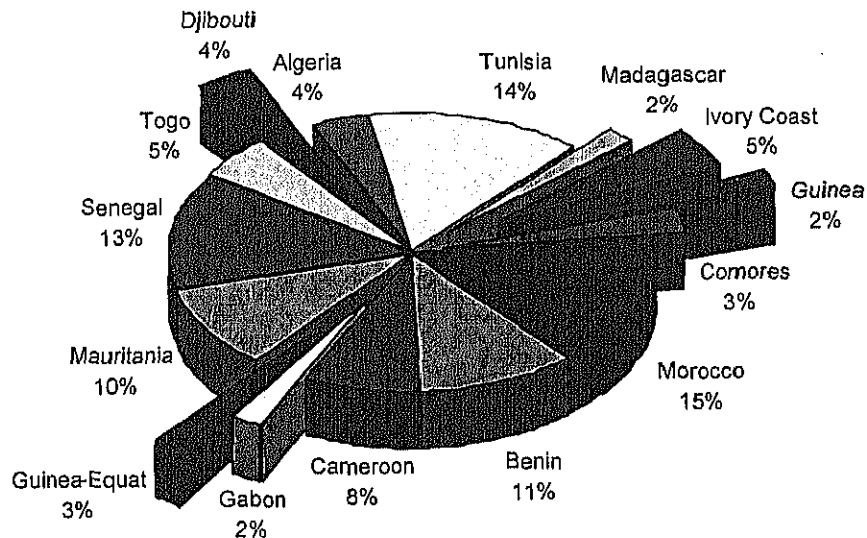
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<sup>1</sup> Not including Cape Verde that did not send any participant

**Tab 1 : Regional distribution of participants for the five sessions**

	Countries / Sessions	1st	2nd	3rd	4th	5th	Total
1	Algeria		1		2	1	4
2	Benin	2	2	2	4	1	11
3	Cameroon	1	2	1	2	2	8
	Cape Verde						0
4	Djibouti		1		2	1	4
5	Gabon		1			1	2
6	Guinea-Equatorial			1		1	2
7	Madagascar	1	1				2
8	Mauritania	3	2	2	2	1	10
9	Senegal	2	3	4	2	3	14
10	Togo	1	2	1		1	5
11	Tunisia	5	3	2	2	3	15
12	Comoros	2		1			3
13	Guinea	2					2
14	Ivory Coast		1	2	2		5
	<b>Sub-total</b>	<b>19</b>	<b>19</b>	<b>16</b>	<b>18</b>	<b>15</b>	<b>87</b>
15	Morocco	6	1	3	3	3 <sup>(*)</sup>	16
	<b>Total</b>	<b>25</b>	<b>20</b>	<b>19</b>	<b>21</b>	<b>18</b>	<b>103</b>

(\*) Two Moroccan participants, due to urgent tasks in their companies, could not end the training

**Graph 1 : Regional distribution of participants**

The training program consisted on five sessions organized as follow:

**Tab 2 : Training program of the five sessions**

<b>Course period</b>	<b>Course title</b>
From 15 to 27 <sup>th</sup> January 2001	- RADAR/ Automatic Radar Plotting Aids (APRA) system ; - Marine Machine.
From 3 to 28 <sup>th</sup> September 2001	- Personal survival techniques ; - Global Maritime Distress & Safety System (GMDSS)/RADAR ; - Marine machine exploitation ; Marine automatic.
From 1 <sup>st</sup> to 23 <sup>rd</sup> October 2002	- Transportation of oil by sea.
From 1 <sup>st</sup> to 26 <sup>th</sup> December 2003	- Personal survival techniques ; - Transportation of chemical products.
From 22 <sup>nd</sup> November to 14 <sup>th</sup> December 2004	- Personal survival techniques ; - Marine machine exploitation ; - Global Maritime Distress & Safety System (GMDSS)/RADAR.

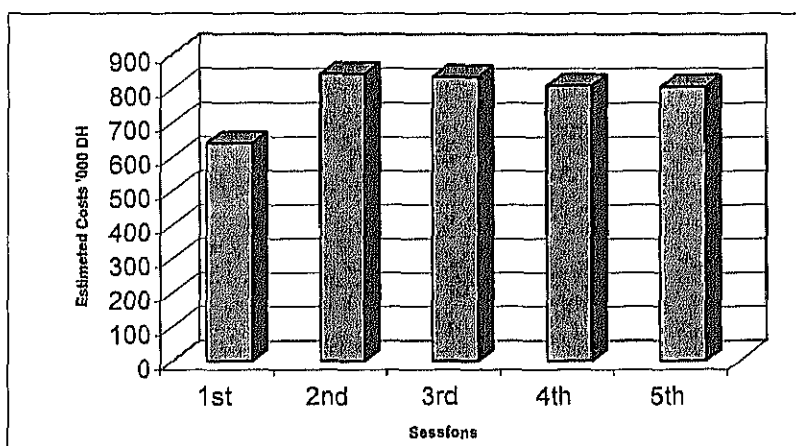
JICA total contribution to the program is 3314 thousand Dh. The allocation of this amount during the five sessions is shown in table 3. The ISEM contribution to the program, as stipulated in the agreement document, corresponds to 15 % of the total program cost. ISEM contribution concerned mainly available instructors, facilities and didactical equipments.

**Tab 3 : Allocation of the JICA financial contribution for the five sessions (Thousands of Dh)**

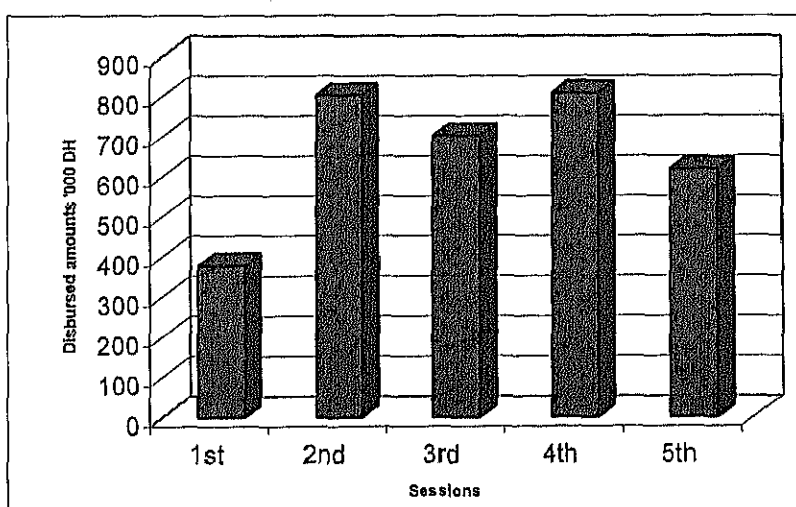
Sessions	1 <sup>st</sup> session	2 <sup>nd</sup> session	3 <sup>rd</sup> session	4 <sup>th</sup> session	*5 <sup>th</sup> session	Total
Estimated budget	641	843	835	810	807	3936
Amounts disbursed	379	804	702	810	619	3314

\* detailed costs of the fifth session are not available

**Graph 2 : Estimated budget**



**Graph 3 : Amounts disbursed**

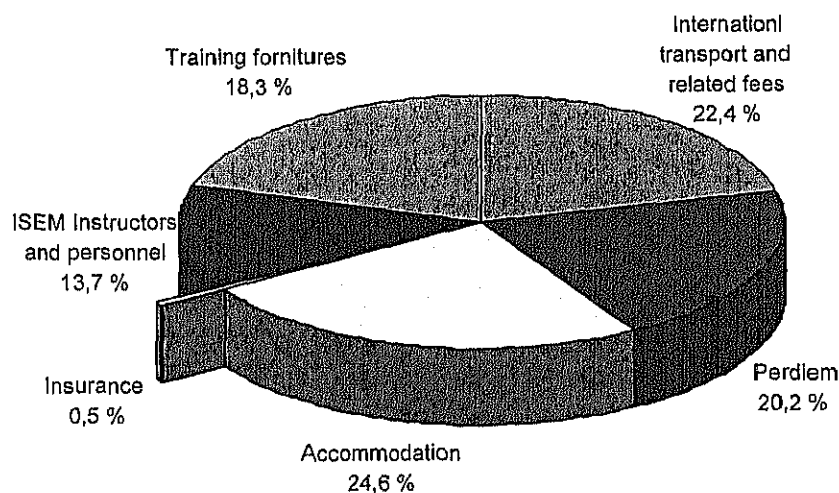


Detailed costs show that the participant's international transport, per diem and accommodation are the most important program expenditures and correspond to 66 % of the total cost. The ISEM personal fees and training furniture shares are respectively 13 % and 20 %.

**Tab 4 : Detailed JICA financial contribution for the five sessions**

Amounts disbursed (thousands of Dh)	1 <sup>st</sup> session	2 <sup>nd</sup> session	3 <sup>rd</sup> session	4 <sup>th</sup> session	5 <sup>th</sup> session	Total	**Share
International transport and related fees	109	185	143	133	173	743	22,4%
Per diem	77	164	133	175	128	671	20,2%
Accommodation	91	209	166	195	153	814	24,6%
Insurance	4	5	3	3	2	17	0,5%
ISEM Instructors and personnel	37	124	103	88	103	455	13,7%
Training material, furniture*	62	117	153	215	60	607	18,3%
<b>Total</b>	<b>379</b>	<b>804</b>	<b>702</b>	<b>810</b>	<b>619</b>	<b>3314</b>	<b>100%</b>

\* see annex for more details; \*\* average shares of the first four sessions

**Graph 4 : Distribution of cost by activities**

### 3. Evaluation Method used

The evaluation study was undertaken with respect to the five criteria stipulated in the terms of reference:

- The relevance of the objectives of the training program in line with the training policies of African countries in the field of merchant marine and with the specific participants needs ;

- The effectiveness of the program in term of appropriateness of the courses, the period of training and the facilities and didactical equipments available at the ISEM ;
- *The efficiency of the quality and quantity of human and material resources used and of the input cost regarding to the training achievements ;*
- The impact of the training on the participant's technical levels and on the reputation of the ISEM ;
- The sustainability of the program achievements in terms of technology transfer to the African countries and the alternatives for the training to be secured.

This analysis allowed to identify the hindering and contributing factors to the training results and, based on those factors, lessons learned and recommendations was formulated.

For that purpose, project documentation was studied and individual and group interviews were conducted with training program managers at the ISEM and the Ministry of Equipment and Transport, with trainees and with the ISEM instructors.

Questionnaires were used for the participants and instructors. Two groups of participants were considered, those attending the 5<sup>th</sup> training session which was taking place at the same time of the evaluation period and the former participants.

A total of 15 participants in the 5<sup>th</sup> session and 10 instructors responded to the questionnaires. Besides, a focus group was held on the 13<sup>th</sup> December 2004 with all the 5<sup>th</sup> session's participants. Questionnaires were faxed to all the ex-participants that had a fax number that did work (i.e. 27), but only one response was received from Algeria (see list in the annex 5 ). It explains why phone calls were made for a sample of 30 participants, but it was possible to get in touch with only six of them that did answer to the questionnaire (see list of these participants in the annex 5).

Meetings were held with ISEM Director, with the responsible of the continuing training department at the ISEM and the Director of professional training at the Ministry of Equipment and Transport.

## **4. Results of evaluation**

### ***4.1. Evaluation of the project in terms of relevance***

The program of this third country training was proposed by a group of experts (Japanese and Moroccans) just after the entry in force of STCW 95, when only five African countries were on the white list (Morocco, Egypt, South Africa, Liberia, Ghana). The main objective was to help them meet the international standards.

Even though merchant marine is very important for African countries economies, this sector is not well developed. Apart from North African countries, the others have not developed merchant fleets. Few of them have merchant marine schools. However, they have port managers, inspectors and administrators that need trainings.

Most African countries having benefited from the training have explicit policy in the merchant marine field (15 of 16). According to the survey, almost all participants think that the training objectives are in line with those of their governments' policy. The participants said unanimously that the contents of training met with their professional needs and with the needs of their organizations. Consequently, it is not surprising if all of them believe that this training is one of the most appropriate means to raise their technical level.

**Selection of participants:** The profiles of participants are various (professors in maritime schools, maritime affairs administrators, maritime safety inspectors, ministries advisors and decision makers). They do have, for most of them, the requirements to follow this program. So they are equally concerned because they are equally responsible for the training of seafarers and for enhancing maritime safety.

Despite the heterogeneity of profiles, quite difficult to avoid in this kind of training where situations vary from a country to another, one third of lecturers think that their level is excellent, and the rest think that their level is good.

#### **4.2. Evaluation of the project in terms of effectiveness**

**Level of satisfaction:** In terms of satisfaction, the survey showed that the majority of ISEM participants were very satisfied (56%) or satisfied (44%). However the near total of those who never benefited from a similar training were very satisfied whereas the near total of those who had a similar experience were just satisfied. This observation is quite interesting because it allows us to relativise the analysis. It means that the ISEM participants who had a similar training had naturally more expectations. Having the ability to compare between the training they just ended in Morocco with trainings in European countries or in Japan, it seems normal that they were more demanding. Nevertheless, it is interesting to notice that, despite their higher level of requirements, no one said that he was moderately satisfied.

**Quality of the training:** The quality issue is at the heart of this evaluation. To have a precise idea about this question, it was necessary to know to what extent ISEM participants assess this quality. Hence, we asked them to choose among five levels of quality ranging from the highest (1) to the lowest level (5). The quality was assessed from nine aspects or angles which range, as shown in the table below, from the content of the courses to the facilities used.

**Tab 5 : Training Quality assessment**

		Level of quality :				
		from the highest (1) to the lowest (5)				
		1	2	3	4	5
1	The content of the courses	12	4			
2	Teaching methods	9	6	1		
3	Lecturers	12	4			
4	Pedagogic tools	10	6			
5	Equipment used in practice	10	6			
6	Documentation	8	6	2		
7	Training organization	9	7			
8	Courses Timing	6	8			
9	Facilities	11	5			



**The content of the courses** is the model courses established by the World Maritime University (WMU), illustrated by videotapes validated by the same university. Participants unanimously consider that the content of the courses is in line with the standards of training certification watch keeping (STCW). This point seems obvious for lecturers since the ISEM made great efforts to belong to the white list. Since its acceptance to this list, to be in line and to stick to these international standards has become a fundamental element of its strategy. Consequently, it could be said that the training objectives are also in line with the policies of the ISEM training strategy. There is a great satisfaction in regard to this aspect since three fourths of participants think that the content of the courses was very good.

**Teaching methods** are very well appreciated by the majority of participants. But, compared to the previous level of satisfaction, it appears that there might be some improvements in this regard. However, some participants expressed during the focus group that they were pleasantly surprised by the comparative teaching methods used in ISEM in that sense that lecturers constantly try to be in line with the recommendations of the world maritime organization. In this regard, one participant added that these teaching methods were more effective than those experienced in Marseille or Nantes training institutes.

**Lecturers' quality** is probably the most important question for assessing the quality training. Three out of four participants scored the highest level. It is interesting to notice that four of six participants who had a similar training also scored the highest level. It suggests that, compared to their colleagues in developed countries, most ISEM lecturers meet the highest international standards. A few participants elaborated on that during the focus group. They did appreciate the active pedagogy of most lecturers who succeeded in taking up the challenge of the heterogeneousness of participants, in the sense that some of them never used radar before the ISEM training. Lecturers were also appreciated because they were very receptive to participant's requests, not hesitating to spend more time with them when needed, and they could keep smiling.

**Pedagogic tools (engine plant, simulators...):** More than 60% of participants consider that the quality of pedagogic tools is of the highest level. This appreciation is, to a less extent, shared by ISEM lecturers. Half of them think that the quality is good, but a few of them think that it should be improved.

In terms of availability, the whole participants said that pedagogic tools were available. It is also the opinion of the lecturers, but near half of them considers that the availability of pedagogic tools was moderate, in the sense that they would have appreciated to have these pedagogic tools at any time.

**Equipment used in practice** got the same level of satisfaction. More than 60% of participants consider the quality of this aspect of the highest level. This opinion is shared by the lecturers since the near total consider the quality as excellent. However, in terms of availability, even though a large majority of them express satisfaction, one third of lecturers think that the equipment availability should be improved.

It should be noted that equipment used during the training is mostly furnished by the JICA during its previous cooperation with ISEM: Radar simulator (1986), engine plant (1996-2000), cargo handling simulator (2000), ECDIS (2000). Morocco furnished other equipment like GMDSS simulator and other laboratories, software and documents.

After the review of these numerous aspects linked to quality, and believing that the high quality observed is the result of many factors, we asked the participants to say to what extent suggested factors contributed to the quality of the training. Factors that contributed mostly to the training quality are, by decreasing order, the global context of training in ISEM, accommodations and the stay, pedagogic tools, didactic material, and the exchange of experiences. Even though exchange of experiences played a very important role for near the half of participants, the fact that this factor is at the end of the scale could be explained by the non homogeneity of the group (see 4.1.). No other factors were suggested.

**Facilities** (accommodations, classes...) were much appreciated since more than two thirds of participants gave to this aspect the highest score.

**The period of training:** Despite the fact that participants come from countries with different climates (tropical, subtropical and Mediterranean ones), in the evaluation done by the ISEM where participants are asked to say to what extent the period of training is suitable, only two participants said that it was poorly suitable or non suitable. Also, it seems that the present period of the training is a good compromise between various expectations and constraints.

**The duration of training** is the issue where there is the lowest consensus. Near half of participants consider it too long (2) or too short (5). Discussions during the focus group showed once again that the group is not that homogeneous. It is not surprising if the less familiar with the techniques used in the modules require more time than those who were used to. On the other hand, many participants said that, according to their responsibilities, it was difficult for them to stay out of their offices for three weeks or more.

**Rate of theory and practice:** It should be pointed that participants and lecturers are unanimous to think that the rate of theory and practice in the course of training program is suitable. This is not surprising since the model courses impose the rate of practical and theoretical trainings.

Most of the opinions expressed by participants are corroborated by the ISEM pedagogic evaluation done at the end of each session. The comparison is quite interesting because the questions are made differently. For each pedagogic aspect, participants had to choose between four options: well suitable, suitable, poorly suitable or non suitable.

The near total of choices made by participants went to the first two options. When we aggregated the scores of each session for all items, we found that the last two options, poorly suitable or non suitable, got a very small percentage. It is interesting to notice that this global percentage decreased between the second and the fifth session, which is not surprising if we accept the notion of the traditional learning curb that occurs in these cases.

**Tab 6 : ISEM pedagogic evaluation**

ISEM Pedagogic evaluation for each of the five sessions					
Percentage of appreciations considered as "poorly suitable" or "non suitable" (a free cell means 0%)					
	Sessions				
	*first	second	third	fourth	Fifth
Duration	32 %	65%	13 %	5%	15 %
Phasing	5 %	12%	7 %	5%	
Equipment			7 %	5%	

Documentation					
Content					
Suitability to employer' needs				5%	
Practice				11%	
Program				5%	
Relationship participants/lecturers				5%	
Usefulness					
Information	10 %	45%		5%	
Accommodations	9 %		7 %		
Lecturers			13 %	5%	
<b>Total</b>	<b>5 %</b>	<b>9%</b>	<b>4 %</b>	<b>4%</b>	<b>1 %</b>

*\* Questions of the first session are not exactly the same than those of the following sessions*

### 4.3. Evaluation of the project in terms of efficiency

Participants unanimously think that human and material resources were in sufficient quantity and quality timely input for the execution of the training. The same unanimity is shared by lecturers. According to all lecturers, the training program was carried out almost as planned. The small changes that occurred were due to Ramadan (the holy month) and to field visits that could not take place as planned.

In the whole, the training result corresponds to input cost. As seen above (see table 4), the input cost is mainly used for international transport, per diems, accommodations. The costs exclusively devoted to the pedagogic training represent only one third of the total input cost. It mainly includes:

- i) Training material and furniture (20% of the total input cost) whose a share (less than a third of the training furniture cost) helped buy a radar ;
- ii) ISEM lecturers and personnel indemnities represent 13% of the total input cost. According to ISEM officials, this percentage is very low compared to percentages observed in other training institutes in European countries (more than one third).

Human, material and input costs fully justify the project achievements. The training cost per participant is, on average, 26 000 Dh (around 3000 US \$), which is, by other international training standards, very low. Think about the input cost in terms of training effect, efficiency of this training course was evaluated high generally.

The first session budget, proposed as a model by JICA, helped adjust budget costs to real costs. Taking into consideration the experience of this first budget where there was an important remainder amount of money (41% of the initial budget), the following budgets were much more balanced in the sense that the remainder amounts of money ranged between 0% and 16% of the initial budgets (see annex). The remainder amounts of money are mainly explained by the fact that, for the reasons seen above, particular to some African countries, some candidates from these countries could not participate at the trainings. During the fourth session, as said above, JICA and ISEM agreed to devote the remainder money (169 000 Dh) to the buying of a radar to reinforce the level of equipment of the training program.

The recorded variations of the different item costs are mainly explained by the length of the trainings, except for the differences between the first and the second year. In fact, participants were supposed to be given indemnities and to use ISEM housing. But it appeared more convenient to host participants in a downtown hotel. This change explains the additional cost for the housing item since the second session.

**Cost effectiveness:** It is always possible to lower these costs, but the risk is that it might be at the expense of the training quality. According to the above financial data, it does not seem wise to suggest cost reductions. Furthermore, it seems well indicated to introduce some additional incentives in order to improve the efficiency. It could be the case of lecturers and personnel indemnities for the sustainability of the personal efforts. Some kind of link could be established to make sure, for instance, that lecturers commit themselves to give documentation to participants at the start of the training (see below). On the other hand, from the sustainability point of view, the alternative means to attain the same achievements at a lower cost is to convince other parties to contribute more (financially speaking) to the training. We mean Moroccan government, AMCI and participating countries.

**Documentation** issue, relatively to the others' ones, got the lowest score. Despite the fact that half of participants gave it the highest score, two of them think that the quality is moderate. Discussions during the focus group showed that ISEM should make some efforts in this field. A few participants said that they would have appreciated if they had got, since the start of the training, a folder encompassing the essential of the documentation. This would have allowed them to have a global picture of the contents of the courses and, on the other hand, to be able to review it in order to be better prepared for the courses. An effort has also to be done by ISEM for a better availability of documentation: one fourth of participants' judge that it was not sufficiently available.

**Training organization** seems to be well appreciated since more than half of participants think it was very well organized. The same unanimity is expressed by the lecturers since half of them think that the organization was excellent.

**Courses Timetable** is the only aspect where majority of participants said it was well done rather than very well done. It seems that the *simultaneous organization of themes* ("modules" in French) makes it difficult to have a perfect timetable.

#### **4.4. Evaluation of the project in terms of impact**

The participants think that the ISEM training contributed significantly to the improvement of their technical skills and the change of mentalities. The ways they think they could use the benefits of their training, once back in their countries, are, for instance: i) to improve the everyday work's methods; ii) to change mentalities; iii) to apply the examples of training;

Asked to tell what special activities they plan to perform after returning their countries, most of participants said that they will utilize their training results by the improvement of everyday work technology and by transfer to a coworker. Only half of them intend to circulate training documents. During the focus group, some participants considered the documentation as a personal tool they have neither the means nor the time to duplicate.

Less than one fourth of participants plan to organize continuous training or to hold seminars. Because of the scarcity of means of many participants' employers, it is not surprising if those who plan to hold seminars or organize continuous training are heads of departments. No other

activities were suggested by participants except the holding of information meetings, which seems the less demanding and the less costly.

Asked to tell if the ISEM training had any negative impact, all participants found none except one who pointed at the lack of a precise phasing program with a detailed schedule of courses, field visits, excursions...

The majority of participants did not know the ISEM before their training in Morocco. However, their judgments about this institute are not less positive than those who had information about it. Excellent, very good institute, satisfactory, technically high level, very good technical output are some of the opinions expressed by the participants. After five sessions of training, and thanks in particular to the "mouth to ear" information circulation, it does not seem exaggerated to think that the ISEM reputation has been improving in African countries.

Despite its low visibility in Morocco as a training institute, it seems very likely that the ISEM reputation improved also in Morocco. In fact, as for many other fields, sectors, organizations or persons, in Morocco, recognition of excellence or of good achievements come very often from abroad or from a foreign organization. The fact that the Japanese cooperation, known for its technical cooperation project until March 2001 and this 5 year trilateral training program, in addition to positive echoes during the last five years, certainly helped ISEM improve its reputation in Morocco. This reputation was also improved in some foreign embassies in Rabat in the sense that, during their visits to ISEM, cooperation officials from Canada, France..., quite impressed by the cost-effectiveness of this JICA – ISEM training program, said that it was an interesting trilateral cooperation example to draw one's inspiration. This feeling is corroborated by Moroccan high official and ship owners who express some kind of pride of the ISEM.

#### ***4.5. Evaluation of the project in terms of sustainability***

All ISEM lecturers and administrators think that the present training could be maintained because the capacity (organization system, qualified personnel arrangement, financial capability, etc.) of the ISEM training is secured.

By its self-budget, ISEM is about to get a full mission simulator (a bridge, a navigational communication and pollution prevention and combating simulator). This government public investment is estimated at four millions Dh (around 476 000 US \$). The public advertisement was published in local newspapers in the end of October 2004 (see annex). Thus, ISEM makes an effort to ensure its sustainability.

However, despite the recent investment efforts, due to limited investment budgets, the ISEM would be facing problems of getting additional equipments in order to maintain technologic update. In order to continue to realize the Third country training program, it is difficult to finance totally by the Moroccan government and by African countries. Thus Japanese continuous assistance, additional financial support by the Moroccan government is needed. And also, to assure the sustainability, the contribution of the beneficiary countries to some extent is desirable.

#### ***4.6. Factors promoting impact and sustainability***

Based on the questionnaire results, the great majority of the participants have the attention to assure the *promoting of the sustainability and the impact of learning during the training at ISEM*. They would like their institutions to make profit of this acquisition once they are backing home. The dissemination of these knowledge and competences will be done through:

- Diffusion of the training documents;
- Transfer of technology to work colleagues;
- Improvement of the work.

The factors that promoted the training effect could be summarized as follow:

- Availability of ISEM qualified instructors in the merchant marine field ;
- Availability of didactical equipment, which allowed real simulations;
- Proactive participants and their maritime background;
- Well organized sessions by the training organization;
- Long ISEM experience in the field of merchant marine training;
- JICA technical and financial assistance;
- The AMCI assistance (diplomatic and official channels for participant's invitations, assistance in case of accidents or non expected events: case of a participant from Côte d'Ivoire who could no go back home during the civil war).

#### **4.7. Factors inhibiting impact and sustainability**

The main factor of sustainability of the program lies on the commitments of the partners. However, even though it is supposed that the program could be totally financed by the Moroccan government, which seems presently unlikely, the ISEM would be facing problems of getting additional equipments and maintaining technologic update. Despite the recent efforts made by this institute in this regard (buying of a full mission simulator), it appears that, due to limited public investment budgets devoted to it, the ISEM will have difficulties to get needed equipments, as :

- i) « un simulateur de passerelle intégrée (IBS) » ;
- ii) « un simulateur de machine marine » ;
- iii) « un bassin d'essais ou bassin de carène pour l'expertise » ;
- iv) « un complément du simulateur de manutention liquide ».

The ISEM hopes that the acquisition of these equipments in the framework of a new Moroccan Japanese maritime cooperation program could, notably, enable it to strengthen and diversify the training courses it provides.

The major factor inhibiting the impact of the program is, as seen above, the difficulties of the know-how transfer to co-workers that participants face once back in their countries. This is caused by the problems of work environment, budget and motivation etc. in their organizations. Another factor that could, to some extent, inhibit the impact of the training program is the heterogeneous participants' levels addressed by the participants and the ISEM managers and instructors during the interviews. This causes difficulties in setting the course level. However, if it seems useful to precise the requirements of participants in order to have a more homogeneous group, experience shows that, in this kind of international trainings, not only it is difficult to avoid level differences, but many could argue that one of the purposes of these trainings is to precisely equalize (or level by the top) these differences.

#### **4.8. Other matters related to the evaluation**

The results of the evaluation suggest that most of the participants have acquired the use of the necessary tools for a good organisation and management of their work. So they are able to contribute to reforms and improvements in their field and they can also transmit their knowledge and competences to their colleagues thanks to the ISEM training program.

However, it is important to wonder if the participants will really make into practice these competences in their countries. This question was addressed during the focus group. Participants think that this issue is relevant because they know that, once back in their countries, new acquired competences might have a poor impact because their work context does not always encourage the transfer of these competences. For them, the omission occurs especially when they have not the opportunities to implement what they learned.

Participants are also aware that the transfer of competences depends on their motivations, values and personalities and on their professional perspectives. They know that the success of the competence's transfer depends on their commitment. Consequently, one can easily understand the difficulties we faced in order to observe and measure the real transfer of competences to the colleagues' participants. It explains the usefulness of the questionnaire sent to former participants. In this regard, we feel some frustration in the sense that we got only six answers.

Despite the fact that it is not, statistically speaking, a significant number of answers, the analysis of these answers largely corroborates the participants' appreciations presented above in the sense that they confirm the usefulness and the quality of the training. With regard to the impact, there is a positive impact on the personal side in terms of the improvement of their daily work. However, when it comes to assess the impact on the participants' organisations they belong to, it should be noticed that the impact is limited because it concerned mainly dissemination of documentation. All did insist on the necessity to participate in this kind of training in order to be in line with STCW requirements.

## 5. Conclusions

The ISEM training program was, generally, very successful. Conclusions are summarized as follows;

- In terms of **relevance**: Training objectives are in line with those of African governments' policy.
- In terms of **effectiveness**: Most participants considered that the quality of training is high and adequate. Teaching methods were much appreciated and lecturers meet the highest international standards.
- In terms of **efficiency**: The training program was carried out almost as planned. It corresponds to input cost. Human, material and input costs fully justify the project achievements. The training cost of a participant is, by international standards, very low.
- In terms of **impact**: The ISEM training contributed significantly to the improvement of participants' technical skills. The Japanese cooperation and this third country training program helped ISEM to improve its reputation.
- In terms of **sustainability**: The ISEM training is secured. ISEM makes an effort to secure the facilities, but in order to strengthen the sustainability, additional support by the Moroccan government and contribution from the beneficiary countries are needed.

However, in order to have better achievements, some elements have to be reinforced (a less heterogeneity of participant profiles, a better documentation, more examples of the lectures given by the Senior Volunteer on "the causes of Japan development" and by the ISEM director on "the port state control of ships").

For the coming years, participating countries still have training needs. It is the opinion of the near total of participants. This is not surprising since highly qualified merchant marine human resources are presently very limited in number of African countries. All maritime countries must apply the STCW convention and its new code from their adoption by the marine world. STCW requires additional trainings and certificates on safety like on:

- Survival techniques at sea;
- Global maritime safety system operation;
- Radar and ARPA system operation;
- Tanker's operation and pollution prevention;
- Chemical tanker's operation and pollution prevention

Furthermore, training needs result from the necessity of African countries to:

- Apply totally or partially Marpol 73/78 convention and its annexes, and to be able to prevent and control maritime pollutions in their coasts and waters from their own ships or from those operating in their waters.
- Insure a minimum capability of search and rescue in their marine waters to be conform to international search and rescue regulation;
- Insure flag state controls and port state controls to insure their ships and their ports are well manned, equipped and operated for a safer navigation and clean seas;

Therefore, it is desirable to continue this kind of third country training program.



## 6. Recommendations

Many recommendations were formulated by the participants in the questionnaire and during the meetings with the ISEM and the Ministry of Equipment and Transport managers and with the focus group. However, based on the analysis of the whole evaluation process, we suggest:

- Improvement of the effectiveness of the training:
  - in order to have better achievements, more homogenize the group of participants
  - give to the participants the content of the modules before the beginning of the courses to allow them to prepare in advance (course folders , CD ROM);
  - *reinforce the capacities of Moroccan lecturers*
  - use, if possible, international networks to diffuse modules and the acts of the seminars (*“maquettes pédagogiques”*, sharing task system).
- Sustainability::
  - to maintain technological update, effort should be made to have necessary equipment continuously
  - in order to continue to realize the third country training program in a sustainable manner, additional financial support by the Moroccan government and the contribution of the beneficiary countries to some extent have to be examined

## 7. Lessons learned

There are two kinds of lessons learned from this training program:

1) **The first kind of lessons concerns mainly the training program. They are, as follow :**

- To avoid heterogeneity of the participants, it seems useful to write clearly in the “General information” about the requirements of the participants. This helps to improve selection procedure of the candidates.
- To reinforce the technical transfer after the participants return to their home countries, it seems useful to write clearly in the “General information” about the expectations of technical transfer, and about the execution of evaluation survey that will be carried out by the training institution in the near future.

2) **The second kind of lessons concerns mainly the ISEM.**

In the maritime field, training is one of the rare segments where Morocco is active. The promotion of research in higher public education institutions in the frame of the new reform of the university and the larger economic openness of Morocco invite the ISEM to play larger role of advice and research. Thanks to this Moroccan Japanese training program, ISEM improved its know-how and its image. In this regard, lessons are:

- *A targeted cooperation in the training field could have great impacts for all partners involved. The ISEM program training is the illustration of that lesson. ISEM has the potential to be more active in this field.*
- The future of the ISEM depends, in a large extent, on its own strategy. This strategy, in the Moroccan context (liberalisation, competition, etc.), should be, as explained above, research oriented. It appears that it is one of the best ways to capitalise on and to mobilize the good expertise of the Moroccan human resources in the merchant marine field.
- The most important things in the Moroccan context is not necessarily financing but the ability to have well defined objectives, a good leadership and incentives in order to mobilize human resources. For this purpose, a targeted cooperation program could help the ISEM define its new objectives as a training and research institute.

## **8. Annexes**

Annex 1 : Evaluation Grid

Criteria	Evaluation Questions		Achievement criteria/measures	Data needed	Data source	Data collection methods
	Main questions	Sub questions				
RELEVANCE	Do the project objectives meet with the needs of beneficiaries ?	Was the training objective in line with the policies of the participants countries ?	Countries marine merchant training strategies. STCW convention's requirements.		Participants to the training STCW convention	Questionnaire survey Literature review
		Were the training objectives in line with the policies of the ISEM training strategy ?	ISEM training strategy. STCW convention's requirements.		ISEM STCW convention	Interviews
		Had the contents of training met with the needs of participants ?		Percentage of satisfied participants	Participants to the training	Questionnaire survey
		Were the participants satisfied ? How many ?			Participants to the training ISEM	Literature review Questionnaire survey
		Was training appropriate as a means which raises the technical level of participants ?		View point of participants and project manager at ISEM	Participants to the training ISEM	Literature review Questionnaire survey
		Was selection of participants appropriate ?		Selection criteria and profiles of participants.	ISEM Foreign Affairs Ministry	Interviews
		Were the contents of training, the level, and the depth suitable ?		Comparison with SRCW certification requirements.	ISEM	Interviews
		Were lecturer's teaching methods suitable ?			ISEM	Interviews
		Was the shares of theory and practice in the course of training suitable ?			Participants ISEM	Questionnaire survey Interviews
		Was the period of training suitable ?			Participants ISEM	Questionnaire survey
EFFECTIVENESS	Were the participant skills in the field of marine training and safety improved by the project ?	Were the used facilities and equipments enough in order to obtain the training effect ?		Quantity and quality of facilities and equipments provided by the ISEM	Participants ISEM	Interviews Questionnaire survey
		Could the ISEM accept the expected number of participants? If not, what was the reason ?		ISEM capacity of training	ISEM	Interviews
		What were the main factors that inhibit or promote the effect of the training ?			Participants ISEM	Interviews Questionnaire survey
		Is there any point that the contents of training should be improved ?			Participants ISEM	Interviews Questionnaire survey

Criteria	Evaluation Questions		Achievement criteria/measures	Data needed	Data source	Data collection methods
	Main questions	Sub questions				
EFFICIENCY	Do the human, material and input costs justify the project achievements?	Were human and material resources of sufficient quantity and quality timely input for the execution of the training?		Adequate ISEM staff and instructors. Quantity and quality of didactical equipment.	ISEM Participants	Interviews. Questionnaire survey.
		Was the training carried out at the right time?		Point of view of participants, instructors and ISEM staff	ISEM Participants	Interview Questionnaire survey
		Was the training program carried out as planned? Wasn't there any frequent change of the program during the course? If yes, why? What are the factors that contributed to or inhibited the efficient execution of the training?	Planned program	Frequency and causes of program changes.	ISEM Participants	Interviews. Questionnaire survey. Project documents.
		Is the training result corresponding to input cost? Wasn't any alternative means to attain at lower cost? Was the higher achievement realized at the same cost?	Comparison with similar trainings held by the ISEM	Total training cost. Training cost per participant.	ISEM	Interviews Project documents
IMPACT	Is there any positive or negative influence of the project achievements on the participant's work and on the ISEM training?	How do the participants utilize the training result after returning their country? Did they perform any special activity (training documents circulation, technology transfer to a coworker, holding seminar, improvement of everyday work, etc.)? Were there any factors that did not help spreading the training result?		Activities that participants are carrying out in their home countries.	Participants of the 2004-training-course Participants of the previous courses	Questionnaire survey
		Did the technical level of the participant's workplace improve by the training result? If so, how?		View point of participants	Participants	Questionnaire survey
		Did the reputation of ISEM improve in Morocco and in African countries?	Growing number of candidates	Number of candidates to ISEM training programs over the last 5 years.	ISEM	Interviews ISEM documents
		Wasn't there any negative impact? If yes, what is it?				

Criteria	Evaluation Questions		Achievement criteria/measures	Data needed	Data source	Data collection methods
	Main questions	Sub questions				
<b>SUSTAINABILITY</b>	<p>Will the ISEM training be maintained ?</p>	<p>Is the capacity (organization system, qualified personnel arrangement, financial capability, etc.) of the ISEM training secured? Is there any chance of being expanded from now on ? Is there any factor of inhibition?</p>		<p>Qualified staff. Equipments and facilities. Accommodation arrangements Financial capacity.</p>	ISEM	Interviews. ISEM documents.
		<p>Are there any facilities and equipments, etc. prepared by the ISEM self-budget ?</p>		<p>Facilities and equipments prepared by the ISEM</p>	ISEM	Interviews. project documents.
		<p>Is there any system which the participants can continue and develop a training result after returning their countries ? What are the difficulties expected ?</p>		<p>Points of view of the participants</p>	Participants	Questionnaire survey
		<p>Are there any training needs from participating countries in the future ?</p>		<p>Training needs</p>	Participants	Questionnaire survey
		<p>What are the financing alternatives of the program in the future ?</p>		<p>Financing alternatives</p>	Transport Ministry Foreign Affairs Ministry. ISEM.	Interviews

Annex 2 : Evaluation study Time Schedule

Tasks	November					December																					
	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Meeting with JICA staff																											
Task planning																											
Meeting with ISEM staff																											
Elaboration of the questionnaires																											
Survey execution																											
Exploitation of questionnaire data																											
Meeting with project managers in MT, MAE, ISEM *																											
Consultant "brainstorming"																											
Additional data collecting																											
Evaluation report draft elaboration																											
Evaluation summary Sheet draft elaboration																											
Documents delivering																											

- 24<sup>th</sup> December 2005 : Submission on the Draft Evaluation report to the JICA

- 21<sup>st</sup> January 2005 : Comment on the Draft by the JICA

- 22<sup>nd</sup> January to 10 February 2005 : Revision of the Draft by the consultants

- 11<sup>th</sup> February 2005 : Submission of Final report to the JICA

## Annex 3 : Detailed costs

	1st Session		2nd Session		3rd Session				
	Allocated	Disbursed	Undisbursed	Allocated	Disbursed	Undisbursed	Allocated	Disbursed	Undisbursed
Frais de transport aérien	290 432,00	98 000,00	192 432,00	165 900,00	177 134,00	-11 234,00	179 000,00	133 599,00	45 401,00
Indemnité des participants	105 000,00	77 350,00	27 650,00	203 000,00	164 500,00	38 500,00	189 000,00	133 240,00	55 760,00
Allocation de voyage	11 760,00	9 800,00	1 960,00	11 760,00	7 840,00	3 920,00	17 640,00	9 800,00	7 840,00
Hébergement	91 000,00	91 000,00		210 000,00	208 884,00	1 116,00	189 000,00	165 600,00	23 400,00
Assurance	5 600,00	3 937,24	1 662,76	5 600,00	4 675,80	924,20	5 600,00	2 590,98	3 009,02
Indemnité des intervenants	21 600,00	21 600,00		81 900,00	81 900,00		50 400,00	50 400,00	
Frais du personnel de service	15 600,00	15 600,00		41 700,00	41 700,00		52 900,00	52 900,00	
Matières consommables				15 000,00	15 001,25	-1,25	15 000,00	30 000,00	-15 000,00
Cérémonie	28 000,00	15 329,00	12 671,00	10 000,00	10 000,00		22 500,00	18 900,00	3 600,00
Impression	40 000,00	15 281,40	24 718,60	34 000,00	33 777,50	222,50	10 000,00	9 788,00	212,00
Elaboration de documents	32 000,00	31 563,25	436,75	35 000,00	34 834,80	165,20	35 000,00	34 903,50	96,50
Imprévus				2 000,00	1 972,02	27,98	2 500,00	2 491,30	8,70
Frais divers de gestion des coordinateurs				13 140,00	13 140,00		15 000,00	3 660,00	11 340,00
Achat de tenues pour les stagiaires				10 000,00	7 961,00	2 039,00	7 000,00	7 005,00	-5,00
Achat de matériel pour la formation							40 000,00	39 852,00	148,00
Voyage d'étude							4 000,00	6 885,00	-2 885,00
Divers				4 000,00	568,00	3 432,00			
Total	640 992,00	379 460,89	261 531,11	843 000,00	803 888,37	39 111,63	834 540,00	701 614,78	132 925,22



## Detailed costs

	4th Session			5 <sup>th</sup> session		
	Allocated	Disbursed	Undisbursed	Allocated	Disbursed	Undisbursed
Frais de transport aérien	169 590,00	131 514,00	38 076,00	190 850,00	167 597,00	23 253,00
Indemnités des participants	210 000,00	175 000,00	35 000,00	175 000,00	128 450,00	46 550,00
Allocations de voyage	11 760,00	1 960,00	9 800,00	13 720,00	5 880,00	7 840,00
Hébergement hôtel	264 000,00	195 200,00	68 800,00	201 600,00	152 465,00	49 135,00
Assurance des participants	5 000,00	2 591,20	2 408,80	4 000,00	2 296,00	1 704,00
Indemnités des intervenants	46 800,00	46 800,00		53 100,00	53 100,00	0
Indemnités du personnel	41 600,00	41 600,00		50 000,00	50 000,00	0
Matières consommables	37 000,00	27 435,60	9 564,40	50 000,00	7 088,00	42 912,00
Cérémonies	5 000,00	2 780,00	2 220,00	5 000,00	4 989,91	10,09
Frais d'impression	8 000,00	8 000,00		15 000,00	13 858,00	1 142,00
Elaboration de documents	10 000,00	7 020,00	2 980,00	37 500,00	29 062,82	8 437,18
Imprévus	1 000,00	909,00	91,00	2 000,00	1 209,25	790,75
Frais divers de gestion des coordinateurs						
Achat de tenues pour les stagiaires						
Achat de matériel pour la formation		168 940,20	-168 940,20			
Voyage d'étude				9 600,00	2 524,00	7 076,00
Divers						
Total	809 750,00	809 750,00	0,00	807 370,00	618 519,98	188 850,02

**Annex 4 : List of tables**

Tab 1 : Regional distribution of participants for the five sessions

Tab 2 : Training program of the five sessions

Tab 3 : Allocation of the JICA financial contribution for the five sessions (*Thousands of Dh*)

Tab 4 : Detailed JICA financial contribution for the five sessions

Tab 5 : Training Quality assessment

Tab 6 : ISEM pedagogic evaluation

**Annex 5 : List of Graphics**

Graph 1 : Regional distribution of participants

Graph 2 : Estimated budget

Graph 3 : Amounts disbursed

Graph 4 : Distribution of cost by activities

## Annex 6 : List of contacts

### ISEM

#### ISEM Staff

- M. Abdelaziz BEHIDA : ISEM Director
- M. Ali BERNI : Responsible of the continuing training at the ISEM and Instructor
- M. Abdelhak NAGUIB : Responsible of studies and instructor
- M. Mohamed OUALI : General secretary

#### ISEM Lecturers

- Abdelaziz BEHIDA
- Ali BERNI
- Abdelhak NAGUIB
- Abderrahim BELKAD
- Abdelouahed MHADI
- Aziz NIRI
- El Moustapha BOUDLAL
- Mustapha FARAH
- Mohamed Bechtaoui
- Khalid EL HAD
- El Hai BELAKHOUI
- Tahar LAFHAL
- Mohamed TAHIRI
- Atlassi ALAOUI
- Abdelilah lamtiri LAARIF
- Abdelilah CHMITI
- Amina BOUCHAABA

#### Senior Volunteers

- Tamoji KAWAI
- Hidehiko KASHIO
- Seikyo KINJO

#### Ministry of Equipment and Transport

- M. Mustapha HAMMOU : Director of professional training

Annex 7 : Lists of ex-participants contactedEX PARTICIPANTS CONTACTED BY FAX

NAME	COUNTRY	N° FAX	OBSERVATION
MODOU DIONE	SENEGAL	221 823 36 03	Fax envoyé mais sans réponse
DIOP MOHAMED	SENEGAL	221 822 44 98	Fax envoyé mais sans réponse
OUSMANE SYLIA	SENEGAL	221 823 36 06	Fax envoyé mais sans réponse
GUEYE MAMADOU	SENEGAL	221 822 44 98	Fax envoyé mais sans réponse
SALIHOU NDOYE	SENEGAL	221 822 44 89	Faux numéro
OUSMANE DIALLO	SENEGAL	221 823 36 06	Fax envoyé mais sans réponse
MAMOUDOU LY	SENEGAL	221 823 36 06	Fax envoyé mais sans réponse
CHARLES ANAGONOU	BENIN	229 316 845	Fax envoyé mais sans réponse
PASCAL KOUMAGNON	BENIN	229 312 891	Fax envoyé mais sans réponse
GHOUHOUNCOCO	BENIN	229 310 978	Fax envoyé mais sans réponse
CHARLES ANAGONOU	BENIN	229 312 891	Fax envoyé mais sans réponse
TAIROU BOUKARI	BENIN	229 315 845	Fax envoyé mais sans réponse
GOUNOU KAKANI	BENIN	229 315 845	Fax envoyé mais sans réponse
OUSSOU KPEVI	BENIN	229 315 845	Fax envoyé mais sans réponse
CHARLES SEGBEY	BENIN	229 315 845	Fax envoyé mais sans réponse
BACHIR LAATIL	TUNISIE	216 71 735 812	Fax envoyé mais sans réponse
MONGI BEN NASR	TUNISIE	216 71 735 812	Fax envoyé mais sans réponse
KHALED M'SALEM	TUNISIE	216 71 735 812	Fax envoyé mais sans réponse
KHEIR EDDINE SGHAIER	TUNISIE	216 71 735 812	Fax envoyé mais sans réponse
MOUNIR CHAABANE	TUNISIE	216 71 735 812	Fax envoyé mais sans réponse
SABRI BECHIR	TUNISIE	216 71 287 414	Faux numéro
EL HANNACHI SAMI	TUNISIE	216 71 735 812	Faux numéro
RIAHI FAOUZI	TUNISIE	216 71 735 812	Faux numéro
MOHAMED YACoub	ALGERIE	213 523 25 80	Faux numéro
REDOUANE HERMOUCHE	ALGERIE	213 24 46 46 48	Fax envoyé mais sans réponse
FODIL TIGHILT	ALGERIE	213 24 46 46 48	Réponse par Fedila Mokrane
MOSTAFA BENDAHMANE	ALGERIE	213 45 26 81 72	Faux numéro
NTUTUMU NCULU	GUNEE EQ.	240 925 15	Faux numéro
OYONO ANGEE	GUINEE EQ.	240 935 02	Faux numéro
MITIGO PEDRO	GUINEE EQ.	240 09 10 07	Faux numéro
MAMADOU DIALLO	GUINEE CO.	224 41 39 70	Fax envoyé mais sans réponse
NOUNKE KEUTA	GUINEE CO.	224 41 39 70	Fax envoyé mais sans réponse
AHMEDOU CHERIF	MAURITANIE	222 25 31 46	Faux numéro
WANE DEMBA	MAURITANIE	222 525 44 76	Fax envoyé mais sans réponse
OULD MY HACEN	MAURITANIE	222 574 60 28	Toujours occupé
OULD NAJITOU	MAURITANIE	222 74 63 12	Faux numéro
AHMED RAMDAN	MAURITANIE	222 74 63 12	Faux numéro
OULD YAHYA BABANA	MAURITANIE	222 525 99 00	Faux numéro
SOULEYMANE SIKAO	TOGO	228 222 17 96	Toujours occupé
EKOUE KOUEVIDJIN	TOGO	228 222 17 96	Fax ne se transmet pas
EKUE-AKPA	TOGO	228 222 28 06	Fax ne se transmet pas
ANTOINE KOUAKOU	COTE D'IVOIRE	225 20 21 53 17	Fax envoyé mais sans réponse

SEKONGO YARIDJOUMA	COTE D'IVOIRE	225 20 21 53 17	Fax envoyé mais sans réponse
SALIHOU	CAMEROUN	237 342 89 56	Fax ne se transmet pas
WEPANDJE	CAMEROUN	237 342 89 56	Fax ne se transmet pas
NGO BISOI	CAMEROUN	237 342 29 33	Fax envoyé mais sans réponse
VICTOR FONEPOP	CAMEROUN	237 342 29 33	Fax envoyé mais sans réponse
NGOE JONAS ITOE	CAMEROUN	237 333 27 23	Faux numéro
RANDRIANAVONY	MADAGASCAR	20 22 215 82	Faux numéro
ADEN HARED	DJIBOUTI	253 34 19 99	Faux numéro
AHMED SALEM	DJIBOUTI	253 34 19 99	Faux numéro
YOUSOUF HERIS	DJIBOUTI	253 34 19 99	Faux numéro
SAMIREH ABIDI	DJIBOUTI	253 355 975	Faux numéro
NDANG-EDOU	GABON	214 700 745	Fax ne se transmet pas
TCHIBINDA-IPANDY	GABON	214 76 01 85	Fax ne se transmet pas

#### EX-PARTICIPANTS CONTACTED BY PHONE

<b>NAME</b>	<b>COUNTRY</b>	<b>SESSION</b>	<b>N° TELE</b>	<b>OBSERVATION</b>
ABDOULAYE DIAGNE	SENEGAL	1	221 821 36 43	Questionnaire rempli par téléphone
MODOU DIONE	SENEGAL	2	221 849 45 45	En congé
GUEYE MAMADOU	SENEGAL	3	221 822 44 98	Ne répond pas
MAMADOU MAMOUDOU LY	SENEGAL	4	221 849 45 45	Ne répond pas
BA ALHASSANE	SENEGAL	1 et 4	221 821 36 43	Questionnaire rempli par téléphone
BECHIR LAATIL	TUNISIE	1 et 3	216 71 735 300	Questionnaire rempli par téléphone
FHIMA AMOR	TUNISIE	2	216 24 31 731	Ne répond pas
ADESSALEM BEN BELGACEM	TUNISIE	2	216 270 722	Ne répond pas
KHALED M'SALEM	TUNISIE	3	216 75 272 366	Ne répond pas
KHEIR EDDINE SGHAEIR	TUNISIE	4	216 71 735 300	A changé de poste
MOUNIR CHAABANE	TUNISIE	4	216 71 735 300	En mission au moment des appels
MOHAMED YAGOUB	ALGERIE	2	213 452 325 92	Numéro Toujours occupé
REDOUANE HERMOUCHE	ALGERIE	4	213 24 46 19 71	Questionnaire rempli par téléphone
FODIL TILGHIT	ALGERIE	4	213 71 15 11 73	Numéro toujours occupé
MOHAMED LEMINE OULD AHMEDOU CHERIF	MAURITANIE	3 et 4	222 25 78 93	Faux numéro
EL ARBY OULED MOULAY HACEN	MAURITANIE	2	222 641 03 60	Faux numéro
GUIG OULD SASS	MAURITANIE	2	222 57 46 979	Téléphone momentanément interrompu
AHMED OULD	MAURITANIE	1	222 74 56 26	Téléphone momentanément

MOHAMED OULD NAJITOU				interrompu
EL MOCTAR OULD AHMED RAMDANE	MAURITANIE	1	222 74 56 26	Téléphone momentanément interrompu
CHARLES ANAGONOU	BENIN	2	229 315 845	Téléphone momentanément interrompu
PASCAL KOUMAGNON	BENIN	1 et 3	229 31 28 90	Questionnaire rempli par téléphone
GILBERT GOUNHOUN	BENIN	1m 2 et 3	229 31 32 87	Questionnaire rempli par téléphone
EMMANUEL WEPANDJE	CAMEROUN	3	237 342 03 88	Ne répond pas
GERTRUDE NGO BISOI	CAMEROUN	4	237 342 89 56	Ne répond pas
VICTOR FONEPOP	CAMEROUN	4	237 342 86 56	Ne répond pas
SOULEYMANE SIKAO	TOGO	1 et 2	228 21 41 61	Ligne toujours occupée
Ekoue KOUEVIDJIN	TOGO	2 et 3	228 21 41 61	Ligne toujours occupée
Thierry Mamy RANDRIANAVONY	MADAGASC AR	2	20 22 243 87	Ne répond pas
Hassane ADEN HARED	DJIBOUTI	4	253 35 34 75	Ne répond pas
Salem Ahmed SALEM	DJIBOUTI	2	253 35 34 75	Ne répond pas







