

添付資料


- 添付資料-1 ステアリング・コミッティ及びテクニカル・コミッティ
議事録
 - 添付資料-2 カウンターパート一覧表
 - 添付資料-3 日本人専門家の派遣記録
 - 添付資料-4 本邦研修の記録
 - 添付資料-5 供与機材の品目リスト
 - 添付資料-6 携行機材の品目リスト
 - 添付資料-7 プロジェクト・デザイン・マトリックス(PDM)及び
活動計画 (PO) (2008年11月23日合意)
 - 添付資料-8 活動計画 (PO) (2009年4月13日 改訂)
 - 添付資料-9 プロジェクト・デザイン・マトリックス(PDM)
(2010年8月22日 改訂)
-

添付資料-1 ステアリング・コミッティ及びテクニカル・コミッティ議事録


添付資料 1-1 第1回ステアリング・コミッティ議事録

**Minutes of Meeting
of
The First Steering Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**


Damascus, 13th of April, 2009



Dr. Akram Al-Khouri
Director General
General Commission for Environmental
Affairs, Ministry of Local Administration
and Environment



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency



Eng. Hilal Al-Attrash
Minister
Ministry of Local Administration and
Environment

Witnessed by



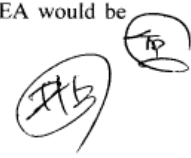
Mr. Hidenori Kumagai
Leader
JICA Project Consultation Mission
Japan International Cooperation Agency

In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 1st Steering Committee (S/C) meeting was held on April 13, 2009.

The 1st S/C meeting was started by an opening statement from His Excellency Minister of MOLAE, Eng. Hilal Al-Attrash. Under the chairmanship of the Minister, the GCEA and the JICA Expert Team (the Team) presented the Inception Report of the Project (Ic/R), and discussions were made among the S/C members.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2

1. The S/C members, JICA Project Consultation Mission, and the Team agreed to implement the Project in line with the Ic/R attached in the ANNEX-6.
2. The S/C members, Technical Committee (T/C) members, Chief Counterparts of each of 7 Outputs of the Project in GCEA, and Chief Counterparts of DFEAs were confirmed as shown in the ANNEX-3.
3. The Japanese side will procure the equipment necessary for the regional training at the selected Directorates for Environmental Affairs (the selected DFEAs). It is recommendable for the Syrian side to procure the equipment necessary for expanding the activities and technical skills obtained in the regional training to other DFEAs. The lists of equipment to be procured by Japanese side are enumerated in the ANNEX-4, and the lists of equipment recommendable to be procured by Syrian side are enumerated in the ANNEX-5.
4. Specific Issues
 - (1) Administration of the Project activities by the GCEA together with the Team is essential in order to i) realize the successful and fruitful achievements of the Project, and ii) enhance more the administrative capability of the GCEA as the national environmental authority in Syria. In this context, it is recognized that the office space to accommodate the Team should be presented in the same building of the GCEA with necessary facilities and utilities for facilitating joint works of both parties, hands-on instruction, and daily communication. The MOLAE and GCEA will put efforts to prepare and furnish the office space of the Team as soon as possible.
 - (2) Global Positioning Systems (GPS) is indispensable to conduct the activities of Output 1 of the Project, including the regional training on pollution sources inventory. The GCEA and the Team requested MOLAE to issue the approval to the Project for procuring the GPS.
 - (3) In order to sustain the Project achievements, all parties recognized that the incentives such as service allowance, travel allowance for site works would be important for the staff of GCEA/DFEAs. The MOLAE and GCEA will examine the proper system in this regard to keep the motivation of the staff for the Project activities and other daily duties.
 - (4) According to the suggestion from Syrian side, in due consideration of effective achievements of the Project purpose and outputs, both Syrian and Japanese sides will examine the possibility of i) shortening the whole Project duration with reducing approximately six (6) months from the original Project duration, and ii) adjusting the dispatch schedule of the Japanese experts in order to increase the duration as much as possible to be stayed by Japanese experts in Syria. In addition, the both sides recognized that regional training at Rural Damascus DFEA would be



provided twice to realize the effective technical transfer especially for the training on laboratory analysis and on-site measurement, since the number of target DFEAs to be zoned into Rural Damascus DEFA would be comparatively large. The necessary increment of the assignment of Japanese experts will be approximately 3 or 4 months in this context. The revised plan based on the above examination will be discussed and finalized by both sides up to the end of May, 2009, including the revision of Plan of Operation defined in the M/M signed on the November 23, 2008 between MOLAE, GCEA, and JICA Syria office.

- (5) Syrian side raised the possibility of the involvement of the Environmental Research Center (ERC) into the Project. Through clarification of needs of the ERC by both Syrian and Japanese sides, the ERC requested Japanese side to provide opportunities to participate and cooperate in the regional trainings planned especially in the Output 1, 2, 6, and 7 of the Project. The ERC plans to assign one staff for each of 4 Outputs above.

End



ANNEX-1

List of Attendants

Syrian Side

Eng. Hilal Al-Attrash	Chairman of Steering Committee, Minister, Ministry of Local Administration and Environment
Dr. Akram Al-Khoury	Project Director, General Director, General Commission for Environmental Affairs, MOLAE
Dr. Yassin Moalla	Project Manager, Director of Laboratory Department, GCEA, MOLAE
Eng. Soliman Kalo	Director of Environmental Research Center (ERC)
Eng. Mahmoud Abdouni	Head of studies department, General Commission for water resources, Ministry of Irrigation
Dr. Mahmoud Al-Haffar	Director of studies, researches and Environment, Ministry of Transport
Ms. Rola Daghestani	Head of Environmental Hygiene Department Directorate of Environmental diseases, Ministry of Health
Eng. Mohammed Allouch	Director of Environment, State Planning Commission
Mr. Bashar Ma'ani	Ma'ani Damas group, Chambers of Industry in Damascus and Rural Damascus

Japanese Side

JICA Project Consultation Mission

Mr. Hidenori Kumagai	Leader
Mr. Masaru Kurimoto	Cooperation Planning

JICA Syria Office

Ms. Akiko Tomita	Chief Representative, JICA Syria
Ms. Mayumi Murakami	Representative, JICA Syria
Mr. Ousama Lazini	Program Officer, JICA Syria
Ms. Noor Hakakki	Interpreter

JICA Expert Team

Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Mr. Keiichi Takahashi	Deputy Chief Advisor/ Inspection-1/ Pollution Inventory-1/ Data Interpretation-1
Mr. Yoshiki Yamamoto	Water Analysis-2/ Data Interpretation-2/ Equipment/ Coordinator
Mr. Mohammed Al-Doubosh	Interpreter







ANNEX-2

**The Project for Capacity Development of
Environmental Monitoring Phase 2**

Agenda

The First Steering Committee Meeting

Date and Time: April 13th (Mon), 2009, 19:30~21:00

Venue: Meeting Room in MOLAE

Agenda:

1. Opening Statement by Chairperson (Minister of Local Administration and Environment)
2. Special Remark by JICA Mission (Leader of JICA Project Consultation Team)
3. Presentation of Project Design and Inception Report
 - (1) Introduction of the Project (Project Director)
 - (2) Plan of Operation of the Project and Findings (JICA Expert Team)
 - (3) Conclusion of Presentation (Project Director)
4. Discussion
5. Closing by Chairperson (Minister of Local Administration and Environment)

End



**ANNEX-3 Steering Committee Members, Technical Committee Members, and Chief Counterparts
in the GCEA and DFEAs**

List of Members of Steering Committee

No.	Name	Position
Syrian side		
1	Eng. Hilal al-Atrash	Minister of MOLAE
2	Eng. Imad Hassoun	Deputy Minister of MOLAE
3	Dr. Akram Al-Kouri	General Director, GCEA, MOLAE
4	Dr. Yasin Moa'lla	Director of Laboratories, GCEA, MOLAE
5	Eng. Suleman Kalo	Director of Environmental Research Center (ERC)
6	Eng. Mahmoud Abdouni	Head of studies department, General commission for water resources, Ministry of Irrigation
7	Eng. Ali Abdulmalek	Person in charge, Department for Environment, Ministry of Housing and Construction
8	Eng. Amal Hasan	Director of Environment, Ministry of Industry
9	Dr. Mahmoud Al-Haffar	Director of Studies, Researches and Environment, Ministry of Transport
10	Ms. Rola Daghtani	Head of Environmental Hygiene Department Directorate of Environmental diseases, Ministry of Health
11	Eng. Mohammed Allouch	Director of Environment, State Planning Commission
12	Dr. Adnan Atfeh	Representative from Chambers of Industry in Damascus and Rural Damascus
Japanese side		
13	Akiko Tomita	Chief Representative, JICA Syria Office
14	JICA Experts	JICA Expert Team (JET)

* Official(s) of the Embassy of Japan may attend the Committee sessions as observer(s).

List of Members of Technical Committee

No.	Name	Position
Syrian side		
1	Dr. Akram Al-Khouri	General Director, GCEA, MOLAE
2	Dr. Yasin Moalla	Director of Laboratory, GCEA, MOLAE
3	Eng. Basaam Kheir Bek	Director, Damascus DFEA
4	Eng. Thaer Al-Deif	Director, Rural Damascus DFEA
5	Eng. Ahmad Hossam Mokhallati	Director, Aleppo DFEA
6	Eng. Adnan Al-Natour	Director, Homs DFEA
7	Chem. Ali Al-Jouaied	Director, Hama DFEA
8	Eng. Lama Ahmad	Director, Lattakia DFEA
9	Eng. Mohammad Amin Ramadan	Director, Dier Ezzor DFEA
10	Eng. Jomanah Hassan	Director, Idleb DFEA
11	Eng. Rac'ifah Esber	Director, Hasakeh DFEA
12	Eng. Shameh Al-Jassem	Director, Raqqa DFEA
13	Dr. Mo'tasem Al-Abed	Director, Sweida DFEA
14	Eng. Ahmad Kablawi	Director, Dara'a DFEA
15	Eng. Hassan Morian	Director, Tartous DFEA
16	Mr. Hamza Suliman	Director, Quneitra DFEA
17	Dr. Nader Ghazi	Director, Public Awareness, GCEA, MOLAE
18	Eng. Haitham Nashawati	Director, Air Safety, GCEA, MOLAE
19	Eng. Reem Abed Rabboh	Director, Water Safety, GCEA, MOLAE
20	Eng. Manal Al-Sakka	Director, EIA, GCEA, MOLAE
Japanese side		
21	Akiko Tomita	Chief Representative, JICA Syria Office
22	JICA Experts	JICA Expert Team (JET)

List of Members of the Counterpart Personnel

No.	Name	Position	Project Responsibility
GCEA, MOLAE			
1	Dr. Akram Al-Khouri	General Director	Project Director
2	Dr. Yasin Moalla	Director of Laboratory	Project Manager
3	Ms. Samah Reslan	EIA Department	Chief counterpart for Output 1
4	Mr. Bashar Al-Daie	EIA Department	Chief counterpart for Output 2
5	Ms. Samar Al-Shami	Water Quality Department	Chief counterpart for Output 3
6	Ms. Heba Salim Ms. Amal Sahammas	Laboratory Department	Chief counterpart for Output 4
7	Ms. Hakima Hawash	Air Quality Department	Chief counterpart for Output 5
8	Ms. Fathiya Mohammad	Laboratory Department	Chief counterpart for Output 6
9	Mr. Yasin Moalla	Laboratory Department	Chief counterpart for Output 7
DFEAs			
1	Mr. Basaam Kheir Bek	Director, Damascus DFEA	
2	Ms. Reem Sader	Laboratory Chief, Damascus DFEA	
3	Mr. Thaeir Al-Deif	Director, Rural Damascus DFEA	
4	Ms. Mona Al-Jomaa	Laboratory Chief, Rural Damascus DFEA	
5	Mr. Ahmad Hossam Mokhalati	Director, Aleppo DFEA	
6	Mr. Ahmad Moalla Ahmai	Laboratory Chief, Aleppo DFEA	
7	Mr. Adnan Al-Natour	Director, Homs DFEA	
8	Mr. Mohammad Ali Al-Hussain	Laboratory Chief, Homs DFEA	
9	Mr. Ali Al-Jouaied	Director Hama DFEA	
10	Ms. Rana Wardeh	Laboratory Chief, Hama DFEA	
11	Ms. Lama Ahmad	Director, Lattakia DFEA	
12	Mr. Yamen Suleiman	Laboratory Chief, Hama DFEA	
13	Mr. Mohammad Amin Ramadan	Director, Dier Ezzor DFEA	
14	Mr. Saher Abdollaha	Laboratory Chief, Dier Ezzor DFEA	
15	Mr. Jomanah Hassan	Director, Idleb DFEA	
16	Mr. Samir Da'boos	Laboratory Chief, Idleb DFEA	
17	Ms. Rac'ifah Esber	Director, Hasakeh DFEA	
18	Mr. Nawaf Othman	Laboratory Chief, Hasakeh DFEA	
19	Ms. Shamseh Al-Jassem	Director, Raqqa DFEA	
20	Mr. Adecab Amori	Laboratory Chief, Raqqa DFEA	
21	Mr. Mo'tasem Al-Abed	Director, Sweida DFEA	
22	Ms. Omayma Al-Sha'ar	Laboratory Chief, Sweida DFEA	
23	Mr. Ahmad Kablawi	Director, Dara'a DFEA	
24	Mr. Mohammad Al-Hariri	Laboratory Chief, Dara'a DFEA	
25	Mr. Hassan Morian	Director, Tartous DFEA	
26	Ms. Rodayna Al-Ali	Laboratory Chief, Tartous DFEA	
27	Mr. Hmza Suleiman	Director, Quncitra DFEA	
28	Mr. Majed Zaytoun	Laboratory Chief, Quncitra DFEA	

(R)

(ATB)

ANNEX-4 List of Equipment to be Procured by Japanese Side

List of Equipment to be Procured by Japanese Side (Equipment)

	Item	Necessity of the Equipment	Required specification & accessories	Total number	Demarcation	
					JET	JICA
1-1	Isokinetic flue gas sampler including flow gas meter	To measure particle matters in air samples	The units consist of ①Pitpt tube, ② Manometer (Inclined tube type), ③Dust holder, and ④Suction pump .	5	0	5
1-2	Draft chamber	To remove contaminated air from inside of laboratories.	- High Chemical-resistant and Heat-resistant - Exhaust air(approx.):10m3/min, - External Dimensions(approx.): W1200mm x D750mm x H2000mm	2	2	0
1-3	Water purification equipment	To make pure water using for analysis.	-Ion exchange water / Distilled water -Distilled Water Capacity: more than 5L/h -Water Quality Level: Conductivity Less than 0.1mS/m	3	3	0
1-4	Cadmium reduction column (for NO3)	To measure NO3.		14	0	14
1-5	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of SHIMAZU (AA 6800) Parameter: Ag	3	0	3
1-6	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of Analytik Jena Parameter: Ag	1	0	1
1-7	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of HITACHI(Z-2000) Parameter: Ag,	2	0	2
1-8	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of SHIMAZU (AA 6800) Parameter: Ca	1	0	1
1-9	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of HITACHI(Z-2000) Parameter: Sb	1	0	1
1-10	Wastewater treatment facility	To treat the wastewater of laboratories.	It should treat the wastewater containing heavy metals. Quantity of treatment: more than 15L/batch	1	0	1
1-11	Hot plate(COD)	To measure COD. Heavy metal	Ceramic, 200-250*200-250mm, with temperature control ambient to 300, including magnetic tiarrar function	18	0	18
1-12	Portable emission analyzer Option Sensor for SO2	To measure stack emission		5	0	5
1-13	Water Bath (Oil)	To measure Oil	200-250mm*200-250mm, with temperature control ambient to 100	4	4	0
1-14	Desiccator(Oil)	To measure Oil	Glass or Plastic	9	9	0
1-15	Printer		Printer which can attach to HACH DR4000, SPECTRO SCAN50	9	0	9

nc

[Handwritten signature]

[Handwritten signature]

List of Equipment to be Procured by Japanese Side (Chemicals)

	Chemicals	Target parameter of the analysis	Required specification & accessories		Total Number	Demarcation	
			Purity	volume /weight		JET	JICA
2-1	Nitric acid, HNO3	Heavy Metals	solution, conc (65%), trace analysis grade	2.5L	22	0	12
2-2	Sulfuric acid, H2SO4	Heavy Metals	solution, conc (95-98%), extra pure or trace analysis grade	2.5L	14	5	9
2-3	Hydrochloric acid, HCl	Heavy Metals	solution, conc (36% or more), extra pure or trace analysis grade	2.5L	11	0	6
2-4	Standard solution for Ag	Ag	solution, conc (1,000ppm), suitable grade for metal analysis	500mL	6	0	6
2-5	Standard solution for Al	Al		500mL	6	0	6
2-6	Standard solution for As	As		500mL	6	0	6
2-7	Standard solution for Ba	Ba		500mL	6	0	6
2-8	Standard solution for Ca	Ca		500mL	6	0	6
2-9	Standard solution for Cd	Cd		500mL	6	0	6
2-10	Standard solution for Cr	Cr		500mL	6	0	6
2-11	Standard solution for Cu	Cu		500mL	6	0	6
2-12	Standard solution for Fe	Fe		500mL	6	0	6
2-13	Standard solution for Hg	Hg		500mL	6	0	6
2-14	Standard solution for K	K		500mL	6	0	6
2-15	Standard solution for Mn	Mn		500mL	6	0	6
2-16	Standard solution for Mg	Mg		500mL	6	0	6
2-17	Standard solution for Na	Na		500mL	6	0	6
2-18	Standard solution for Ni	Ni		500mL	6	0	6
2-19	Standard solution for Pb	Pb		500mL	6	0	6
2-20	Standard solution for Sb	Sb		500mL	6	0	6
2-21	Standard solution for Se	Se	500mL	6	0	6	
2-22	Standard solution for Zn	Zn	500mL	6	0	6	
2-23	NH4Cl	Heavy Metals	analytical or extra pure grade	100g	6	0	6
2-24	NH4NO3	Heavy Metals	analytical or extra pure grade	100g	6	0	6
2-25	Pd(NO3)2	Heavy Metals	analytical or extra pure grade	5g	6	0	6
2-26	Mg(NO3)2	Heavy Metals	analytical or extra pure grade	25g	6	0	6
2-27	EDTA	Heavy Metals	analytical or extra pure grade	100g	6	0	6
2-28	Sodium borohydride, NaBH4	Heavy Metals	analytical or trace metals grade	100g	6	0	6
2-29	Sulfanilamide, C6H8N2SO2	Heavy Metals	analytical or extra pure grade	250g	6	0	6
2-30	Potassium permanganate, KMnO4	Hg	extra pure / trace analysis grade	500g	1	1	0
2-31	Potassium persulfate, K2S2O8	Hg	extra pure / trace analysis grade	500g	1	1	0
2-32	Sodium chloride, NaCl	Hg	extra pure / trace analysis grade	500g	1	1	0
2-33	Hydroxylamin sulfate (Hydroxylammonium sulfate), (NH2OH)2·H2SO4	Hg	analytical or reagent grade	250g	1	1	0
2-34	Stannous chloride (Tin (II) chloride), SnCl2	Hg	reagent or extra pure grade	500g	1	1	0
2-35	Magnesium perchlorate, Mg(ClO4)2	Hg	any grade	1,000g	1	1	0
2-36	Feroin indicator	COD		100ml	14	0	14
2-37	Ferrous ammonium sulfate	COD	analytical or extra pure grade	500g	14	0	14
2-38	Mercury(I) Sulfate	COD	analytical or extra pure grade	50g	14	0	14
2-39	Potassium Dichromate	COD	analytical or extra pure grade	500g	14	0	14
2-40	Potassium Hydrogen Phthalate	COD	analytical or extra pure grade	500g	14	0	14
2-41	Silver Sulfate	COD	analytical or extra pure grade	500g	14	0	14
2-42	Sodium hydroxide, NaOH	NO3-N	pellets, analytical or extra pure grade	1,000g	14	0	14
2-43	Ammonium Chloride, NH4Cl	NO3-N	analytical or extra pure grade	500g	14	0	14
2-44	Ammonium hydroxide	NO3-N	analytical or extra pure grade	500ml	14	0	14
2-45	Cd-granules	NO3-N	suitable for diazotization titration.	100g	14	0	14
2-46	Copper Sulfate; CuSO4/5H2O	NO3-N	analytical or extra pure grade	500g	14	0	14
2-47	Disodium dihydrogen ethylenediamine tetraacetate dihydrate(EDTA-2Na)	NO3-N	analytical or extra pure grade	500g	14	0	14
2-48	Standard solution for NO3	NO3-N	100ppm	500ml	14	0	14
2-49	Standard solution for NO2	NO3-N	100ppm	500ml	14	0	14
2-50	phosphoric acid(H3PO4).	NO3-N	analytical or extra pure grade	500ml	14	0	14

	Chemicals	Target parameter of the analysis	Required specification & accessories		Total Number	Demarcation	
			Purity	volume /weight		JET	JICA
2-51	Sulfanilimide (CAS # 63-74-1),	NO3-N	suitable for diazotization titration.	500g	14	0	14
2-52	N-(1-naphthyl)-ethylenediamine dihydrochloride (CAS # 1465-25-4).	NO3-N	analytical or extra pure grade	25g	14	0	14
2-53	n-Hexane	Oil	analytical or extra pure grade	500ml	14	5	9
2-54	Sodium Sulfate, Na2SO4	Oil	analytical or extra pure grade	500g	14	5	9
2-55	Indicator paper (pH)	Heavy Metals and Oil			14	5	9
2-56	Silica gel	Oil	any grade	1kg	14	5	9

②

①

List of Equipment to be Procured by Japanese Side (Glassware)

	Item	Required specification & accessories	Total Number	Demarcation	
				JET	JICA
3-1	Beaker	Glass, Griffin squat form, 50mL	70	0	70
3-2	Beaker	Glass, Griffin squat form, 100mL	162	15	147
3-3	Beaker	Glass, Griffin squat form, 200mL	42	15	27
3-4	Beaker	Glass, Griffin squat form, 1000mL	28	10	18
3-5	Beaker	PTFE, Griffin squat form, 100mL (use glassware if not available)	60	0	60
3-6	Balance Dish	Plastic, 90mm*90mm*25mmH or similar 500pcs/pack	14	5	9
3-7	Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 100mL	300	0	300
3-8	Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 250mL	60	0	60
3-9	Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 1000mL	440	0	440
3-10	Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 2L	30	0	30
3-11	Bottle	Glass, round-shaped, clear, joint and stopper, wide neck, 1000mL or similar	28	10	18
3-12	Bottle	Glass, Brown, screw closure (leak-proof), 500ml	28	0	28
3-13	Bucket	Polypropylene or HDPE, with pouring spout and rigid handle	54	15	39
3-14	Buret	Auto Buret, 25 or 50mL, grads 0.5mL	28	0	28
3-15	Condenser	Liebig condenser, 300mm jacket Liebig with 24/40 ground-glass joint	28	0	28
3-16	Condenser stand	It fixes the Liebig condenser	28	0	28
3-17	Cylinder	Glass, joint and stopper, 100mL, grads. 1mL	88	0	88
3-18	Cylinder	Glass, joint and stopper, 50mL, grads. 1mL	28	10	18
3-19	Eye protection	Polycarbonate, with clear lenses, browguard and hinged side arms, can be worn over spectacles, large	70	25	45
3-20	Face mask	Disposable, with metal nose piece, standard sized	700	250	450
3-21	Filtration paper	Cellulose, pore size 2.7um or similar, φ 90-110mm, hardened (high wet strength and chemical resistance), ash less (<0.01%ash), 100pcs/pack	20	5	15
3-22	Flask	Glass, Erlenmeyer, narrow neck, graduated, 100mL, clear, stoppered or screw cap	42	15	27
3-23	Flask	Glass, Erlenmeyer, narrow neck, graduated, 300mL, clear, stoppered or screw cap	100	25	75
3-24	Flask	Glass, volumetric, 50mL, tolerance ±0.06mL or better, clear, joint and stopper	130	25	105
3-25	Flask	Glass, volumetric, 100mL, tolerance ±0.1mL or better, clear, joint and stopper	190	25	165
3-26	Flask	Glass, volumetric, 200mL, tolerance ±0.15mL or better, clear, joint and stopper	58	10	48
3-27	Flask	Glass, volumetric, 500mL, tolerance ±0.25mL or better, clear, joint and stopper	40	10	30
3-28	Funnel	Polypropylene, φ 60mm or similar	60	0	60
3-29	Funnel	Polypropylene, φ 150mm or similar	30	0	30
3-30	Funnel	Glass, φ 60mm or similar	168	10	158
3-31	Funnel	Glass, φ 150mm or similar	28	10	18
3-32	Glass beads	Glass, medium, 1000pcs/pack	14	0	14
3-33	Glass wool		14	0	14
3-34	Glove	Polyethylene, disposable, textured surface, non-sterile, medium, 100pcs/pack	14	5	9
3-35	Glove	Latex, disposable, examination, lightly powdered or powder free, non-sterile, medium, 100pcs/pack	14	5	9
3-36	Glove	Neoprene, long (elbow-length), acid resistant, abrasion and puncture resistant, large	42	15	27
3-37	Magnet	Magnet for Stirrer	70	0	70
3-38	Mortar and Pestle set	70mm*60mm, Agate or Alumina	14	0	14
3-39	Pipette	Polyethylene, graduated, Pasteur, capacity 3-5mL, 500pcs/pack	14	5	9
3-40	Pipette	Glass, graduated, 1mL, grads. 0.01mL, tolerance ±0.006 or better	36	0	36
3-41	Pipette	Glass, graduated, 2mL, grads. 0.02mL, tolerance ±0.01 or better	36	0	36
3-42	Pipette	Glass, graduated, 5mL, grads. 0.05mL, tolerance ±0.03 or better	106	10	96
3-43	Pipette	Glass, graduated, 10mL, grads. 0.1mL, tolerance ±0.05 or better	116	10	106
3-44	Pipette	Glass, one mark (whole), 1mL, tolerance ±0.008mL or better	36	0	36
3-45	Pipette	Glass, one mark (whole), 2mL, tolerance ±0.01mL or better	24	0	24
3-46	Pipette	Glass, one mark (whole), 5mL, tolerance ±0.015mL or better	52	0	52
3-47	Pipette	Glass, one mark (whole), 10mL, tolerance ±0.02mL or better	40	0	40

	Item	Required specification & accessories	Total Number	Demarcation	
				JET	JICA
3-48	Pipette filler	Molded rubber bulb, approx. 60mL capacity, 3 glass ball valves, suitable for pipettes of 2-25mL or wider	20	5	15
3-49	Pipette filler	Plastic, capacity 0.5-2mL or wider, standard release speed	20	5	15
3-50	Pipette filler	Plastic, capacity 2-10mL or wider, standard release speed	20	5	15
3-51	Pipette jar	Plastic, φ 80 height 420 (cylinder) or larger	20	5	15
3-52	Pipette stand	Plastic, horizontal, holding 6 or more	6	0	6
3-53	Pipette stand	Plastic, vertical, holding 20 or more, for drying and storage	6	0	6
3-54	Separatory Funnel	Glass, 2L, with TFE stopcock	28	10	18
3-55	Stand for Separatory Funnel		14	5	9
3-56	Test Tube	Glass, Erlenmeyer, graduated, 100mL, clear, stoppered	140	0	140
3-57	Test Tube Stand	Plastic, for 10 test tube(100ml)	14	0	14
3-58	Tray	Plastic, shallow, 450 * 350 * 30 mm or similar	28	0	28
3-59	Tray	Plastic, rigid, 600 * 350 * 150 mm or similar, suitable for the soak jar	28	0	28
3-60	Trolley	Plastic or plastic coated, two or more shelves, with casters, 850(w) * 1000(d) * 850(h) mm or similar	6	0	6
3-61	Wash bottle	Polyethylene, narrow neck, leak-proof, with rinser tube, imported, 1000mL	42	15	27
3-62	Watch glass	Glass, 65-75mm	120	0	120
3-63	Watch glass	PTFE, 65-75mm (use glassware if not available)	60	0	60

ANNEX-5 List of Equipment Recommendable to be Procured by Syrian Side

List of Equipment Recommendable to be Procured by Syrian Side (Equipment)

	Item	Necessity of the Equipment	Required specification & accessories	Number
1-1	Draft chamber	To remove contaminated air from inside of laboratories.	- High Chemical-resistant and Heat-resistant - Exhaust air(approx.):10m3/min, - External Dimensions(approx.): W1200mm x D750mm x H2000mm	5
1-2	Water purification equipment	To make pure water using for analysis.	-Ion exchange water / Distilled water -Distilled Water Capacity: more than 5L/h -Water Quality Level: Conductivity Less than 0.1mS/m	5
1-3	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of SHIMAZU (AA 6800) Parameter: Ag	1
1-4	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of HITACHI(Z-2000) Parameter: Ag.	1
1-5	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of PGI-990 Parameter: Ag	1
1-6	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of Varian (AA220) Parameter: Al	1
1-7	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of Varian (AA220) Parameter: Ba	1
1-8	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of Varian (AA220) Parameter: Hg	1
1-9	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of SHIMAZU (AA 6800) Parameter: Mn	1
1-10	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of PGI-990 Parameter: Mn	1
1-11	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of Varian (AA220) Parameter: Sb	1
1-12	Hollow cathode lamp (AAS)	To measure Heavy metals.	These lamps should be suite for AAS of PGI-990 Parameter: Sb	1
1-13	Spectrophotometer	To measure NO3.	UV/Vis	5
1-14	Printer		Printer which can attach to HACH DR4000, SPECTRO SCAN50	5

List of Equipment Recommendable to be Procured by Syrian Side (Chemicals)

	Chemicals	Target parameter of the analysis	Required specification & accessories		Number
			Purity	volume /weight	
2-1	Nitric acid, HNO3	Heavy Metals	solution, conc (65%), trace analysis grade	2.5L	10
2-2	Hydrochloric acid, HCl	Heavy Metals	solution, conc (36% or more), extra pure or trace analysis grade	2.5L	5
2-3	Standard solution for Ag	Ag	solution, conc (1,000ppm), suitable grade for metal analysis	500mL	5
2-4	Standard solution for Al	Al		500mL	5
2-5	Standard solution for As	As		500mL	5
2-6	Standard solution for Ba	Ba		500mL	5
2-7	Standard solution for Ca	Ca		500mL	5
2-8	Standard solution for Cd	Cd		500mL	5
2-9	Standard solution for Cr	Cr		500mL	5
2-10	Standard solution for Cu	Cu		500mL	5
2-11	Standard solution for Fe	Fe		500mL	5
2-12	Standard solution for Hg	Hg		500mL	5
2-13	Standard solution for K	K		500mL	5
2-14	Standard solution for Mn	Mn		500mL	5
2-15	Standard solution for Mg	Mg		500mL	5
2-16	Standard solution for Na	Na		500mL	5
2-17	Standard solution for Ni	Ni	500mL	5	
2-18	Standard solution for Pb	Pb	500mL	5	
2-19	Standard solution for Sb	Sb	500mL	5	
2-20	Standard solution for Se	Se	500mL	5	
2-21	Standard solution for Zn	Zn	500mL	5	
2-22	NH4Cl	Heavy Metals	analytical or extra pure grade	100g	5
2-23	NH4NO3	Heavy Metals	analytical or extra pure grade	100g	5
2-24	Pd(NO3)2	Heavy Metals	analytical or extra pure grade	5g	5
2-25	Mg(NO3)2	Heavy Metals	analytical or extra pure grade	25g	5
2-26	EDTA	Heavy Metals	analytical or extra pure grade	100g	5
2-27	Sodium borohydride, NaBH4	Heavy Metals	analytical or trace metals grade	100g	5
2-28	Sulfanilamide, C6H8N2SO2	Heavy Metals	analytical or extra pure grade	250g	5

(D)

2/2

(Fb)

List of Equipment Recommendable to be Procured by Syrian Side (Glassware)

	Item	Required specification & accessories	Number
3-1	Beaker	Glass, Griffin squat form, 100mL	100
3-2	Beaker	PTFE, Griffin squat form, 100mL (use glassware if not available)	50
3-3	Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 100mL	250
3-4	Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 250mL	50
3-5	Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 1000mL	250
3-6	Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 2L	25
3-7	Bucket	Polypropylene or HDPE, with pouring spout and rigid handle	10
3-8	Cylinder	Glass, joint and stopper, 100mL, grads. 1mL	50
3-9	Filtration paper	Cellulose, pore size 2.7um or similar, φ 90-110mm, hardened (high wet strength and chemical resistance), ash less (<0.01%ash), 100pcs/pack	5
3-10	Flask	Glass, Erlenmeyer, narrow neck, graduated, 300mL, clear, stoppered or screw cap	25
3-11	Flask	Glass, volumetric, 50mL, tolerance ±0.06mL or better, clear, joint and stopper	50
3-12	Flask	Glass, volumetric, 100mL, tolerance ±0.1mL or better, clear, joint and stopper	100
3-13	Flask	Glass, volumetric, 200mL, tolerance ±0.15mL or better, clear, joint and stopper	25
3-14	Flask	Glass, volumetric, 500mL, tolerance ±0.25mL or better, clear, joint and stopper	10
3-15	Funnel	Polypropylene, φ 60mm or similar	50
3-16	Funnel	Polypropylene, φ 150mm or similar	25
3-17	Pipette	Glass, graduated, 1mL, grads. 0.01mL, tolerance ±0.006 or better	30
3-18	Pipette	Glass, graduated, 2mL, grads. 0.02mL, tolerance ±0.01 or better	30
3-19	Pipette	Glass, graduated, 5mL, grads. 0.05mL, tolerance ±0.03 or better	30
3-20	Pipette	Glass, graduated, 10mL, grads. 0.1mL, tolerance ±0.05 or better	15
3-21	Pipette	Glass, one mark (whole), 1mL, tolerance ±0.008mL or better	30
3-22	Pipette	Glass, one mark (whole), 2mL, tolerance ±0.01mL or better	20
3-23	Pipette	Glass, one mark (whole), 5mL, tolerance ±0.015mL or better	20
3-24	Pipette	Glass, one mark (whole), 10mL, tolerance ±0.02mL or better	10
3-25	Pipette filler	Molded rubber bulb, approx. 60mL capacity, 3 glass ball valves, suitable for pipettes of 2-25mL or wider	5
3-26	Pipette filler	Plastic, capacity 0.5-2mL or wider, standard release speed	5
3-27	Pipette filler	Plastic, capacity 2-10mL or wider, standard release speed	5
3-28	Pipette jar	Plastic, φ 80 height 420 (cylinder) or larger	5
3-29	Pipette stand	Plastic, horizontal, holding 6 or more	5
3-30	Pipette stand	Plastic, vertical, holding 20 or more, for drying and storage	5
3-31	Trolley	Plastic or plastic coated, two or more shelves, with casters, 850(w) * 1000(d) * 850(h) mm or similar	5
3-32	Watch glass	Glass, 65-75mm	100
3-33	Watch glass	PTFE, 65-75mm (use glassware if not available)	50

FB

[Handwritten signature]

FB

**ANNEX-6 Inception Report on the Project for the Capacity Development of
Environmental Monitoring Phase 2 in the Syrian Arab Republic, April
2009**



**THE PROJECT FOR
CAPACITY DEVELOPMENT OF
ENVIRONMENTAL MONITORING
IN THE SYRIAN ARAB REPUBLIC
PHASE 2
INCEPTION REPORT**

April 2009

**MINISTRY OF LOCAL ADMINISTRATION AND ENVIRONMENT
GENERAL COMMISSION FOR ENVIRONMENTAL AFFAIRES
JAPAN INTERNATIONAL COOPERATION AGENCY**

A handwritten signature in black ink, appearing to be a stylized name.

A handwritten signature in black ink, appearing to be a stylized name.

A handwritten signature in black ink, appearing to be a stylized name.

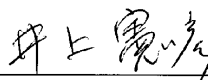
添付資料 1-2 第2回ステアリング・コミッティ議事録

**Minutes of Meeting
of
The Second Steering Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

Damascus, 12th of August, 2009

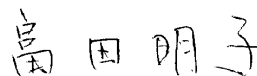


Eng. Imad Hassoun
Deputy Minister
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

Witnessed by



Dr. Kawkab Dayeh
Minister
Ministry of State for Environmental Affairs

Ms. Akiko Tomita
Chief Representative
JICA Syria Office
Japan International Cooperation Agency


In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 2nd Steering Committee (S/C) meeting was held on August 12, 2009.

The 2nd S/C meeting was started by a special remarks from Chief Representative of JICA Syria Office, Ms. Akiko Tomita, and an opening statement from Her Excellency Minister of Ministry of State for Environmental Affairs (MSEA), Dr. Kawkab Dayeh. Under the chairmanship of the Minister, the MSEA and the JICA Expert Team (the Team) presented the Project outline, activities and achievements as well as Progress Report (1) (P/R(1)), and discussions were made among the S/C members.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2

1. The S/C members and the Team confirmed the contents of P/R(1) submitted to the committee.
2. The attendants recognized mutually that it would be necessary to clarify the purposes and roles of each inspection work being conducted inconsistently by several organizations in governorate level such as General Sewerage Commission, Health Department, Environmental Committee, and DFEA, because the inspectors in DFEAs often received inquiries or complaints from factories to be inspected due to the duplication of inspection by different organizations. The authorities concerned will together examine the clarification and possible cooperation of inspection to factories according to the mandates prescribed in related legislative framework.
3. In order to have more effective inspection and pollution source control, the attendants recognized that it would be necessary to share the information on factories (pollution sources) among the related authorities such as Ministry of Industry, MSEA, Department of Industry in governorates, and DFEAs. For example, information on wastewater discharge volume are available in Ministry of Industry and/ or Departments of Industry, whereas information on wastewater quality analyzed are available in MSEA and/ or DFEAs. In this regard, it is expected that information exchange between two ministries/ departments will contribute to reciprocal supervision/ surveillance toward the factories.
4. The attendants confirmed the following notes for realizing more fruitful achievements of the Project.
 - 1) Importance of facilitation and initiative by MSEA toward the DFEAs for enhancing Project activities, such as:
 - Motivation, incentives, and/ or allowance for DFEAs' staff in order i) to keep and enhance the participation in the regional training and necessary OJT under the Project, and ii) to introduce the concept of hardship compensation regarding the site works and laboratory works within the daily duties of DFEAs' staff,
 - Participation of chief C/Ps of MSEA/ GCEA in the regional training conducted under the Project from the viewpoints of i) better administration of the Project activities including closer communication between MSEA and DFEAs, and ii) technical capability development of MSEA staff themselves, and
 - Supporting DFEAs for budget planning for the next Syrian fiscal year on laboratory works and inspection works, with due consideration in consumables, maintenance and



R. T 

- repairing of equipment and machinery, replacement of equipment and machinery if necessary, and logistic expenses.
- 2) Fulfillment of commitment of Syrian side for smooth operation of the Project, such as:
- Securing the travel cost and allowance for participation in the regional training at the selected DFEAs for mobilizing the staff of the other DFEAs,
 - Logistic facilitation for such site works as inspection and sampling of DFEAs (car fuel, etc.),
 - Examination of applicability of ID card for inspectors of DFEAs to authorize and enforce the inspection works toward the factories, and
 - Securing the well-maintained vehicles for JICA Expert Team.
5. The major points raised and discussed in the course of the meeting are summarized in ANNEX-3.

End



2



ANNEX-1

List of Attendants

Syrian Side

Dr. Kawkab Dayeh	Chairman of Steering Committee, Minister, Ministry of State for Environmental Affairs
Eng. Imad Hassoun	Deputy Minister, MSEA
Dr. Yasin Moalla	Project Manager, Director of Laboratory Department, MSEA
Eng. Ali Abdulmalek	Person in charge, Department for Environment, Ministry of Housing and Construction
Eng. Raihan Khattab	Deputy Director of Studies, Researches and Environment, Ministry of Transport
Eng. Amal Hasan	Director of Environment, Ministry of Industry
Eng. Mahmoud Abdouni	Head of Studies Department, General Commission for Water Resources, Ministry of Irrigation
Eng. Mohammed Allouch	Director of Environment, State Planning Commission
Dr. Adnan Atfeh	Representative from Chambers of Industry in Damascus and Rural Damascus
Ms. Rana Al-Salti	Journalist, Cham Press News
Ms. Sana Ebrahim	Journalist
Mr. Ibrahim Ghaibour	Journalist, Syria News
Mr. Abdulkarim Saeid	Journalist, Al-Bath Newspaper
Mr. Ali Abdallah AlAhmad	Journalist, SANA Agency
Ms. Arij Nakad	Journalist, SANA Agency

Japanese Side

JICA Syria Office	
Ms. Akiko Tomita	Chief Representative, JICA Syria
Mr. Yasuhiro Suhara	Representative, JICA Syria
Mr. Izeldien Oghly	Program Office, JICA Syria
JICA Expert Team	
Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Dr. Ryunan Matsue	Deputy Chief Advisor/ Inspection-2
Eng. Mohammed Al-Doubosh	Interpreter
Mr. Wasim Kabbesh	Interpreter



ANNEX-2

**The Project for Capacity Development of
Environmental Monitoring Phase 2**

Agenda

The Second Steering Committee Meeting

Date and Time: August 12th (Wed), 2009, 14:00~15:30

Venue: Meeting Room in MSEA

Agenda:

1. Opening
 - (1) Introduction of Steering Committee (Project Manager)
 - (2) Special Remarks (Chief Representative of JICA Syria Office)
 - (3) Opening Statement by Chairperson (Minister of State for Environmental Affairs)

2. Presentation on the Project
 - (1) Achievements of the Phase 1 Project (Project Manager)
 - (2) Design of the Phase 2 Project (Project Manager)
 - (3) Activities and Achievements of the Phase 2 Project up to August (Chief Advisor)
 - (4) Findings and Further Activities (Chief Advisor)

3. Discussion

4. Closing by Chairperson (Minister of State for Environmental Affairs)

End



ANNEX-3

Memorandum of the Discussions

1) The Minister commented to the followings after Mr. Inoue's presentation.

- The problems raised by Mr. Inoue were internal matters and Mr. Imad will take care of them.
- The efforts of training activities conducted by JET and Syrian CPs should be evaluated.

2) The representative of the Chamber of Industry (COI) in Damascus and Rural Damasucs mentioned:

- Close cooperation between industrial activities and MSEA are necessary.
- MSEA should provide the industrial facilities guideline to COI and explain the guideline to COI.
- Arrangement for awareness of the industrial activities related to the inspection works.
- The analysis results of DFEAs should be qualified and the laboratories in 14 DFEAs should be authorized.

The Minister and Dr. Yasin replied:

- Cooperation is important.
- Mr. Imad will send some publications about inspection to the COI.
- The laboratories of MSEA have been received the training about QA/QC during Phase 1, and in Phase 2 QA/QC also will be involved through the participation of AEC program.
- Only the laboratory of HIAST is certified by international agency in Syria, others are adopted by local decisions.

3) The representative of Ministry of Industry mentioned:

- What is the role of the other ministries in this project?
- We hope to be informed about the inspection visits in order to coordinate with DFEAs to facilitate the entry to the industrial facilities.
- The skills (including communication skills) of some inspectors should be improved.

The Minister replied:

- Cooperation with MSEA and DFEAs in inspection activities and analysis works etc.
- It is difficult to make announced inspection for all factories because unannounced inspections will ensure that the pollution discharging situation can be seen unadorned.
- MSEA will ask the inspectors to take care of these matters and we will issue ID for the inspectors for their field inspection.

Dr. Yasin replied:

In phase I there was very good cooperation with the Ministry of Industry and Chamber of Industry where many seminars and mutual activities happened together. Many materials were distributed to them such as newsletter etc.

4) The representative of Ministry of Irrigation mentioned:

- What is the role of the related agencies and ministries in this project, this question was asked in the 1st St/C but no answer was received.
- Ministry of Irrigation has started the monitoring program for water quality since the 1970th and we used to share our data with MSEA and present all support, so our involvement is needed.
- Inspection should not be exclusively in the MSEA.

The Minister replied:

- We welcome all kinds of cooperation including inspection activities.
- MSEA is identified by the law to be the main responsible authority for environmental inspection.
- We hope that all laboratories at MSEA are qualified and we have central laboratory (i.e. laboratory of ERC).

Dr. Yasin interfered:

- We started the laboratory works since 2005, it means we are in the beginning stage.
- We are preparing a national agency for the accreditation of the laboratories through EU project.

5) The representative of SPC (State Planning Commission) mentioned:

- We hope to benefit from the surveys conducted by JICA.
- The Syrian standards needs to be updated
- We hope that MSEA not only carry out environmental monitoring but also take actions on environmental pollution and we hope JICA side can provide some supports on the solution for the environmental pollution of the industrial activities.

The Minister replied:

- We are participating in the amendment of the current standards and soon they will be issued and applied. All standards are under update step by step
- It is the responsibility of MSEA to take actions on environmental pollution control.

6) The representatives of Ministry of Housing and Construction mentioned:

- It is important of the mutual works during the preparation and implementing the environmental inspection and monitoring.
- The inspectors from sewerage companies are working in inspection under the legislative law No. 30.

The Minister replied:

- Some arrangement in the future should be taken to facilitate the participation of other authorities.

Finally, the Minister concluded the meeting in a closing speech thanking all the attendances of the meeting.

End



6

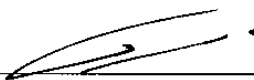
A.T



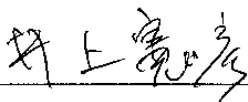
添付資料 1-3 第3回ステアリング・コミッティ議事録

**Minutes of Meeting
of
The Third Steering Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

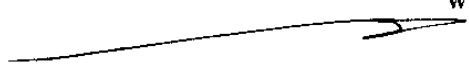
Damascus, 22nd of July, 2010



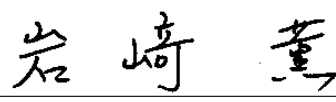
Eng. Suleman Khaled Kalou
Project Director
General Director of General Commission for
Environmental Affairs
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

Witnessed by


Dr. Kawkab Dayeh
Minister
Ministry of State for Environmental Affairs



Mr. Kaoru Iwasaki
Chief Representative
JICA Syria Office
Japan International Cooperation Agency

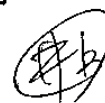
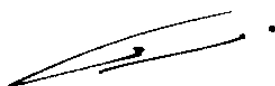
In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 3rd Steering Committee (S/C) meeting was held on July 22, 2010.

The 3rd S/C meeting was started by an introduction from Project Director, Eng. Suleman Khaled Kalou, special remarks from Chief Representative of JICA Syria Office, Mr. Kaoru Iwasaki, and an opening statement from Her Excellency Minister of Ministry of State for Environmental Affairs (MSEA), Dr. Kawkab Dayeh. Under the chairmanship of the Minister, Project Manager, Dr. Yasin Moalla presented the outline, activities and midterm achievements of the Project, and Assistant Director of Global Environmental Department of JICA Headquarters, Mr. Issei Aoki presented the findings and evaluation results of the Mid-term Evaluation of the Project. Subsequently the discussions were made among the S/C members.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2

1. The representative of Chamber of Industry (COI) for Damascus and Rural Damascus pointed out that i) the COI had been preparing the awareness activities to the industrial sector under the patronage of Minister of State for Environmental Affairs, and ii) the collaboration with MSEA would be important. Minister of MSEA commented that MSEA would be ready for cooperation with COI in this regard in order to fruitful future perspectives for well-balancing the economic development with environmental protection in Syria.
2. The representative of Ministry of Industry (MOI) pointed out that the classification of the industry/ factories should be compatible to the pollution source inventory to be prepared under the Phase 2 Project of MSEA. Minister of MSEA replied that MSEA had been communicating with MOI for fulfilling the information of inventory such as fuel type and consumption. It was recognized that the further mutual cooperation would be essential in this regard for preparing the better pollution source inventory.
3. The representative of MOI pointed out that the roles and mandates of inspection to industrial sector should be clarified/ demarcated among the related authorities. Minister of MSEA commented that any coordination and arrangement with the related authorities were opened in MSEA under the stipulation of Law 50 on Environment through tackling the contradictions/ constraints regarding the inspection works of the authorities concerned.
4. The representative of Ministry of Housing and Construction (MOHC) proposed to establish a kind of coordination committee among the authorities which were conducting the inspection works to the industrial sector. Minister of MSEA appreciated the suggestion of MOHC, and S/C members confirmed that the necessary cooperation and coordination afterward should be enhanced among the authorities concerned.
5. As replying the findings of the Mid-term Evaluation pointed out by the JICA regarding some difficulties to participate in trainings of the Project due to insufficient budget for transportation, Minister of MSEA committed that the solution would be made soon through tackling the remaining burdens raised at the separation to two ministries (MSEA and Ministry of Local Administration).

End



ANNEX-1

List of Attendants

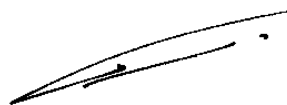
Syrian Side

Dr. Kawkab Dayeh	Chairman of Steering Committee, Minister, Ministry of State for Environmental Affairs
Eng. Imad Hassoun	Deputy Minister, MSEA
Eng. Suleman Khaled Kalou	Project Director, General Director, General Commission for Environmental Affairs, MSEA
Dr. Yasin Moalla	Project Manager, Director of Laboratories, MSEA
Dr. Wasim Fallouh	Project Director, Ministry of Housing and Construction
Chem. Amal Hasan	Director of Environment, Ministry of Industry
Eng. Mahmoud Abdouni	Deputy Director, Water Quality Monitoring Department, Ministry of Irrigation
Dr. Jamal Kanbarieh	Board Member, Chambers of Industry in Damascus and Rural Damascus
Mr. Ayman Ahmed	Head of Press Office, MSEA
Mr. Ali Abdallah Al Ahmad	Journalist, SANA Agency
Ms. Safieh Saoud	Journalist, Syrian TV

Japanese Side

JICA Tokyo Headquarters	
Mr. Issei Aoki	Assistant Director, Global Environment Department, JICA
JICA Syria Office	
Mr. Kaoru Iwasaki	Chief Representative, JICA Syria
Mr. Yasuhiro Suhara	Representative, JICA Syria
Mr. Izeldien Oghly	Program Officer, JICA Syria
Mr. Annas Akkad	Interpreter
JICA Expert Team	
Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Eng. Mohammed Al-Doubosh	Interpreter







ANNEX-2

**The Project for Capacity Development of
Environmental Monitoring Phase 2**

Agenda

The Third Steering Committee Meeting

Date and Time: July 22nd (Thu), 2010, 10:00~12:00

Venue: Meeting Room in MSEA

Agenda:

1. Opening
 - (1) Introduction of Steering Committee (Project Director)
 - (2) Special Remarks (Chief Representative of JICA Syria Office)
 - (3) Opening Statement by Chairperson (Minister of State for Environmental Affairs)

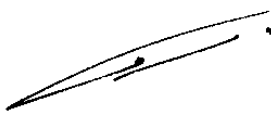
2. Project Achievements at the Midterm as of July 2010 (Project Manager)

3. Results of Mid-term Evaluation of Project
(Assistant Director, Global Environment Department, JICA Tokyo HQ)

4. Discussion

5. Closing by Chairperson (Minister of State for Environmental Affairs)

End



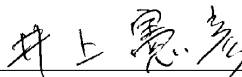
添付資料 1-4 第1回テクニカル・コミッティ議事録

**Minutes of Meeting
of
The First Technical Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

Damascus, 11th of August, 2009



Eng. Imad Hassoun
Deputy Minister
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 1st Technical Committee (T/C) meeting was held on August 11, 2009.

The 1st T/C meeting was started by an opening statement from Eng. Imad Hassoun, Deputy Minister, Ministry of State for Environmental Affairs (MSEA). Under the chairmanship of the Project Director, Counterparts (C/Ps) of Syrian side and the JICA Expert Team (the Team) presented the Project outline, activities and achievements as well as Progress Report (1) (P/R(1)), and discussions were made among the T/C members.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2

1. The T/C members and the Team confirmed the contents of P/R(1) submitted to the committee.
2. The T/C members and the Team confirmed the revised Plan of Operation (PO) as shown in ANNEX-3. Attendants also confirmed the equipment list to be procured by Japanese side as shown in ANNEX-4, and the equipment list recommendable to be procured by Syrian side as shown in ANNEX-5, both of which are indispensable for the Project implementation and expansion of the Project achievements to all Directorates for Environmental Affairs (DFEAs).
3. Specific Issues
 - (1) The attendants in the meeting recognized mutually the initiative to administrate the Project by MSEA/ GCEA from the viewpoints of enhancing the self-teaching exercises or self-training repetition in DFEAs to achieve the Project purpose, such the following as:
 - 1) Monitoring of self-dependent activities of the Project in DFEAs, and necessary advice and intervention for DFEAs' self-dependent activities,
 - 2) Initiative to examine the duplication of inspection works to the factories in governorate level by several organizations, such as General Sewerage Commission, Health Department, Environmental Committee, etc., and
 - 3) Flexibility of daily communication between chief C/Ps of MSEA/ GCEA and key staff of DFEAs for better administration of the Project.
 - (2) The attendants recognized mutually the importance of facilitation by MSEA/ GCEA toward DFEAs for smooth Project implementation, such the following as:
 - 1) Motivation, incentives, and/ or allowance for DFEAs' staff in order i) to keep and enhance the participation in the regional training and necessary OJT under the Project, and ii) to introduce the concept of hardship compensation regarding the site works and laboratory works within the daily duties of DFEAs' staff,
 - 2) Securing the travel cost and allowance for participation in the regional training at the selected DFEAs for mobilizing the staff of the other DFEAs,
 - 3) Examination of applicability of ID card for inspectors of DFEAs to authorize and enforce the inspection works toward the factories, and
 - 4) Logistic facilitation for such site works as inspection and sampling of DFEAs (car fuel, etc.).



- (3) MSEA/ GCEA and the Team recommend DFEAs to have more active participation in Atomic Energy Center (AEC) program in order i) to improve the capability of Quality Assurance and Quality Control, ii) to endorse socially the results of laboratory analysis, and iii) to promote the social reliability on inspection of DFEAs.
- (4) The attendants in the meeting recognized mutually importance of participation of chief C/Ps of MSEA/ GCEA in the regional training conducted under the Project from the viewpoints of i) better administration of the Project activities including closer communication between MSEA/ GCEA and DFEAs, and ii) technical capability development of MSEA/ GCEA staff themselves. Therefore, the following process will be recommendable to implement the Project from the next stage in October 2009.
- 1) Monthly schedule of training to be provided by the Team will be shared with the Project Manager and every chief C/P at the latter half of the previous month.
 - 2) The Project Manager and chief C/Ps will arrange their schedule to participate in training at DFEAs, including necessary internal arrangement for permission of travels.
- (5) It was confirmed in the meeting that a wastewater treatment facility to be procured by Japanese side would be installed at the laboratory in Homs DFEA, and that the wastewater generated from DFEAs' laboratories would be treated by centralizing to Homs DFEA through transporting the wastewater from the other DFEAs. In this context, the necessary preparedness and roles of concerned actors were confirmed as shown below for installation and proper operation of the facility.

Actor	Necessary Preparedness
GCEA & HOM DFEA	<ul style="list-style-type: none"> - Budgetary arrangement for OM, wastewater transportation, etc. - Examination of transportation system of wastewater to HOM DFEA from the other DFEAs.
HOM DFEA	<ul style="list-style-type: none"> - Assignment of OM staff. - Allocation of space for installation including utilities. - Securing disposal of sludge in cooperation with a sewerage treatment plant by sharing the disposal site.
Japanese Side	<ul style="list-style-type: none"> - Initial operational training for the facility (by a supplier). - Technical advice for proper operation of the facility in the course of the Project activities.

End




ANNEX-1

List of Attendants

Syrian Side

Eng. Imad Hassoun	Deputy Minister, Ministry of State for Environmental Affairs
Dr. Yasin Moalla	Project Manager, Director of Laboratory Department, MSEA
Eng. Wadia Joha	Deputy Director of Damascus DFEA
Chemist Reem Sader Eddin	Laboratory Chief at Damascus DFEA
Eng. Thaer Al-Deif	Director of Rural Damascus DFEA
Eng. Elyia Wasel	Head of Planning Department of Aleppo DFEA
Eng. Adnan Al-Natour	Director of Homs DFEA
Eng. Rawa Al-Habian	Deputy Director of Hama DFEA
Eng. Lama Ahmad	Director of Lattakia DFEA
Eng. Mohammad Amin Ramadan	Director of Dier Ezzor DFEA
Eng. Jomanah Hassan	Director of Idleb DFEA
Eng. Rac'ifah Esber	Director of Hasakeh DFEA
Eng. Shamsch Al-Jassem	Director of Raqqa DFEA
Dr. Mo'tasem Al-Abed	Director of Sweida DFEA
Eng. Ahmad Kablawi	Director of Dara'a DFEA
Eng. Hassan Morian	Director of Tartous DFEA
Mr. Hamza Suliman	Director of Quneitra DFEA
Eng. Haitham Nashawati	Director, Air Safety Department, MSEA
Eng. Manal Al-Sakka	Director, EIA Department, MSEA
Eng. Sawsan Arafeh	Deputy Director, Water Safety Department, MSEA
Eng. Khaldoun Morad	Engineer, Water Safety Department, MSEA

Japanese Side

JICA Syria Office	
Mr. Yasuhiro Suhara	Representative, JICA Syria
Mr. Izeldien Oghly	Program Officer, JICA Syria
JICA Expert Team	
Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Dr. Ryunan Matsue	Deputy Chief Advisor/ Inspection-2
Eng. Mohammed Al-Doubosh	Interpreter
Mr. Wasim Kabbesh	Interpreter



ANNEX-2

**The Project for Capacity Development of
Environmental Monitoring Phase 2**

Agenda

The First Technical Committee Meeting

Date and Time: August 11th (Tue), 2009, 11:00~14:30


Venue: Meeting Room in MSEA

Agenda:

1. Opening Statement by Chairperson (Deputy Minister)
2. Project Design and Overall Schedule (Project Manager)
3. Presentation from DFEAs on Project Activities and Related Topics
 - (1) Presentation from DAM DFEA (Director of DAM DFEA)
 - (2) Presentation from DAMR DFEA (Director of DAMR DFEA)
 - (3) Presentation from ALP DFEA (Director of ALP DFEA)
 - (4) Presentation from HOM DFEA (Director of HOM DFEA)
 - (5) Presentation from HAM DFEA (Director of HAM DFEA)
 - (6) Presentation from LTK DFEA (Director of LTK DFEA)
 - (7) Presentation from DRZ DFEA (Director of DRZ DFEA)
 - (8) Presentation from IDL DFEA (Director of IDL DFEA)
 - (9) Presentation from HSK DFEA (Director of HSK DFEA)
 - (10) Presentation from RAQ DFEA (Director of RAQ DFEA)
 - (11) Presentation from SWD DFEA (Director of SWD DFEA)
 - (12) Presentation from DAR DFEA (Director of DAR DFEA)
 - (13) Presentation from TAR DFEA (Director of TAR DFEA)
 - (14) Presentation from QNT DFEA (Director of QNT DFEA)
4. Overall Progress of Project Activities (JET)
5. Discussion
6. Closing by Chairperson (Deputy Minister)

End



Annex-3
Revised PO (Final)


Output 1:	JFY 2009/2009												JFY 2010												JFY 2011												JFY 2012												JICA Expert in Charge
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Pollution Sources Inventory																																																	
GCEA reviews the results of "Pollution Source Survey" done in the Phase I, and identifies the necessary information for preparing pollution source inventory.																																																	
1.1																																																	
<i>Revised</i>																																																	
GCEA identifies the situation to prepare pollution sources inventory and its utilization purposes by each DPEA.																																																	
1.2																																																	
<i>Revised</i>																																																	
GCEA designs specification of the pollution source inventory.																																																	
1.3																																																	
<i>Revised</i>																																																	
Each DPEA prepares the pollution sources inventory based on the activity 1.3.																																																	
1.4																																																	
<i>Revised</i>																																																	
Main Takahashi (Air)																																																	
<i>Revised</i>																																																	
Main Sato (Water)																																																	
<i>Revised</i>																																																	

7/26



Annex3-1

Output 3: Sampling for Water Effluent		JFY 2009			JFY 2010			JFY 2011			JFY 2012			JICA											
		3	4	5	6	7	8	9	10	11	12	1	2		3	4	5	6	7	8	9	10	11	12	
	GCEA prepares water effluent sampling training plan, and manages the implementations.																								Matsue Yamamoto
	3.1																								
	Water effluent sampling trainings for the 14 DFEAs are conducted in 5 selected DFEA for regional training.																								Yamamoto
	3.2																								
	A sample SOP of water effluent sampling for the 14 DFEAs is prepared in 5 selected DFEA for regional training.																								Yamamoto
	3.3																								
	Each DFEA prepares a SOP of water effluent sampling.																								Yamamoto
	3.4																								
	Each DFEA conducts sampling based on a SOP of water effluent sampling.																								Yamamoto
	3.5																								
Main	Yamamoto																								
Sub	Matsue																								

Annex-3

Output 5: Stack Emission Measurement	JFY 2009/2009															JFY 2010															JFY 2011															JFY 2012															JICA Expert in Charge
	SFY 2009					SFY 2010					SFY 2011					SFY 2012					SFY 2013					SFY 2014																																			
	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
S.1 GCEA prepares stack emissions (gases and particulate matter) measurement training plan, and manages the implementations. <i>Revised</i>																																																								Takahashi Hirao					
S.2 Stack emissions (gases and particulate matter) measurement training using portable stack emissions (gases and particulate matter) measurement equipment for 14DFEAs are conducted in 5 for regional training. <i>Revised</i>																																																			Hirao										
S.3 A SOP concerning the stack emissions (gases and particulate matter) measurement for 14 DFEAs is prepared in 5 for regional training. <i>Revised</i>																																																			Hirao										
S.4 Each DFEA conducts necessary stack emissions (gases and particulate matter) measurement based on the SOP. <i>Revised</i>																																																			Hirao										
Main Hirao <i>Revised</i>																																																													
Sub Takahashi <i>Revised</i>																																																													

Annex 5

ANNEX-4

1. Equipment will be procured by Japanese side

" " = procured by JICA, "*" = procured by JET

Item	Necessity of the Equipment	Required specification & accessories	Total Qty	Demarcation		DAM	DAM R	ALP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
				JET	JICA														
1-1	Isokinetic fine gas sampler including flow gas meter	To measure particulate matters in air samples	5	0	5	0	1	1	1	0	0	1	0	0	0	0	0	1	0
1-2	Draft chamber	To remove contaminated air from inside of laboratories	2	2	0	0	0	0	0	0	0	1*	0	0	0	0	0	1*	0
1-3	Water purification equipment	To make pure water using for analysis	3	3	0	0	0	1*	1*	0	0	1*	0	0	0	0	0	0	0
1-4	Calcium reduction column (for NO3)	To measure NO3	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-5	Hollow cathode lamp (AAS)	To measure Heavy metals	3	0	3	0	1	0	0	0	0	0	0	1	0	0	0	1	0
1-6	Hollow cathode lamp (AAS)	To measure Heavy metals	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1-7	Hollow cathode lamp (AAS)	To measure Heavy metals	2	0	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0
1-8	Hollow cathode lamp (AAS)	To measure Heavy metals	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
1-9	Hollow cathode lamp (AAS)	To measure Heavy metals	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
1-10	Wastewater treatment facility	To treat the wastewater of laboratories	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1-11	Hot plate (COD)	To measure COD Heavy metal	18	0	18	0	2	2	1	2	1	2	1	1	1	1	1	2	1
1-12	Portable emission analyzer Option Sensor for SO2	To measure stack emission	5	0	5	0	1	1	1	0	0	1	0	0	0	0	0	1	0
1-13	Water Bath (Oil)	To measure Oil	4	4	0	0	0	0	0	0	0	1*	0	0	1*	0	0	1*	1*
1-14	Densimeter (Oil)	To measure Oil	9	9	0	0	1*	0	0	1*	0	1*	0	1*	1*	1*	1*	1*	1*
1-15	Printer	Printer which can attach to HACH DR4000, SPECTRO SCANS90	9	0	9	1*	1*	1*	1*	0	1*	1*	0	0	0	1*	0	1*	1*

116

2. Chemicals will be procured by Japanese side
" " = procured by JICA, "*" = procured by JET

	Chemicals	Target parameter of the	Required specification & accessories		Total Qty	Demarcation		DAM	DAMR	ALP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
			Purity	volume / weight		JET	JICA														
2-1	Nitric acid, HNO3	Heavy Metals	analytical or extra pure grade	60	0	60	0	10	10	0	10	0	10	0	10	0	0	0	0	10	0
2-2	Sulfuric acid, H2SO4	Heavy Metals	analytical or extra pure grade	70	25	45	5	5*	5*	5*	5*	5	5	5*	5	5	5	5	5	5*	5
2-3	Hydrochloric acid, HCl	Heavy Metals	analytical or extra pure grade	30	0	30	0	5	5	0	5	0	5	0	5	0	0	0	0	5	0
2-4	Standard solution for Ag	Ag	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-5	Standard solution for Al	Al	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-6	Standard solution for As	As	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-7	Standard solution for Ba	Ba	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-8	Standard solution for Ca	Ca	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-9	Standard solution for Cd	Cd	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-10	Standard solution for Cr	Cr	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-11	Standard solution for Cu	Cu	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-12	Standard solution for Fe	Fe	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-13	Standard solution for Hg	Hg	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-14	Standard solution for K	K	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-15	Standard solution for Mn	Mn	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-16	Standard solution for Mg	Mg	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-17	Standard solution for Na	Na	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-18	Standard solution for Ni	Ni	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-19	Standard solution for Pb	Pb	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-20	Standard solution for Sb	Sb	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-21	Standard solution for Se	Se	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-22	Standard solution for Zn	Zn	analytical or extra pure grade	500mL	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-23	NH4Cl	Heavy Metals	analytical or extra pure grade	100g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-24	NH4NO3	Heavy Metals	analytical or extra pure grade	100g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-25	Pd(NO3)2	Heavy Metals	analytical or extra pure grade	5g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-26	Mg(NO3)2	Heavy Metals	analytical or extra pure grade	25g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-27	EDTA	Heavy Metals	analytical or extra pure grade	100g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-28	Sodium borohydride, NaBH4	Heavy Metals	analytical or extra pure grade	100g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-29	Sulfanilamide, C6H8N2SO2	Heavy Metals	analytical or extra pure grade	250g	6	0	6	0	1	1	0	1	0	1	0	1	0	0	0	1	0
2-30	Potassium permanganate, KMnO4	Hg	extra pure / trace analysis grade	500g	1	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0
2-31	Potassium persulfate, K2S2O8	Hg	extra pure / trace analysis grade	500g	1	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0
2-32	Sodium chloride, NaCl	Hg	extra pure / trace analysis grade	500g	1	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0

Chemicals	Target parameter of the	Required specification & accessories		Total Q'ty	Demarcation			DAMR	ALP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	ONT
		Purity	volume /weight		JET	JICA	JICA													
2-33 Hydroxylamine sulfate (Hydroxylammonium sulfate), (NH2OH)2·H2SO4	Hg	analytical or reagent grade	250g	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0	
2-34 Stannous chloride (Tin (II) chloride), SnCl2	Hg	reagent or extra pure grade	500g	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0	
2-35 Magnesium perchlorate, Mg(ClO4)2	Hg	any grade	1,000g	1	0	0	1*	0	0	0	0	0	0	0	0	0	0	0	0	
2-36 Ferrous indicator	COD		100ml	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-37 Ferrous ammonium sulfate	COD	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-38 Mercury(I) Sulfate	COD	analytical or extra pure grade	50g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-39 Potassium Dichromate	COD	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-40 Potassium Hydrogen Phthalate	COD	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-41 Silver Sulfate	COD	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-42 Sodium hydroxide, NaOH	NO3-N	pellets, analytical or extra pure grade	1,000g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-43 Ammonium Chloride, NH4Cl	NO3-N	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-44 Ammonium hydroxide	NO3-N	analytical or extra pure grade	500ml	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-45 Cd granules	NO3-N	suitable for diazotization titration	100g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-46 Copper Sulfate, CuSO4·5H2O	NO3-N	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-47 Disodium ethyleneglycol diethylenediamine tetraacetate dihydrate(EDTA-2Na)	NO3-N	analytical or extra pure grade	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-48 Standard solution for NO3	NO3-N	100ppm	500ml	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-49 Standard solution for NO2	NO3-N	100ppm	500ml	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-50 phosphoric acid(H3PO4)	NO3-N	analytical or extra pure grade	500ml	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-51 Sulfanilamide (CAS # 63-74-1)	NO3-N	suitable for diazotization titration	500g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-52 N-(1-naphthyl)-ethylenediamine dihydrochloride (CAS # 1465-25-4)	NO3-N	analytical or extra pure grade	25g	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
2-53 n-Hexane	Oil	analytical or extra pure grade	500ml	14	5	9	1	1*	1*	1*	1*	1*	1*	1	1	1	1	1*	1	
2-54 Sodium Sulfate, Na2SO4	Oil	analytical or extra pure grade	500g	14	5	9	1	1*	1*	1*	1*	1*	1*	1	1	1	1	1*	1	
2-55 Indicator paper (pH)	Heavy Metals and Oil			14	5	9	1	1*	1*	1*	1*	1*	1*	1	1	1	1	1*	1	
2-56 Silver gel	Oil	any grade	1kg	14	5	9	1	1*	1*	1*	1*	1*	1*	1	1	1	1	1*	1	



3. Glassware and others will be procured by Japanese side
" " = procured by JICA, "*" = procured by JET

Item	Required specification & accessories	Total Q'ty	Demarcation		DAM	DAM R	AIP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
			JET	JICA														
3-1	Beaker Glass, Griffin squat form, 50ml	70	0	70	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3-2	Beaker Glass, Griffin squat form, 100ml	162	15	147	3	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*
3-3	Beaker Glass, Griffin squat form, 200ml	42	15	27	3	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*	3*
3-4	Beaker Glass, Griffin squat form, 1000ml	28	10	18	2	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*
3-5	Beaker PTFE, Griffin squat form, 100ml (use glassware if not available)	60	0	60	0	10	10	0	10	0	10	0	10	0	0	0	0	10
3-6	Balance Dish Plastic, 90mm*90mm*25mm or similar 500g/50g/500g pack	14	5	9	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1	1*
3-7	Bottle Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 100ml	300	0	300	0	50	50	0	50	0	50	0	50	0	0	0	0	50
3-8	Bottle Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 250ml	60	0	60	0	10	10	0	10	0	10	0	10	0	0	0	0	10
3-9	Bottle Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 100ml	440	0	440	10	60	60	10	60	10	60	10	60	10	10	10	60	10
3-10	Bottle Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 250ml	30	0	30	0	5	5	0	5	0	5	0	5	0	0	0	0	5
3-11	Bottle Glass, round-shaped, joint and stopper, wide neck, 1000ml, or similar	28	10	18	2	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*
3-12	Bottle Glass Brown, screw closure (leak-proof), 500ml	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-13	Bucket Polypropylene or HDPE, with pouring spout and rigid handle	54	15	39	3	3*	3*	3*	3	3	3*	3	3	3	3	3	3*	3
3-14	Buret Auto Buret, 25 or 50mL, grads less than 0.5mL	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-15	Condenser Liebig condenser, 300mm jacket Liebig with 24/40 ground-glass joint	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-16	Condenser stand It faces the Liebig condenser	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-17	Cylinder Glass, joint and stopper, 100ml, grads 1mL	88	0	88	2	12	12	2	12	2	12	2	12	2	2	2	2	12
3-18	Cylinder Glass, joint and stopper, 50mL, grads 1mL	28	10	18	2	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*
3-19	Eye protection Polycarbonate, with clear lenses, browguard and hinged side arms, can be worn over spectacles, large	70	25	45	5	5*	5*	5*	5	5	5*	5	5	5	5	5	5	5
3-20	Face mask Disposable, with metal nose piece, standard sized	700	250	450	50	50*	50*	50*	50	50	50*	50	50	50	50	50	50*	50
3-21	Filtration paper Cellulose, pore size 2.7um or similar, φ 90-110mm, hardened (high wet strength and chemical resistance), ash less (<0.01% ash), 100pc/box	20	5	15	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1*	1
3-22	Flask Glass, Erlenmeyer, narrow neck, graduated, 100mL, clear, stoppered or screw cap	42	15	27	3	3*	3*	3*	3	3	3*	3	3	3	3	3	3*	3
3-23	Flask Glass, Erlenmeyer, narrow 24/40 neck, 300mL, clear	100	25	75	5	5*	5*	5*	5	5	5*	5	5	5	5	5	5*	5
3-24	Flask Glass, volumetric, 50mL, tolerance +0.06mL or better, clear, joint and stopper	130	25	105	5	5*	5*	5*	5	5	5*	5	5	5	5	5	5*	5
3-25	Flask Glass, volumetric, 100mL, tolerance ±0.1mL or better, clear, joint and stopper	190	25	165	5	5*	5*	5*	5	5	5*	5	5	5	5	5	5*	5
3-26	Flask Glass, volumetric, 200mL, tolerance ±0.15mL or better, clear, joint and stopper	58	10	48	2	2*	2*	2*	2	2	2*	2	2	2	2	2	2*	2
3-27	Flask Glass, volumetric, 500mL, tolerance ±0.25mL or better, clear, joint and stopper	40	10	30	2	2*	2*	2*	2	2	2*	2	2	2	2	2	2*	2
3-28	Funnel Polypropylene, φ 60mm or similar	60	0	60	0	10	10	0	10	0	10	0	10	0	0	0	0	10
3-29	Funnel Polypropylene, φ 150mm or similar	30	0	30	0	5	5	0	5	0	5	0	5	0	0	0	0	5
3-30	Funnel Glass, φ 60mm or similar	168	10	158	12	2*	2*	2*	12	12	2*	12	12	12	12	12	12	12
3-31	Funnel Glass, φ 150mm or similar	28	10	18	2	2*	2*	2*	2	2	2*	2	2	2	2	2	2*	2

Item	Required specification & accessories	Total Qty	Demarcation		DAM	DAM R	ALP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
			JET	JICA														
3-32	Glass beads	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3-33	Glass wool	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3-34	Glove	14	5	9	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1*	1
3-35	Glove	14	5	9	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1*	1
3-36	Glove	42	15	27	3	3*	3*	3*	3	3	3*	3	3	3	3	3	3*	3
3-37	Magnet	70	0	70	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3-38	Mortar and Pestle set	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3-39	Pipette	14	5	9	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1*	1
3-40	Pipette	36	0	36	0	6	6	6	6	6	6	6	6	6	6	6	6	6
3-41	Pipette	36	0	36	0	6	6	6	6	6	6	6	6	6	6	6	6	6
3-42	Pipette	106	10	96	5	2*+9	2*+9	2*+3	11	5	2*+9	5	11	5	5	5	2*+9	5
3-43	Pipette	116	10	106	7	2*+8	2*+8	2*+5	10	7	2*+8	7	10	7	7	7	2*+8	7
3-44	Pipette	36	0	36	0	6	6	6	6	6	6	6	6	6	6	6	6	6
3-45	Pipette	24	0	24	0	4	4	4	4	4	4	4	4	4	4	4	4	4
3-46	Pipette	52	0	52	2	6	6	6	6	6	6	6	6	6	6	6	6	6
3-47	Pipette	40	0	40	2	4	4	4	4	4	4	4	4	4	4	4	4	4
3-48	Pipette filler	20	5	15	1	1*+1	1*+1	1*	2	1	1*+1	1	2	1	1	1	1*+1	1
3-49	Pipette filler	20	5	15	1	1*+1	1*+1	1*	2	1	1*+1	1	2	1	1	1	1*+1	1
3-50	Pipette filler	20	5	15	1	1*+1	1*+1	1*	2	1	1*+1	1	2	1	1	1	1*+1	1
3-51	Pipette jar	20	5	15	1	1*+1	1*+1	1*	2	1	1*+1	1	2	1	1	1	1*+1	1
3-52	Pipette stand	6	0	6	0	1	1	1	0	1	0	1	0	1	0	0	1	0
3-53	Pipette stand	6	0	6	0	1	1	1	0	1	0	1	0	1	0	0	1	0
3-54	Separatory Funnel	28	10	18	2	2*	2*	2*	2	2	2*	2	2	2	2	2	2*	2
3-55	Stand for Separatory Funnel	14	5	9	1	1*	1*	1*	1	1	1*	1	1	1	1	1	1*	1
3-56	Test Tube	140	0	140	10	10	10	10	10	10	10	10	10	10	10	10	10	10
3-57	Test Tube Stand	14	0	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3-58	Trey	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-59	Trey	28	0	28	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3-60	Trolley	6	0	6	0	1	1	1	0	1	0	1	0	1	0	0	1	0
3-61	Wash bottle	42	15	27	3	3*	3*	3*	3	3	3*	3	3	3	3	3	3*	3
3-62	Watch glass	120	0	120	0	20	20	20	0	20	0	20	0	20	0	0	20	0
3-63	Watch glass	60	0	60	0	10	10	10	0	10	0	10	0	10	0	0	10	0



ANNEX-5

1. Equipment recommendable to be procured by Syrian side

○ : The Equipment most recommendable to be procured by Syrian side

Item	Necessity of the Equipment	Required specification & accessories	Total Qty	DAM	DAMR	ALP	HOM	HAM	LTK	DRZ	IDL	RISK	RAQ	SWD	DAR	TAR	QNT
1-1	Draft chamber To remove contaminated air from inside of laboratories	- High Chemical-resistant and Heat-resistant - Excess air (approx. 10m³/min. - External Dimensions (approx. 1. W1200mm x D750mm x H2000mm.	5		1						1	1		1			1
1-2	Water purification equipment To make pure water using for analysis	- Ion exchange water / Distilled water - Distilled Water Capacity: more than 5L/h - Water Quality Level: Conductivity: Less than 0.1mS/m	5	○					○				1	1			1
1-3	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of SHIMADZU (AA 6800) Parameter: Ag	1													1	
1-4	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of HITACHI(Z-2000) Parameter: Ag	1							1							
1-5	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of PPGI-990 Parameter: Ag	1											1			
1-6	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of Varian (AA220) Parameter: Al	1						1								
1-7	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of Varian (AA220) Parameter: Ba	1						1								
1-8	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of Varian (AA220) Parameter: Bi	1						1								
1-9	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of SHIMADZU (AA 6800) Parameter: Mn	1													1	
1-10	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of PPGI-990 Parameter: Mn	1											1			
1-11	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of Varian (AA220) Parameter: Sb	1						1								
1-12	Hollow cathode lamp (AAS) To measure Heavy metals	These lamps should be suitable for AAS of PPGI-990 Parameter: Sb	1													1	
1-13	Spectrophotometer To measure NO3-N	UV/VIS	5					○			○	○	○				
1-14	Printer	Printer which can attach to HACH DR4000. SPECTRO SCAN50	5					1			1	1	1				
1-15	Portable emission analyzer	TESTO550XL and its optior sensor for SO2(Parts No.514.9927) Max Temperature over 250°C Size: more than 450 x 450 x 450mm	7	1					1		1	1	1				
1-16	Oven To measure SS and other parameter	Drying chemicals, Glassware.	5							1							1

2. Chemicals recommendable to be procured by Syrian side

Chemicals	Target parameter of the analysis	Required specification & accessories		Total Qty	DAM	DAMR	ALP	HOM	HAM	LTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
		Purity	volume /weight															
2-1 Nitric acid, HNO3	Heavy Metals	Solution conc (65%, trace analysis grade)	2.5L	10	2					2		2				2		
2-2 Hydrochloric acid, HCl	Heavy Metals	Solution conc (36%, trace analysis grade)	2.5L	5	1					1		1				1		
2-3 Standard solution for Ag	Ag	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-4 Standard solution for Al	Al	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-5 Standard solution for As	As	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-6 Standard solution for Ba	Ba	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-7 Standard solution for Ca	Ca	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-8 Standard solution for Cd	Cd	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-9 Standard solution for Cr	Cr	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-10 Standard solution for Cu	Cu	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-11 Standard solution for Fe	Fe	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-12 Standard solution for Hg	Hg	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-13 Standard solution for K	K	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-14 Standard solution for Mn	Mn	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-15 Standard solution for Mg	Mg	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-16 Standard solution for Na	Na	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-17 Standard solution for Ni	Ni	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-18 Standard solution for Pb	Pb	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-19 Standard solution for Sb	Sb	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-20 Standard solution for Se	Se	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-21 Standard solution for Zn	Zn	Solution conc (1000ppm, suitable grade for metal analysis)	500mL	5	1					1		1				1		
2-22 NH4Cl	Heavy Metals	analytical or extra pure grade	100g	5	1					1		1				1		
2-23 NH4NO3	Heavy Metals	analytical or extra pure grade	100g	5	1					1		1				1		
2-24 Pd(NO)2	Heavy Metals	analytical or extra pure grade	5g	5	1					1		1				1		
2-25 Mg(NO)2	Heavy Metals	analytical or extra pure grade	25g	5	1					1		1				1		
2-26 EDTA	Heavy Metals	analytical or extra pure grade	100g	5	1					1		1				1		
2-27 Sodium borohydride, NaBH4	Heavy Metals	analytical or extra pure grade	100g	5	1					1		1				1		
2-28 Nulfin/amine, C6H8N2SO2	Heavy Metals	analytical or extra pure grade	250g	5	1					1		1				1		

3. Glassware recommendable to be procured by Syrian side

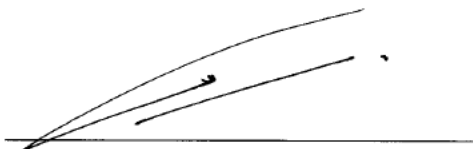
Item	Required specification & accessories	Total Qty	DAM	DAMR	ALP	HOM	HAM	UTK	DRZ	IDL	HSK	RAQ	SWD	DAR	TAR	QNT
3-1 Beaker	Glass, Griffin's squat form, 100mL.	100	20					20		20			20	20		
3-2 Beaker	PTFE, Griffin's squat form, 100mL. (use glassware if available)	50	10					10		10			10	10		
3-3 Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 100mL	250	50					50		50			50	50		
3-4 Bottle	Polypropylene or HDPE, white, screw closure (leak-proof), wide neck, 250mL	50	10					10		10			10	10		
3-5 Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 1000mL	250	50					50		50			50	50		
3-6 Bottle	Polypropylene or HDPE, white, round-shaped, screw closure (leak-proof), 2L	25	5					5		5			5	5		
3-7 Bucket	Polypropylene or HDPE, with pouring spout and rigid handle	10	2					2		2			2	2		
3-8 Cylinder	Glass, joint and stopper, 100mL, grads, 1ml	50	10					10		10			10	10		
3-9 Filtration paper	Cellulose, pore size 2 μm or similar, φ 90-110mm, hardened (high wet strength) and chemical resistant, ash less (50% ash), 100pcs/pack	5	1					1		1			1	1		
3-10 Flask	Glass, Erlenmeyer, narrow neck, graduated, 300mL, clear, stoppered or screw cap	25	5					5		5			5	5		
3-11 Flask	Glass, volumetric, 50mL, tolerance ±0.05mL or better, clear, joint and stopper	50	10					10		10			10	10		
3-12 Flask	Glass, volumetric, 100mL, tolerance ±0.1mL or better, clear, joint and stopper	100	20					20		20			20	20		
3-13 Flask	Glass, volumetric, 200mL, tolerance ±0.15mL or better, clear, joint and stopper	25	5					5		5			5	5		
3-14 Flask	Glass, volumetric, 500mL, tolerance ±0.25mL or better, clear, joint and stopper	10	2					2		2			2	2		
3-15 Funnel	Polypropylene, φ 60mm or similar	50	10					10		10			10	10		
3-16 Funnel	Polypropylene, φ 150mm or similar	25	5					5		5			5	5		
3-17 Pipette	Glass, graduated, 1mL, grads, 0.01mL, tolerance ±0.005 or better	30	6					6		6			6	6		
3-18 Pipette	Glass, graduated, 2mL, grads, 0.02mL, tolerance ±0.01 or better	30	6					6		6			6	6		
3-19 Pipette	Glass, graduated, 5mL, grads, 0.05mL, tolerance ±0.03 or better	30	6					6		6			6	6		
3-20 Pipette	Glass, graduated, 10mL, grads, 0.1mL, tolerance ±0.05 or better	15	3					3		3			3	3		
3-21 Pipette	Glass, one mark (whole), 1mL, tolerance ±0.008mL or better	30	6					6		6			6	6		
3-22 Pipette	Glass, one mark (whole), 2mL, tolerance ±0.015mL or better	20	4					4		4			4	4		
3-23 Pipette	Glass, one mark (whole), 5mL, tolerance ±0.015mL or better	20	4					4		4			4	4		
3-24 Pipette	Glass, one mark (whole), 10mL, tolerance ±0.02mL or better	10	2					2		2			2	2		
3-25 Pipette filler	Molded rubber bulb, approx. 60mL capacity, 3 glass ball valves, suitable for pipettes of 2-25mL or wider	5	1					1		1			1	1		
3-26 Pipette filler	Plastic, capacity 0.5-2mL or wider, standard release speed	5	1					1		1			1	1		
3-27 Pipette filler	Plastic, capacity 2-10mL or wider, standard release speed	5	1					1		1			1	1		
3-28 Pipette jar	Plastic, φ 80 height, 420 (cm/inch) or larger	5	1					1		1			1	1		
3-29 Pipette stand	Plastic, horizontal, holding 6 or more	5	1					1		1			1	1		
3-30 Pipette stand	Plastic, vertical, holding 20 or more, for drying and storage	5	1					1		1			1	1		
3-31 Trolley	Plastic or plastic coated, two or more shelves, with casters, 850(w) * 1000(d) * 850(h) mm or similar	5	1					1		1			1	1		
3-32 Watch glass	Glass, 65-75mm	100	20					20		20			20	20		
3-33 Watch glass	PTFE, 65-75mm (use glassware if not available)	50	10					10		10			10	10		



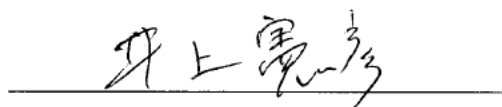
添付資料 1-5 第2回テクニカル・コミッティ議事録

**Minutes of Meeting
of
The Second Technical Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

Damascus, 15th of March, 2010



Eng. Suleman Khaled Kalou
Project Director
General Director of General Commission for
Environmental Affairs
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 2nd Technical Committee (T/C) meeting was held on March 15, 2010.

The 2nd T/C meeting was started by an opening statement from Eng. Suleman Khaled Kalou, Project Director, General Director of GCEA, Ministry of State for Environmental Affairs (MSEA). Under the chairmanship of the Project Director, Dr. Yasin Moalla, Project Manager, Director of Laboratory Department of GCEEA, MSEA, presented the Project outline and overall achievements of the Project, followed by the presentations of activities of five Directorates for Environmental Affairs (DFEAs) from south regions (Damascus, Rural Damascus, Sweida, Dara'a, and Quneitra). The JICA Expert Team (the Team) presented the findings and recommendations to the Project as well as Progress Report (2) (P/R(2)), and discussions were made among the T/C members.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2.

1. P/R(1) (draft) was submitted to committee from the Team, and would be reviewed by the T/C members for finalization.
2. Specific Issues
 - (1) The T/C members discussed the budgetary issues on such the expenses as travel allowance, fuel for vehicles, and maintenance of machinery and equipment, necessary for implementing the Project as well as fulfilling the mandates of DFEAs. Project Director explained that some accounting system was not functioning properly in 2009 due to re-organization of the ministry, and that an improvement of system and budget allocation would be expected from now on through the consultation with the Ministry of Finance. It was confirmed among the T/C members to continue devoting the efforts to tackle the above situation by MSEA/ GCEA together with DFEAs.
 - (2) The T/C members pointed out that the opportunities of training and on-the-job training (OJT) provided under the Project were less than the expectation especially compared with the Phase 1. Project Manager pointed out that MSEA/ GCEA and DFEAs should put self-efforts for capacity building of ourselves without full dependence on donors. Project Manager also explained i) MSEA/ GCEA and DFEAs should put gratitude to JICA and the Team for their efforts and cooperation to the Project, ii) that the Project was being implemented under the Project design agreed between Syrian and Japanese sides, and iii) that the Team was working for providing the training and OJT according to the Project design for the capacity development of MSEA/ GCEA and DFEAs. Project Manager implied the possibility to discuss such the needs with JICA at the time of the Mid-term Evaluation planned in July 2010.
 - (3) The T/C members discussed the insufficiency of human resources in DFEAs especially on the number of staff for accomplishing the mandate under the Environmental Law No. 50 / 2002 and related decrees. Project Manager explained that the arrangement of staff increment was being made, and would be stationed considering the requirements of DFEAs.
 - (4) The Team shared the findings and implications obtained in the course of the Project implementation such as effectiveness of weekly meeting and monthly meeting in MSEA/ GCEA, efforts devoted by MSEA/ GCEA as well as DFEAs. The T/C members confirmed to continue such performance for fruitful achievements of the Project.

- (5) The Team pointed out the recommendations and notes as enumerated below, and the T/C members mutually recognized the importance to continue devoting efforts on the following.
- 1) Cooperative relations are recommendable to be enhanced more between MSEA/ GCEA and industrial sector including Ministry of Industry and Chamber of Industry in governorates, to promote exchanging the data and information of factories which will be helpful for development of pollution source inventory of Output 1.
 - 2) The vehicle arrangement in DFEAs is recommendable to be improved to fulfill the inspection mandates, including the examination of changing the registration categories of vehicles in DFEAs which would contribute to more allocation of fuel for inspection purpose.
 - 3) Participation of chief counterparts of MSEA/ GCEA in regional training is recommendable to be enhanced more in order to realize the smooth monitoring of Project activities in DFEAs as well as to contribute to raising the technical capability of chief counterparts.
 - 4) It is recommendable for MSEA/ GCEA and Homs DFEA to make sure the necessary preparedness for wastewater treatment facility to be installed at Homs DFEA as below.

Actor	Necessary Preparedness
MSEA/ GCEA & HOM DFEA	- Budgetary arrangement for OM, wastewater transportation, etc. - Transportation system of wastewater to HOM DFEA from the other DFEAs.
HOM DFEA	- Assignment of OM staff. - Space and utilities for installation. - Disposal system for sludge in cooperation with a sewerage treatment plant by sharing the disposal site.
Japanese Side	- Initial operational training for the facility (by a supplier). - Technical advice for proper operation of the facility in the course of the Project activities.

End



ANNEX-1

List of Attendants

Syrian Side

Eng. Soleman Khaled Kalou	Project Director, General Director of GCEA, MSEA
Dr. Yasin Moalla	Project Manager, Director of Laboratory Department, MSEA
Chemist Reem Sader Eddin	Laboratory Chief at Damascus DFEA
Eng. Thaer Al-Deif	Director of Rural Damascus DFEA
Eng. Ahmed Housam Mkhallalati	Director of Aleppo DFEA
Eng. Adnan Al-Natour	Director of Homs DFEA
Eng. Ali Al-Juayed	Director of Hama DFEA
Eng. Yamen Salman	Laboratory Chief of Lattakia DFEA
Eng. Mohammad Amin Ramadan	Director of Dier Ezzor DFEA
Eng. Mahmoud Tamer	Laboratory Chief Idleb DFEA
Eng. Rae'efah Esber	Director of Hasakeh DFEA
Eng. Rif'at Khudr	Vice Director of Sweida DFEA
Eng. Ahmad Kablawi	Director of Dara'a DFEA
Eng. Hassan Morjan	Director of Tartous DFEA
Mr. Hamza Suleiman	Director of Quneitra DFEA
Eng. Manal Al-Sakka	Director, EIA Department, MSEA
Chemist Samar Chami	Water Safety Department, MSEA
Ms. Sanaa Yakoub	Journalist, Tichreen Newspaper

Japanese Side

JICA Syria Office	
Mr. Izeldien Oghly	Program Officer, JICA Syria
JICA Expert Team	
Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Mr. Keiichi Takahashi	Deputy Chief Advisor/ Inspection-1/ Pollution Inventory-1/ Data Interpretation-1
Mr. Yoshiki Yamamoto	Wastewater Analysis-2/ Data Interpretation-2/ Coordinator
Eng. Mohammed Al-Doubosh	Interpreter

ANNEX-2

The Project for Capacity Development of Environmental Monitoring Phase 2

Agenda


The Second Technical Committee Meeting

Date and Time: March 15th (Mon.), 2010, 11:00~13:30

Venue: Meeting Room in MSEA

1. Opening Statement by Chairperson (Project Director: Eng. Suleman Kalou)
2. Overall Progress and Plan of Next Stage (Project Manager: Dr. Yasin Moalla)
3. Presentation from South Region DFEAs on Project Activities and Related Topics
 - (1) Presentation from DAM DFEA (Director of DAM DFEA)
 - (2) Presentation from DAMR DFEA (Director of DAMR DFEA)
 - (3) Presentation from SWD DFEA (Director of SWD DFEA)
 - (4) Presentation from DAR DFEA (Director of DAR DFEA)
 - (5) Presentation from QNT DFEA (Director of QNT DFEA)
4. Recommendation from JICA Expert Team
5. Discussion
6. Closing by Chairperson (Project Director: Eng. Suleman Kalou)

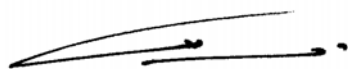
End



添付資料 1-6 第3回テクニカル・コミッティ議事録

**Minutes of Meeting
of
The Third Technical Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

Damascus, 18th of October, 2010



Eng. Suleman Khaled Kalou
Project Director
General Director of General Commission for
Environmental Affairs
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 3rd Technical Committee (T/C) meeting was held on October 18, 2010.

The 3rd T/C meeting was started by an opening statement from Eng. Suleman Khaled Kalou, Project Director, General Director of GCEA, Ministry of State for Environmental Affairs (MSEA). Under the chairmanship of the Project Director, Dr. Warif Yazgi, Project Manager, Director of Laboratories of MSEA, presented the Project outline, overall achievements, next schedule, and recommendations related to the Project, followed by the presentations of activities of four Directorates for Environmental Affairs (DFEAs) from central and coastal regions (Lattakia, Homs, Hama, and Tartous). The JICA Expert Team (the Team) presented the topic on pollution source control and environment improvement by introduction of Japanese case. Then the discussions were made among the T/C members under the chairmanship of Eng. Suleman Khaled Kalou.

The important matters are referred to in the following as the results of the discussions in the meeting, and the attendants and agenda of the meeting are listed in ANNEX-1 and 2.

1. P/R(3) (draft) was submitted to committee from the Team for reviewing purpose by the T/C members for finalization.
2. Specific Issues
 - (1) Through the presentation by Dr. Warif Yazgi on overall achievements and recommendations of the Project, the discussions were made as following.
 - 1) MSEA recommended the T/C members to utilize GPS more effectively for preparing the pollution source inventory. For this purpose, MSEA will re-distribute again the approval and authorization letter if necessary, which was once shared already with DFEAs upon the delivery of GPS in March and May 2010.
 - 2) MSEA suggested DFEAs to prepare and allocate the budget to install the draft chamber for Atomic Absorption Spectrophotometer (AAS) based on the suggestion from the Team, if DFEA did not yet install the chamber.
 - 3) TESTOs (equipment being used in Output 5 for stack emission measurement) were calibrated in German under the Project. For sustainable use of the equipment, MSEA is going to examine the possible future cooperation with authorities such as Higher Institute of Science and Technology through the basic agreement between authorities.
 - 4) Dr. Warif Yazgi pointed out the importance of sharing the results and knowledge obtained in Training in Japan, and recommended the T/C members to facilitate the opportunities to extend the results and knowledge among DFEA staff from the participants of the Training in Japan. Eng. Suleman Khaled Kalou also suggested the possibility of planning the integrated workshop for that purpose.
 - 5) Dr. Warif Yazgi introduced the visions of MSEA toward the fruitful achievements of the Project, by showing the road map stepping i) pollution source inventory, ii) hot spot identification (environmental monitoring plan), iii) mapping, iv) data accumulation and interpretation, and v) decision making for effective pollution control.
 - 6) Dr. Warif Yazgi pointed out the key remarks on i) more enhancement of participation of



the Chief Counterparts (C/Ps) in the training and activities of the Project at DFEAs, ii) importance of self-training in DFEAs as well as evaluation of staff to understand the achievement level of capacity development, iii) unifying the format for data entry in the reporting system from DFEAs to MSEA, and iv) importance of information sharing and cooperation with related directorates in governorate level.

- (2) Through the presentations by directors/ representatives from four DFEAs, the discussions were made as shown below.
- 1) Wastewater treatment facility was installed in Homs DFEA under the Project, and it is functioning. Eng. Adnan Al Natour, Director of Homs DFEA, assigned three staff for operation and maintenance of the facility in DFEA. The T/C members confirmed that the facility should be activated as soon as possible, and the action plan should be prepared for delivering the laboratory wastewater to Homs DFEA from other DFEAs in order to share the effective utilization of the facility among DFEAs.
 - 2) Mr. Hassan Morjan, Director of Tartous DFEA, pointed out that the stacks of the factories should have flanges for emission measurement. Eng. Suleman Khaled Kalou recommended the T/C members that MSEA and DFEAs as environmental authorities obligate the factories to install the flange by themselves. For this purpose, MSEA will examine the cooperation with the Ministry of Industry and chambers of industries in the governorates to obligate the factories for installing the flanges by themselves. Whenever necessary, the Team should provide the technical information and advices on flange installation, such as design drawing and preferable locations of installation on the stacks in the factories.
 - 3) In addition, the following requests were raised in the meeting, and Eng. Suleman Khaled Kalou and Dr. Warif Yazgi noted the requests. The requests raised would be examined and tackled by MSEA with receiving the advice and support from the Team in the course of the Project activities, in case that the requests would be within the Project scope.
 - To allocate the appropriate budget to DFEAs for such purposes as travel cost, allowance, etc, for not only the Project activities but also the daily duties of DFEAs.
 - To provide the training at not only the selected DFEAs for regional basis but also the other DFEAs to save the travel cost and travel time.
 - To commence the practical training especially on data interpretation as soon as possible because the Output 6 has been just launched in action.
 - To procure the equipment for stack emission measurement for other DFEAs in addition to five DFEAs of regional training centers.

End



ANNEX-1

List of Attendants

Syrian Side

Eng. Soleman Khaled Kalou	Project Director, General Director of GCEA, MSEA
Dr. Warif Yazgi	Project Manager, Director of Laboratories, MSEA
Chemist Reem Sader Eddin	Laboratory Chief at Damascus DFEA
Eng. Thaer Al-Deif	Director of Rural Damascus DFEA
Eng. Ahmed Housam Mkhallalati	Director of Aleppo DFEA
Eng. Adnan Al-Natour	Director of Homs DFEA
Eng. Ali Al-Juayed	Director of Hama DFEA
Eng. Lama Ahmad	Director of Lattakia DFEA
Eng. Yamen Salman	Laboratory Chief of Lattakia DFEA
Eng. Mohammad Amin Ramadan	Director of Dier Ezzor DFEA
Eng. Jumana Hasan	Director of Idleb DFEA
Eng. Rae'efah Esber	Director of Hasakeh DFEA
Dr. Motasem Al-Abd	Director of Sweida DFEA
Eng. Ahmad Kablawi	Director of Dara'a DFEA
Eng. Hassan Morjan	Director of Tartous DFEA
Mr. Hamza Suleiman	Director of Quneitra DFEA
Chemist Ali Salameh	Chief Counterpart for output 6 at MSEA
Eng. Heba Salim	Chief Counter part for output 4 at MSEA
Eng. Amal Shammass	Chief counter part for output 4 at MSEA

Japanese Side

JICA Syria Office

Mr. Sohara	Representative, JICA Syria
Mr. Izeldien Oghly	Program Officer, JICA Syria

JICA Expert Team

Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Mr. Shinsuke Sato	Pollution Inventory-2/ Monitoring
Mr. Yoshiki Yamamoto	Water Analysis-2/ Data Interpretation-2/ Coordinator
Eng. Mohammed Al-Doubosh	Interpreter
Eng. Wasim Kabbesh	Interpreter
Ms. Maryam Ayyoubi	Interpreter



ANNEX-2

The Project for Capacity Development of Environmental Monitoring Phase 2

Agenda

The Third Technical Committee Meeting

Date and Time: October 18th (Mon.), 2010, 11:00~13:30

Venue: Meeting Room in MSEA

Agenda:

1. Opening Statement by Chairperson (Project Director: Eng. Suleman Kalou)
2. Overall Progress, Plan of Next Stage, and Recommendations
(Project Manager: Dr. Warif Yazgi)
3. Presentation from DFEAs in Central and Coastal Regions on Project Activities and
Related Topics
 - (1) Presentation from HOM DFEA (Director of HOM DFEA)
 - (2) Presentation from HAM DFEA (Director of HAM DFEA)
 - (3) Presentation from LTK DFEA (Director of LTK DFEA)
 - (4) Presentation from TAR DFEA (Director of TAR DFEA)
4. Topics Offered from JICA Expert Team (JET)

+++ Pollution Source Control and Environment Improvement +++
5. Discussion
6. Closing by Chairperson (Project Director: Eng. Suleman Kalou)

End

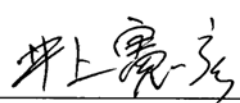


添付資料 1-7 第4回テクニカル・コミッティ議事録

**Minutes of Meeting
of
The Fourth Technical Committee
for
The Project for Capacity Development of Environmental Monitoring
Phase 2
in
The Syria Arab Republic**

Damascus, 28th of March, 2011

Eng. Suleman Khaled Kalou
Project Director
General Director of General Commission for
Environmental Affairs
Ministry of State for Environmental Affairs



Mr. Norihiko Inoue
Chief Advisor
JICA Expert Team
Japan International Cooperation Agency

In accordance with the Record of Discussion (R/D) and Minutes of Meeting (M/M) signed on the November 23, 2008, between the Ministry of Local Administration and Environment (MOLAE), the General Commission for Environmental Affairs (GCEA), and the Japan International Cooperation Agency (JICA) Syria Office for the Project for Capacity Development of Environmental Monitoring Phase 2 in the Syria Arab Republic (the Project), the 4th Technical Committee (T/C) meeting was held on March 28, 2011.

The 4th T/C meeting was started by an opening statement from Eng. Suleman Khaled Kalou, Project Director, General Director of GCEA, Ministry of State for Environmental Affairs (MSEA). Under the chairmanship of the Project Director, Dr. Wareef Al Yazji, Project Manager, Director of Laboratories of MSEA, presented the Project outline, overall achievements since 3rd T/C, and recommendations related to the Project, followed by the presentations of activities of five Directorates for Environmental Affairs (DFEAs) from north and northeast regions (Aleppo, Idleb, Deir Ezzor, Hasakeh, and Raqqa). Then the discussions were made among the T/C members under the chairmanship of Eng. Suleman Khaled Kalou.

The attendants and agenda of the meeting are listed in ANNEX-1 and 2.

1. The essential conclusions and recommendations are summarized in the following as the results of the discussions in the meeting.
 - 1) Project Manager pointed out that confusion on the concept between inspection and environmental monitoring was found through reviewing the monitoring plans of some of DFEAs. The Manager suggested that an opportunity would be provided for giving the instruction to laboratory chiefs of DFEAs with the support from JICA Expert Team (JET), in order to have a clear concept of environmental monitoring as well as to understand the planning methodology of monitoring such as locations, frequency, etc.
 - 2) Some DFEAs raised the difficulties i) to conduct the planned activities of inspection and monitoring, and ii) to prepare the reports and submit them to MSEA, due to insufficient budget and transportation as well as unavailability of the internet. Project Manager committed that the recommendations to mitigate/ solve the difficulties in DFEAs would be officially raised to higher authorities.
 - 3) Project Manager pointed out that the results of AEC program on NO₃ did not achieve the satisfactory level in all the DFEAs, except Sweida DFEA. Dara'a DFEA Director expressed the necessity of calibration of the spectrophotometer. On the other hand, Project Manager recommended i) application of the Cadmium Reduction Method to NO₃ analysis in order to judge the efficiency of the standard method by analyzing the NO₃ samples of AEC program, ii) calibration of equipment related to NO₃ analysis, and iii) cooperation with other commissions in order to identify the reason of unsatisfactory level of analysis.
 - 4) Aleppo DFEA Director raised the necessity of more hands-on training especially for heavy metal analysis by Atomic Absorption Spectrophotometer (AAS), instead of homework-style training. Project Manager explained that it would be important i) to conduct self-dependent training in DFEAs after receiving a series of trainings from JET, and ii) to transfer knowledge from senior staff to junior ones. The Manager also presented the achievement made by Quneitra DFEA in developing their capabilities of conducting AAS analysis.
 - 5) The capacity development by the Project in Aleppo DFEA may be affected due to resigning or shifting many counterpart personnel. The DFEA will re-arrange the assignment of staff and counterpart personnel as soon as possible to resume the effectiveness of training.
 - 6) Project Manager requested DFEAs to review the Practical Guidelines for Industrial Facilities Inspection and to send the comments if any by official letter within 10 days (by 7th April 2011).

- 7) The draft Progress Report (4) (PrR4) was distributed in the meeting to the T/C members. Project Manager requested DFEAs to review PrR4 and send the comments if any by official letter by 13th April 2011.
 - 8) Project Manager and Homs DFEA Director confirmed that i) a study should be conducted on the costs of operating the wastewater treatment facility procured by JICA (filters, electricity, maintenance, etc), and ii) cost for operation and maintenance of the facility should be shared among the DFEAs.
2. The remarks to be noted or to be discussed further are enumerated in the following, which were raised in the meeting.
- 1) Project Manager raised the importance regarding mobile and stationary stations for air quality measurement, especially on i) calibration of the equipment owned by the MSEA and DFEAs before and after measurement, ii) on-site calibration of the equipment, and iii) recording calibration results in specific forms. Project Manager requested DFEA Directors and laboratory chiefs to send the monitoring results together with the calibration data to MSEA.
 - 2) Directors and laboratory chiefs of some DFEAs raised that difficulties were still awaiting solutions especially on the travel cost and allowance to participate in the regional training, and requested MSEA to secure the budget for implementing the Project activities.
 - 3) DFEAs raised the following points regarding the inspectors and inspection activities:
 - It is necessary for inspectors to have an identification card.
 - It is essential for inspectors to obtain more experiences on detecting the deceptions of factories (i.e. the factories who have secret wastewater discharge system (by-pass discharge) and do not reveal such system to inspectors), and
 - It is important for MSEA and DFEAs i) to estimate the pollution load in wastewater discharged, and ii) to initiate the discussion on the regulation of wastewater discharge from the view point of not only pollution concentration but also pollution load control.
 - 4) Director of Deir Ezzor DFEA reported the status of environmental pollution in the governorate, i.e. i) all the types of wastewater are discharged into the river without treatment, and ii) agricultural wastewater shows high salinity. The Director pointed out the importance of installing the wastewater treatment stations as soon as possible. Laboratory chief of Hasakeh DFEA also reported that an oil company is one of the most polluting sources in the governorate whenever there is rainfall in the area.
 - 5) The technical aspects of the inspection were touched on through the discussion of Practical Guidelines for Industrial Facilities Inspection, regarding i) safety security for inspection of medical wastewater, ii) gradual increment of complaints to DFEAs on volatile organic compounds (VOCs) in air due to unavailability of measurement equipment, and iii) application of water quality standards to water bodies according to the water use purpose. Especially on iii), Project Manager explained that the Directorate of Water Safety in MSEA is currently preparing a Standard Specification for Surface Water Quality, which will be done within two years (2011-2012) and issued by Syrian Arab Organization for Standardization and Metrology.
 - 6) Project Manager pointed out, considering the remaining period of the Project, that i) practical and self-dependent trainings by trainees are to be increased in all the outputs when the trainees can perform the measurement, ii) it is important for trainees to prepare and calibrate the equipment/ devices, and iii) JET should provide such the instruction to the trainees as pointing out and correcting the mistakes.

End

ANNEX-1

List of Attendants

Syrian Side

Eng. Soleman Khaled Kalou	Project Director, General Director of GCEA, MSEA
Dr. Wareef AL Yazji	Project Manager, Director of Laboratories, MSEA
Eng. Manal Al Sakka	Director of EIA and Inspection, MSEA
Chemist Reem Sader Eddin	Laboratory Chief of Damascus DFEA
Eng. Mona Al Jomaa	Laboratory Chief of Rural Damascus DFEA
Eng. Mohamad Said Nafloos	Director of Aleppo DFEA
Eng. Adnan Al-Natour	Director of Homs DFEA
Eng. Samer Al Maghoot	Laboratory Chief of Hama DFEA
Eng. Mohammad Amin Ramadan	Director of Dier Ezzor DFEA
Eng. Mahamoud Tamer	Laboratory Chief of Idleb DFEA
Eng. Nawaf Othman	Laboratory Chief of Hasakeh DFEA
Eng. Hassan Okula	Laboratory Chief of Raqqa DFEA
Eng. Fares Atala	Head of EIA Department of Sweida DFEA
Eng. Ahmad Kablawi	Director of Dara'a DFEA
Eng. Hassan Morjan	Director of Tartous DFEA
Eng. Thanaa Al Mnizel	Laboratory Chief of Quneitra DFEA
Eng. Samar Al Chami	Chief Counterpart for output 3 of MSEA
Eng. Heba Salim	Chief Counter part for output 4 of MSEA
Eng. Amal Shammas	Chief counter part for output 4 of MSEA
Chemist Ali Salameh	Chief Counterpart for output 7 of MSEA

Japanese Side

JICA Syria Office

Mr. Yasuhiro Sohara	Representative, JICA Syria
Mr. Izeldien Oghly	Program Officer, JICA Syria

JICA Expert Team

Mr. Norihiko Inoue	Chief Advisor/ Environmental Analysis and Management
Mr. Shinsuke Sato	Pollution Inventory-2/ Monitoring
Mr. Yoshiki Yamamoto	Water Analysis-2/ Data Interpretation-2/ Coordinator
Eng. Wasim Kabbesh	Interpreter
Ms. Maryam Ayyoubi	Interpreter
Mr. Aiman Roumya	Interpreter

ANNEX-2

**The Project for Capacity Development of
Environmental Monitoring Phase 2**

Agenda

The Fourth Technical Committee Meeting

Date and Time: March 28th (Mon.), 2011, 11:00 ~ 13:30

Venue: Meeting Room in MSEA

Agenda:

1. Opening Statement by Chairperson (Project Director: Eng. Suleman Kalou)
2. Overall Progress, Plan of Next Stage, and Recommendations
(Project Manager: Dr. Wareef Yazgi)
 - ✓ Date of the Second Sharing Workshop
3. Presentation from DFEAs in **North and Northeast Regions** on Project Activities and Related Topics
 - (1) Presentation from ALP DFEA (Director of ALP DFEA)
 - (2) Presentation from IDL DFEA (Director of IDL DFEA)
 - (3) Presentation from DRZ DFEA (Director of DRZ DFEA)
 - (4) Presentation from HSK DFEA (Director of HSK DFEA)
 - (5) Presentation from RAQ DFEA (Director of RAQ DFEA)
4. Topics for Discussion
 - (1) Practical Guidelines for Industrial Facilities Inspection
 - (2) Draft Progress Report (4)
5. Opinion Exchange
6. Closing by Chairperson (Project Director: Eng. Suleman Kalou)

End

添付資料 1-8 中間レビュー議事録

シリア / 〆

Minutes of Meeting
Between
Ministry of State for Environmental Affairs
And
Japan International Cooperation Agency
On
The Project on "Capacity Development of Environmental Monitoring Phase II"
in the Syrian Arab Republic

The Japanese Mid-Term Evaluation Team, organized by the Japan International Cooperation Agency (hereinafter referred to as 'JICA') and headed by Mr. Kaoru Iwasaki conducted the mid-term evaluation from July 19 to 22 on the Technical Cooperation Project on Capacity Development of Environmental Monitoring Phase II (hereinafter referred to as 'the Project') on the basis of the Record of Discussions signed on November 23, 2008.

During the evaluation period in the Syrian Arab Republic (hereinafter referred to as 'Syria'), the JICA Evaluation Team had a series of discussions and exchanged views with the Syrian counterparts.

As a result of discussions, the Syrian counterparts and the JICA Evaluation Team mutually agreed upon the Mid-Term Evaluation Report and the revision of PDM as the Attached Document.

Damascus, July , 2010

岩崎 薫

Mr. Kaoru Iwasaki
Leader
Japanese Mid-Term Evaluation Team,
Chief Representative,
JICA Syria Office
Japan International Cooperation Agency

Eng. Suleman Khaled Kalou
Project Director
General Director,
General Commission for Environmental
Affairs,
Ministry of State for Environmental
Affairs

(Witness)

井上 隆彦

Mr. Norihiko Inoue
Chief Advisor,
JICA Expert Team

(Witness)

Dr. Kawkab Dayeh
Minister,
Ministry of State for Environment
Affairs

THE ATTACHED DOCUMENT

1 Revision of Project Design Matrix

Revision of the Project Design Matrix (PDM) was discussed between the JICA Evaluation Team and the Syrian counterparts. Both sides agreed to modify the PDM as shown in a table below. The revised PDM is attached as Appendix 1. Plan of Operation (PO) will be revised in accordance with the revised PDM and to be approved by the next Technical Committee.

PDM	Proposed revision	Background of the Revision
MOLAE	MSEA	Due to the organizational change
GCEA	MSEA	Due to the organizational change
Activity 6-8 Materials for public awareness based on the present situations for water and air quality are developed.	Workshops are held by MSEA to share the present situations for water and air quality for DFEAs and other relevant authorities.	Sharing the information of present situations for water and air quality is effective to achieve the output 6.
Indicator 6-2 A report, which includes air pollution situations and air pollution maps on the governorate level is prepared in more than 11 DFEAs.	A report, which includes air pollution situations and air pollution maps on the governorate level, is prepared in at least 5 selected DFEAs.	Because necessary equipments to measure stack emission are available only in 5 DFEAs at the time of the mid-term evaluation. This indicator will reviewed if necessary when such necessary equipments are available in other DFEAs afterward.
Indicator 6-3 Materials for public awareness based on the present situations for water and air quality is prepared in more than 11 DFEAs.	A report, which includes the workshops mentioned in Activity 6-8 to share the present situations for water and air quality among DFEAs and other relevant authorities, is prepared by MSEA.	Same as Activity 6-8

2 The Mid-Term Evaluation Report

Through the mid-term evaluation, the Syrian counterparts explained the progress and current situation of the Project to the JICA Evaluation Team. Then, the team had detailed interviews with the Syrian counterparts and JICA experts about the Project. After the interviews with counterparts in MSEA and DFEAs, the JICA Evaluation Team drafted the Mid-Term Evaluation Report (hereinafter referred to as "the Report") and presented it to the Syrian counterparts. The Report is attached as Appendix II. The summary of the Report is presented by JICA in the Third Steering Committee Meeting on July 22, 2010. The members of Steering Committee and Syrian counterparts agreed on the Report.

- Appendix I Revised Project Design Matrix
- Appendix II Mid-Term Evaluation Report
- Appendix III List of Attendants of the Third Steering Committee

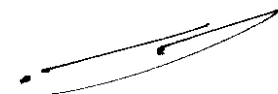
APPENDIX I: Project Design Matrix (PDM) [Revision 04]

Project Name : Capacity Development for Environmental Monitoring Project Duration : 3 years July 22, 2010
 Phase II
 Target Area : 14 Governorates in Syria Target Group : Relevant staff of the DFEAs and MSEA, Approximately 20 million inhabitants of Syria.

Overall Goal	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Environmental management capabilities are strengthened in each Governorate by enhancement of the capabilities for implementing inspection and pollution sources management of DFEA.	1. The number of enforcement based on the inspection in Governorates is increased.	1. The number of enforcement based on the inspection in Governorates is increased.	1. The enforcement record based on the inspection.	The Syrian Government keeps its policy support for environmental protection.
Project Purpose Capabilities of the DFEAs for implementing inspection and environmental monitoring concerning the water and air pollution sources are strengthened under the management by MSEA.	1. The number of the qualified inspector of the laboratory staff is increased. 2. The number of the inspection case is increased. 3. The number of the monitoring item is increased.	1. The number of the qualified inspector of the laboratory staff is increased. 2. The number of the inspection case is increased. 3. The number of the monitoring item is increased.	1. Certification of the inspector. 2. Inspection record 3. Monitoring activity report	The Syrian Government keeps its policy support to provide staff, and budget to the Directorates.
Outputs	1-1 The proper Pollution Sources Inventory is prepared.	1-1 The proper Pollution Sources Inventory is prepared.	1-1 Specification of the Pollution Sources Inventory.	Execution instructions are promulgated.
2. Capabilities for implementing inspection are strengthened.	2-1 A revision of "Industrial Facilities Inspection Guideline" is prepared.	2-1 A revision of "Industrial Facilities Inspection Guideline" is prepared.	1-2 Pollution Sources Inventory. 2-1 A revision of "Industrial Facilities Inspection Guideline"	
3. Necessary sampling skills for inspection for water effluent are strengthened.	3-1 SOP for water effluent sampling is prepared in more than 11 DFEAs. 3-2 More than 60% of the staff, who got the training, are able to conduct the water effluent sampling based on the SOP.	3-1 SOP for water effluent sampling is prepared in more than 11 DFEAs. 3-2 More than 60% of the staff, who got the training, are able to conduct the water effluent sampling based on the SOP.	3-1 SOP for water effluent 3-2 Training record of the water effluent sampling.	
4. Capabilities concerning water quality analysis for water effluent and surface water are improved.	4-1 SOP for water quality analysis is prepared in more than 7 DFEAs of the 9 DFEAs, except Damascus DFEA, which possess AAS. 4-2 A (Acceptable) grade of the AEC Program is obtained for at least 6 parameters in each DFEA. 4-3 The number of possible analytical parameter is increased by 8 different parameters more on average in 9 DFEA, which possess AAS. 4-4 Water quality analyses with preparation of reagent are able to conduct for at least 1 parameter in more than 11 DFEAs.	4-1 SOP for water quality analysis is prepared in more than 7 DFEAs of the 9 DFEAs, except Damascus DFEA, which possess AAS. 4-2 A (Acceptable) grade of the AEC Program is obtained for at least 6 parameters in each DFEA. 4-3 The number of possible analytical parameter is increased by 8 different parameters more on average in 9 DFEA, which possess AAS. 4-4 Water quality analyses with preparation of reagent are able to conduct for at least 1 parameter in more than 11 DFEAs.	4-1 SOP for water quality analysis 4-2 Participant Record of the AEC Program 4-3 Analyses record 4-4 Analyses record	

<p>5. Capabilities concerning measurement of stack emissions (gases and particulate matter) are strengthened.</p>	<p>5-1 SOP for stack emissions is prepared in more than 5 DFEAs. 5-2 More than 60% of the staff, who got the training, is able to conduct the stack emissions measurement based on the SOP for stack emissions. 5-3 The number of possible analytical parameter for stack emissions is increased by 3 different parameters more.</p>	<p>5-1 SOP for stack emissions measurement 5-2 Training record of stack emissions measurement 5-3 Analysis record for stack emissions</p>
<p>6. Capabilities concerning evaluation of present conditions of water and air quality in each governorate are strengthened.</p>	<p>6-1 A report, which includes water pollution situations and water pollution maps on the governorate level is prepared in more than 11 DFEAs. 6-2 A report, which includes air pollution situations and air pollution maps on the governorate level is prepared in at least 5 selected DFEAs. 6-3 A report, which includes the workshops mentioned in Activity 6-8 to share the present situations for water and air quality among DFEAs and other relevant authorities, is prepared by MSEA.</p>	<p>6-1 Report, which includes water pollution situations and their maps 6-2 Report, which includes air pollution situations and their maps 6-3 Report, which includes the workshops</p>
<p>7. Capabilities concerning formulation and implementation of environmental monitoring plan are strengthened.</p>	<p>7-1 The environmental monitoring plan is developed and implemented in 14 DFEAs.</p>	<p>7-1 Each environmental monitoring plan</p>

BA



Narrative Summary	Inputs	Important Assumption
<p>Activities</p> <p>1.1 MSEA reviews the results of "Pollution Sources Survey" done in the Phase 1, and identifies the necessary information for preparing pollution sources inventory.</p> <p>1.2 MSEA identifies the situations to prepare pollution sources inventory and its utilization purposes by each DFEA.</p> <p>1.3 MSEA designs specification of the pollution sources inventory.</p> <p>1.4 Each DFEA prepares the pollution sources inventory based on the activity 1.3.</p> <p>2.1 Each DFEA identifies technical and institutional issues of present inspection.</p> <p>2.2 MSEA understands the issues of present inspections by DFEAs, and prepares a draft revision of "Industrial Facilities Inspection Guideline".</p> <p>2.3 Each DFEA conducts inspection based on a draft revision of "Industrial Facilities Inspection Guideline".</p> <p>2.4 Each DFEA identifies the issues of inspection based on a draft revision of "Industrial Facilities Inspection Guideline".</p> <p>2.5 MSEA reflects the identified issues of inspections by DFEAs for a draft revision of "Industrial Facilities Inspection Guideline".</p> <p>3.1 MSEA prepares water effluent sampling training plan, and manages the implementations.</p> <p>3.2 Water effluent sampling trainings for the 14 DFEAs are conducted in 5 selected DFEA for regional training.</p> <p>3.3 A sample SOP of water effluent sampling for the 14 DFEAs is prepared in 5 selected DFEA for regional training.</p> <p>3.4 Each DFEA prepares a SOP of water effluent sampling.</p> <p>3.5 Each DFEA conducts sampling based on a SOP of water effluent sampling.</p>	<p><u>Syrian Side Inputs</u></p> <ol style="list-style-type: none"> 1. Preparation of equipment 2. Daily allowance and transportation/accommodation fees for the trainings. 3. Land, building, laboratories, office space and other necessary facilities for the Project. 4. Assignment of counterparts and administrative personnel. 5. Running expenses for the implementation of the Project. <p><u>Japanese Side Inputs</u></p> <ol style="list-style-type: none"> 1. Provision of equipment 2. Dispatch of experts team 	<p>Laboratory staff trained by the Project stay in laboratories and keep working on the environmental monitoring.</p> <p>Agents/manufactures timely provide spare parts for the equipment.</p> <p><u>Pre-conditions</u></p> <ol style="list-style-type: none"> 1. Appropriate number of laboratory staff who have chemical background are assigned. 2. Laboratory spaces are prepared in DFEAs.

BA
TAE

<p>4.1 MSEA prepares water quality analyses training plan, and manages the implementations. 4.2 Analyses trainings, including COD, NO3-N, Oil for the 14 DFEAs are conducted in 5 selected DFEA for regional training. 4.3 Trainings concerning reliability of the analyses data for the 14 DFEAs are conducted in 5 selected DFEAs for regional training. 4.4 Heavy metals analyses trainings using AAS for the 13 DFEAs (except Damascus DFEA) are conducted in 5 selected DFEAs for regional training. 4.5 A sample SOP concerning the water quality analyses for the 14 DFEAs is prepared in 5. 4.6 Each DFEA conducts necessary analyses based on the trainings. 4.7 Each DFEA prepares SOPs concerning necessary water quality analyses. 4.8 Each DFEA conducts necessary water quality analyses based on the SOPs.</p>	
<p>5.1 MSEA prepares stack emissions (gases and particulate matter) measurement training plan, and manages the implementations. 5.2 Stack emissions (gases and particulate matter) measurement trainings using portable stack emissions (gases and particulate matter) measurement equipment for the 14DFEAs are conducted in 5 for regional training. 5.3 A SOP concerning the stack emissions (gases and particulate matter) measurement for the 14 DFEAs is prepared in 5 for regional training. 5.4 Each DFEA conducts necessary stack emissions (gases and particulate matter) measurement based on the SOP.</p>	

Handwritten signature and initials.

	<p>6.1 MSEA prepares a training plan of water quality interpretation / report preparation and interpretation of stationary emission sources of air pollution / report preparation, and manages the implementations.</p> <p>6.2 Trainings for water quality interpretation / report preparation for the 14 DFEAs are conducted in 5 for regional training.</p> <p>6.3 Each DFEA interprets present water quality situations based on the available water quality data concerning the water quality pollution sources and the public water bodies.</p> <p>6.4 Each DFEA prepares a report, which includes water pollution situations and water pollution maps on the governorate level.</p> <p>6.5 Trainings for interpretation of stationary emission sources of air pollution/ report preparation for the 14 DFEAs are conducted in 5 for regional training.</p> <p>6.6 Each DFEA interprets each stationary emission sources of air pollution.</p> <p>6.7 Each DFEA prepares a report using reference data, which includes air pollution situations and air pollution maps on the governorate level.</p> <p>6.8 Workshops are held by MSEA to share the present situations for water and air quality for DFEAs and other relevant authorities.</p>
	<p>7.1 MSEA prepares training plan of data interpretation and revising environmental monitoring plan, and manages the implementations.</p> <p>7.2 Each DFEA identifies the technical issues of the present monitoring plan.</p> <p>7.3 Trainings of monitoring data interpretation for the 14 DFEAs are conducted in 5 for regional training.</p> <p>7.4 Trainings of revising environmental monitoring plan based on the monitoring data interpretation for the 14 DFEAs are conducted in 5 for regional training.</p> <p>7.5 Each DFEA revises the present environmental monitoring plan.</p> <p>7.6 MSEA evaluates the revised environmental monitoring plans by DFEAs, and provides the technical suggestions.</p> <p>7.7 Each DFEA conducts environmental monitoring based on the revised environmental monitoring plan.</p>

④

87

Appendix II Mid-Term Evaluation Report

1 Introduction

1.1 Objective of the Evaluation Study

The specific objectives of the mid-term evaluation are outlined as follows.

- (1) To review the progress of the Project and evaluate the achievement
- (2) To identify the positive factors to promote the effects of the Project
- (3) To identify the negative factors to prevent the effects of the Project
- (4) To consider the necessary actions to be taken and make recommendations for the Project
- (5) To revise the Project Design Matrix (PDM) and Plan of Operation (PO), if necessary

1.2 Methodology of the Evaluation Study

The Project was evaluated based on the PDM. For the data and information collection, the JICA Evaluation Team applied several methods such as the questionnaire to the JICA experts, the interviews to Syrian counterparts, field surveys and so on. The JICA Evaluation Team analyzed and evaluated the Project in terms of the achievement level of the Project purpose and outputs, the implementation process by using evaluation criteria such as relevance, effectiveness, and efficiency. Finally, the JICA Evaluation Team made the recommendations based on the results.

1.3 Members of the JICA Evaluation Team

- (1) Mr. Kaoru Iwasaki
Leader
Chief Representative,
JICA Syria Office,
Japan International Cooperation Agency
- (2) Mr. Issei Aoki
Assistant Director, Environmental Management Division 2,
Environmental Management Group, Global Environmental Department
Japan International Cooperation Agency

1.4 Schedule of the Study

The evaluation study was implemented from 19 July to 22 July in Syria. The detailed schedule is attached as ANNEX 1.

2 Inputs for the Project

2.1 Input from the Japanese side

In total, the Japanese side has allocated and appropriated necessary budget for the Project activities and management excluding provided equipments are shown in the following table.

1,000 Japanese Yen

	JFY2009	JFY2010
Total Cost for Project Implementation	88,912	87,225

(1) Dispatch of Japanese experts
Seven Japanese experts were dispatched and assigned. Detailed information is attached as ANNEX 2.

(2) Counterpart training in Japan
Country focused training course on capacity building regarding the Project was organized twice so far. Detailed information is attached as ANNEX 3.

(3) Provision of equipment