

National Center for Occupational Director

Ministry of Labor and Social Affairs

The Republic of Iraq

The Republic of Iraq
The Project on Strengthening
the Capacity for Occupational Safety
and Health

Project Completion Report

October 2021

Japan International Cooperation Agency (JICA)

National Center for Occupational Health and Safety

Ministry of Labor and Social Affairs

The Republic of Iraq

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Abbreviations

	English
FED	Federal Government of Iraq
JCC	Joint Coordination Committee
KRG	Kurdistan Regional Government
KRG MOLSA	Ministry of Labor and Social Affairs of Kurdistan Regional Government
KYT	Kiken (Hazard) Yochi (Prediction) Training
MOLSA	Ministry of Labor and Social Affairs of Iraq
NCOHS	National Centre for Occupational Health and Safety, under Ministry of Labor and Social Affairs of Iraq
OSH	Occupational Safety and Health
R/D	Record of Discussion

Photos
【Training in Japan】



Closing Ceremony for the training course “Capacity building for workers in health and safety management” in 2016



Closing Ceremony for the training course “Capacity development on risk assessment, and occupational safety and health management system” <Second Batch> in 2018



Closing Ceremony for the training course “Capacity Building for Workers to Record Occupational Accidents and Diseases” in 2019



Company inspection visit in Fukuoka in training course “Training of Medical Staff and Assistants” in 2019



Completion Report

Project for on Strengthening the Capacity for Occupational Safety and Health



A theoretical lecture on report making for occupational injuries and diseases in the training course “Capacity building of workers in NCOHS and KRG MOLSA on accident & occupational disease reporting and recording <First Batch>” in 2017



Learning concept of Zero-Accident Campaign in the training course “Updating methods of training in the field of OSH <First Batch>” in 2020”



Training course “Training of Medical Staff and Assistants” in 2019 at JICA Kyusyu-Center



【Training / Inspection in Iraq】



NCOHS held a training “Risk Prediction in Work Place (KYT session)” at Babylon Battery 2 Baghdad on 17 Sep. 2017



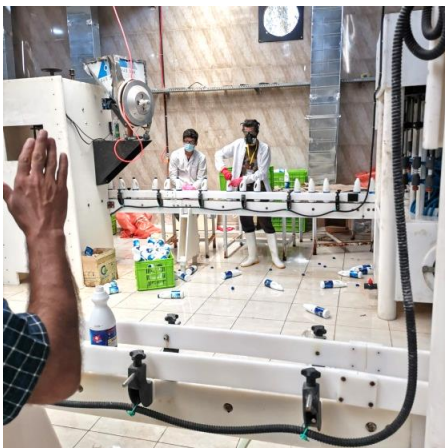
KRG-MOLSA held a training course “Safety and safety rules and hazard, risk assessment in work place” for Company/Factory workers in 2019 to 2021



KRG-MOLSA conducts Occupational Inspections on construction projects in Erbil city in 2021



KRG-MOLSA Conducts Occupational Inspections on Crude Oil Fields to Determine Health Effects of Workers Exposed to Hydrogen Sulfide Gas, Governorate of Erbil in 2019



KRG-MOLSA conducts Occupational Inspections on food factories in Governorate of Erbil in 2020



Eng. Omar giving training Laboratory Staff for the operation of ICP-AES device at NCOHS, in Sep. 2021

1. Basic Information of the Project

1.1 Country

The Republic of Iraq

1.2 Title of the Project

The Project on Strengthening the Capacity for Occupational Safety and Health

1.3 Duration of the Project (Planned and Actual)

Planned duration of the Project was from April 2017 and to April 2020 (36 months). Actual duration of the Project is from October 2016 to October 2021 (60 months).

There were two reasons for amending the duration of the Project. First, as the schedule of some training courses planned in 2017 were postponed, it is necessary to extend the duration of the Project in order to implement all planned training courses. Therefore, the duration of the Project was extended from three (3) years to four (4) years by exchanging Minutes of Meetings signed on 31st October 2019.

Second, because of the global spread of the coronavirus disease (COVID-19), some the project activities have been suspended and it was necessary to re-extend the duration of the Project from four (4) years to five (5) years by exchanging Minutes of Meetings signed on 7th October 2020.

1.4 Background (from Record of Discussion)

The occupational safety and health (hereinafter referred as “OSH”) is one of the elements for realizing decent work, and is also the never-ending challenges to be achieved. Government of Iraq had been taking effective measures for this subject and the national organization once played a role as a lead player of OSH in the Middle East. However, successive wars and economic sanctions forced so many people move to the unforeseen work, in which they know little about the risks entitled. Moreover, in line with deterioration of basic quality of life, the safeness of the work tends to be ignored, while other elements were prioritized for the worker to survive. But the aspiration remains in the people and the Government of Iraq hence the

country is tackling with the augmenting risks of accidents in reconstruction of infrastructures under limited resources. In accordance with the situations above, the Government of Iraq requested the Government of Japan a Technical Cooperation Project for re-building the capacity of OSH administration of MOLSA, KRG MOLSA and other related organizations.

1.5 Overall Goal, Project Purpose, and Outputs (from R/D & Final)

The outline of the Project which was discussed and agreed upon by the Record of Discussion (R/D) and 1st JCC meeting was summarized in Table 1-1. Verifiable indicators of the Project were updated when the need raised by discussing among stakeholders and agreed by JCC meeting.

Table 1-1: Outline of the Project

Overall Goal	Verifiable Indicator (R/D)	Verifiable Indicator (Final)
Knowledge of Occupational Safety and Health (OSH) administration of the National Center for Occupational Health and Safety (NCOHS) departments and KRG MOLSA directorates in all governorates is improved.	<ol style="list-style-type: none"> 1. More than x % of inspectors and medical staff in charge of OSH administrative services at the governorate level receive training by NCOHS and KRG MOLSA. 2. More than x % of inspectors and medical staff in charge of OSH administrative services at the governorate level evaluate the training by NCOHS and KRG MOLSA is useful to their duties. 	<ol style="list-style-type: none"> 1. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level receive training by NCOHS and KRG MOLSA. 2. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level evaluate the training by NCOHS and KRG MOLSA is useful to their duties.
Project Purpose	Verifiable Indicator	Verifiable Indicator
OSH administrative	1. More than x %	1. More than 80%

<p>services of NCOHS and related departments of MOLSA and KRG MOLSA are improved.</p>	<p>inspectors, medical staff and researchers evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>2. More than x % companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>3. More than x % of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.</p>	<p>inspectors, medical staff and researchers evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>2. More than 80% companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>3. More than 80% of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.</p>
Output	Verifiable Indicator	Verifiable Indicator
<p>Output 1: Capacity of occupational safety administration (Safety Management System, and Health and Safety Work Environment) of NCOHS and related departments of</p>	<p>1-1 More than x % inspectors and other staff receive training on occupational safety based on the new modules.</p> <p>1-2 More than x % inspectors and other staff evaluate the</p>	<p>1-1 More than 80% inspectors and other staff receive training on occupational safety based on the new modules.</p> <p>1-2 More than 80% inspectors and other staff evaluate the</p>

<p>MOLSA and KRG MOLSA is improved.</p>	<p>training on occupational safety are useful to their duties.</p>	<p>training on occupational safety are useful to their duties.</p>
<p>Output 2: Capacity of occupational health administration (identification and recording of occupational diseases and accidents) of NCOHS and related departments of MOLSA is improved.</p>	<p>2-1 More than x % of inspectors receive training on occupational health based on the new modules.</p> <p>2-2 More than x % inspectors and other staff evaluate the training on occupational health are useful to their duties.</p> <p>2-3 Case study seminars of more than x types of occupational diseases are conducted.</p>	<p>2-1 More than 70% of inspectors receive training on occupational health based on the new modules.</p> <p>2-2 More than 70% inspectors and other staff evaluate the training on occupational health are useful to their duties.</p> <p>2-3 Case study seminars of more than 2 types of occupational diseases are conducted.</p>
<p>Output 3: Capacity of analytical measures of hazardous chemical substances in the workplace (heavy metals in biological samples and indoor environment) of NCOHS and related departments of MOLSA is improved.</p>	<p>3-1 The accuracy of analytical measure of hazardous chemical substances in the workplace is improved.</p> <p>3-2 More than x fields of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.</p>	<p>3-1 The accuracy of analytical measure of hazardous chemical substances in the workplace is improved.</p> <p>3-2 More than 2 fields of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.</p>

1.6 Implementing Agency

Stakeholders for the Project are listed in the table below.

Table 1-2: Implementing Agencies and Relating Organizations

Implementing Agency (Counterpart (CP))	Project Director Director General of NCOHS, Project Managers: <ul style="list-style-type: none"> • Director of Directorate of Occupational Health and Safety, KRG MOLSA • Director of Directorate of Occupational Health, NCOHS • Director of Directorate of Occupational Safety, NCOHS
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Japanese Project Team Members

Since it became difficult to dispatch qualified OSH experts to Iraq due to their organizations policy, it was decided not to dispatch Japanese experts to Iraq. Therefore, implementing institution of the Project were updated by JCC meeting.

Joint Coordinating Committee (JCC)

Joint Coordinating Committee (JCC) meeting was conducted on June 11th, 2019. The members of JCC were outlined in Table 1-3 below. JCC confirmed verifiable indicators in PDM, monitored the progress against the Plan of Operation and validated the achievements of Project Targets and Outputs of the Project.

Table 1-3: Members of JCC

Members (Iraqi side)	<ul style="list-style-type: none"> • Project Director: Director General of NCOHS, MOLSA • Director of Directorate of Occupational Health and Safety, KRG MOLSA • Director of Directorate of Occupational Health, NCOHS • Director of Directorate of Occupational Safety, NCOHS • Director of Laboratory Department, NCOHS • Director of Inspection Division NCOHS • Director of Consulting Safety and Engineering Test Division, NCOHS
Members (Japanese side)	<ul style="list-style-type: none"> • Representatives of JICA Iraq Office • JICA experts in charge of the Country Focused Training • Representatives of JICA Headquarters

2. Results of the Project

2.1 Results of the Project

2.1.1 Input by the Japanese side (Planned and Actual)

(1) Japanese Experts

Planned:

JICA will dispatch Japanese experts in the following fields.

- Chief advisor/ Occupational Safety and Health
- Training Planning/ Project Coordinator
- Other experts, as necessary

Actual:

Since it became difficult to dispatch Japanese experts due to deterioration of security in Iraq, it was decided not to dispatch them to Iraq.

(2) Training

Planned:

Short-term training on the followed topics as necessary in Japan and third countries.

- ① Capacity building for officials in health and safety management
- ② Capacity building for governmental officials in NCOHS in risk assessment and OSH Management System
- ③ Capacity building of officials in NCOHS and KRG MOLSA on accident & occupational disease reporting and recording
- ④ Training of medical staff and medical assistants
- ⑤ Practical training on analytical measures of heavy metals in biological samples and environment
- ⑥ Updating methods of training in the field of OSH

Actual:

The Project organized the following trainings and a pilot action plan supporting program. The summary of training in Japan is in the table below.

Table 2-1: Training in Japan

No.	Duration (No. of days)	No. of participants	Items of lecture and visit
1	From 10 th October 2016 (13 days)	15 (FED:10/KRG:5)	Capacity building for workers in health and safety management
2	From 16 th February 2017 (13 days)	9 (FED:6/KRG:3)	Training for medical staff and Assistants in diagnosing Occupational Diseases
3	From 16 th April 2017 (14 days)	18 (FED:12/KRG:6)	Capacity development on risk assessment, and occupational safety and health management system
4	From 2 nd July 2017 (14 days)	9 (FED:6/KRG:3)	Practical training on analytical measures of hazardous substances in the work environment
5	From 17 th July 2017 (13 days)	15 (FED:10/KRG:5)	Capacity building of workers in NCOHS and KRG MOLSA on accident & occupational disease reporting and recording
6	From 6 th November 2017 (12 days)	10 (FED:10/KRG:0)	Capacity building for workers in health and safety management <Second Batch>
7	From 15 th April 2018 (14 days)	18 (FED:12/KRG:6)	Capacity development on risk assessment, and occupational safety and health management system <Second Batch>
8	From 14 th February 2019 (16 days)	11 (FED:10/KRG:1)	Training of Medical Staff and Assistants
9	From 23 rd June 2019 (14 days)	10 (FED:7/KRG:3)	Updating methods of training in the field of OSH
10	From 2 nd December	10 (FED:6/KRG:4)	Capacity building of workers in NCOHS and KRG MOLSA on

	2019 (11 days)		accident & occupational disease reporting and recording <Second Batch>
11	From 11 th February 2020 (23 days)	12 (FED:12/KRG:0)	Practical training on analytical measures of heavy metals and biological samples and environment

Although the Project planned the 12th training in Japan about the same content of 9th training in June 2020, it was cancelled due to the global spread of Covid-19.

The summary of the pilot action plan supporting program is in the table below.

Table 2-2: Pilot Action Plan Supporting program

No.	Duration (No. of days)	No. of participants	Items of lecture
1	10 th September 2018 to 25 th February 2019 (3 days)	6 (FED:6/KRG:0)	Dissemination of KYT and Safety Culture in pilot companies

(3) Provision of Equipment

Planned:

Basic and essential equipment necessary for inspection and analysis of occupational diseases will be provided.

Actual:

The Project provided the following equipment. The provision of the equipment is in the table below.

Table 2-3: List if Provided Equipment

No.	Equipment	Quantity	Price of acquisition (JPY)	Day of acquisition	Place of installation
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1	ICP-AES (Atomic Absorption Spectrophotometer)	1 (FED:1)	28,311,000	2021/9/22	National Center for Occupational Safety and Health (NCOHS)
2	Detectors (LEL, CO, H2S, O2)	8 (FED:5/ KRG:3)	787,255	2019/2/17 2019/2/17	NCOHS KRG MOLSA
3	First Aid Dummy	3 (FED:2/ KRG:1)	770,854	2019/2/17 2019/2/17	NCOHS KRG MOLSA
4	Digital X-ray & Printer with Films for Digital X-ray	1 (FED)	3,190,579	2021/10/21	NCOHS
5	Spirolab (Spirometer)	2 (FED: 1, KRG: 1)	1,392,050	2021/10/20 2021/10/27	NCOHS KRG MOLSA
6	Cardimax -7102	2 (FED: 1, KRG: 1)	645,911	2021/10/31 2021/10/28	NCOHS KRG MOLSA
7	Medical BMI scale	2 (FED: 1, KRG: 1)	445,456	2021/10/20 2021/10/27	NCOHS KRG MOLSA
8	Audiometer (air +bone)	2 (FED: 1, KRG: 1)	1,491,231	2021/10/31 2021/10/30	NCOHS KRG MOLSA
9	LCD Electronic Chart (Vision Test)	2 (FED: 1, KRG: 1)	289,546	2021/10/20 2021/10/27	NCOHS KRG MOLSA
10	Sound Level Meter with accessories	8 (FED: 5, KRG: 3)	256,583	2021/10/21 2021/10/28	NCOHS KRG MOLSA
11	Humidity Probe & Heat	8 (FED: 5, KRG: 3)	668,184	2021/10/21 2021/10/28	NCOHS KRG MOLSA

12	Vibration Meter	8 (FED: 5, KRG: 3)	605,820	2021/10/21 2021/10/28	NCOHS KRG MOLSA
13	Chlorine Detector with all Sensor Guarantee and Maintenance <u>*Project Requested "Air Detector" but supplied "Liquid Detector"</u>	8 (FED: 5, KRG: 3)	980,003	2021/10/31 2021/10/28	NCOHS KRG MOLSA
14	CH4 Detector	4 (FED: 3, KRG: 1)	256,137	2021/10/31 2021/10/28	NCOHS KRG MOLSA
15	NH3 Detector	(FED: 3, KRG: 1)	467,729	2021/10/31 2021/10/28	NCOHS KRG MOLSA
16	Full face respirators (PPE)	2 (FED: 1, KRG: 1)	33,409	2021/10/20 2021/10/27	NCOHS KRG MOLSA
17	Work allowances for protection from the risk of welding (PPE)	2 (FED: 1, KRG: 1)	66,818	2021/10/31 2021/10/28	NCOHS KRG MOLSA
18	Work allowances for protection from the chemicals (PPE)	2 (FED: 1, KRG: 1)	25,614	2021/10/31 2021/10/28	NCOHS KRG MOLSA
19	Half mask respirators (PPE)	2 (FED: 1, KRG: 1)	10,023	2021/10/20 2021/10/27	NCOHS KRG MOLSA
20	Welding helmet, hand shield and goggles (PPE)	2 (FED: 1, KRG: 1)	42,187	2021/10/31 2021/10/30	NCOHS KRG MOLSA
21	Face Shields (PPE)	2 (FED: 1, KRG: 1)	3,341	2021/10/20 2021/10/27	NCOHS KRG MOLSA
22	Heat protection	2	2,227	2021/10/20	NCOHS

	gloves (PPE)	(FED: 1, KRG: 1)		2021/10/27	KRG MOLSA
23	Protection gloves from the chemicals (PPE)	2 (FED: 1, KRG: 1)	11,136	2021/10/21 2021/10/28	NCOHS KRG MOLSA
24	Protection gloves of acute bodies (PPE)	2 (FED: 1, KRG: 1)	16,705	2021/10/31 2021/10/28	NCOHS KRG MOLSA
25	General safety glasses (PPE)	2 (FED: 1, KRG: 1)	22,273	2021/10/31 2021/10/30	NCOHS KRG MOLSA
26	Ear muffs (PPE)	2 (FED: 1, KRG: 1)	22,273	2021/10/31 2021/10/28	NCOHS KRG MOLSA
27	Hearing protection equipment (rubber plugs) (PPE)	2 (FED: 1, KRG: 1)	33,409	2021/10/31 2021/10/30	NCOHS KRG MOLSA
28	Helmet shock gloves (PPE)	2 (FED: 1, KRG: 1)	33,409	2021/10/31 2021/10/30	NCOHS KRG MOLSA
29	Safety shoes (PPE)	2 (FED: 1, KRG: 1)	33,409	2021/10/31 2021/10/30	NCOHS KRG MOLSA

(4) Local Operational Cost

The Project covered the following expenses:

- Expenses for setting the JCC
- Expenses incurred for the pilot action plan supporting program in 2018
- Expenses for implementing the action plan created through the Japan training of the 2019:
 - 1) Cost of making posters and pamphlets to promote OHS awareness
 - 2) Expenses for various inspections and hold seminars
- Expenses for some Governorates to implement the action plans also provided in 2019.

(5) Total Cost

Total disbursements for goods and services amounted to JPY146,905,990.

Table2-4: Disbursement for the Project Implementation

Japanese Fiscal Year	Amount (JPY)
2016	22,687,565
2017	35,392,272
2018	20,280,703
2019	52,782,954
2020	0
2021	15,581,152

2.1.2 Input by the Iraq side (Actual)

(1) Assigned counterparts

Assigned counterparts of MOLSA is in the table.

Table 2-5: Assigned Counterparts of MOLSA

Title for PJ	Title for organization	Assigned duration	Name
Project Director	Director General of NCOHS, MOLSA	2015-2018	Eng. Ammar
		2018-2019	Alsudani
		2019-2020	Eng. Azhar Magid
		2021-2022	Doc. Nadir Al-Shumary Eng. Mashreq Abdul Khaleq
Project Managers	Director of Directorate of Occupational Health and Safety, KRG MOLSA	2015-2021 2021-2022	Dr. Arff
	Director of Directorate of Occupational Health, NCOHS	2015-2021	Ms. Lina Fayiq
	Director of Directorate of Occupational Safety, NCOHS	2015-2021	Ms. Noha Shaker
Others	Director of Laboratory Department, NCOHS	2015-2021	Mr. Mohamed Abdel Amir

	Director of Inspection Division, NCOHS	2015-2021	Mr. Mohamed Abdel Amir
	Director of Consulting Safety and Engineering Test Division, NCOHS	2015-2021	Mr. Osamah
	Director of Directorate of Labor, Erbil Directorate, KRG MOLSA	2015-2020 2020-2021	Mr. Mrewan Ms. Jwan

(2) Facilities and Equipment

Planned:

- Project office and facilities necessary for the implementation of the Project.
- Running cost and installation costs for procured equipment.

Actual:

- The Project made the above expenditures as planned.

(3) Local costs

The CP Agency, NCOHS expensed the following costs.

- Domestic transportation expenses for trainees participate training in Japan.
- Cost of repairing cracks in project offices and laboratories.
- Reinforcement work cost for voltage to connect electrical equipment in laboratories, and its 24-hour power supply.
- Maintenance costs for cooling devices.

2.1.3 Activities (Planned and Actual)

(1) Activities for Output 1: Capacity of occupational safety administration (Safety Management System, and Health and Safety Work Environment) of NCOHS and related departments of MOLSA and KRG MOLSA is improved.

Activity 1-1: Identify necessary capacity of inspectors and other relevant staff in NCOHS, KRG MOLSA, and governorates.

【Federal NCOHS】

- The training in Japan increased the knowledge of inspectors and other related staff on occupational safety, accumulated information for their activities, and strengthened their capacity for occupational safety inspection.

- In particular, it has been realized to monitor the availability of safety requirements in the working environment.

【KRG-MOLSA】

- There was an advantage in that the information capacity of the inspectors increased, but the reflection in further activities is a future issue.

Activity 1-2: Review existing training programs of occupational safety.

【Federal NCOHS】

- The development of a new training curriculum for occupational health and safety officers in government agencies has been greatly reflected in a mindset review within NCOHS.
- Also, new training courses have been established and implemented at the training center for workers based on the knowledge and skills gained from the experience of training in Japan.

【KRG-MOLSA】

- Information on accidents and hazards for inspectors has increased, and their awareness has improved, but due to budget problems, this has not been reflected in actual training activities.

Activity 1-3: Select master trainers and conduct trainer's training (in Iraq, Japan or third countries).

【Federal NCOHS】

- No particular activity in this area.
- In Iraq, it is difficult to find an incentive to become a master trainer, so we would like to have master trainer training in Japan in order to make use of Japan's knowledge and experience.
- This kind of training has also contributed to strengthening the role of the center in the field of OSH in Iraq, and we hope for continued support.

【KRG-MOLSA】

- No particular activity in this area.

Activity 1-4: Develop new training modules of occupational safety based on the activities 1-1 to 1-3.

【Federal NCOHS】

- Using the vocabulary learned in trainings in Japan, new training vocabulary was introduced in the center's courses (e.g., danger prediction, etc.)

【KRG-MOLSA】

- Intensifying further training on incident recording and reporting.
- Intensifying training of medical staff on medical occupational diseases.

Activity 1-5: Provide training for inspectors and relevant staff in NCOHS, KRG MOLSA and governorates.

【Federal NCOHS】

- NCOHS inspectors also provided extensive trainings to the staff of the Work Inspection Committee of the Department of Labor and Vocational Training of MOLSA.
- NCOHS participated in inspection committees as a follow-up to the application of safety requirements in various economic activities, and also enhanced the capacity of the members of the committees.

【KRG-MOLSA】

- Conducted training on safety management for inspectors.

Activity 1-6: Monitor and evaluate training and reflect the results to revise training modules.

【Federal NCOHS】

- Once a year from November to December, when the plan for the next fiscal year was updated, NCOHS took activity monitoring including various training modules, and revisions them.
- In addition, after each training session, we reflected the opinions of the target companies and factories, and made minor revisions to the training implementation method.
- Regarding the activities to achieve the overall goal of the Project, NCOHS

agreed with JICA Iraq office to conduct joint monitoring every 6 months after the Project finished.

【KRG-MOLSA】

- KRG-MOLSA have already reviewed the modules and added training on accidents and hazards in projects in various fields.

(2) Activities for Output 2: Capacity of occupational health administration (identification and recording of occupational diseases and accidents) of NCOHS and related departments of MOLSA is improved.

Activity 2-1: Identify necessary capacity of medical staff in NCOHS and governorates.

【Federal NCOHS】

- NCOHS and medical staff from each prefecture also participated in the training in Japan, which was very helpful in identifying the necessary expertise for each organizational staff.
- By organizing necessary information for staff and providing information by NCOHS, the ability of professional health checkups was improved and contributed to the establishment of an occupational disease recording system in Iraq.

【KRG-MOLSA】

- Throughout the Project, one medical staff was required for each group of inspectors and was redeployed.

Activity 2-2: Review existing training programs of occupational health.

【Federal NCOHS】

- Through the knowledge gained in the Project, NCOHS began to share their experiences with the staff, especially in the field of specialization in community medicine, for postgraduate medical students.

【KRG-MOLSA】

- Inspectors now share information on accidents and hazards with medical staff,

making OSH activities more effective.

Activity 2-3: Provide training for medical staff in NCOHS and governorates (in Iraq, Japan or third countries).

【Federal NCOHS】

- It was very helpful that most of the workers in Japan's occupational health departments have been trained in the occupational disease registration and occupational health fields, and that they conduct occupational health examinations for workers.
- In the future, NCOHS is also considering providing training to medical staff in governorates as well.

【KRG-MOLSA】

- No particular activity in this area.

Activity 2-4: Develop new training modules of occupational health based on the activities 2-1 to 2-3.

【Federal NCOHS & KRG-MOLSA】 -Both same actions under taking-

NCOHS & KRG-MOLSA have been developing the following new and training modules.

- Further trainings on recording and reporting incidents.
- Trainings of medical staff on medical occupational diseases.

Activity 2-5: Provide training for inspectors and relevant staff in NCOHS directorates in governorates.

【Federal NCOHS】

- NCOHS has invited the Department of Occupational Health and Safety Department officials in Governorates to participate in a wide range of trainings, and through these activities, the Occupational Health and Safety inspection capacity is improving.

【KRG-MOLSA】

KRG-MOLSA has provided the following trainings to OSH related department

staff and inspectors.

- Training on administrative safety on projects.
- Training on occupational disease course for medical professionals.
- Training on chemicals and chemical hazards.

Activity 2-6: Conduct case study seminars on occupational diseases among medical staff in NCOHS and governorates.

【Federal NCOHS】

- NCOHS, the national agency responsible for OHS records in Iraq, has already received a number of consultations from local ministries.
- Therefore, cases related to occupational diseases have already been accumulated and case study seminars are held regularly.

【KRG-MOLSA】

KRG-MOLSA regularly has conducted the following seminars on occupational diseases.

- Dermatitis due to chemical hazards.
- Respiratory disease.
- Hearing loss.

(3) Activities for Output 3: Capacity of analytical measures of hazardous chemical substances in the workplace (heavy metals in biological samples and indoor environment) of NCOHS and related departments of MOLSA is improved.

Activity 3-1: Identify necessary capacity of researchers and other relevant staff in NCOHS.

【Federal NCOHS】

- Each NCOHS researcher has expertise in their own field, and no additional specific competence is recognized.

【KRG-MOLSA】

KRG-MOLSA has required researchers to improve the analytical and measurement accuracy of hazardous chemicals in the following three fields or more.

- Determination of heavy metals such as vanadium in soil samples.
- Measurement of hydrogen sulfide gas in oil field production.
- Measuring heavy metals in water.

Activity 3-2: Select and procure laboratory equipment and develop the operational and maintenance procedures.

【Federal NCOHS & KRG-MOLSA】 -Both same actions under taking-

- As the equipment was delivered and set up just before the end of the Project, this activity has not yet been fully implemented.

Activity 3-3: Provide training for researchers and other relevant staff in NCOHS (in Iraq, Japan or third countries).

【Federal NCOHS】

- In the Project, we introduced the latest equipment (ICP-AES) in the laboratory department. This device will be used by NCOHS to measure toxins in biological samples and in the air.
- NCOHS is working with the Ministry of Higher Education and the Ministry of Health and Environment to provide services to students who want to use the device for research and is also focusing on joint research using this equipment.

【KRG-MOLSA】

- Currently, KRG-MOLSA does not have a research department and is planning to establish a laboratory.
- The equipment received from JICA has been used by the inspection department for company visits and will be used in the laboratory for safe operation in the future.

Activity 3-4: Compile the analysis methods of hazardous chemical substances in the workplace (heavy metals in biological samples and indoor environment) in reports and share with relevant institutions.

【Federal NCOHS】

- NCOHS has collected biological samples of hazardous chemicals, measures

the percentage of toxins and minerals, and submits reports to the relevant authorities.

【KRG-MOLSA】

- No particular activity in this area.

2.2 Achievements of the Project

2.2.1 Outputs and Indicators

Three outputs and two or three indicators each output were set to measure the achievement of the Project, as indicated in the Table 1-1: Outline of the Project. The achievement of each indicator is explained as follows.

- (1) Output 1: Capacity of occupational safety administration (Safety Management System, and Health and Safety Work Environment) of NCOHS and related departments of MOLSA and KRG MOLSA is improved.

NCOHS and KRG-MOLSA have confirmed the following results.

- 1) By applying what we learned in the training courses in Japan, the number of inspection visits to economic activities increased and the contents of inspections became more efficient.
- 2) Through the activities of the Project, several studies on OSH have been completed by NCOHS.
- 3) New risks and hazards in the working environment were identified and the working environment improved.
- 4) The equipment provided to NCOHS from the Project has strengthened the ability to analyze biological samples of hazardous chemicals.
- 5) The ability of economic workers to perform specialized health examinations has improved.
- 6) The Project has indirectly contributed to the increase in the number of occupational safety warnings from NCHOS (Increase in national OSH requirements in Iraq since 2016)

Output 1 Indicator 1-1: More than 80% inspectors and other staff receive training on occupational safety based on the new modules.

【Federal NCOHS】

- **90%**¹ of inspectors and other staff have received occupational safety training based on the new module.
- It increases information about workplace safety and safety regulation requirements and enables efficient OSH activities.

【KRG-MOLSA】

- **80%**² of inspectors and other staff have received occupational safety training based on the new module.
- It increases information about workplace safety and safety regulation requirements and enables efficient OSH activities.

Output 1 Indicator 1-2: More than 80% inspectors and other staff evaluate the training on occupational safety are useful to their duties.

【Federal NCOHS】

- After training in Japan, a new training module was adopted for practical work in Iraq from 2017.
- Since then, the new module has been updated and utilized every year, and **96%** of NCOHS inspector and other staff evaluated it as effective and useful to their duties.

【KRG-MOLSA】

- **80%** of inspector and administrative staff at the Governorate level of KRG-MOLSA evaluated that the new training modules adopted after training in Japan were useful to their duties.

(2) Output 2: Capacity of occupational health administration (identification and recording of occupational diseases and accidents) of NCOHS and related departments of MOLSA is improved.

Output 2 Indicator 2-1: More than 70% of inspectors receive training on

¹ The percentages shown in the Federal NCOHS column were calculated from responses to questionnaires collected by selecting relevant staff for each activity from the approximately 80 NCOHS staff involved in the Project prior to project termination.

² The percentages shown in the KRG-MOLSA column were calculated from responses to questionnaires collected by selecting relevant staff for each activity from the approximately 30 NCOHS staff involved in the Project prior to project termination.

occupational health based on the new modules.

【Federal NCOHS】

- More than **85%** of inspectors are trained in occupational health based on the new module.

【KRG-MOLSA】

- More than **75%** inspectors and other staff receive training on occupational safety based on the new modules.

Output 2 Indicator 2-2: More than 70% inspectors and other staff evaluate the training on occupational health are useful to their duties.

【Federal NCOHS】

- NCOHS has continuously conducted training for inspectors and other staff more than 6 times a month, and **90%** of the participants answered that the training was useful to their duties.

【KRG-MOLSA】

- KRG-MOLSA has continuously conducted training for inspectors and other staff more than 4 times a month, and **75%** of the participants answered that the training was useful to their duties.

Output 2 Indicator 2-3: Case study seminars of more than 2 types of occupational diseases are conducted.

【Federal NCOHS】

The following **three types** of seminars on occupational diseases are conducted by NCOHS.

- 1- Coronavirus preventive measures in the work environment.
- 2- Respiratory diseases.
- 3- Deafness.

【KRG-MOLSA】

The following **three types** of seminars on occupational diseases are conducted by KRG-MOLSA.

- 1- Dermatitis due to chemical hazards.
- 2- Respiratory diseases.
- 3- Deafness.

(3) Output 3: Capacity of analytical measures of hazardous chemical substances in the workplace (heavy metals in biological samples and indoor environment) of NCOHS and related departments of MOLSA is improved.

Output3 Indicator 3-1: The accuracy of analytical measure of hazardous chemical substances in the workplace is improved.

【Federal NCOHS】

- NCOHS improved **more than 3 fields** of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.

【KRG-MOLSA】

- KRG-MOLSA improved **3 fields** of analytical measures of hazardous chemical substances in the workplace.

Output3 Indicator 3-2: More than 2 fields of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.

【Federal NCOHS】

- NCOHS compiled **3 fields** of analytical measures of hazardous chemical substances in the workplace.

【KRG-MOLSA】

- KRG-MOLSA improved **3 fields** of analytical measures of hazardous chemical substances in the workplace.

2.2.2 Project Purpose and Indicators

The Project Purpose is defined as “OSH administrative services of NCOHS and related departments of MOLSA and KRG MOLSA are improved.” And three indicators were set to measure the achievement, such as follows.

1. More than 80% inspectors, medical staff and researchers evaluate that

OSH administrative services of NCOHS and KRG MOLSA have been improved.

2. More than 80% companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.
3. More than 80% of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.

Project Purpose Indicator 1: More than 80% inspectors, medical staff and researchers evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.

Result: **More than 90%**³ of project stakeholders at Federal NCOHS, and **more than 80%** of project stakeholders at KRG MOLSA rated their OSH management services as improved.

Project Purpose Indicator 2: More than 80% companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.

Result: **More than 85%**⁴ of companies which receive the inspections evaluate that OSH administrative services of NCOHS, and **more than 80%** of companies which receive the inspections evaluate that OSH administrative services of KRG MOLSA rated their OSH management services as improved.

Project Purpose Indicator 3: More than 80% of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.

Result: **More than 95%**⁵ of medical staff of NCOHS, and **more than 75%**

³ Percentages are the results of a questionnaire survey of inspectors, medical staff, and researchers from NCOHS (approximately 80 people in total) and KRG-MOLSA (approximately 30 people in total).

⁴ Percentages are the results of questionnaires conducted by NCOHS (approximately 40 targets in total) and KRG-MOLSA (approximately 25 targets in total) during the project period for inspected companies and projects.

⁵ Percentages are the aggregate results of a questionnaire administered to approximately 35

medical staff of KRG-MOLSA reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.

However, since KRG-MOLSA has not been provided with an analysis machine such as ICP-AES, the results can be said to be limited.

2.3 History of PDM Modification

Project Design Matrix (PDM) was modified and approved two times at 1st JCC Meeting in June 2019 to suit to the current situation and environment of and to make indicators clear and measure the achievements. Modifications were done on the Objectively Verifiable Indicators of Overall Goal, Project purpose, Output 1, Output 2, Output 3.

Modifications approved at the 1stJCC Meeting are listed in the table below.

Table2-6: PDM Modifications at the 1st JCC Meeting (June 2019)

(1) Objectively Verifiable Indicators of Overall Goal	
Before	Amended
1. More than x % of inspectors and medical staff in charge of OSH administrative services at the governorate level receive training by NCOHS and KRG MOLSA.	1. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level receive training by NCOHS and KRG MOLSA.
2. More than x % of inspectors and medical staff in charge of OSH administrative services at the governorate level evaluate the training by NCOHS and KRG MOLSA is useful to their duties.	2. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level evaluate the training by NCOHS and KRG MOLSA is useful to their duties.
(2) Objectively Verifiable Indicators of Project Purpose	
Before	Amended
1. More than x % inspectors, medical staff and researchers evaluate that OSH administrative services	1. More than 80% inspectors, medical staff and researchers evaluate that OSH administrative services of

NCOHS medical staff.

<p>of NCOHS and KRG MOLSA have been improved.</p> <p>2. More than x % companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>3. More than x % of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.</p>	<p>NCOHS and KRG MOLSA have been improved.</p> <p>2. More than 80% companies which receive the inspections evaluate that OSH administrative services of NCOHS and KRG MOLSA have been improved.</p> <p>3. More than 80% of medical staff reply that they utilize the analytical measures according to the report of hazardous chemical substances analysis in the workplace developed by the Project.</p>
(3) Objectively Verifiable Indicators of Output 1	
Before	Amended
<p>1-1 More than x % inspectors and other staff receive training on occupational safety based on the new modules.</p> <p>1-2 More than x % inspectors and other staff evaluate the training on occupational safety are useful to their duties.</p>	<p>1-1 More than 80% inspectors and other staff receive training on occupational safety based on the new modules.</p> <p>1-2 More than 80% inspectors and other staff evaluate the training on occupational safety are useful to their duties.</p>
(4) Objectively Verifiable Indicators of Output 2	
Before	Amended
<p>2-1 More than x % of inspectors receive training on occupational health based on the new modules.</p> <p>2-2 More than x % inspectors and other staff evaluate the training on occupational health are useful to their duties.</p> <p>2-3 Case study seminars of more than x types of occupational</p>	<p>2-1 More than 70% of inspectors receive training on occupational health based on the new modules.</p> <p>2-2 More than 70% inspectors and other staff evaluate the training on occupational health are useful to their duties.</p> <p>2-3 Case study seminars of more than 2 types of occupational diseases are conducted.</p>

diseases are conducted.	
(5) Objectively Verifiable Indicators of Output 3	
Before	Amended
3-1 The accuracy of analytical measure of hazardous chemical substances in the workplace is improved.	3-1 The accuracy of analytical measure of hazardous chemical substances in the workplace is improved.
3-2 More than x fields of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.	3-2 More than 2 fields of analytical measures of hazardous chemical substances in the workplace are compiled in the reports.

2.4 Others

2.4.1 Results of Environmental and social Considerations

Planned:

Category : C

Evidence of the rating: the environmental and social impacts of the Project are the lowest based on the JICA Guidelines for Environmental and Social Considerations (Promulgated in April 2010).

Actual:

The Iraq side made adequate considerations and for the environmental and social impacts of the Project. The activities of the Project had some positive environmental and social impacts, but ended without any particular negative impacts.

2.4.2 Results of Consideration on Gender/Peace Building/Poverty Reduction

Not Applicable

3. Results of Joint Review

3.1 Results of Review based on DAC Evaluation Criteria

(1) Relevance

Relevance is considered to be high for the following reasons.

For the Iraqi government, the creation of non-oil industries and industrial diversification are core issues mentioned in the “National Development Plan” (2018-2022). Enhancing the transition of young people from education to employment is also an important issue in order to resolve the deteriorating security situation caused by repeated distrustful political demonstrations in Iraq.

The Government of Japan has set “strengthening the basis for economic growth” as a priority development issue for assistance of Iraq, and the “industrial promotion and industrial diversification program” to “support self-reliant and continuous economic growth” is the highest priority issue.

Prior to the start of the Project, many workers in Iraq, including workers at construction sites for Japanese Loan Projects, died in work accidents, and there were also many accidents such as mass electrocution among factory workers. Due to the circumstances, this project was started as a project with high urgency.

(2) Effectiveness

The effectiveness is considered to be high for the following reasons.

Regarding OSH activities in Iraq, NCOHS & Department of Occupational Safety and Health, KRG-MOLSA has been established and it seems that the implementation system is in place. The content was sloppy and needed a review of the overall picture of OSH activities.

During the Japanese implementation period, while spending time analyzing the current situation in Iraq, the careful preparation of the curriculum and input from the basics of OSH activities were effective technology transfer for the Iraqi government.

(3) Efficiency

The efficiency is considered to be middle for the following reasons.

At the planning stage, the Project planned to dispatch Japanese experts to Iraq

to provide concrete face-to-face input, however due to the deteriorating security situation in Iraq caused by the rise of ISIL (Islamic State in Iraq and the Levant), it became impossible to dispatch Japanese experts. Instead, the Project was decided to implement it through the main inputs as series of training in Japan and provision of equipment.

In addition, the Project started in 2016, and in 2020, due to the spread of COVID-19, some training courses were cancelled.

Despite being hit by various accidents, the Japanese implementing agencies made efforts to continuously implement the Project with as much input as possible.

Even after the Project started in 2016, it took a considerable amount of time to identify the necessary equipment for the Project and receiving tax exemptions by the Government of Iraq for project equipment imported from Japan. In addition, since 2019, due to the deterioration of political security in Iraq, office staff temporarily evacuated to Jordan, and it took a lot of time to procure equipment in Iraq.

Due to various difficulties and delays, the Project had to be extended several times, but thanks to the efforts and cooperation of the people involved, most of the activities of the Project were successfully completed.

(4) Impact

The impact of this project will be high.

Through the implementation of the Project, OSH activities that had not been established in Iraq have been established, and most of the indicators of the project purpose have been achieved. Since 2017, the introduction of new training modules into OSH activities in Iraq through the Project has been credited with improving the quality of training, seminars and inspections conducted.

Through the implementation of the Project, various OSH activities that had not been established in the domestic OSH activities in Iraq are becoming established, and many of the indicators of the project purpose have been achieved. Therefore, the impact is considered as high.

In particular, both Federal NCOHS and KRG-MOLSA established such new OSH

activities as follows:

- Initiated the establishment of an occupational disease registry in Iraq.
- Increased No. of audits for Factories/Companies by labor audit committees.
- Better monitoring of construction projects.
- In addition, the following factories were seen in the conventional OSH activities too.
- Activation of advice and consultation in the field of OSH.
- introduction of risk assessment into training operations.
- Introduction of new training curriculum.

Especially, at the Federal NCOHS, the first ICP-AES device in Iraq was provided by the Project, which markedly improved the inspection capabilities of OSH inspectors.

- Initiate the process of testing worker biological samples for toxins and increasing the accuracy of results.

(5) Sustainability

In order to ensure sustainability, it is necessary first of all to have OSH's superiority in terms of policies and systems in Iraq. Currently, construction projects for reconstruction and new development are rapidly increasing in Iraq, and the needs for OSH activities are also rapidly increasing, and there are no particular factors that hinder the achievement of the overall goal.

However, it is very difficult to foresee whether federal and KRG-MOLSA leaders will be able to make OSH a high priority and continue to budget for its activities. In addition, although it can be said that the implementation of the Project contributed to the improvement of OSH activities in Iraq, it is still necessary to improve in terms of technology and spread awareness of OSH in Iraq.

For this purpose, it is important to monitor together the activities of NCOHS and KRG-MOLSA in the future, also continuous follow-up and technical cooperation from JICA.

3.2 Key Factors Affecting Implementation and Outcomes

(1) Covid-19

- While the Project planned the 12th training in Japan about the same content

of 9th training in June 2020, it was cancelled due to the global spread of Covid-19. As the result of that, the OSH inspectors who were trained limited.

- Although the provision of equipment should be completed by months ago before the end of project, Covid-19 situation made it more difficult for delivering the equipment as planned. As the result of that, the follow-up for using equipment was not completed within the period of the Project.

(2) Organizational Factors:

- The dispatch of experts originally planned by JICA did not materialize due to the deterioration of security.
- There were frequent transfers of personnel in the Iraqi government, and it took a lot of time and effort to seek the understanding of the relevant ministries and agencies regarding the implementation of OSH activities.
- Deteriorating relations between the federal government and the Kurdistan government have hampered the approval of the NCOHS and KRG-MOLSA collaboration.

(3) As External Factors:

- Due to the impact of the new coronavirus, the planned country-specific training could not be implemented, which affected the effect.
- Domestic instability forced us to scale back our plans for the project.
- In addition, there was a delay in the delivery of equipment, creating a gap between training and the use of equipment.

3.3 Evaluation on the Results of the Project Risk Management

(1) Result of the Risk Management

Risk management due to external conditions of the security and political situation occurred a lot, but other than that, there are no particular mentions.

3.4 Lessons learned

Organization	Lessons Learned
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Federal NCOHS	<ul style="list-style-type: none"> - Deterioration of public security in Iraq, delays in forming a cabinet after the election, and accompanying deterioration of the financial situation were major obstacles to the implementation of the Project. - In line with the appointment of the new minister, the leaders of the NCOHS were changed, and despite the change in policy, the staff made efforts to persuade the upper management and continued OSH activities. - The number of training sessions in new modules and the number of inspections of private companies and public projects have increased dramatically, and people's awareness of OSH in Iraq is increasing. However, OSH awareness has not yet been fully realized, and further dissemination activities are necessary.
KRG-MOLSA	<ul style="list-style-type: none"> - As the KRG held a referendum in September 2017 to confirm the residents' intentions for independence, the Federal government suspended entry into Kurdistan and reduced financial support, and that greatly hampering project activities. - Deteriorating finances of KRG is a major problem, and the OSH budget is still not fully allocated. - Since liberation from ISIL in 2018, reconstruction and development projects and factory investment have also increased rapidly, and the number of OSH trainings, seminars and inspections has also increased significantly. - There are many international development projects and investments in KRG, and the need for spreading OSH awareness is increasing.

4. For the Achievement of Overall Goals after the Project Completion

4.1 Prospects to Achieve Overall Goal

Overall Goal:

Capacity of Occupational Safety and Health (OSH) administrative services of the National Center for Occupational Health and Safety (NCOHS) departments and KRG MOLSA directorates in all governorates is improved.

Objectively Verifiable Indicators:

1. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level receive training by NCOHS and KRG MOLSA.
2. More than 80% of inspectors and medical staff in charge of OSH administrative services at the governorate level evaluate the training by NCOHS and KRG MOLSA is useful to their duties.

Prospects to Achieve Overall Goal:

Indeed, the Project has contributed significantly to improving and strengthening the capacity and knowledge of OSH field's officials in Iraq.

However, at present, the knowledge and capacity building are limited to the capacity building of the central government and some governorate officials, and it can be said that the actual impact on improving the working environment of labors in Iraq is still limited.

Unless NCOHS and KRG-MOLSA continue to upgrade the capacity of more governorate officials and take more proactive OSH measures, the overall goals of this project will not be achieved.

This will require further efforts by the NCOHS and the KRG-MOLSA, and also JICA will need to work with International Donors and Organization such as ILO to provide ongoing technical assistance.

4.2 Plan of Operation and Implementation Structure of the Iraq side to Achieve the Overall Goal

Organization	Plan of Operation
Federal NCOHS	- Training inspectors and medical staff responsible for OSH management services at least 4 times per month

	<ul style="list-style-type: none"> - Inspection of more than 30 companies and projects per month - Conduct more than 3 types of OSH training for private companies at least 5 times a year. - Review training modules at least once a year - Strengthen technical support for training and conducting inspections for the staff of each governorate.
KRG-MOLSA	<ul style="list-style-type: none"> - Training inspectors and medical staff responsible for OSH management services at least 4 times per month - Inspection of more than 15 companies and projects per month - Conduct more than 2 types of OSH training for private companies at least 4 times a year. - Review training modules at least once a year - Increase the number of OSH staff in each governorate and strengthen technical support for training and conducting inspections.

4.3 Recommendation for the Iraq side

- To continue to improve the capacity of own staff and relevant government agencies at NCOHS, and also to promote training of OSH officers in each governorate as trainers and strengthen cooperation for nationwide OSH information collection.
- To continue to strengthen case studies on OSH regarding testing and training laboratory at NCOHS.
- To set up and start the operation of the currently planned laboratory at KRG-MOKSA, and to utilize the equipment that has been supported by the Project in the laboratory.
- To continue implementation of strengthening OSH activities in all governorates in the KRG.
- JICA Iraq office is considering continuous technical assistance to NCOHS and KRG-MOLSA in the next fiscal year and beyond. To that end, JICA Iraq

office would like to hold regular discussions and exchange information on the progress of ILO projects that we heard are currently underway and the technical assistance required of JICA.

**4.4 Monitoring Plan from the End of the Project to Ex-post Evaluation
(If the Project will be continuously monitored by JICA after the completion of the Project, mention the plan of post-monitoring here.)**

NCHOS, KRG-MOLSA and JICA Iraq Office will share the progress of OSH activities in Iraq every 6 months after the end of the Project, and share information on the latest issues identified in the OSH field.

[End of Document]