APPENDIX H

MINUTES OF DISCUSSIONS

Date	Meeting	Reference	Remakrs	Page
3-Jul-2015	Memorandum on the project	M-1		H-1
26-Jul-2015	TAC Kick-off Meeting	M-2		H-6
27-Jul-2015	Three Parties Agreement	M-3		H-10
2-Aug-2015	2nd TAC Meeting	M-4		H-25
-	3rd TAC Meeting	-	taken privately	
18-Oct-2015	4th TAC Meeting	M-5		H-33
1-Nov-2015	5th TAC Meeting	M-6		H-35
16-Nov-2015	6th TAC Meeting	M-7		H-37
6-Dec-2015	7th TAC Meeting	M-8		H-39
20-Dec-2015	8th TAC Meeting	M-9		H-43
3-Jan-2016	9th TAC Meeting	-	taken privately	
31-Jan-2016	10th TAC Meeting	M-10		H-28
18-Feb-2016	11th TAC Meeting	M-11		H-56
13-Mar-2016	12th TAC Meeting	M-12		H-62
28-Mar-2016	13th TAC Meeting	M-13		H-68
11-Apr-2016	14th TAC Meeting	M-14		H-76
26-Apr-2016	15th TAC Meeting	M-15		H-86
16-May-2016	16th TAC Meeting	-	taken privately	
20-Jun-2016	17th TAC Meeting	M-16		H-95
11-Jul-2016	18th TAC Meeting	M-17		H-106
22-Aug-2016	Design WG Meeting -1	M-18		H-117
24-Aug-2016	Design WG Meeting -2	M-19		H-119
28-Aug-2016	Design WG Meeting -3	M-20		H-120
29-Aug-2016	Design WG Meeting -4	M-21		H-121
29-Aug-2016	19th TAC Meeting	M-22		H-122
7-Sep-2016	Expert Panel Meeting	M-23		H-130
30-Oct-2016	20th TAC Meeting	M-24		H-131
7-Nov-2016	Design WG Meeting -5	M-25		H-138
10-Nov-2016	Design WG Meeting -6	M-26		H-140
15-Nov-2016	Design WG Meeting -7	M-27		H-142
15-Nov-2016	21st TAC Meeting	M-28		H-143
16-Nov-2016	Design WG Meeting -8	M-29		H-148
21-Nov-2016	Design WG Meeting -9	M-30		H-152
27-Nov-2016	Design WG Meeting -10	M-31		H-153
27-Nov-2016	22nd TAC Meeting	M-32		H-154

Date	Meeting	Reference	Remakrs	Page
29-Nov-2016	Design WG Meeting -11	M-33		H-159
2-Dec-2016	Design WG Meeting -12	M-34		H-161
19-Dec-2016	23rd TAC Meeting	-	taken privately	
22-Dec-2016	Design WG Meeting -13	M-35		H-162
9-Jan-2017	24th TAC Meeting	-	taken privately	
9-Feb-2017	Design WG Meeting -14	M-36		H-163
13-Feb-2017	Design WG Meeting -15	M-37		H-164
15-Feb-2017	Design WG Meeting -16	M-38		H-165
16-Feb-2017	Design WG Meeting -17	M-39		H-166
20-Feb-2017	25th TAC Meeting	M-40		H-167
23-Feb-2017	Design WG Meeting -18	M-41		H-173
28-Feb-2017	Design WG Meeting -19	M-42		H-174
1-Mar-2017	Wrup-up Meeting	M-43		H-175
20-Mar-2017	26th TAC Meeting	M-44		H-177
10-Apr-2017	27th TAC Meeting	M-45		H-183
10-Apr-2017	Design WG Meeting -20	M-46		H-188
18-Apr-2017	Design WG Meeting -21	M-47		H-190
20-Apr-2017	Design WG Meeting -22	M-48		H-191
24-Apr-2017	Design WG Meeting -23	M-49		H-192
24-Apr-2017	Minutes of Discussion	M-50	Agreement on D/D Study	H-193
26-Apr-2017	28th TAC Meeting	M-51		H-197

MEMORANDUM

on

PROJECT FOR CONSTRUCTION OF THE NEW DIROUT GROUP OF REGULATORS

between

JAPAN INTERNATIONAL COOPERATION AGENCY

and

MINISTRY OF WATER RESOURCES AND IRRIGATION

Date: July 3, 2015

With a view to providing the basis for supervision and monitoring of the above-mentioned Project and thereby facilitating its successful implementation and ensuring its effectiveness and sustainability, Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Water Resources and Irrigation (hereinafter referred to as "MWRI") conclude the following Memorandum.

For
Japan International Cooperation Agency

Mitsunori SAITO
Director
Middle East Division 1
Middle East and Europe Department

For
Ministry of Water Resources and Irrigation

A. Korrat

Eng. Ahmed M. I. Korrat
Head of Reservoirs and Grand Barrages Sector
Ministry of Water Resources and Irrigation

1. JICA and MWRI confirm the contents of the Record of Discussions (R/D) signed on March 4, 2015, and attached hereto as ANNEX I the Minutes of Discussions dated May 21, 2014 (hereinafter referred to as "M/D") attached hereto as ANNEX II with the following notes.

(1) 4.9 Submission of Report

MWRI and JICA confirm that MWRI shall submit to JICA a Progress Report quarterly (in March, June, September and December of each year) until completion of the Project, by updating the Project Status Report (PSR), based on the updated status of the Project from time to time with a view to ensuring the smooth and efficient implementation of the project. Progress Report shall be accompanied with Forecast Disbursement Schedule (as per ANNEX IV), Photographs and Project Map as necessary. Status of the measures to be adopted and/or points which require special attention and their planned countermeasures should be reported in 3-2 Precautions of the PSR.

JICA and MWRI also confirm that, as per Section 4. Administration of Loan, Article III of the Loan Agreement, MWRI, promptly, but in any event not later than six (6) months after completion of the Project, shall submit to JICA a Project Completion Report by filling information available at the time of the Project completion into the PSR.

(2) 4.11 Rehabilitation and Preservation of Existing Dirout Regulators

JICA asked to confirm that the rehabilitation for the existing Dirout group of regulators (hereinafter referred to as "old DGR") will not affect the progress of the construction of new Dirout group of regulators (hereinafter referred to as "new DGR"). MWRI confirms the following:

The old DGR continue to be operated until the new DGR start operation, and in case rehabilitation will be required, MWRI will coordinate with the concerned parties including JICA. After finishing the project, MWRI will hand over the old DGR to the Ministry of Antiquities and the old DGR won't have any irrigation functions.

According to the above explanation, MWRI and JICA confirm that procurement and construction work for rehabilitation and preservation of the old DGR shall not be critical issue to delay the construction of the new DGR, and that the old DGR will not affect irrigation functions of the new DGR in the future.

(3) 7.3 Evaluation Activities

JICA and MWRI agree that the evaluation of the Project should be conducted at JICA's

expenses, from time to time, during the project cycle along with the criteria of the PSR provided by MWRI.

(4) 7.4 Ex-Ante Evaluation Report

JICA would publish the "Ex-Ante Project Evaluation Report" soon since the Loan Agreement was signed on March 15, 2015. The Report, prepared based on the information collected through JICA's appraisal, consists of eight major items: 1) project name, 2) necessity and justification of the Bank loan, 3) objectives of the project, 4) project description including schedule at present and result of environmental review, 5) performance indicators (operation and effect indicators), 6) risks due to external factors, 7) evaluation results of past similar projects and lessons learned, and 8) evaluation plan.

(5) 8.1 Technical Assistance

MWRI and JICA confirm that the grant for Technical Assistance will be considered based on the requests from MWRI.

(6) 8.2 Rehabilitation of Minor Structure

Rehabilitation of Minor Structure along the Bahr Yusef and Ibrahimia canals, which was identified as one of the project components in Feasibility study, has been excluded from the Project scope. JICA and MWRI confirm that rehabilitation of minor structure is important to improve production in the farm land. MWRI agree that it would share the updated information on the progress and future plan of rehabilitation of damaged minor structures.

2. JICA and MWRI confirm the contents of the PSR, as of the signing of this Memorandum, attached hereto as ANNEX III with the following modifications.

(1) 2-2 Implementation Schedule

MWRI requested to shorten the duration of the procurement of a contractor comparing to the agreed duration in the M/D.

JICA strongly recommended to keep the agreed duration in the M/D as per mentioned in the letter attached hereto as ANNEX V.

As a result, however, MWRI requested to shorten the duration as much as possible.

MWRI and JICA agreed the duration concerning the procurement of the contractor as follows under the conditions stated in the table below.

	Task	Duration	Conditions
Pre-qualification of Contractor			
(1)	JICA concurrence of PQ document.	Half (0.5) month (12 JICA working days)	Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the submitted documents. This stage is started during the D/D study period.
(2)	PQ announcing and floating.	One and half (1.5) month	This stage is started during the D/D study period.
(3)	PQ evaluation.	Half (0.5) month	The evaluation is done by RGBS with assistance of General Consultant. This stage includes approval processes of the evaluation result by the Egyptian side.
(4)	JICA concurrence of PQ evaluation.	Half (0.5) month (12 JICA working days)	Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the submitted documents.
Procurement of Contractor			
(1)	JICA concurrence of Tender Documents.	One (1) month	This does not include preparation of the tender documents by RGBS and approval processes by the Egyptian side. Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the submitted documents.
(2)	Tender announcement and floating.	Three (3) months	
(3)	Technical Evaluation.	One (1) month	The evaluation is done by RGBS with assistance of General Consultant. This stage includes approval processes of the result by the Egyptian side.
(4)	JICA concurrence for Technical Evaluation.	Half (0.5) month (12 JICA working days)	Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the submitted documents.
(5)	Financial Evaluation.	Half (0.5) month	The evaluation is done by RGBS with assistance of General Consultant. This stage includes approval processes of the result by the Egyptian

			side.
(6)	JICA concurrence for Financial Evaluation.	Half (0.5) month (12 JICA working days)	Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the submitted documents.
(7)	Contract Negotiations.	Half (0.5) month	The negotiation is done by RGBS. This stage includes approval processes of the result of contract negotiation by the Egyptian side.
(8)	JICA concurrence for draft contract.	Half (0.5) month (12 JICA working days)	Under the condition that there is no deviation and/or no violation from the JICA procurement guidelines and no unclear parts in the draft contract.
(9)	Contract	One week	
(10)	JICA concurrence for Contract.	One week	Under the condition that there is no change from the concurred draft contract.
	Total	**Eleven (11) months**	

According to the change in the start of the D/D study and its duration, and the above mentioned change made in the duration of the procurement of the contractor, the overall schedule shall be modified as follows.

Items	Original (Start from)	Actual
(1) Procurement of Consultant for Detailed Design	March 2015	
(2) Commencement of Detail Design	June 2015	
(3) Procurement of Consultant for Supervision	April 2016	
(4) Commencement of Consulting Service for Supervision	April 2017	
(5) Procurement of Contractor	February 2017	
(6) Commencement of Contractor's work	February 2018	
(7) Transfer Mosque[1]	June 2016	
(8) Civil works		
・Bahr Yusef Regulator	June 2018	
・Badraman Regulator (Badraman Canal)	May 2019	
・Badraman Regulator (Dairutiah Canal)	April 2020	

· Ibrahimia Regulator · Navigation lock on the Ibrahimia Regulator · Abo Gabal regulator · Sahelyia Regulator (9) Procurement of Equipment (10) Civil works Water Distribution System Project Completion Date (2)	December 2019 January 2021 March 2018 July 2020 May 2020 January 2021 April 2022	

(1) MWRI explained that if the necessity of transferring the mosque is confirmed in the D/D Study, the mosque will be transferred, if not confirmed, the mosque won't be transferred.

(2) Project Completion is defined as the commencing time for using all facilities.

ANNEX I: Record of Discussions (R/D) dated March 4 ,2015
ANNEX II: Minutes of Discussions dated May 21, 2014
ANNEX III: Project Status Report (PSR)
ANNEX IV: Forecast Disbursement Schedule
ANNEX V: Letter from JICA to MWRI dated June 2, 2015

THE MINUTES OF THE MEETING
ON
THE KICKOFF MEETING
FOR
THE DETAILED DESIGN
ON
PROJECT FOR CONSTRUCTION OF THE NEW DIROUT GROUP OF REGULATORS
IN
THE ARAB REPUBLIC OF EGYPT

AGREED UPON BETWEEN

MINISTRY OF WATER RESOURCES AND IRRIGATION

AND

THE JAPAN INTERNATIONAL COOPERATION AGENCY

Cairo, 26th July 2015

Dr. Ragab Ali Abdel Azim Head / Central Directorate for Studies, Specification & Design, RGBS Ministry of Water Resources and Irrigation The Arab Republic of Egypt	Eng. Tomiji Shimoji Team Leader / Irrigation Planning Study Team Japan International Cooperation Agency (JICA)

Ragab Ali
2/8/2015

JICA Egypt Office

Ms. Keiko MIZOE	Representative
Ms. Alshaimaa Naguib	Program Officer

JICA Study Team

Eng. Tomiji SHIMOJI	Team leader / Irrigation Planning
Eng. Hitoshi TOKU	Senior Civil Engineering
Eng. Kazuma AKIYOSHI	Civil Engineering
Eng. Izumi KATO	Geology and Hydro-Geology
Eng. Kazunori TAKASAKI	Management of Topographic Survey
Eng. Kazuko MIKI	Groundwater Analysis
Eng. Tomoyuki KAWABE	Hydraulic Simulation Analysis
Eng. Asaharu NAGAHARA	Project Cost Estimation
Eng. Motohisa WAKATUKI	Water Structure Engineering
Eng. Fusataka ARAKAWA	Water Management System
Eng. Susumu MURASE	Telecommunication System
Eng. Hajime KITA	Coordinator

In response to the request of the Arab Republic of Egypt, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a mission to Egypt in March 2015, and agreed the basic contents of the Record of Discussions (R/D) with the Ministry of Water Resources and Irrigation (hereinafter referred to as "MWRI"). In accordance with the R/D, JICA dispatched a survey team for "Detailed Design Study on Project for Construction of the New Dirout Group" (hereinafter referred to as "the Team") in July 2015.

The first meeting (Kickoff Meeting) was held on 26th July 2015, and the General Description of the Project and Tentative Work Schedule were discussed among the Technical Advisory Committee members (MWRI, Ministry of International Cooperation), JICA and JICA Study Team. Opinions were also exchanged between Egyptian and Japanese sides.

The main issues discussed during the Kickoff Meeting are as follows:

1. Dr. Ragab who is a Chair Man of the Technical Advisory Committee, Head of Central Department for Studies, Specification & Design, RGBS, Ministry of Water Resources and Irrigation, cited the history of the cooperation between the Governments of Egypt and Japan on Bahr Yousef Canal for more than 15 years, which started with the rehabilitation of the Lahoun regulator. Then the Chairman stated the importance of the project that the new construction of the Dirout Group of Regulators is to complete the irrigation system of the Bahr Yousef Canal and the Ibrahimia Canal, which serves 15% – 20% of agriculture land in Egypt.

2. The Chairman summarized the items, which should be studied through this Detailed Design Study, as location of the regulators to be rehabilitated, water Management System.

3. The Chairman introduced to the members of the Technical Advisory Committee (TAC) in the MWRI side.

4. The Chairman stated that the TAC is formed with RGBS and related organizations, headed by Dr. Ragab, the Head of Central Directorate for Studies of RGBS and the TAC acts as Counterparts to the Study Team and submit the required data to the Team.

5. The team leader of the Study Team asked to the Chairman for establishment of the Working Group under the TAC.

6. The Chairman stated that the Working Group has been already established under the TAC and the member of the WG has been appointed.

7. On assignment of counterparts to the Study, the Deputy Minister said that he would consider that.

8. The Study Team stated that the Inception Report will be submitted to the Chairman on 27 July 2015. And, the Study Team asked to hold an explanation and discussion meeting for the Inception Report to the TAC and related members on 1st August 2015.

Attached paper-1

Participants of the Meeting on 26 July 2015
(at the MWRI conference room, Cairo)

Ministry of Water Resources and Irrigation (MWRI)

Dr. Ragab Ali Abdel Azim	Head of Central Department for Studies, Specification & Design, RGBS
Ms. Nahla Mostafa Mohamed	General Director of Studies and Specifications
Ms. Yasser Gomaa	GD of Information Centre for RGBS
Ms. Amal Ahmed Ali	Dept. GD of Studies and Specifications
Mr. Mahmoud Ali Abdel Aliem	GM of Hydro-Mechanical Works for New Assiut Barrage
Mr. Mahoud Eid Nagi	GM for Contracts New Assiut Barrage
Mr. El Sayed El Shahat El Sayed	Deputy Director in RGBS
Dr. Ehab Elgohory	GM of RGBS Technical Office
Ms. Hala Mohamed Saied	GM of Foreign Finance P.S
Mr. Mohamed Abdel Heguid	DD of ECRI
Mr. Ibrahim Ragab Moamed	Dept. Mechanical & Electrical Research Institute
Mr. Ahmed Mohamed Anwar	Researcher, Construction Research Institute (CRI)
Dr. Samir A S Ibrahim	Professor Dr. Saw of HRI, Diputy Director
Mr. Khaled A Kheei El Dei	Director if Environmental Research Institute
Dr. Emad Ali Ali El Hout	Engineer in RGBS
Mr. Abdel Rahman Samy	Engineer in RGBS
Dr. Khaled Touber	GM of RGBS
Mr. Magdy Moh Higab	GD of Designs and Barrage Safety, RGBS
Mr. Hesham Elshazly	RGBS / MWRI

JICA Head Quarters

Mr. Satoru Fujita	Assistant Director, Rural Development Department
Mr. Hiroyuki IKEDA	Deputy Assistant Director, Rural Development Department
Dr. Ashraf M. El-Abd	Chief Program Officer

JICA Study Team

Mr. Tomiji SHIMOJI	Team Leader/ Irrigation Planning
Mr. Hitosh TOKU	Senior Civil Engineering
Mr. Kazuma AKIYOSHI	Civil Engineering
Mr. Izumi KATO	Geology and Hydro-geology
Mr. Kazunori TAKASAKI	Management of topographic survey
Ms. Kazuko MIKI	Groundwater analysis
Mr. Tomoyuki KAWABE	Hydraulic simulation analysis
Mr. Asaharu NAGAHARA	Project cost estimation
Mr. Motohisa WAKATUKI	Metal structure engineering
Mr. Fusataka ARAKAWA	Water Management System
Mr. Susumu MURASE	Telecommunication System
Mr. Hajime KITA	Coordinator

AGREEMENT
OF
DETAILED DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION OF THE NEW DIROUT GROUP OF REGULATORS
AMONG
JAPAN INTERNATIONAL COOPERATION AGENCY,
MINISTRY OF WATER RESOURCES AND IRRIGATION,
AND
DETAILED DESIGN CONSULTANT

Cairo, July 27th, 2015

藤田 覚

Mr. Satoru Fujita
Deputy Director,
Rural Development Department
Japan International Cooperation Agency

A. Korrat

Eng. Ahmed M. I. Korrat
Head of Reservoirs and Grand Barrages Setor
Ministry of Water Resources and Irrigation

Mr. Tomiji Shimoji
Team Leader
JICA Detailed Design Study Team

I .INTRODUCTION

Based on a series of preliminary discussions between the Government of Arab Republic of Egypt (hereinafter referred to as "GOE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on Project for Construction of the New Dirout Group of Regulators (hereinafter referred to as "the Project"), JICA dispatched a mission (hereinafter referred to as "the JICA Appraisal Mission") to Arab Republic of Egypt from May 18th to 22nd, 2014 for the purpose to appraise the Project.

At that time, the JICA Appraisal Mission held a series of discussions concerning the Detailed Design Study on the Project (hereinafter referred to as "the Design Study") with the representatives of relevant organization of the GOE. As a result of the discussions, JICA and Ministry of Water Resources and Irrigation (hereinafter referred to as "MWRI"), which is the sole responsible organization of the Design Study on GOE side, have agreed that both side shall sincerely cooperate with each other in implementing the Design Study and confirmed the details of the same.

Accordingly, JICA selected SANYU CONSULTANTS INC. as "Detailed Design (hereinafter referred to as D/D) Consultant", on July 1st, 2015, to conduct the Design Study, and based on the Minutes of Discussion (M/D) between JICA and MWRI signed on May 21st, 2014, and the Record of Discussion (R/D) between JICA and GOE signed March 4th, 2015, JICA dispatched a mission in July 2015 (hereinafter referred as "the JICA Mission") composed of Mr. Satoru Fujita and Mr. Hiroyuki Ikeda from JICA Headquarters and D/D Consultant Team headed by Mr. Tomiji Shimoji to hold a Kick-Off Meeting with MWRI for the Design Study. The list of participants in this meeting and the Overall schedule of the Design Study are given in Annex 1 and 2.
The major items confirmed during the stay of the JICA Mission are as summarized below. Consequently, the Design Study will be conducted based on the result of the discussions.

II .TITLE OF THE DESIGN STUDY

The title of the Design Study is "The Detailed Design on the Project for Construction of the New Dirout Group of Regulators"

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Ⅲ.OBJECTIVE AND SCOPE OF THE DESIGN STUDY

The objective of the Design Study is to prepare the tender documents and detailed design for the Project.

Scope of the Design study (the details of the scope are shown in Annex 3) can be summarized as follows:

(1) Review of the existing F/S for the project (confirmation of the definitive plan)

(2) Additional natural condition surveys

(3) Conduct of the detailed design

(4) Formulation of tender documents (including pre-qualification documents)

(5) Setting-up of Environmental Management Plan

It has been confirmed by MWRI that the drawings and documents to be formulated by the Design Study (hereinafter referred to as "the Design Documents") shall be fully utilized for the procurement procedures of the Project, after the revision by the consultant for the Supervision Consulting Services and approval of MWRI.

Ⅳ.DURATION AND SCHEDULE OF THE DESIGN STUDY

The Design Study started on July 20th, 2015 and is scheduled to be carried out within twenty two (22) months.

The Parties agreed that the schedule will be carried out in accordance with the following points;

(1) The Design Study will be conducted based on the R/D signed in March 2015 and the conceptual design confirmed in the M/D signed in May 2014.

(2) All reports and documents will be subjected to approval by MWRI and JICA within four weeks from the receiving date of reports.

(3) The organizational structure of the Technical Advisory Committee (hereinafter referred to as "TAC") has been decided by MWRI, and MWRI will give the details of the structure of TAC to D/D Consultant accordingly.

(4) The names of counterpart personnel will be given to the D/D Consultant by August 10th, 2015.

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The overall schedule of the Design Study is given in Annex 2.

V.IMPLEMENTATION ARRANGEMENTS

1. Administration of the Project

MWRI, as a sole counterpart agency, shall coordinate the implementation of the Design Study among the representatives of relevant organizations of GOE. MWRI will assign adequate number of counterpart personnel and manage them to work together and effectively/efficiently with the D/D Consultant to achieve technology transfer as well.

Head of Central Department of Study, Specifications and Design (CD-SSD) who is the focal point of MWRI shall coordinate the implementation of the Design Study between the representatives of relevant organizations of the GOE, as a sole counterpart agency of JICA.

JICA provides the Head of CD-SSD with the technical part of the contract signed between JICA and D/D Consultant in English language within one month after the commencement of the Design Study.

2. Technical Advisory Committee

The TAC shall be established to examine and confirm the process and details of the Design Study. TAC shall be constituted by the authorities concerned with the design and procurement process of the Project on the MWRI side.

The TAC shall be an important consultation mechanism responsible for the following aspects, especially, in order to ensure smooth implementation of the Design Study;

(1) To examine and analyze the tender documents prepared by the D/D Consultant.
(2) To examine and analyze the technical aspects of the Design Study based on the reports and explanation by the D/D Consultant in the course (at the each stage) of the Design Study,
(3) To summarize the comments and requests to the Design Study and notify them to the D/D Consultant, and
(4) To confirm the revision by the D/D Consultant based on the comments and requests thereof.

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The TAC is expected to meet with the D/D Consultant regularly and when asked to attend including sixth (6) times as follows:

(1) First Meeting, to be held after the submission of the Inception Report;
(2) Second Meeting, to be held at an appropriate date to confirm design specifications and standards.
(3) Third meeting, for discussion of the output of mathematical model and physical model,
(4) Fourth meeting, to be held after the submission of the Draft Basic Design Report;
(5) Fifth meeting to be held after the submission of the Interim Report in the detailed design stage
(6) Sixth meeting to be held after the submission of Draft Final Report and Draft Bidding Documents

3. The D/D Consultant

The D/D Consultant shall perform their works considering the comments and requests of MWRI with all due technical diligence to the extent provided in the TOR which is based on the R/D.

4. Mutual Consultation

JICA and MWRI focal points will consult each other during all the process and the stages of the Design Study implementation.

VI.LIABILITY OF THE D/D CONSULTANT

The liability of the D/D Consultant towards JICA shall be as provided by laws in force in Japan. For the reason that JICA shall assign to MWRI the right to use the Design Documents without any compensation, MWRI shall indemnify JICA against claim based on loss or damage caused by the defects of the Design Documents in principle.

However, for the purpose to motivate and encourage the D/D Consultant to perform their works with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, JICA shall entitle MWRI to claim correction of and/or direct loss or damage caused by the defects of the Products to the D/D consultant directly, WITHIN the amount of the contract between JICA and the D/D consultant. Such claim shall not be in effect unless such claim is formally made on the D/D Consultant within two (2) years after JICA granted the right to use the

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Products to MWRI. If defect arise from deliberate default, fraudulent misrepresentation of reckless misconduct, the duration of the liability shall be until ten (10) years after the delivery of the detailed design report.

If MWRI becomes aware of an error(s) or defect(s) in the Design Documents, MWRI shall promptly give notice of such an error(s) or defect(s) to the D/D Consultant, together with JICA in writing, and look for amicable settlement. The time period for amicable settlement is at least fifty six (56) days and can be extended by the mutual agreement of both parties. In the event that an amicable settlement cannot be reached through consultation, the matter shall be referred to arbitration. The arbitration shall be conducted in English, and the dispute shall be settled by arbitration in accordance with the Rules of Arbitration of the International Chamber of Commerce. The place of arbitration shall be Paris.

JICA shall submit an official English translation of the contract documents signed between JICA and the D/D Consultant and any other required documents needed for arbitration, which are checked and confirmed by a lawyer, to MWRI within two months from the date JICA receives a written notice from MWRI concerning the failure of amicable settlement.

If MWRI side revises or amends parts of the Design Documents during the tendering process, the D/D Consultant shall not bear the liability of such revision and amended sections of the Design Documents, unless the D/D Consultant agrees with the revisions/amendments.

Ⅶ.OTHERS

1. Tax treatment, such as exemption or temporary payment

JICA requested MWRI to facilitate any necessary internal procedures such as approvals of the concerned ministries and authorities of tax exemption for necessary works in the implementation stage. MWRI responded that any written document copy of the exemption of specific taxes, duties, etc., such as the Exchange of Notes between two governments shall be required for that and by MWRI will do its best to facilitate the process.

The parties agreed that MWRI and the D/D Consultant would consult each other about the tax issues in case any problem occurs in the Study stage.

2. GOE's procurement laws and regulations collection

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Preparation of bidding documents and bidding procedures should be conducted according to JICA's guidelines including the the Standard Bidding Documents under Japanese ODA Loans prepared by JICA. In this context, the D/D Consultant is planning to check the consistency and/or possible violations between current government procurement laws and regulations in Arab Republic of Egypt, and consequently, MWRI promised to assist the D/D Consultant to collect those laws and regulations information.

3. D/D Consultant's right of possible submission of proposal for Supervision Consultant selection

MWRI shall not restrict the consultants forming the D/D Consultant to participate in the submission of proposals for the Supervision Consultant. In other words, the consultants shall be eligible to submit a proposal for the Supervision Consultant of the construction when MWRI requests for proposals under the loan agreement signed March 15th, 2015.

Annex1: List of Participants of the Meeting
Annex2: Overall Schedule of the Detailed Design Study
Annex3: Scope of work for the Design Study

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ANNEX-1

List of Participants

Name	Position
Ahmed Korrat	Head of RGBS
Ragad Ali Abdel-Azim	Head of Central Directorate of Studies and Specification
Nahla Mostafa Mohamed	General Director of Studies and Specification
Doaa Lashien Desokey	Minister's Assistant for Grants and Agreements, MWRI
Amal Ahmed Ali Moalla	Deputy Director of General Directorate of Studies and Specification
Abdel-Rahman Samy	Civil Engineer, RGBS
William Zaki	Senior Civil Engineer, S.CI
Rania Hassan	Civil Engineer, Head of RGBS Technical Office
Ehab Elgohary	General Manager of Technical Office of the Head of RGBS
Tomiji SHIMOJI	Team leader Irrigation Development Plan
Hitoshi TOKU	Senior Civil Engineer
Kazuma AKIYOSHI	Civil Engineer (1)
Izumi KATO	Geologist / Hydro-geologist
Kazunori TAKASAKI	Supervisor of Survey Construction Cost Estimator (2)
Kazuko MIKI	Groundwater Analyst
Tomoyuki KAWABE	Hydraulic Engineer Hedraulic Phisical Model Test
Asaharu NAGAHARA	Construction Cost Estimator (1)
Motohisa WAKATSUKI	Gate Engineer
Fusataka ARAKAWA	Water Management System Engineer
Susumu MURASE	Communication System Engineer
Hajime KITA	Coordinator

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Ashraf Elabd	JICA Egypt Office
Keiko Mizoe	JICA Egypt Office
Satoru FUJITA	Leader
Hiroyuki IKEDA	Cooperation Planning

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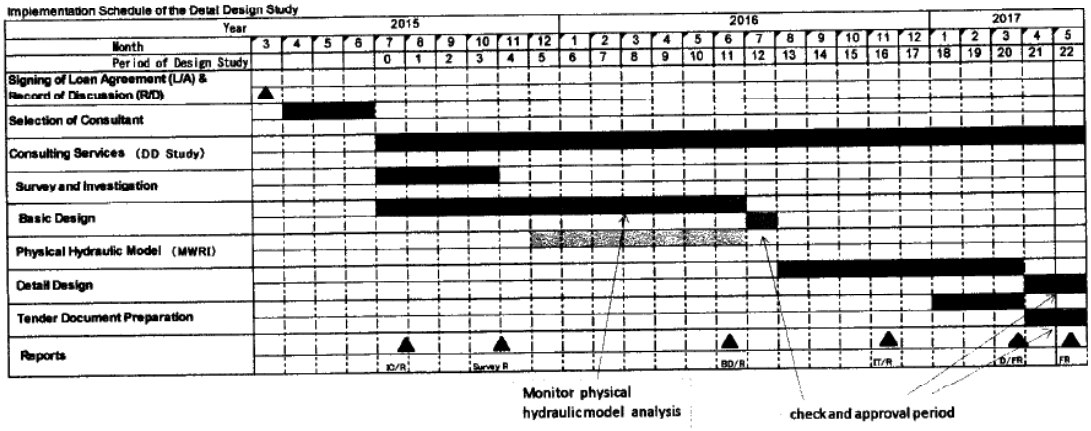
ANNEX-2

9

Project for Construction of the New Dirout Group of Regulators

The Schedule of the Design Study (Tentative)



Commencement date: 20th July, 2015

End date: 19th May, 2017

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ANNEX-3

Project for Construction of the New Dirout Group of Regulators

Scope of Work
for
the Design Study

1. INTRODUCTION

1.1 Objectives of the ODA Loan Project

The objective of the Project is to improve agricultural productivity through construction of New Dirout Group of Regulators (hereinafter referred to as "DGR") and Improvement of Water Distribution System and to contribute to poverty alleviation in the Project Area, namely the command area of DGR.

1.2 Outline of the ODA Loan Project

The Project consists of two components, namely i) New Construction of DGR and ii) Improvement of Water Distribution System, of which works are summarized in the following table.

Main Project Works

(1) New Construction of Dirout Group of Regulator	
i) New construction of regulators	Construction works of five regulators
ii) installation of gates	W8.0m x H6.3m : 7 vents (tentative) W4.0m x H2.3m and 2.8m : 5 vents (tentative)
iii) Peripherals improvement of facilities	Construction of maintenance bridge
iv) Coffer dam works	Single and double coffer dams by steel sheet-pile (tentative)
(2) Improvement of Water Distribution System	
i) Monitoring system for improving water distribution system of regulators along Bahr Yosuf and Ibrahimia Canals	Installation of monitoring equipment
ii) Monitoring system for improving water distribution system of intakes along branch canals.	Installation of monitoring equipment
iii) Construction of building of Integrated Water Distribution System (IWDS) Center	Construction of building of IWDS Center

* Transfer of existing mosques is not included in this Detailed Design.

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2. SCOPE OF WORK THE DETAIL DESIGN STUDY

(1) Review of Previous Study (1 month)

a. To make examination, review and proposal of design modification to Technical Advisory Committee of MWRI as required, with reference to i) existing plans based on "the Preparatory Survey for the Rehabilitation and Improvement of Dirout Group of Regulators".

(2) Survey and Investigation (3 months)

b. To make neccssary physical investigations such as;

- geological and soil mechanical survey with field and laboratory test and analysis,
- topographic surveys and mapping,
- longitudinal and cross-sectional survey for canals, river and approach roads,
- monitoring of groundwater table,
- structural survey on existing regulators,
- construction material survey,
- survey on existing water distribution facilities, and
- other surveys and investigations required for detailed design.

Three (3) months will be required for the above works.

(3) Basic Design (11months)

c. To conduct Basic Design for the following work items:

i) New DGR Construction

- Determination of design standards to be applied.
- Determination of position (axes) and general specifications of New DGR,
- Determination of general plan and sections of New DGR,
- Hydraulic design including 3-D mathematical model
- Monitoring the physical hydraulic model analysis which is conducted by HRI under the contract with MWRI
- Analysis on back water along the Ibrahimia canal upstream of New DGR and justification of rehabilitation plan of the Ibrahimia canal.

ii) Water Distribution Improvement

- Determination of operating system and equipment to be applied,
- Determination of data transfer system,
- Determination of measurement and monitoring system, and
- Determination of centralized monitoring system.

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Eleven (11) months will be required for the above works. This includes the period of the above Review of Previous Study (1 month), the Survey and Investigation (3 months), and monitoring the physical hydraulic model analysis (7 months).

(4) Detailed Design (8 months)

d. To conduct Detailed Design for the following work items:

i) New DGR Construction

- Architecture design
- Structural design of regulators
- Hydraulic and structural design of gates and their appurtenances,
- Foundation treatment
- Drawings (incl. Water Distribution System)
- Bill of quantities (ditto)
- Cost estimate (ditto)
- Construction plan (ditto)

ii) Water Distribution Improvement

- Design of data transfer system,
- Design of facilities to be controlled,
- Design of centralized monitoring system,
- Specification of equipment,

Eight (8) months will be required for the above works.

e. To prepare draft pre-qualification and tender documents with specifications and drawings based on the detailed design taking into account of procurement procedure of JICA and GOE no later than twenty (20) months of commencement of the study.

f. To verify the outputs of the above mentioned detailed design works by an authorized engineer of the Consultant. This verification shall be shown in draft final report.

g. To formulate environmental management plan during the process of the Design Study.

h. On-the-job training will be undertaken between the DD Consultant Team and GOE counterparts.

Schedule of the Design Study is given in ANNEX-2.

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3. REQUIRED EXPERTS

Experts required within minimum experience in similar projects for the detailed design works are assumed as follows:

- Team leader/Irrigation and drainage (10 years in similar project)
- Structural engineer (1~3) (7 years in similar project)
- Design engineer (1~2) (7 years in similar project)
- Geologist / Hydro-geologist (7 years in similar project)
- Groundwater / modeling specialist (5 years in similar project)
- Hydraulic engineer / Mathematical Modeling (7 years in similar project)
- Hydraulic engineer/ Physical Modeling (7 years in similar project)
- Construction planning specialist (5 years in similar project)
- Cost estimator (1~2) (5 years in similar project)
- Metal works engineer (5 years in similar project)
- Mechanical engineer (5 years in similar project)
- Electric engineer (5 years in similar project)
- Architect (5 years in similar project)
- Water management specialist (7 years in similar project)
- Communication system engineer (5 years in similar project)
- Tender specialist (5 years in similar project)
- Environmentalist (5 years in similar project)
- Design verification engineer (5 years in similar project)
- Coordinator (5 years in similar project)

4. REPORTS

JICA shall submit the Draft Final Report and Final Report in English language to MWRI. The Draft Final Report and the Final Reports shall include drawings of detailed design, specifications and other necessary documents for tender. Other reports shown below will be prepared in English language and submitted to MWRI as well as to JICA by the D/D Consultant.

Prior to JICA's approval of the reports, they have to be presented to, discussed with and agreed by PIU at each stage of the Design Study.

(1) Inception Report:

20 copies shall be submitted one (1) month after commencement of the Design Study.

(2) Survey and Investigation Report

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5 copies shall be submitted by the time of five (5) months after the commencement

(3) Basic Design Report:

20 copies shall be submitted by the time of eleven (11) months after the commencement.

(4) Interim Reports:

20 copies shall be submitted at the time of sixteen (16) months after the commencement.

(5) Draft Final Report (including summary):

20 copies shall be submitted at the time of twenty (20) months after the commencement.

(6) Final Report (including summary):

30 copies shall be submitted by the time of twenty two (22) months after the commencement.

(7) Monthly and Quarterly progress Report

10 copies shall be submitted by the end of each month and quarter

Each report will be provided with 5 soft copies.

(End)

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THE MINUTES OF THE SECOND MEETING
OF
THE TECHNICAL ADVISORY COMMITTEE (TAC)
WITH
THE DETAILED DESIGN STUDY CONSULTANT
(SANYU CONSULTANTS INC.)
FOR THE PROJECT FOR CONSTRUCTION
OF THE NEW DIROUT GROUP OF REGULATORS (NDGR) PROJECT

Cairo, 2nd August 2015

Dr. Ragab Ali Abdel Azim
Head, Central Directorate for Studies, Specifications and Designs (CDSSD),
Reservoirs and Grand Barrages Sector (RGBS)
Ministry of Water Resources and Irrigation (MWRI)

Eng. Tomiji Shimoji
Team Leader / Irrigation Planning,
D/D Consultant

1. Introduction

The second meeting of the Technical Advisory Committee (TAC) was held on Sunday 2nd August 2015 following the kickoff meeting which was held on Sunday 26th July 2015, and after conducting field visits to site of the Dirout Group of Regulators (NDGR). The second meeting was mainly to nominate the working groups for the activities over the period 2nd August – 21st August 2015 and to discuss the findings of the field visit. Presentation on the inception report was made by the detailed design (D/D) consultant.

2. Purpose of the meeting

The purpose of the meeting is to discuss the following activities made by the D/D consultant:

1- The detailed plan and time table for the activities of the D/D consultant over the period 1st August to 21st of August 2015, i.e. during the D/D consultant's 1st assignment in Egypt
2- Nomination of MWRI working groups (WG) and corresponding consultant's working group
3- Arrangements for the field visits for each WG
4- Presentation of the inception report

3. List of participants

The attached table shows the list of participants that include TAC members, JICA representatives and Sanyu consultant team members

4. Discussions and results

4.1 Detailed plan and time table of activities for the period 1st August to 21th of August 2015

A detailed work schedule for the D/D consultant team working groups till 21st August was presented and discussed with TAC, JICA, and the D/D consultant. The following are the activities that will be conducted by the D/D consultant under the supervision of the TAC:

(1) Geological and Geotechnical Survey

The main activities and schedule for geological and geotechnical survey were presented by Eng. Kato as follows:

- Data collection for geology and groundwater,
- Field visit for determining field survey location,
- Internal meeting on the survey contents and applied,
- Preparation of technical specifications for geological survey, and
- Bidding process for geological survey, etc.

TAC members asked the consultant to discuss and agree on the criteria and identifying the number of boreholes, depth of boreholes and location of boreholes (coordinates) during working group meeting to be held on 3rd August 2015 at General Directorate for Studies and Specifications (GDSS) headed by Eng. Nahla.

The working group will discuss and come to an agreement on the design network of groundwater monitoring (piezometers) in the affected area. The depth and method and frequency of recoding the data will be also discussed.

(2) Topographic Survey

The main activities and schedule for topographic survey were presented by Eng. Takasaki as follows:

- Data collection for geology and groundwater,
- Field visit for determining field survey location,
- Internal meeting on the survey contents and applied,
- Preparation of technical specifications for topographic survey, and
- Bidding process for topographic survey, etc.

Detailed of topographic and bathy survey will be discussed with working group to include the area and features to be surveyed. The output of the survey will be maps with appropriate scale and cross sections of the water ways in addition to the bathy maps. The distance between the cross sections will be decided through the e working group meetings based on the technical specifications provided by JICA.

(3) Design

The main activities and schedule for design were presented by Eng. Akiyoshi as follows:

- Weir axis,

- Design criteria for civil and gate design,
- Hydro power, and
- Gate works, etc.

(4) Hydraulic Analysis

The main activities and schedule for hydraulic analysis were presented by Eng. Akiyoshi.

TAC commented on the intervals of cross section and longitudinal sections, and the need of bathymetric survey in details that is needed for the hydraulic model. The D/D consultant replied to TAC comments. TAC also asked the D/D consultant to provide the TAC of the basic information about the hydraulic mathematical model and its basic requirements of input data in addition to the output parameters. This information need to be discussed and agreed by the working group and to be included in the inception report.

(5) Construction Cost Survey

The main activities and schedule for construction cost survey was presented by Eng. Nagahara. He requested RGBS to show cost estimation guidelines if RGBS had and asked the WG to help him to find the latest price for all components of the project to come out with the final accurate cost estimate.

The working group will discuss with the consultant the required data and questionnaire to be filled and collected. Also the methodology of cost/price escalation analysis will be discussed through the WG. In addition, the required information and documents for cost estimation will be provided by Egyptian side.

(6) Water Management

The main activities and schedule for water management by Eng. Arakawa, and he stated that the D/D consultant planned to start the field survey from 3rd August 2015, the following of the meeting.

TAC member still need to know the methodology and equipment needed for such activity to be included in the inception report.

4.2 Nomination of MWRI working groups and corresponding consultant's working group

At the end of the first session, the WG members have been selected and assigned for each activity as shown in table 1.

4.3 Arrangements for the field visits

Table 2 presents the agreed upon field visits.

4.4 Presentation of the Inception Report

The D/D consultant submitted twenty (20) sets of the Inception Report (IC/R) with official letter to RGBS, and Eng. Shimoji, team leader of the D/D consultant, gave a presentation on the IC/R.

TAC members commented on the IC/R as follows:

- The TAC members asked the consultant to identify the inspection plan of the site and monitoring devices which may be needed during the detailed design study,
- The TAC members asked the consultant to identify the design criteria, and specifications which will be used in the design. The possibility of using the Egyptian code with the Japanese code will be discussed in detail with the counterpart working group,
- The TAC members asked the consultant to identify the type of design software which will be used in the design activities and provide a plan for on the job training for the counterpart working group members from MWRI,
- The TAC members asked the consultant to include in the IC/R a preparation of a mitigation plan for expected rise in GW levels in the project area,
- The TAC members asked the consultant to discuss the comparison between the double leaf gates and the radial gates which presented in the IC/R in details with the counterpart design working group. In this regard, the consultant team should include Mechanical Engineer, and
- The TAC members asked the consultant to include an Environmental specialist in the consultant team to study the environmental baseline survey, socioeconomic aspects of temporary land acquisition for site installation yard.

At the end of discussion Dr. Ragab asked the TAC members to submit their comments on the IC/R in written format according to schedule mentioned in the letter. These comments will be complied and submitted to the consultant according to the RD and three party agreement.

Table 1: List of Working Group Members

No	Working Group (WG)	Directorate	MWRI WG	D/D Consultant WG
1	Geological and Geotechnical Survey WG	General Directorate for Studies and Specifications (GDSS)	- Eng. Nahla Mostafa - GDSS team - Representative of CRI - Irrigation Directorate Representatives	Eng. Kato Eng. Miki Eng. Kita
2	Groundwater Monitoring WG	GDSS	- Eng. Nahla Mostafa - GDSS team - Dr. Khaled Tobar - Dr. Hisham - Representative of Groundwater Research Institute - Irrigation Directorate Representatives	Eng. Kato Eng. Miki Eng. Kita
3	Topographic Survey WG	GDSS	- Eng. Nahla Mostafa - GDSS team - Representative of HRI - Eng. Eman -Irrigation Directorate Representatives	Eng. Takasaki Eng. Kawabe
4	Design WG	General Directorate for Designs and Barrage Safety (GDDBS)	- Eng. Magdy Higab - GDDBS team - CRI representative - Representative of HRI - Representative of MEI - Eng. Mahmoud Abdel-Alim - HPPEA - RTA - GDDBS Staff	Eng. Tanabe Eng. Iida Eng. Toku Eng. Wakatsuki Eng. Akiyoshi
5	Hydraulic Analysis WG	General Directorate for Information Center (GDIC)	- Eng. Yasser Gomaa - Eng. Eman - Dr. Emad - Eng. Nada - HRI	Eng. Kawabe Eng. Wakatsuki
6	Construction Cost Survey WG	GDSS	- Eng. Nahla Mostafa - GDSS team - Eng. Abdel-Rehim - Eng. Mahmoud Abdel-Alim - Eng. Mahmoud Eid - Eng. Ehab El-Gohary	Eng. Nagahara Eng. Otsuki Eng. Takasaki Eng. Narukawa
7	Water Management WG	Central Directorate for Water Distribution (CDWD)	- Eng. Amal - Dr. Hesham Elshazely - Eng. M. Hassan - Eng. M. Zaghloul - Eng. Ayman Nadder - Eng. Gamal El-Baz - Eng. Doaa	Eng. Arakawa Eng. Murase

Table 2: Participants of the 2nd TAC Meeting on 2nd August 2015, MWRI, Cairo

MWRI

Dr. Ragab Ali Abdel Azim	Head of Central Directorate for Design and Studies (CDDS), RGBS
Eng. Nahla Mostafa	Director of Researches, Studies and Contracts, RGBS
Eng. Yasser Abde Meuim Gomaa	Director of Information Center, RGBS
Eng. Hala Said	Director of Foreign Finance and Planning Sector
Dr. Khaled Tobar	Director of Investment Plan Follow up, RGBS
Eng. Mahmoud Eid	Director of Contracts / Assiut Barrage Project
Eng. Mahmoud Abdel Alim	Director of Mechanical and Electrical Works, Assiut Barrage Project
Eng. Ehab El-Gohary	Director of the Technical Office, RGBS
Eng. Magdy El-Bendary	Director of Design and Constructions Safety, RGBS
Eng. Elsaid El-shehat	Deputy Director of Design and Constructions Safety, RGBS
Eng. Aml Ahmed Ali	Deputy Director Researches, Studies and Contracts, RGBS
Dr. Hesham Elshazely	Chief Engineer, CDDS Technical Office
Eng. Eman Fathy	Chief Engineer, CDDS Technical Office
Dr. Emad Elhout	Technical Office of RGBS Sector Head
Dr. Mohamed Abdel Meged	Representative of ECRI
Dr. Mohamed Abdel Latif	Representative of HRI
Dr. Ahmed Anwar	Representative of CRI
Dr. Ibrahim Ragab	Representative of MERI

JICA Egypt Office

Ms. Keiko MIZOE	Representative
Ms. Alshaimaa Naguib	Program Officer

JICA Study Team

Eng. Tomiji SHIMOJI	Team leader / Irrigation Planning
Eng. Hitoshi TOKU	Senior Civil Engineering
Eng. Kazuma AKIYOSHI	Civil Engineering
Eng. Izumi KATO	Geology and Hydro-Geology
Eng. Kazunori TAKASAKI	Management of Topographic Survey
Eng. Kazuko MIKI	Groundwater Analysis
Eng. Tomoyuki KAWABE	Hydraulic Simulation Analysis
Eng. Asaharu NAGAHARA	Project Cost Estimation
Eng. Motohisa WAKATUKI	Water Structure Engineering
Eng. Fusataka ARAKAWA	Water Management System
Eng. Susumu MURASE	Telecommunication System
Eng. Hajime KITA	Coordinator

Meeting Memo

Reg. No. 4 General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators	Signature
Date / Time	18 October 2015 (Sun.) / 14:00～16:00	Hitoshi Toku / Ragab
Place	Meeting Room (Dr. Ragab's Room) in the MWRI Building (12th Floor)	
Attendance	MWRI: Dr. Ragab, Eng. Nahla, Eng. Magdy, Dr. Hesham, Eng. Elsayed, Eng. Yasser, Eng Abdel ,Eng. Eman, Eng. Narimau, Eng. Naglaa, Prof. Abdel Azim, Eng. Eid, Dr. Hany D/D Consultant: Eng. Toku, Eng. Kawabe, Eng. Kato, Eng. Kita	

1. The outline of internal TAC meeting (in Arabic)

- Dr .Ragab explained that there are four WGs under TAC as below;
  【1st WG】 Head: Eng. Nahla, Responsibility: Field work, Borehole works, Survey works, Preparing/Presentation the documents, Environment works of Expropriation.
  【2nd WG】 Head: Eng. Magdy, Responsibility: Design works
  【3rd WG】 Head: Eng. Yasser, Responsibility: Mathematical Model/ Hydraulic Physical Model Test
  【4th WG】 Head: Dr. Ragab: Responsibility: Water Management System
- TAC has an obligation to make a presentation of the report to PIU every month; therefore, Dr. Ragab told that TAC meeting will be held twice a month and monthly report will be submitted fortnightly.
- PIU assured that the location of group of regulators axis (140 m D/S of the existing weir axis) is an approximate location, which needs to be verified during the geotechnical and groundwater analysis

2. Geotechnical Survey

- Eng Nahla reported that the casing at BHN-1 is stuck and could not be pulled out. Eng. Kato explained that stuck casing trouble is frequent case in ordinary boring works, and it does not seriously affect the field investigation works.
- Eng. Kato explained the contract team in the boring works, which is carried out by different method from the specified one submitted by Dr. Bondok Consultant. So Eng. Kato and Eng. Kita will check its validity through the field survey which is supposed to be carried out by D/D consultant from 19th to 22nd Oct. And after that a meeting will be held with the Geotechnical survey group within TAC to study the proposal and how to proceed with the Boreholes and Piezometers works.
- TAC asked the D/D consultant to check the installation method of boreholes and piezometers holes according to the agreed specifications, specially implementing SPT tests and backfilling method.
- TAC also notified the Consultant to follow the time schedule of the study, especially the time schedule of the field investigations. Knowing that, the Borings in water have not started yet.

3. Topographic Survey

- Eng. Nahla reported that there is no problem in the survey; however, she has not received the report regarding the reference point (such as National Bench Mark) which is the base of TBM. Therefore, Eng. Toku and Eng. Kawabe will confirm the current situation regarding this matter through the field survey which is supposed to be carried out by D/D consultant from 20th to 22nd Oct.

4. Physical Model

- Physical Model construction is almost done except for the shape of the river bed and the existing regulators
- In order to confirm the discrepancies in the drawings of the existing regulators, Eng. Yasser asked Eng. Kawabe to attend the meeting with HRI to confirm that the differences in the drawings.
- WG will hold the meeting at 10:00 on 19th Oct @HRI, and Eng. Toku and Eng. Kawabe will attend it.

5. Design Criteria

- In order to discuss and finalize the comments of the design criteria report which were proposed by D/D consultant, Eng. Magdy suggested holding the meeting next Sunday (25th Oct. from 10:00). Eng. Magdy will send the finalized comments based on the meeting to D/D consultant as soon as possible.

6. Explanation about assignment schedule of D/D consultant

- The new proposed assignment schedule was explained by Eng. Toku and it was mainly accepted by JICA. TAC groups will coordinate their activates according to the assignment schedule of the Consultant.

Hiroshi Toku

Meeting Memo

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	1 November 2015 (Sun.) / 10:00～12:30	
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)	
Attendants	MWRI: Dr. Ragab, Eng. Nahla, Dr. Hesham, Eng. Mahmoud, Eng. Mahoud, Eng. Hala, Dr. Khalid, Dr. Ahmed, Eng. Mamdouh, Eng. Yasser, Eng. Iman, Eng. Amal, Eng. Saber, Eng. Refaat, Dr. Hany Consultant: Eng. Toku, Eng. Akiyoshi, Eng. Kuromi, Eng. Tanabe, Eng. Kato, Eng. Kita , Eng. William, Ms. Mariam	

1. Introduction

- Dr. Ragab explained the Technical Advisory Committee (TAC) meeting is going to be held bi-weekly.

2. Progress of field work

(1)Geotechnical Survey

- Eng. Nahla explained the all the circumstances about the progress of the field work including the delay in schedule and its causes. Eng. Nahla also suggested the necessity of security for RGBS staffs in case problems occur with residents in Dirout regarding the survey., Eng. Nahla presented the problems that resulted in the delay in the field work namely,
  - The delay of the consultant to assign the Boreholes in water to a subcontractor
  - The delay of the existing subcontractor to implement the mechanical on land boring including the SPT tests

- Eng. Kato made a presentation about the purpose of various types of survey/test for the construction of the NDGRs. He also explained the outline of the schedule in the survey.
- Eng. Kita reported the results of survey work observation, and showed the results are similar to the one in Feasibility Study (F/S) stage except for the state of sand layer, that's why intensive sampling and SPT tests are required
- TAC member asked questions regarding the quantity of the survey items, especially about the number of Standard Penetration Test (SPT). Eng. Kato explained the sub-contractor insisted to cancel the SPTs due to not enough space to mobilize rotary drilling machine for SPT, and he suggested the number of SPT should be reduced by two (2) holes (from eight (8) SPTs to six (6) SPTs in piezometers). He explained instead of reducing SPT, soil sampling is going to be implemented for all the piezometers.
- Also, Eng. Kato explained new additional holes only for SPT should be made from the experience of BH-N1 (It took ten (10) days until completion of all the tests in one borehole).
- Regarding the number of other survey items, Eng. Kato explained what we discussed through the approval of Inception Report (IC/R).
- The Geotechnical group from the DD consultant and the counterpart group from TAC) Will discuss this matter during the field visit on 3rd November, 2015

(2)Topographic Survey

- Eng. Nahla reported the progress of the field work, and there was no discussion about the topographic survey in the meeting.

3. Progress of Design Criteria

- Eng. Akiyoshi made a presentation regarding the fundamental principle regarding the design criteria and the design flow for the gate selection.
- Eng. Mahmoud Abd El-Aliem (General Manager of Hydro Mechanical Works of New Assuit Barrage) had some comments on the selection of the gate type, so D/D consultant will have discussion through the field investigation on 4th November in Assiut, and in the Design Working Group (WG) meeting on 9th November. He mentioned as following topics;

1) Single-leaf gate is easy and simple structure than Double-leaf gate
2) The reason that two regulators, Bahr-Yusef and Ibrahimia, are installed to Double-leaf gate, is not clear
3) hydraulic hoist system should be discussed instead of rope/wire drum hoist type

4. Progress of Physical model

- Eng. Yasser reported the schedule and the current situation of the physical model test. The calibration will be started soon.
- Dr. Khalid requested D/D consultant to explain the mathematical model simulation to make sure the gate type (single or double). D/D consultant agreed to make presentation on it in the Design WG meeting will be held on 9th November.

5. **The others**

- Regarding the design discharge which is requested by Eng. Kawabe, D/D consultant will have a discussion with RGBS at 14:00 on the 2nd November.
- D/D consultant explained the work plan during the basic design period from October 2015 to July 2016, In addition, D/D consultant explained the assignment schedule of consultant engineers in Egypt from October to December 2015, and introduced consultant engineers and supporting staffs who attended this meeting to TAC member.

Hitoshi Taku

Meeting Memo (6th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	16 November 2015 (Mon.) / 10:30～14:00	
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)	
Attendance	MWRI: Dr. Ragab, Eng. Nahla, Eng. Magdy, Eng. Rafaat, Dr. Ahmed, Dr. Eid, Dr. Hesham, Eng. Abdel Latif, Eng. Yasser, Eng. Amal, Eng. Rania, Eng. Mofreh, Dr. Khalid, Eng. Rowida Consultant: Eng. Toku, Eng. Tanabe, Eng. Takasaki, Eng. Kita , Eng. William, Ms. Mariam	

1. Status of the Field Investigation

- Eng. Nahla reported the current progress and the future schedule in geotechnical survey work.

- WG meeting will be held to discuss the depth of piezometers (One member from Groundwater Research Institute thinks additional shallow piezometers may be installed).

2. Design Criteria

2.1 Design Discharge

- TAC member and D/D consultant confirmed the design discharge, and the maximum discharge of Diroutiah canal should be twelve (12) m^3/sec, not thirteen (13) m^3/sec. The other values are the same as the ones confirmed on 2nd and 11th November 2015 as shown below.

Regulator		F/S Stage		Confirmed on 16th Nov. '15	
		Discharge (m^3/sec)	Ratio	Discharge (m^3/sec)	Ratio
DGRs	Ibrahimia	161.6	37%	186	39%
	Bahr-Yusef	226.5	52%	227	48%
	Sahelyia	4.2	1%	5	1%
	Diroutiah	11.7	3%	12	3%
	Badraman	8.3	2%	9	2%
	Abo Gabal	6.2	1%	7	1%
	Irad Delgaw	8.6	2%	9	2%
Direct Intake		11.5	3%	19	4%
Total		438.6		474	

Table: Design Discharge (confirmed on 11th Nov., '15 with Eng. Magdy at RGBS)

2.2 Design High Water Level

- TAC confirmed the design high water level is EL.46.30m and the design flood water level is EL.47.00m.
- Top level of the pier is 47.50m (flood water level EL.47.0+0.50m, according to Egyptian code).

2.3 The Top level of the gate

・The top level of the gate is EL.46.55m according to Egyptian code (+0.25m from the design high water level)

2.4 The operation of the gate

・Regarding rte operation of the gate, attendants agreed that the consultants will consider the operation type with comparison table of three types (overflow, underflow and between gates as WG discussed before).

2.5 (2.6) The leaf gate type and hoist type

・Comparison between single and double leaf gates (also between mechanical and hydraulic cylinder regarding the hoist type), the consultant will make a draft report within two (2) weeks. Those topics are expected to be finalized until the next TAC meeting (the beginning of December 2015).

2.7 New Regulators Axis

・Attendants confirmed the NDGRs axis is 140m downstream from the existing DGRs axis.

2.8 New Ibrahimia Navigation Lock

・Attendants showed the negative attitude to construct the new navigation lock (MWRI already sent the letter regarding this matter as the ministry decision). However Ministry of Transportation (MOT) still insists to install it, and RGBS asked D/D consultant to convince them with comparison from the technical and cost aspects (There are two options: 1. utilization of the existing navigation lock with guide wall or 2. constructing the new navigation lock. Refer the appendices).

2.9 Mini-Hydropower

・PIU decided not to install the mini-hydropower as MWRI decision; therefore, the D/D consultant does not make any more consideration regarding this matter.

2.10 Foundation Work

・D/D consultant agreed that the result of field survey will be sent to CRI through TAC as reference after the field work has done.

2.11 Preservation for Existing DGRs

・MWRI enables the D/D consultant to construct the new DGRs by discussing with the Ministry of Archaeology; therefore, the D/D consultant mainly discuss only with RGBS.

3. Status of the implementation of the Physical Hydraulic Model

・Eng. Yasser reported the current progress (95% completed but it needs to catch up the delay caused by the discrepancy in two drawings between the one from the F/S report (which is provided by RGBS to the D/D consultants) and another conducted by RGBS).

End of discussion

Meeting Memo (7th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	6 December 2015 (Sunday) / 9:30~12:00
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	• Attached a list of attendance from TAC members • Attached a list of attendance from consultant team members

The Main issues discussed in the TAC meeting:

1. Follow up of the 6th meeting

1.1. Technical comparison between single and double leaf gate:

The DD consultant affirmed that the comparison table is just a draft for reference, and the comparative examination should be done in more detail and it takes too much time as follows:

1) Examination of numbers and width of gates including hydraulic feature: until the end of December 2015
2) Making basic drawings of regulators: until the end of January 2016

Most of the attendants agree on the type of gate, which is double leaf but the TAC will postpone the decision until the site visit next Sunday.

1.2. Including the following three (3) types of combination of gate operation and flow control:

☒ Single Leaf-gate (Under-flow control),

☒ Double Leaf-gate (Over-flow control), and

☒ Double Leaf-gate (Orifice-flow control)

TAC members stated that the identification of flow pattern will result in precautions in the hydraulic design for each type

1.3 Technical Comparison wire rope drum hoist or hydraulic system

The DD consultant affirmed that The comparison table is just a draft for reference, and comparative examination should be done in more detail same as the comparison of gate type and it takes a lot of time as follows:

1) Examination of hosting devices: until the end of January 2016, and
2) Making basic drawings of regulators: until the end of January 2016

1.4 Technical and financial Comparison between two alternatives of Ibrahimia Lock construction

TAC stated that the full detail comparison between the Ibrahimia lock two alternatives will be postponed until the final decision of the Lock is taken jointly by RGBS, and RTA.

2. Status of the Field Investigation

(1) Topographic Survey: The Consultant reported that the plan survey, long. Survey, and cross sec. survey have been finalized

(2) Geotechnical Survey: The consultant reported that the installations of piezometers, permeability, and SPT tests have been finalized.

(3) The On water Boring: The consultant reported that the mobilization has started yesterday and the work will start from Today till the end of January, 2016.

Status of the Design Criteria

The consultant showed the need to verify the following from the Egyptian code:

1) Difference of design method and criterion value between the Egyptian code and Japanese criteria,
2) The applied design criteria for the detailed design study of the project, and
3) Basic consensus of the design principal for NDGRs among parties concerned, such as CRI, RGBS and D/D consultant.

TAC affirmed that the design criteria and equations of the Egyptian code must be followed not only the numbers but the context and equations. The Head of the TAC also stated that the CRI did not deliver the recommended value of the design criteria from the Egyptian code.

3. **Physical Hydraulic Model:**

Eng. Yasser reported that the construction of the model is about to be completed and the construction of the new regulators will be a pending issue if there will be changes in the vent widths of the new regulators. Also the type of flow recommended by the Consultant will affect the operation of the physical model. She also suggests the possibility of using flume in the physical model. Regarding matching the implementation of the physical model with the mathematical model, the consultant reported that the results of the mathematical model will be delivered in March 2016. Also the matching of the physical model time schedule with other DD activities is a must.

4. **Improvement of Water Management Working Group**

Dr. Hesham El-Shazely reported that the pending issues in the activities of WM working group are as follows:

- Survey the status of the water management improvement facilities
- Follow up the ID rehabilitation plan of minor structures
- Identify the water management improvement plan and tools within the working group
- Identify the discharge and water level monitoring locations requirements
- Identify the expansion plan of telemetry system
- Identify the water management improvement facilities

5.Decisions:

No.	Issue	Decisions	Responsibility
1a	Dimensions of gates	Identify the effect of changing the gate dimension on the physical hydraulic model through a meeting of the Design WG on Wednesday 9th December, 2015	Eng. Magdy El-Bendary
1b	Type of gates	A field visit will be conducted on 13th December,2015 to Sakola,Mazora,and Monshat El-Dahab regulators to investigate the proposed design by the DD consultant	Eng. M.Abdelaleem Design WG DD Consultant
1c	Type of hoist		

1d	Investigate the flow control method (over flow, under flow, or between gates)	Design WG will consult the GD of barrages maintenance, and water distribution CD regarding gate operation	Eng.Magdy El-Bendary	
2.	verify the design criteria from the Egyptian code	Check and fill in the recommended values in the design criteria from the Egyptian Code following the equation, and criteria rather than the values (including the structure importance in particular aspects e.g. seismic loads and effect)	The DD consultant	
3.	The need for shallow piezometer	Piezometer WG must hold a meeting to determine the need of shallow piezometers (in case of the need, the WG must determine numbers, location, M&E system and consult the issue with the DD consultant)	Eng. Nahla Mostafa The DD consultant	
4.	Ibrahimia lock	The decision will be taken according to the River Transportation Authority RTA mandate and authorization. RTA is the only entity which decides whether or not to construct a navigation lock. It is a steering decision, which must be taken jointly by RGBS, and RTA	Eng. Magdy El-Bendary	
5.a	All the Physical model results must be delivered before March 2015	A meeting will be held between the Head of physical model group, Eng. Nahla, DD consultant, and HRI rep. on Wednesday 9th December, 2015	Eng. Nahla, Eng. Yesser The DD consultant	
5.b	The need for a new proposal from HRI (modified 2 including a new activity)	Physical model WG will decide how much the proposal (modified 2) matching with the time schedule of the DD study	Eng. Nahla, Eng. Yesser The DD consultant	
5.c	Using flume in the physical model	The physical model WG will decide whether it is necessary or not, and in case of acceptance, what will be the situation contractually, and regarding the matching with the DD schedule	Eng. Nahla, Eng. Yesser The DD consultant	
6	DD study time schedule	The consultant shall prepare a modified time schedule of the study taking into considerations the field investigation status and physical hydraulic model developments	The DD consultant	

7	The available area for site installation yard, the actual need for the project, and the land acquisition procedures	Afield visit will be conducted by the project cost and plan WG with the DD consultant on Sunday 13 December,2015	Eng. Nahla, The DD consultant

5. Closing remarks: The head of TAC stated that she was very pleased with the obvious positive impression got from this TAC meeting and the meeting was closed at 12:00.

6. Next meeting: The next meeting will be held at 9:30 a.m. on Sunday, December 20, 2015.

Eng. Nabila Bahaa

Head, CDSD, and TAC

Reservoirs and Grand Barrages Sector (RGBS)

Dec 9th 2015

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

9th Dec. 2015

Meeting Memo (8th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	20 December 2015 (Sunday) / 9:30～12:00 noon
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	• Attached a list of attendance from TAC members (attached 1) • Attached a list of attendance from consultant team members(attached 2)

1. Eng Nabila Bahha El-Dien, the head of the TAC welcomed all the participants from the TAC members and others, and stated the contents of this meeting agenda (attached 3).
2. The DD consultant presented the current situation regarding following issues as in the attached presentation (attached 4):
   - Fill in the recommended values in the design criteria from the Egyptian Code, and submit
   - Prepare and submit a modified time schedule for the basic design phase
   - Status of the topographic survey and the final drawing and report
   - Monitoring of groundwater table in the piezometers will start by a contract on 1st January, 2016, but the consultant already started for twice campaigns
   - Installation of piezometers and on land and boring are completed
   - on-water boring activities are ongoing and three boreholes are completed
   - The consultant is carrying a detailed comparison between gate widths, comparison between gate lifting mechanisms, and discharge method through gates. The consultant will submit the detailed comparisons by the end of January 2016
   - The upcoming missions of the consultant members, and the work schedule in Japan and Egypt
3. Pending issues (None)
4. **Follow up the 7th TAC meeting decisions:**

No	Issue	Decisions	Achieved
1a	Dimensions of gates	Identify the effect of changing the gate dimension on the physical hydraulic model through a meeting of the Design WG on Wednesday 9th December, 2015	A detailed comparison of gate widths 4,5,6,8m will be conducted by the end of January 2015, and a preliminary comparison will be submitted by the end of December 2015
1b	Type of gates	A field visit will be conducted on 13th December,2015 to Sakola,Mazora,and Monshat El-Dahab regulators to investigate the proposed design by the DD consultant	A site visit from TAC members was conducted to Monshat El-Dahab regulator on13th Dec. The attendants of the site visit agreed on the suitability of double leaf gates, and a check list of all comments will be provided by Eng. M. Abdelaleem before 31st Dec2015
1c	Type of hoist		

1d	Investigate the flow control method (over flow, under flow, or between gates)	Design WG will consult the GD of barrages maintenance, and water distribution CD regarding gate operation	The Design WG agreed with the consultant to study the three flow patterns
2.	verify the design criteria from the Egyptian code	Check and fill in the recommended values in the design criteria from the Egyptian Code following the equation, and criteria rather than the values (including the structure importance in particular aspects e.g. seismic loads and effect)	The DD consultant fill in the values from the Egyptian code and it is under revision by Design WG
3.	The need for shallow piezometer	Piezometer WG must hold a meeting to determine the need of shallow piezometers (in case of the need, the WG must determine numbers, location, M&E system and consult the issue with the DD consultant)	GW representative did not attend neither the coordination meeting not the TAC meeting, proving no more interest in the request of shallow piezometer and accordingly the installation of shallow piezometer is cancelled
4.	Ibrahimia Navigation lock	The decision will be taken according to the River Transportation Authority RTA mandate and authorization. RTA is the only entity which decides whether or not to construct a navigation lock. It is a steering decision, which must be taken jointly by RGBS, and RTA	The Head of RGBS sent a letter to the Head of ID due to the delay of getting an answer from RTA, to go ahead to construct a third degree lock beside Ibrahimia regulator without the need of a new lock gates
5.a	All the Physical model results must be delivered before March 2015	A meeting will be held between the Head of physical model group, Eng. Nahla, DD consultant, and HRI rep. on Wednesday 9th December, 2015	HRI represent did not attend the meeting, and Eng.Refaat confirmed that the final time schedule will be signed by HRI, and approved by Eng. Yesser on December 21st
5.b	The need for a new proposal from HRI (modified 2 including a new activity)	Physical model WG will decide how much the proposal (modified 2) matching with the time schedule of the DD study	Eng.Refaat confirmed that proposal (modified 2) doesn't change the original negotiation conditions. The final time schedule will be signed by HRI, and approved by Eng. Yesser on Dec. 21st
5.c	Implementation flume in the physical model	The physical model WG will decide whether it is necessary or not, and in case of acceptance, what will be the situation contractually, and regarding the matching with the DD schedule	Eng. Refaat confirmed that from Physical model WG HRI stated that there is no need to construct flume

6	DD study time schedule	The consultant shall prepare a modified time schedule of the study taking into considerations the field investigation status	The DD consultant submitted a modified time schedule for the basic design
7	The available area for site installation yard, the actual need for the project, and the land acquisition procedures	Afield visit will be conducted by the project cost and plan WG with the DD consultant on Sunday 13 December,2015	A site visit was conducted by Head of TAC .Eng. Nahla, and the DD consultant and agreed primary on the Area of the yard, and its conditions. The WG must take all need action contacting surveying authority, preparing the needed documents, draft of ministerial decree, and primary contract with land owner.

5. Decisions of the 8th TAC meeting

No	Issue	Decisions	Responsibility
1	Surveying works drawings and report	The DD consultant shall submit the drawings and report by the mid of January 2016	Eng. Nahlaa The DD consultant
2	The on-water boring modified time schedule	Coordination with IS, and CDWD regarding the current operation of Bahr Youssef and Ibrahimia regulators, and winter closure	Eng. Nabila Eng.Nahla
3.	The need for shallow piezometer	The possibility of constructing shallow piezometer will not be considered	Eng. Nahlaa Eng.Magdi
4.a	Dimensions of gates	A detailed comparison of gate widths 4,5,6,8m will be conducted by the end of January 2015, and a preliminary comparison will be submitted by the end of December 2015	The DD consultant
4.b	Type of hoist	A detailed comparison between gate lifting mechanisms will be conducted by the end of January 2015	The DD consultant
4.c	The flow control method	The consultant will consider the three flow patterns and its hydraulic effects in the design	The DD consultant
4.d	Type of the gate	The TAC agreed on the suitability of double leaf gates in (NDGRs), but a check list of the comments will be provided by Eng. M. Abdelaleem including the non-protected wire before Dec.31st.	Eng. Magdy El-Bendary, Eng. M. Abdelaleem
5.	Review the submitted filling in of the design criteria from the Egyptian code	The design WG will review the submitted values, and report to the TAC next meeting (January 3rd)	Eng. Magdy El-Bendary,

6.	Ibrahimia old lock deterioration material	The design WG will conduct a meeting to study the deteriorating material of old lock, and the options of constructing the lock	Eng. Magdy El-Bendary
7.a	The need for a new proposal from HRI (modified 2 including a new activity	The final time schedule will be signed by HRI, and approved by Eng. Yesser	Eng. Yesser Eng. Nahla
7.b	Using flume in the physical model	HRI &WG confirmed that there is no need to construct flume	Eng. Yesser
8	DD study time schedule	The consultant will submit a detailed modified time schedule of the whole study period (22months) including the Man-months in Japan and Egypt	The DD consultant
9	The available area for site installation yard, the actual need for the project, and the land acquisition procedures	The project planning and cost WG will proceed with the procedures by contacting with the surveying directorate in Assiut and take all needed action and prepare all documents and the draft of Minster decree before Jan.31st.	Eng. Nahla Eng.Abdel Reheem and stakeholders

6. Closing remarks: The head of TAC stated that she was very pleased with the obvious positive impression got from this TAC meeting and the meeting was closed at 11:00.
7. Next meeting: The next meeting will be held at 9:30 a.m. on Sunday, January 31st 2016

Eng. Nabila Bahaa El-Dien 22/12/2015
Head, CDSD, and TAC
Reservoirs and Grand Barrages Sector (RGBS)

Eng. Tomiji Shimoji
Team Leader / D/D Consultant

Agenda of the 9th TAC Meeting to be held on 3rd of Jan. 2016

From	To	Topic	Presented by
10:00	10:30	follow up of 8th TAC Meeting Decisions	**Eng. Nabila Bahaa**
10:30	10:40	Pending issues regarding field investigation works	**Eng. Nahla Mostafa**
10:40	10:50	Pending issues regarding Design Criteria	**Eng. Magdy El-Bendary**
10:50	10:55	The Physical Model status and the calibration process,	**Eng. Yasser Abd-El-Moneim**
10:55	11:15	Ibrahimia lock and possible solutions	**Dr. K. Toubar**
11:15	11:45	No.& width of vents, Gate type, lifting system	**Dr. K. Toubar, Eng. Mahmoud Ali & Eng. Ayman A Salam**
11:45	12:00	Closing	**Eng. Nabila Bahaa**

Meeting Memo (10th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature	
Date / Time	31 January 2016 (Sun.) / 9:30~11:30, 3rd February 2016 (Wednesday) 9.00~11:00 AM ,and 7th February 2016 12:30 ~3:00 PM		
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)		
Attendance	• Attached a list of attendance from TAC members (attached 1) • Attached a list of attendance from consultant team members (attached 2)		

1. Eng Nabila Bahha El-Dien, the head of the TAC welcomed all the participants from the TAC members and others, and stated the contents of this meeting agenda (attached 3).
2. The DD consultant presented the current situation regarding following issues as in the attached presentation (attached 4):
   - On-water boring included additional boreholes with justification and the boring activities will be completed before 15th February 2016
   - The D/D consultant presented to the TAC the following matters based on meeting materials:
     * Results of the detailed comparison of width and number of vent,
     * Type of hoist, and
     * Discharge control method
   - Consultant delivered version (1) the preliminary comparisons (attached 5.a)
   - Consultant delivered the version (2) detailed comparison according to RGBS comment version (2) on 21st January (attached 5.b)
3. The DG held different meetings with the DD consultant from 24th January to 7th February 2016, and delivered comments on the submitted detailed comparison, the hydraulic design including the number of vents, and vent width, the hydraulic approach, and the non uniform flow calculation sheet. Attached the Comments of Dr A.Anwar (attached 6.a), Comments of Dr Khaled Tobar (attached 6.b),and comments of DWG (attached 6.c)
4. **Follow up of the 8th, and 9th TAC meetings**

No	Issue	Decisions	Responsibility	Status
1	Surveying works drawings and report	The DD consultant shall submit the drawings and report by the end of December 2015	Eng. Nahlaa The DD consultant	Achieved
2	The on-water boring modified time schedule	Coordination with IS, and CDWD regarding the current operation of Bahr Youssef and Ibrahimia regulators, and winter closure	Eng. Nabila Eng.Nahla	Achieved
3.	The need for shallow piezometer	The possibility of constructing shallow piezometer will not be considered	Eng. Nahlaa Eng.Magdi	Achieved

4.a	Dimensions of gates	A detailed comparison of gate widths 4,5,6,8m will be conducted by the end of January 2016, and a preliminary comparison will be submitted by the end of December 2015	The DD consultant	Originally submitted on January 21st 2016, and achieved **Feb 7th**
4.b	Type of hoist	A detailed comparison between gate lifting mechanisms will be conducted by the end of January 2016	The DD consultant	Achieved
4.c	The flow control method	The consultant will consider the three flow patterns and its hydraulic effects in the design	The DD consultant	Achieved
4.d	Type of the gate	The TAC agreed on the suitability of double leaf gates in (NDGRs), but a check list of the comments will be provided by Eng. M. Abdelaleem including the non-protected wire before Dec.31th.	Eng. Magdy El-Bendary, Eng. M. Abdelaleem	Achieved
5.	Revision of the submitted filled in values from the Egyptian code to the design criteria	The design WG will review the submitted values, and report to the TAC next meeting (January 3rd)	Eng. Magdy El-Bendary,	Achieved
6.	Ibrahimia old lock deterioration material	The design WG will conduct a meeting to study the deteriorating material of old lock, and the options of constructing the lock	Eng. Magdy El-Bendary	Pending
7.a	The need for a new proposal from HRI (modified 2 including a new activity	The final time schedule will be signed by HRI, and approved by Eng. Yesser	Eng. Yesser Eng. Nahla	Achieved
7.b	Using flume in the physical model	HRI &WG confirmed that there is no need to construct flume	Eng. Yesser	Achieved
8	DD study time schedule	The consultant will submit a detailed modified time schedule of the whole study period (22months) including the Man-months in Japan and Egypt	The DD consultant	Achieved
9	The available area for site installation yard, the actual	The project planning and cost WG will proceed with the procedures by contacting with the surveying	Eng. Nahla Eng.Abdel Reheem and	Pending

	need for the project, and the land acquisition procedures	directorate in Assiut and take all needed action and prepare all documents and the draft of Minster decree before Jan.31st.	stakeholders	
10	wire drum hoist and hydraulic cylinder comparison	Detailed technical, and financial comparison of operation, and maintenance in 40 years life time including references for comparison	Eng. M. Abd-El-aliem	Pending
11	Comments regarding the submitted preliminary comparison of the consultant regarding discharge methods, vent width, hoist type, and Ibrahimia lock	The DG shall submit the comments regarding the submitted preliminary comparisons from the DD consultant before 24th January, 2016	Eng. Magdy El-Bendary, Eng. M.Abd El-Aliem,and Dr.Khaled Tobar	Achieved
12	New ibrahimia lock	Sending a letter to the Head of RGBS, and the Head of ID to resend an official letter to the Head of RTA regarding the technical, and economical non-necessity of Ibrahinia new lock	Eng. Nabila Bahaa	The H.E. the Minister of MWRI has sent an official letter to the H.E the minister of Transport but no reply yet (pending)
13	Comments regarding the submitted filling in of the design criteria from the Egyptian code	The DG shall submit the comments regarding the filled in values, and aspects from the Egyptian code in the structural and hydraulic design criteria	Dr. Ahmed Anwar	Achieved
14	Banking arrangements with MOIC, and central Bank of Egypt	The Banking arrangements follow up committee shall fulfill all the necessary comments required by the Central Bank of Egypt, and hold a coordination meeting with the Central Bank, and Bank of Tokyuo representatives	Eng. Nahla Mostafa	Achieved partially. Meetings with the two banks, and JICA expected to be held before 20th February 2016

15	Follow up of the incentives system of the TAC and WGs members according to the PIU decisions	Follow up of the request letter to the Head of RGBS, and the head of ID regarding the effectuation of the PIU decision regarding the incentives system of the TAC and WGs members	Eng.Nabila Bahaa	Pending (No reply yet)
16	The TAC Invitation letter to the Research Institutes representatives	The TAC invitation letter to the representatives of the Research Institutes should include a c.c. letter to the Directors of the Research Institutes	TAC technical office	Achieved

5. Eng. Nahla presented the on-water boreholes situation and issue activities as follows:
   - Three additional on-water boreholes were implemented in Bahr Youssef canal besides the two planned on-water boreholes
   - the two planned on-water boreholes were implemented in Ibrahimia Canal during the period 30th January to 4th February
   - There is one remaining on-water boring in Diroutia, and Badrman, the consultant suggests to replace it by two on-land boring due to the difficulty in installing the barge on the currently canal depth, and waterway width but the site investigation WG is waiting for an official letter from the consultant and at the same time the WG contacted with water distribution directorate in Assiut to raise the water level D.S. Diroutia, and Badrman
   - Regarding the site installation yard, there is a need for legal agreement with the land owner to agree with the rent price, and the availability of land from January 2018 with no restrictions because issuing a ministerial decree for temporary land acquisition starting from now will be a waste of money for two years
   - The consultant has submitted the surveying works report last week and it is under revision. However further additional bathymetric survey for each canal has been carried out by HRI to figure out the current condition of the canal beds more in detail.
6. Eng. Yasser presented the status of the physical hydraulic model and stated that:
   - the physical model calibration results report was submitted and delivered to the DD consultant and the comments of the physical model from the WG will be delivered soon taking into consideration the comments of the consultant that have been recently submitted
   - There is a need for the final hydraulic design(final dimensions) of Bahr Youssef, and Ibrahimia before 15th February 2016,as HRI reported
   - The DD consultant sent a confirmation email based on HRI request to include three additional sections in the physical model, and HRI affirmed that, and Eng. Yesser confirmed that it will not affect the final cost or the time schedule of the physical model study project
7. **Results of the Meetings between the DWG and the DD consultant from 24th January to 7th February 2016**
   - D/D consultant recommended 4 vents in 8 m width for Bahr Yusef regulator and 3 vents in 8 m width for Ibrahimia regulator. D/D consultant explained hydraulic calculation was executed with prudent consideration which is general determination for hydraulic condition according to Egyptian code, detailed calculation with non-uniform flow method, and economical comparison for each type of vent

width of 5m, 6m and 8m

- D/D consultant submitted the results of hydraulic calculation and rough cost estimation for comparative study of vent width on 30th January 2016 prior to the 10th TAC Meeting through e-mail, and based on them, D/D consultant explained the details of the results in the meeting.
- Dr. Abdel Azim asked D/D consultant to check the hydraulic calculation again because the following three (3) points should be reconfirmed at cross section No.27/28 of Bahr Yusef in hydraulic calculation, upstream of existing DGRs.

1) Area of water flow: 1,375.95 m^2 seems too big for design.
2) Roughness coefficient: It should be 0.04 because canal bed is not made of concrete.
3) Quantity of flow: Upstream of existing regulator should be 456 m^3/s which is design total discharge volume of NDGRs, not 227 m^3/s which is design discharge volume of Bahr Yusef

- Considering the safety operation in case that one of gates is broken, D/D consultant explained 224 m^3/s of water which is 98.7 % of design discharge volume of Bahr Yusef Regulator, can be discharged when 8 m vents in width is applied; however, flow velocity in this condition is higher than 2 m/s.
- D/D consultant emphasized that 6 vents in 6 m width for Ibrahimia leads to one more water diversion for the dry works, which results the construction period will be required one more year compare to the plan.
- Regarding the discharges and maximum design water level at the, D/D consultant applied the values submitted in the 6th TAC meeting. However for the downstream water levels, the consultant considered the maximum future water levels deducted from the Q-H relation between monitoring discharge volume and water level for 1999-2014, and also the maximum actual D.S. water levels submitted to the consultant in the DWG meeting on 24th January 2016 (Attached 7)
- Based on the revised evaluation of the comparative study of Ibrahimia, and Bahr Youssef submitted from the DD consultant on 2nd February 2016 (attached 8)

Aspects	**DD Consultant**	**TAC**
Hydraulic aspects	In any width of the vent, there is no hydraulic problem because of enough water head is ensured between the upstream of existing regulators and downstream of new regulators	Agreed but the allowable mean velocities for regulators design in the Egyptian code must be applied
Economical aspects	• Total opening widths for (5*5, 6*4, 8*3m) are almost the same. But the fewer number of vents, the more economical because the concrete volume of piers as well as the foundation piles will be reduced. • Cost of gate facilities is also reduced accordingly because the number of hoist as well as the weight of gate guides decrease. • The time and cost of temporary works will change for Bahr Youssef canal due to the increase in structure width. (the implementation time of the project will increase by one year)	• The pier width is almost constant in the submitted calculations due to the grooves for the hydraulic cylinders. • The cost of temporary works will not change as long as the total width is not different widely
Operation and maintenance	As the number of gates increase, the possibility of operation mistakes increases	• As the number of gates increase, the effect of out of operation gate

		(maintenance) will be reduced .i.e in 4 gates only 25% of the discharge capacity will be lost but in 3 gates, 33% of the discharge capacity will be lost • The velocity inside the vent will exceed 2m/s in case of 2vent*8m • The operability of the gates will not be different, and will depend on hydraulic pressure (hydraulic cylinders), and no need for man power
Comprehensive evaluation	From the point of initial cost as well as the maintenance cost, the DD consultant recommend the 8m width, but if the vent width is restricted from 4to 6 based on the Egyptian code, the DD consultant will accept 6m width	From the point of initial, and running cost as well as the ease of maintenance, operability, and following the Egyptian code, and all discussed above, the TAC recommends the 6m width for Ibrahimia, and Bahr Youssef

8. The hydraulic design of the small regulators

The DD consultant submitted the hydraulic design of the small regulators (Sahylia, Badrman, Diroutia, Abou Gabal, and Irad Delgao)

9. Decisions of the 10th TAC meeting

No	Issue	Decisions	Responsibility
1	Dimensions of gates	TAC selected the 6m width for vents, and selected 4 vents*6m for both Bahr Youssef, and Ibrahimia. But the consultant will raise the issue to JICA Head quarter in Tokyo	DD Consultant
2	Type of gates	Both sides agree upon the Double leaf gates	DD Consultant
3	Type of hoist	Both sides agree upon the hydraulic cylinder	DD Consultant
4	The flow control method	Both sides agree upon consider the three flow patterns (over flow, under flow, and orifice flow) in design calculation	DD Consultant
5	Stoplogs	The design must include one set of stoplogs for each (Ibrahimia, and Bahr Youssef regulators). The mechanical facility should include lifting mechanism for upstream and downstream stoplogs. The width of the vents must be identical for small regulators together, and (for Ibrahimia, and Bahr Youssef together)	DD Consultant

6	Hydraulic design of the small regulators	DWG shall submit the preliminary comments regarding the hydraulic design of the small regulators by 8th February 2016, and two meetings with the DD consultant will be on February 15th , and 16th	DWG, and the DD Consultant
7		A detailed hydraulic, M&O, and financial comparison between hydraulic design in case of double leaf gates with its three operation methods (overflow, under flow, and orifice flow) compared with the suggested bottom hinge flap gate. Also	DD Consultant
8	The non-response from RTA regarding the Minister letter regarding the non-necessity of New Ibrahimia lock	TAC raise the issue to the Head of RGBS, and the Head of ID	Eng. Nabila Bahaa
9	Geotechnical investigation	The consultant should submit the final geotechnical report before 21st March 2016	Eng. Nahla DD Consultant
10	Physical model	The official comments regarding the physical model calibration results report must be submitted to HRI before 15th February 2016	Eng. Yesser DD Consultant
11		The additional sections requested by HRI, and confirmed by the DD consultant in the physical model should not affect the final cost or the time schedule of the physical model study project	
12		The confirmation of the hydraulic design of DGR including vent widths, and numbers must be submitted to HRI before 15th February 2016	
13	Contract between Consultant & ECRI	The TOR and the contract between the Consultant & ECRI should be submitted	DD Consultant
14	Surveying works report	The surveying works report which submitted electronically in 21st January 2016, shall be updated based on the sent comments from the WG and resent in Hard format including maps, drawings of the cross sections and profiles, and the main report	DD Consultant

15	Temporary Land acquisition	legal agreement with the land owner to agree with the rent price, and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017	Eng. Nahla Mostafa

10. Closing remarks: The head of TAC stated that she was very pleased with the obvious positive impression got from this TAC meeting third session and was closed on Sunday 7th February 2016 at 3:00 PM

11. Next meeting: The next meeting will be held at 9:30 a.m. on Thursday, February 18th,2016 on MWRI building 1st floor

Eng. Nabila Bahaa El-Dien
Head, CDSD, and TAC
Reservoirs and Grand Barrages Scetor
(RGBS)

Eng. Tomiji Shimoji
Team Leader / D/D Consultant
8th February 2016

C.C. Head of RGBS
C.C. TAC Members

Meeting Memo (11th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	18 February 2016 (Thu.) / 9:00～12:00
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (2nd Floor)
Attendance	MWRI: Engs. Nabila (R), Magdy (R), Mahmoud Ali (R), Refaat (I), Yasser (R), Amal (R), Mohmoud Rafee (T), Rania (R), Mohamed Salah (R), Dr. Mohamed (R), Ahmed Anwar (C), Dr. Abdel Azim (H), Dr. Khaled (R), Dr. Hesham (R) Consultant: Engs. Shimoji, Toku, Kuromi, Tanabe, Wakatsuki, Kawabe, Kita, William and Mariam

1. Eng Nabila Bahha El-Dien, the head of the TAC welcomed all the participants from the TAC members (Attach 1) and the consultant members (Attach.2). She also appreciated the efforts done by Eng. Nahla Mostafa the former TAC member, and Director of GDRSC, welcomed her successor Dr. M.Gabr and stated the contents of this meeting agenda (attached 3).

2. Follow up of the 10th TAC meeting

No	Issue	Decisions	status
1	Dimensions of Ibrahimia, and bahr Youssef gates	TAC selected the 6m width for vents, and selected 4 vents*6m for both Bahr Yousef and Ibrahimia. But the consultant will raise the issue to JICA Head quarter in Tokyo.	The DD Consultant informed JICA HQ, and waiting for JICA response
2	Type of gates	Both sides agree upon the Double leaf gates.	**O.K.**
3	Type of hoist	Both sides agree upon the hydraulic cylinder.	**O.K.**
4	The flow control method	Both sides agree upon consider the three flow patterns (over flow, under flow, and orifice flow) in design calculation.	**O.K.**
5	Stoplogs	The design must include one set of stoplogs for each (Ibrahimia, and Bahr Yousef regulators). The mechanical facility should include lifting mechanism for upstream and downstream stoplogs. The width of the vents must be identical for small regulators together, and (for Ibrahimia and Bahr Yousef together).	**O.K.**
6	Hydraulic design of the small regulators	DWG shall submit the preliminary comments regarding the hydraulic design of the small regulators by 8th February 2016, and two meetings with the DD consultant will be on February 15th , and 16th.	**O.K.**

7		A detailed hydraulic, M&O, and financial comparison between hydraulic design in case of double leaf gates with its three operation methods (overflow, under flow, and orifice flow) compared with the suggested bottom hinge flap gate.	O.K. but detailed economical comparison is needed
8	The non-response from RTA regarding the Minister letter regarding the non-necessity of New Ibrahimia lock	TAC raise the issue to the Head of RGBS, and the Head of ID.	The Minister of Transport sent a letter to the H.E. the minister of MWRI confirming the non-necessity of any navigation lock in new DGR
9	Geotechnical investigation	The consultant should submit the final geotechnical report before 21st March 2016.	**Pending**
10	Physical model	The official comments regarding the physical model calibration results report must be submitted to HRI before 15th February 2016.	**Pending** • Eng. Yasser should deliver the calibration report comments • HRI can't start constructing the model of NDGR before JICA approval of Ibrahimia, and Bahr Youssef design • DD consultant must finalize the hydraulic design of small regulators
11		The additional sections requested by HRI, and confirmed by the DD consultant in the physical model should not affect the final cost or the time schedule of the physical model study project	
12		The confirmation of the hydraulic design of DGR including vent widths, and numbers must be submitted to HRI before 15th February 2016	
13	Contract between Consultant and ECRI	The TOR and the contract of the groundwater monitoring between the Consultant and ECRI should be submitted	O.K.
14	Topographic survey works report	The topographic survey works report which submitted electronically in 21st January 2016, shall be updated based on the sent comments from the WG and resent in Hard format including maps, drawings of the cross sections and profiles, and the	O.K.

		main report	
15	Temporary Land acquisition	legal agreement with the land owner to agree with the rent price, and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017	Pending Dr. Gabr should prepare official document after February 22nd meeting, which will be held in Minya Central directorate

3. Discussion Record

3.1 Presentation for the suitable width and number of vents

D/D consultant made a presentation regarding the width and number of vents for small regulators, and considering the result of hydraulic calculation, operation and maintenance, and rough cost comparison. D/D consultant recommended the Case-1C as in the table below. D/D consultant also explained the procedures and reasons to determine the recommended combination, which is following conditions:

- Egyptian Code (Allowable Velocity, Vr, Contraction ratio, and Allowable heading up), and
- Instruction from the head of TAC considering operation and maintenance (O/M) as follows:
  - Minimum number of vents must be two (2) for small regulators (three (3) for large regulators), and
  - Maximum number of variety in vent width for small regulator must be two (2).

Regulator	Sahelyia	Badraman		Abo Gabal	
Canal	Sahelyia	Diroutia	Badra-man	Abo Gabal	IradDelgaw
Case-1A	1.5m × 2	2.5m × 2	2.5m × 2	1.5m × 2	2.5m × 2
Case-1B	2.0m × 2	2.5m × 2	2.0m × 2	2.0m × 2	2.0m × 2
Case-1C	2.0m × 2	2.0m × 3	2.0m × 2	2.0m × 2	2.0m × 2

- In response to D/D consultant's recommendation, TAC required further calculation in case that the elevation of all aprons of the new Abo Gabal Regulator (regulator for Abo Gabal and Irad Delgaw Canals) is the same. Further calculation and comparison should be done considering the velocity (should be between 1.0-1.5m/s).
- Eng. Magdy asked about the reason of changing the design table shown above from the previously one submitted on 16th February 2016. D/D consultant explained that it is because a minor adjustment in calculation for the heading up was done.
- Eng. Magdy explained what we discussed through a series of Design WG meetings in this week, and showed his opinion that small width gate should be applied considering the operation and maintenance. The number of rods should be followed by Eng. Mohmoud Ali's recommendation.
- Dr. Hesham mentioned that the design velocity through the vents must be within 1.5 m/s for small regulators considering that the sedimentation area upstream the existing regulators, and asked the consultant for more detailed cost comparison in the three cases because they are not the same cost.
- Eng. Nabila asked the DWG to take the decision for the combination of width and number of vents before the

end of next week (25th February 2016).

- Eng. Mohmoud Rafee mentioned the elevation of apron of the regulators should be same considering the problems caused by sediments.
- Dr. Abdel Azim commented the elevation of all aprons of the new Abo Gabal Regulator should be the same level, and the D/D consultant accepted it.

3.2 Presentation for the suitable gate and hoist type

- In the presentation, D/D consultant also recommended the slide gate with hydraulic cylinder with motor-driven operation method for the small regulators.
- Eng. Mohmoud Ali commented about the number of hoists for gate operation method. He recommended two sets of hoist with one (1) motor for each gate.

3.3 Location of the new Sahelyia and Abo Gabal regulators

- New Sahelyia and Abo Gabal regulators are constructed upstream of existing regulators. Dr. Abdel Azim showed his opinion to check if the heading up is small enough and the distance is long enough to meet Egyptian Code. Eng. Nabila asked D/D consultant the distance between existing regulators and new ones. D/D consultant answered it is around 30m, and it is going to be studied and will be reported before 20th March 2016.
- Eng. Yasser suggested the location and angle of regulators can be changed to consider the water flow. D/D consultant explained that there is no problem in 90 degrees because the flow is gentle and negligible for sediments, and Dr. Abdel Azim agreed it.

3.4 Current situation for the dimension of the new Bahr Yusef and Ibrahimia regulators

- D/D consultant explained the current situation for TAC decision in two big regulators with JICA. Eng. Nabila asked this matter should be urgently settled in approval because physical hydraulic model test is now suspended.

3.5 New Navigation Lock for the new Ibrahimia regulator

- Eng. Nabila notified TAC members that an official letter ref.1266 dated 3rd February 2016 from the Minister of Transport is sent to H.E. the Minister assuring that no navigation locks are required in new DGR. Eng. Magdy showed his opinion the operation and maintenance (O/M) bridge can be used for public transportation by making railway/tunnel crossing; therefore, it is beneficial from not only financial but also social aspects.
- Eng. William showed his opinion that the O/M bridges for small regulators (New Sahelyia and New Abo Gabal) should be less than 10m wide because of less traffic. TAC showed it takes time to discuss internally.

3.6 Physical Hydraulic Model

- Eng. Yasser had no comment in regard with the physical hydraulic model test, and she is waiting the information about the final decision regarding the dimensions of the two (2) large regulators. She asked the JICA consultant to attend a meeting at HRI on 25th February 2016, the consultant replied that (Engs. Kawabe and Toku) will attend the meeting

4. Decisions in the 11th TAC meeting.

No	Issue	Decisions	Responsibility
1	Dimensions of vents for the New Ibrahimia and Bahr Yusef regulators	Detailed Design (D/D) consultant shall finalize the discussion with JICA HQ regarding the hydraulic design of the two big regulators Ibrahimia, and Bahr Yousef and inform TAC before the end of next week 25th February 2016) in order not to stop the physical model activities	D/D consultant
2	The combination of width and number of vents for small regulators	D/D consultant will carry out further hydraulic calculation in case that all aprons of the new Abo Gabal regulator are on the same elevation in accordance with suggestion by Design WG of TAC, based on the result of calculation, Design WG of TAC should make final decision before the end of next week 25th February 2016).	Design WG of TAC and D/D consultant
3	Cost comparison for small regulators	D/D consultant will make rough cost comparison for each suggested case in response to the comment in 11th TAC meeting within three (3) weeks.	Design WG of TAC and D/D consultant
4	Type of gates for small regulators	Both sides (TAC and D/D consultant) agree upon type of gate for small regulators are slide gate.	Achieved
5	Type of hoist for small regulators	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.	Design WG of TAC and D/D consultant
6	Three-view drawings for small regulators	Target date for submitting the three-view drawings for small regulators is 20th March 2016 (Sun.). Design WG of TAC should make final decision for the design of small regulators before the end of next week (25th February 2016).	D/D consultant
7	The flow control method for small regulators	Both sides agree the flow control method with the underflow for small regulators.	Achieved
8	New Ibrahimia Navigation Lock	TAC received the official letter from the Ministry of Transport River and there is now officially no need for the construction of any new Navigation Locks in new DGRs.	Achieved
9	Field Survey Report	D/D consultant should submit the final report on geotechnical survey and topographic survey before 21st March 2016.	Dr. Mohamed DD consultant
10	Physical Hydraulic	The construction of scale model of new regulators will start when the width and number of vents are approved by	Eng. Yasser

	Model Test	JICA	
		The official comments regarding the physical model calibration results report must be submitted to HRI before 25th February 2016	
		The additional sections requested by HRI, and confirmed by the DD consultant in the physical model should not affect the final cost or the time schedule of the physical model study project	
11	Temporary Land acquisition	Legal agreement with the land owner to agree with the rent price and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017. Integrated legal Memo& vision is needed to be prepared before March 1st 2016	Dr. Mohamed Gabr
12	Revision of the monthly and quarterly progress report from the consultant	WGs have to revise the previous monthly and quarterly progress report before the end of next week (25th February 2016).	Eng. Yesser Eng. Magdi Dr.Mohamed Gabr
13	Connecting the maintenance bridge of the new DGR with the existing road east of Dairout railway station	The JICA consultant should consider both alternatives of road to connect the maintenance bridge of the new DGR with the existing road east of Dairout railway station	Design WG of TAC and D/D consultant

3. Closing remarks: The head of TAC thanked the attendant of the meeting for their valuable contribution and closed the meeting at 12:00
4. Next meeting: The next meeting will be held at 9:30 a.m. on Sunday, March 13th,2016 on MWRI building 1st floor

28 2 2016

Eng. Nabila Bahaa El-Dien

Head, CBSD, and TAC

Reservoirs and Grand Barrages Sector

(RGBS)

for **Eng. Tomiji Shimoji**

Team Leader / D/D Consultant

C.C. ~~Head of RGBS~~

C.C. TAC Members

Meeting Memo (12th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	13th March 2016 (Sun.) / 9:30～12:30
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	MWRI: Engs. Nabila (R), Sayed El-Shahat (R), Refaat (I), Yasser (R), Amal (R),Dr.Hesham Elshazely (R), Mahmoud Rafee (T), Dr.Mohamed Gabr (R), Dr.Ahmed Anwar (C), Dr. Khaled (R), Dr.Khaled Keair El-Din, Ibrahim Ragab, Abd el-Rehiem, Mahmoud Nagi Consultant: Engs. William and Mariam

1. Eng Nabila Bahha El-Dien, the head of the TAC welcomed all the participants from the TAC members (Attach 1).

2. Follow up of the 11th TAC meeting

No	Issue	Decisions	Responsibility	status
1	Dimensions of vents for the New Ibrahimia and Bahr Yusef regulators	Detailed Design (D/D) consultant shall finalize the discussion with JICA HQ regarding the hydraulic design of the two big regulators Ibrahimia, and Bahr Youssef and inform TAC before the end of next week 25th February 2016) in order not to stop the physical model activities	D/D consultant	Pending till 20/3/2016
2	The combination of width and number of vents for small regulators	D/D consultant will carry out further hydraulic calculation in case that all aprons of the new Abo Gabal regulator are on the same elevation in accordance with suggestion by Design WG of TAC, based on the result of calculation, Design WG of TAC should make final decision before the end of next week 25th February 2016).	Design WG of TAC and D/D consultant	Partially achieved, pending till 20/3/2016
3	Cost comparison for small regulators	D/D consultant will make detailed cost comparison for each suggested case in response to the comment in 11th TAC meeting before the end of next week (25th February 2016)	Design WG of TAC and D/D consultant	achieved
4	Type of gates for small regulators	Both sides (TAC and D/D consultant) agree upon type of gate for small regulators are slide gate.	Design WG of TAC and D/D consultant	achieved
5	Type of hoist for small regulators	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.		pending

6	Three-view drawings for small regulators	Target date for submitting the three-view drawings for small regulators is 20th March 2016 (Sun.). Design WG of TAC should make final decision for the design of small regulators before the end of next week (25th February 2016).	D/D consultant	pending
7	The flow control method for small regulators	Both sides agree the flow control method with the underflow for small regulators.	D/D consultant	achieved
8	New Ibrahimia Navigation Lock	TAC received the official letter from the Ministry of Transport Rive and there is now officially no need for the construction of any new Navigation Locks in new DGR.	D/D consultant	achieved
9	Field Survey Report	D/D consultant should submit the final report on geotechnical survey and topographic survey before 21st March 2016, after the comments of field survey working group	Dr. Mohamed Gabr DD consultant	pending
10	Physical Hydraulic Model Test	The construction of scale model of new regulators will start when the width and number of vents are approved by JICA	Eng. Yasser	pending
		The official comments regarding the physical model calibration results report must be submitted to HRI before 25th February 2016		achieved
		The additional sections requested by HRI, and confirmed by the DD consultant in the physical model should not affect the final cost or the time schedule of the physical model study project		achieved
11	Temporary Land acquisition	Legal agreement with the land owner to agree with the rent price and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017. Integrated legal Memo& vision is needed to be prepared before March 1st 2016. Eng. Abd El-Rahiem will meet with the owner on 17th March 2016	Dr. Mohamed Gabr Eng. Abd El-Rahiem	Pending till 20/3/2016

12	Revision of the monthly and quarterly progress report from the consultant	WGs have to revise the previous monthly and quarterly progress report before the end of next week (25th February 2016).	Eng. Yesser Eng. Magdi Dr.Mohamed Gabr	Achieved, official signature from JICA consultant , and Dr. Gabr still needed
13	Connecting the maintenance bridge of the new DGR with the existing road east of Dairout railway station	The JICA consultant should submit a comparison between the bridge/tunnel alternatives to connect the maintenance bridge of the new DGR with the existing road east of Dairout railway station	Design WG of TAC and D/D consultant	Only a drawing is submitted **Attach 2**

3. Discussion Record

3.1 Dr. Mohammed Gabr presented the situation of dealing with the two illegal mosques buildings along Bahr Youssef which obstruct the construction of new DGR, and stated that the Multiple Committee (Atyaf) for dealing with the obstructions of new DGR is waiting for the reply of Awkaf central directorate in Assiut regarding the proposal of constructing one big mosque replacing the two illegal mosques. He stated that the Multiple committee (Atyaf) is also still waiting for the reply of the Irrigation sector regarding the reconstruction of Dairout irrigation District building and the nearby mosque. He also presented the situation of the temporary land acquisition of the site installation yard, and the Multiple committees is still waiting for a request from the landowner asking for rent his land for the project site installation purpose. He also presented some of the monitoring results of the installed piezometers in the project area

Prof. Dr. Khair El-Din presented the GW monitoring results carried by ECRI from middle January 2016, and TAC asked JICA consultant to monitor also the existing wells according to the Inception Report

3.2 The Draft monitoring plan of the water distribution improvement system

- Dr. Hesham Elshazely presented the draft monitoring plan of the water distribution system submitted by the consultant and included 35 locations, while the original plan in the feasibility report included 63 locations. The justification for this change is needed from the consultant. He stated also that the water distribution central directorate and the water distribution directorate of Upper Egypt recommended adding 21 locations besides the included monitoring locations in the new draft proposal submitted from the consultant. Also the necessity of using SCADA in the monitoring house needs an explanation from the consultant and a comparison between using telemetry calling modem with sufficient software, and the using of SCADA is required **(Attach.3)**

3.3 Physical Hydraulic Model

- Eng. Yasser stated that the comments of the calibration report were submitted to HRI, and the physical model WG reached an agreement with HRI regarding the additional velocity sections at 30, and 50 m D.S. the old and the new DGR. She stated that the physical model study will be extended till the end of mathematical model to 31st

July 2016.She stated also that the physical model WG is studying the possibility of constructed one flume across Bahr Youssef in the new DGR model to check the protection length, and size D.S.

3.4 The Detailed Design WG

- Eng.Sayed El-Shahat stated that the Consultant submitted the cost estimate of the small five regulators based on the hydraulic design, and the selected design alternative Alt. (1C) is 5% higher in the cost than Alt. (1A)
- He stated that the seismic analysis is discussed within the DWG, and the they are studying also the seismic analysis of the Design of New Assiut Barrage and will discuss the issue in details with the consultant on March 21st 2016

4. Decisions in the 12th TAC meeting.

No	Issue	Decisions	Responsibility
1	Dimensions of gates	TAC selected the 6m width for vents, and selected 4 vents*6m for both Bahr Youssef, and Ibrahimia, and the consultant has to finalize the issue to JICA Head quarter in Tokyo, and inform TAC with the final decision before 20th March 2016	DD Consultant
2	Hydraulic design of the small regulators	TAC selected the design alternative (1C), and and the consultant has to finalize the issue to JICA Head quarter in Tokyo, and inform TAC with the final decision before 20th March 2016	DD Consultant
3	Type of hoist	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.	DD Consultant, and Design WG
4	Geotechnical investigation	The consultant should submit the final geotechnical report before 21st March 2016. The Field investigation WG should submit the final comments **to the consultant before 17th March 2016**	Dr. Mohammed Gabr DD Consultant
5	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI before 28th March 2016	Eng. Yasser DD Consultant
6		The confirmation of the hydraulic design of DGR including vent widths, and numbers must be submitted to HRI before 1st April 2016	DD Consultant
7	Piezometer observations by ECRI	The consultant should coordinate with ECRI to include the existing wells in the project area in the monitoring activities of the 13 piezometers as agreed in the Inception report	Dr. Mohammed Gabr DD Consultant

8	Surveying works report	The surveying works report which submitted electronically in 21st January 2016, shall be updated, and Field investigation WG should submit the final comments to the consultant before 17th March 2016	Dr. Mohammed Gabr DD Consultant
9	Temporary Land acquisition	legal agreement with the land owner to agree with the rent price, and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017	Dr. Mohammed Gabr Eng. Abd El-Rehiem
10	The two illegal mosques	The Environment, and land acquisition WG, should coordinate with the consultant to plan the access roads to the new DGR site during construction in order to identify the need for demolishing the second mosque along Bahr Youssef, and following up with Awkaf concerning the 2nd Mosque, and with Irrigation sector	Dr. Mohammed Gabr Eng. Abd El-Rehiem
11	Hydraulic Design of the new DGR	The consultant has to submit the drawings, and cross sections of the hydraulic design before 20th March 2016	DD Consultant
12	Seismic design of the new DGR	The seismic analysis is carried out from March 20th to 24th	Eng. Magdy El-Bendary DD Consultant
13	Draft monitoring plan of the water distribution improvement system	The consultant has to submit a justification for the change in the number of the monitoring locations	Dr. Hesham Elshazely DD consultant
14		The consultant has to submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the using of SCADA	
15		The control monitoring house is recommended to be established in El-Minya, as there is a possibility of using the suggested extension building in the central directorate for water resources, and Irrigation of El-Minya. The construction of the extension building will be confirmed by the Central Directorate for Buildings, and Engineering affairs before raising the issue in the 2nd PIU meeting	Eng. Nabila
16		Adding the Head of Central directorate of water distribution, and the Head of Telemetry central directorate, and the General director of Telemetry to the WG	Eng. Nabila

4. Closing remarks: The head of TAC thanked the attendant of the meeting for their valuable contribution and closed the meeting at 12:30
5. Next meeting: The next meeting will be held at 9:30 a.m. on Monday, March 28th,2016 on MWRI building 1st floor

13 3 2016

Eng. Nabila Bahaa El-Dien

Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

C.C. Head of RGBS
C.C. TAC Members

Meeting Memo (13th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	28th March 2016 (Mon.) / 9:30~12:30
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	MWRI: Engs. Nabila, Yasser, Magdi, Sayed El-Shahat, Refaat, Amal ,Hesham Elshazely , Mahmoud Rafee, .Mohamed Gabr, Abd El-Azim Ali, Khaled Tobar , Ibrahim Ragab, Abd el-Rehiem, Mahmoud Nagi, Ahmad Anwar, Hani Mostafa, Rania Nashaat **Consultant**: Engs, Shimoji, Toku, Tanabe, Kuromi, Ohtsuki, Kita, William Mariam, and El Hussein **JICA**: Hajime Yamazaki, Representative of JICA Cairo office

1. Eng Nabila Bahha El-Dien, the head of the TAC welcomed all the participants from the TAC members (Attach. 1), appreciated receiving JICA letter regarding approving TAC decision concerning DGR hydraulic design (gate numbers, and widths) and stated the TAC meeting Agenda starting by the follow up of the 12th TAC meeting.

2. Follow up of the 12th TAC meeting

No	Issue	Decisions	Responsibility	status
1	Dimensions of gates	TAC selected the 6m width for vents, and selected 4 vents*6m for both Bahr Youssef, and Ibrahimia, and the consultant has to finalize the issue to JICA Head quarter in Tokyo, and inform TAC with the final decision before 20th March 2016	DD Consultant	Hydraulic design including dimensions of vents approved by JICA letter on 23rd March 2016
2	Hydraulic design of the small regulators	TAC selected the design alternative (1C), and and the consultant has to finalize the issue to JICA Head quarter in Tokyo, and inform TAC with the final decision before 20th March 2016	DD Consultant	
3	Type of hoist	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.	DD Consultant, and Design WG	On-going
4	Geotechnical investigation	The consultant should submit the final geotechnical report before 21st March 2016. The Field investigation WG should submit the final comments to the consultant before 17th March 2016	Dr.Gabr DD Consultant	**On-going**

5	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI before 28th March 2016	Eng. Yasser	The flume is agreed by the physical model WG, and the issue is raised to the head of RGBS
6		The confirmation of the hydraulic design of DGR including vent widths, and numbers must be submitted to HRI before 1st April 2016	DD Consultant Eng. Yasser	Hydraulic design including dimensions of vents approved by JICA letter on 23rd March 2016
7	Piezometer observations by ECRI	The consultant should coordinate with ECRI to include the existing wells in the project area in the monitoring activities of the 13 piezometers as agreed in the Inception report	Dr. Gabr DD Consultant	On-going and a letter is sent to the consultant to follow this instructions
8	Surveying works report	The surveying works report which submitted electronically in 21st January 2016 shall be updated, and Field investigation WG should submit the final comments to the consultant before 17th March 2016. Final report has to be submitted by the end of April 2016	Dr. Gabr DD Consultant	On-going, and a letter is sent to the consultant including the comments of the report
9	Temporary Land acquisition	legal agreement with the land owner to agree with the rent price, and the availability of land starting from January 2018 with no restrictions since official procedures will not start before January 2017	Dr. Gabr Eng. Abd El-Rehiem	Pending till Environment WG complete the comparison between the three alternatives before April 11th

10	The two illegal mosques (Youssefy Mosque on the left bank of Bahr Youssef, and Irrigation district Mosque	The Environment, and land acquisition WG, should coordinate with the consultant to plan the access roads to the new DGR site during construction in order to identify the need for demolishing the second mosque along Bahr Youssef, and following up with Awkaf concerning the 2nd Mosque, and with Irrigation sector	Dr. Gabr Eng. Abd El-Rehiem	Atyaf WG, and Environment WG should follow the procedures, and present on 11th April
11	Hydraulic Design of the new DGR	The consultant has to submit the drawings, and cross sections of the hydraulic design before 20th March 2016	DD Consultant	3view drawings were submitted on 17th March, and a layout is submitted on TAC meeting but an Auto Cad soft copy should be completed and signed
12	Seismic design of the new DGR	The seismic analysis is carried out from March 20th to 24th	DD Consultant Eng.Magdy	On-going
13	Draft monitoring plan of the water distribution improvement system	The consultant has to submit a justification for the change in the number of the monitoring locations	DD Consultant Dr.Hesham Elshazely	On-going
14		The consultant has to submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the using of SCADA		
15		The control monitoring house is recommended to be established in El-Minya, as there is a possibility of using the suggested extension building in the central directorate for water resources, and Irrigation of El-Minya. The construction of the extension building will be confirmed by the Central Directorate for Buildings, and Engineering affairs before raising the issue in the 2nd PIU meeting	Eng.Nabila	A letter, and explanatory note was raised to the head of RGBS

16		Adding the Head of Central directorate of water distribution, and the Head of Telemetry central directorate, and the General director of Telemetry to the WG	Eng.Nabila	Achieved

3. Discussion Record

3.1 The DD consultant presented the following issues: (DD consultant presentation attached 2)

- Final hydraulic design including the drawings submitted in the TAC meeting (attached3), and approval of JICA on 23rd March 2016 (attached4)
- DWG activities to discuss the stability analysis, and seismic analysis
- The final Geotechnical report
- The final topographic field survey
- Progress of the groundwater monitoring activities
- Justification of the draft proposal of the monitoring activities for water management system
- Future plan of the maintenance bridge, and roads at the site

3.2 Eng. Magdi El-Bendari presented the activities of the DWG namely (attached 5):

- Revision of the hydraulic design
- Hydraulic design of the diversion canals during construction for Ibrahimia, Bahr Youssef, and small regulators, and correction of the design discharges for the diversion canals
- The contents of the hydraulic design report, namely design of floors, aprons, piers, abutments, protection/seepage layers, riprap protection, stone pitching, empirical formula used in the design, percolation length, check of piping, scour length, design of the gates, hydraulic design of temporary bridges, banks protection, and during construction drawings, and after construction drawings
- D/D Consultant requested the reference data regarding the seismic analysis such as the latest zoning map and references for design to TAC, TAC asked to D/D consultant to obtain the latest version of the seismic zoning map from the NRIAG
- 3.3 Dr. Mohammed Gabr presented the activities of field investigations and cost estimate namely(attached6):
- Soil profile of the boreholes from Geotechnical investigation report
- Situation of the site installation yard and the need to study two new alternatives recommended by the consultant
- Situation of dealing with the two illegal mosques buildings along Bahr Youssef which obstruct the construction of new DGR, and stated that the Multiple Committee (Atyaf) for dealing with the obstructions of new DGR is still waiting for the reply of Awkaf central directorate in Assiut.
- The multiple committee (Atyaf) is also still waiting for the reply of the Irrigation sector regarding the reconstruction of Dairout irrigation district building and the nearby mosque.
- the monitoring results of the installed piezometers in the project area

3.4 Eng. Yasser presented the status of the Physical Hydraulic Model, namely:

- The physical model study will be extended till the end of mathematical model to 31st July 2016.
- The WG agreed to construct one flume for one vent for Bahr Youssef in the new DGR model to check

the protection length, and size D.S., and the procedures are taken to assign the task to HRI, and start the activity as soon as possible

- The Mathematical model explanation report revision has finished, and it will be sent also to HRI representative

3.5 Dr. Hesham Elshazely comments on the justification for the draft monitoring plan of the water distribution system submitted by the consultant as follows,

- The draft monitoring plan submitted by the consultant included only 35 locations (attached 7),
- The consultant has not presented a justification for using SCADA system
- The verification of the command areas of the branch canals has finished
- The DD consultant has to finish the inspection of the branch canal intakes` gates before deciding the installation of gate positioning

4. Decisions in the 13th TAC meeting.

No	Issue	Decisions	Responsibility
1	Dimensions of gates **for large regulators**	TAC, and JICA consultant agreed on the hydraulic design and vent dimensions i.e. 6m width for vents, and selected 4 vents*6m for both Bahr Youssef, and Ibrahimia, and the consultant has to finalize the Auto Cad drawings, and sign to be submitted to HRI before April 1st 2016	DD Consultant
2	Hydraulic design of the small regulators	TAC, and JICA consultant agreed on design alternative (1C), and and the consultant has to finalize the Auto Cad drawings, and sign to be submitted to HRI **before April 1st 2016**	DD Consultant
3	Type of hoist	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.	DD Consultant, and Design WG must finalize in next stage
4	Geotechnical investigation	The consultant should submit the draft geotechnical report before 1st April 2016. The Field investigation WG should submit the final comments **to the consultant before 11th April 2016, the final report should be submitted by the end of April 2016**	Dr. Mohammed Gabr DD Consultant
5	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI before 31st March 2016	Eng.Nabila (follow up the letter raised to the head of RGBS)

6		The confirmation of the hydraulic design of DGR including vent widths, and numbers must be submitted to HRI before 1st April 2016	Eng. Yasser DD Consultant
7	Mathematical Model	The Physical and Mathematical model WG has to submit the Mathematical model description report to HRI representative before 31st March 2016 and the comments of the report must be submitted to the consultant before 4th April 2016. The DD consultant shall update the report, and present it in the next TAC meeting on 11th April 2016	Eng. Yasser DD Consultant
8	Piezometer observations by ECRI	The consultant should coordinate with ECRI to include the existing wells in the project area in the monitoring activities of the 13 piezometers as agreed in the Inception report, and finalize the report	Eng. Abd. El-Reheem Dr. Mohammed Gabr DD Consultant
9	Surveying works report	The surveying works report which submitted on 7th March 2016, shall be updated, and should be submitted before the end of April 2016	Dr. Mohammed Gabr DD Consultant
10	Temporary Land acquisition	The Environment, and land acquisition, and Atyaf WGs shall carry out SWOT analysis for the three alternatives of site installation yard, and the DD consultant has to confirm the required area for site installation yard before April 1st 2016	DD consultant Dr. Mohammed Gabr Eng. Abd El-Rehiem
11	The two illegal mosques	The Environment, and land acquisition, and Atyaf WGs, should coordinate with Awkaf central directorate in Assiut concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and also get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before before11th April 2016	Dr. Mohammed Gabr Eng. Abd El-Rehiem
12	Hydraulic Design of the new DGR	The consultant has to update the hydraulic design report based on the above mentioned comments before 11th April 2016, and the final one will be in July 2016	DD Consultant
13	Seismic design of the new DGR	The consultant has to carry out the seismic analysis based on the following considerations: • Egyptian code, and international procedures for seismic analysis	Eng. Magdy El-Bendary DD Consultant

		• Latest official earthquakes map zone for Egypt from National Research Institute for astronomical, and geophysical studies • Seismic calculation sheet carried out for Monshat El-Dahab regulator • The five international references for seismic analysis delivered by CRI and submitted to the consultant	
14	Draft monitoring plan of the water distribution improvement system	The consultant has to finish the inspection of the branch canals intakes and submit a status report before April11th, 2016	Dr. Hesham Elshazely DD consultant
15		The consultant has to submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the using of SCADA before April11th, 2016	
16	Coordination of the WG activities	Each WG has to prepare a report of the activities carried out within the WG from 20th July 2015 till March 31st and to make sure that all documents , signed from the consultant, and to be presented (p.p.t) on the next TAC meeting	1. Field work WG(Geotechnical , and Survey) WGs 2. Atyaf WG 3. Environment WG (Groundwater, land acquisition, illegal mosques, compensations) 4. Design WG 5. Physical and math. model WG 6. Contract, and cost estimate WG 7. Water management WG (water distribution system, Telemetry, and SCADA)
17	Future plan of the maintenance bridge, and road network at the DGR site	• The consultant has to submit traffic survey for the DGR, and consider the existing bridge US DGR, design a railway level crossing between the maintenance road, and the railway, and study connecting the maintenance road with the old DGR bridge by a road parallel to Ibrahimia lock • The Design and Environment WG have to hold a coordination meeting with the railway	Eng. Magdy El-Bendary Eng. Abd El-Reheem DD Consultant

		authority in Assiut concerning the designed railway level crossing for its approval	
18	Location of borrow sites	• DD consultant has to finalize the tests required to identify the suitability of the quarries materials and submit it to TAC before April11th, 2016 • The Environment WG has to identify the necessary procedures required from MWRI side for getting approvals, and permits from the localities in Assiut before April11th, 2016	Dr. M. Gabr Eng. Abd El-Reheem DD Consultant
19	The landscaping of expected area gained in Ibrahimia, and Bahr Youssef waterways due to the embankments to the left of new Bahr Youssef regulator, and to the right of new Ibrahimia regulator	• Design, and Environment WG has to coordinate with the DD consultant to prepare the necessary landscape design • The Environment WG has to discuss with the irrigation directorate in East Minya how to use the gained areas after construction	Eng. Magdy El-Bendary Eng. Abd El-Reheem DD Consultant

4. Closing remarks: The head of TAC thanked the attendant of the meeting for their valuable contribution and closed the meeting at 12:30

5. Next meeting: The next meeting will be held at 9:30 a.m. on Monday, April11th,2016 on MWRI building 1st floor

Eng. Nabila Bahaa El-Dien
Head TAC, CDSD, and CDSD
Reservoirs and Grand Barrages Sector
(RGBS)

28 3 2016

Eng. Tomiji Shimoji
Team Leader / D/D Consultant

C.C. Head of RGBS
C.C. TAC Members

Meeting Memo (14th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	11th April 2016 (Mon.) / 9:30～13:30
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	MWRI: Dr. K.Tobar, Yasser, Magdy, Refaat, Amal, Hesham Elshazely , Mahmoud Rafee, .Mohamed Gabr, Abd El-Azim Ali, M.Abd-Elaleem, Abd El-Rehiem, Mahmoud Nagi, Ahmad Anwar, Hani Mostafa, M.Hagras **Consultant**: Engs, Shimoji, Toku, Kuromi, Kawabe, Kadowaki, Iida, Arakawa, Kita, William, Mariam and El Hussein **JICA**: Hajime Yamazaki, Representative of JICA Cairo office

1. Dr. Khaled Tobar, the Resident Engineer of DGR project, headed the TAC on behalf of Eng Nabila Bahha El-Dien, who is engaged in a promotion training course. Dr. Khaled welcomed all the participants from the TAC members (Attach.1), and stated the TAC meeting Agenda starting by the follow up of the 13th TAC meeting.

2. Follow up of the 13th TAC meeting

No	Issue	Decisions	Responsibility	status
1	Dimensions of gates (large scale regulators)	TAC and D/D consultant agreed on the hydraulic design and vent dimensions i.e. 6m width for vents, and selected 4 vents*6m for both Bahr Youssef and Ibrahimia, and the consultant has to finalize the Auto Cad drawings, and sign to be submitted to HRI before April 1st 2016	D/D Consultant	Ongoing, because of road width is to be agreed upon. During this TAC meeting this issue will be settled then followed by a meeting within DWG to identify the details of piers, and aprons, hence these issues to be completed by 12th April 2016
2	Hydraulic design of the small regulators	TAC and D/D consultant agreed on design alternative (1C), and the D/D consultant has to finalize the Auto Cad drawings, and sign to be submitted to HRI before April 1st 2016	D/D Consultant	
3	Type of hoist	Both sides agree upon type of hoist for small regulators are the motor with shafts. The number of hoisting rods should be discussed in the next stage.	D/D Consultant, and Design WG	Ongoing and a meeting within DWG and engineers from maintenance directorate will be held to agree on the number of shafts.

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4	Geotechnical investigation	The consultant should submit the final geotechnical report before the end of April 2016. The Field investigation WG should submit the final comments against the progress report which was done for Dr. Mohamed Gabr on 27th March 2016, to the consultant before 31st March 2016	Dr. Mohammed Gabr D/D Consultant	Ongoing, and the draft report will be submitted by the end of April 2016
5	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI before 31st March 2016	Eng. Nabila (follow up the letter raised to the head of RGBS)	The issue is raised to the head of ID
6	Physical model	The confirmation of the hydraulic design of NDGRs including vent widths, and numbers must be submitted to HRI before 1st April 2016	Eng. Yasser D/D Consultant	Consultant submitted the signed drawings on 28th March 2016.
7	Mathematical model analysis	The Physical and Mathematical model WG will submit the mathematical model description report to HRI representative before 31st March 2016 and the comments of the report should be submitted to the consultant before 4th April 2016. The D/D consultant shall update the report, and present it in the next TAC meeting on 11th April 2016.	Eng. Yasser D/D Consultant	Consultant submitted the draft report on 20th March 2016, and waiting for the comments. Ongoing and a meeting will be held on 13 April at HRI for clarifications by the consultant
8	Piezometer observations by ECRI	D/D consultant should coordinate with ECRI to include the existing wells in the project area in the monitoring activities of the 13 piezometers as agreed in the Inception report, and finalize the report.	Eng. Abd. El-Reheem Dr. Mohammed Gabr D/D Consultant	A monitoring results report will be submitted end of April 2016
9	Topographic	The surveying works report which	Dr. Mohammed	Ongoing and the

	surveying works report	submitted on 7th March 2016, shall be updated, and finalized before the end of April 2016 after receiving the comments from RGBS.	Gabr D/D Consultant	final report at the end of April
10	Temporary yard acquisition	The Environment and land acquisition, and Atyaf WGs shall carry out SWOT analysis for the three alternatives of site installation yard, and the D/D consultant will confirm the required area for temporary yard before April 1st 2016.	D/D consultant Dr. Mohammed Gabr Eng. Abd El-Rehiem	The required area is 14500 m^2. The SWOT analysis is on going
11	The two illegal mosques	The Environment and land acquisition, and Atyaf WGs, should coordinate with Awkaf central directorate in Assiut concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and also get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before before11th April 2016.	Dr. Mohammed Gabr Eng. Abd El-Rehiem	A letter is to be sent from Awqaf Dairout to the Awqaf directorate in Assiut with no objection.
12	Hydraulic Design of the new DGR	D/D consultant will update the hydraulic design report based on the above mentioned comments before 11th April 2016, and the final one will be in July 2016	DD Consultant	The hydraulic design report will be submitted in the end of May 2016
13	Seismic design of the new DGR	The consultant will carry out the seismic analysis based on the following considerations: • Egyptian code, and international procedures for seismic analysis • Latest authorized earthquakes zoning map for Egypt from National Research Institute for astronomical, and geophysical studies Seismic calculation sheet carried out for Monshat El-Dahab	Eng. Magdy El-Bendary DD Consultant	The zoning map will be received from NRIAG by 12 April.

		regulator (if available)Five international references for seismic analysis delivered by CRI and submitted to the consultant		
14	Draft monitoring plan of the water distribution improvement system	D/D consultant will finish the inspection of the branch canals intakes and submit a status report	Dr. Hesham Elshazely DD consultant	Inspection report will be submitted by the end of this week
15		D/D consultant will submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the using of SCADA before 11th April 2016.		A meeting will be held with the CD of Telemetry next week
16	Coordination of the WG activities	Each WG will prepare a report of the activities carried out within the WG from 20th July 2015 till March 31st 2016 and to make sure that all documents, signed from the consultant, and to be presented (p.p.t) on the next TAC meeting.	1. Field survey work WG 2. Geotechnical WG 3. Environment WG (Groundwater, land acquisition, illegal mosques, compensations) 4. Design WG 5. Physical and math. model WG 6. Contract, and cost estimate WG Water management WG (water distribution system, Telemetry, and SCADA	The reports are not yet finalized but a presentation from Eng. Magdy, Dr. Hesham, and Eng. Abd El-Reheem were presented. Reports to be submitted before 19 April.
17	Future plan of the maintenance bridge, and road network at the DGR site	• D/D consultant has already completed the traffic study for DGR area in 2010 considering the existing bridge US DGRs • D/D consultant will design a railway level crossing between the maintenance road and the railway and study connecting	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant	Ongoing and the road width will be identified in this TAC meeting and the traffic survey data will be gone through analysis so that

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		the maintenance road with the existing DGRs bridge by a road parallel to Ibrahimia lock • The Design and Environment WG have to hold a coordination meeting with the railway authority in Assiut concerning the designed railway level crossing for its approval		recommendation for bridge width and capacity can be derived.
18	Location of borrow sites	• D/D consultant will get the comment about the suitability of the quarries materials from CRI • The Environment WG will identify the necessary procedures required from MWRI side for getting approvals, and permits from the localities in Assiut	Dr. M. Gabr Eng. Abd El-Reheem D/D Consultant	Preliminary tests were carried out at CRI, and another sample will be taken for detailed analysis in June 2016.
19	The landscape of expected area gained in Ibrahimia, and Bahr Youssef waterways due to the embankments to the left of new Bahr Youssef regulator, and to the right of new Ibrahimia regulator	• Design and Environment WG will coordinate with the D/D consultant to prepare the landscape design after construction • The Environment WG will discuss with the irrigation directorate in East Minya how to use the gained areas after construction	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant	Preliminary landscape map drawing was submitted in the 14th TAC meeting

3. Discussion Record

3.1 Eng. Abd El-Reheem presented activities of Environmental WG (attached 2) including

- Follow up of goundwater monitoring activity going on in Dairout city
- coordination meetings with the railway authority in Dirout, the local administration,and Awkaf directorate in Assiut to get their agreement on the alternative area of Youssefy mosque
- Introduction of new possible installation yard in the cotton gin on Bahr Youssef about 700m downstream the construction site
- selecting the six site installation yards alternatives, and carrying out the comparison between them

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3.2 Eng. Magdy El-Bendari presented the activities of the DWG namely (attached 3):

- Setting the NDGR new axis, 140m downstream the old Dairout Group of Regulators.
- Agreement on using the Egyptian code of practice as a priority 1 in design then the Japanese codes then international codes.
- Agreement on the design principals for the NDGR from both the hydraulic and structural points of view.
- Agreement on the number and width of vents for each regulator included in the NDGR.
- Agreement on the gate lifting systems for each regulator included in the NDGR.
- Revision of the hydraulic design
- Temporary works, and Diversion canals for both (Ibrahimia & Bahr Yousif) regulators

3.3 Dr. Mohammed Gabr presented the activities of field investigations and cost estimate WGs namely:

- Geotechnical, and survey reports will be submitted by the end of April
- The contact with Awkaf directorate in Assiut to get their agreement on the alternative area of Youssefy mosque
- The current activities of the Contracts, and cost estimate WG
- Situation of the temporary yard and the need to compare between the available alternatives, to get an area of 14500m^2 as recommended by the consultant

3.4 Eng. Yasser presented the status of the Physical Hydraulic Model, namely:

- The physical, and Mathematical model WG could not deliver the detailed drawings of the hydraulic design NDGRs because the width of the maintenance bridge, lengths of the piers, lengths of aprons for both the large regulators, and the small regulators were not finalized between the DWG and the consultant.
- The WG is still waiting the approval of the head of ID to start the negotiation of HRI to construct one flume for one vent for Bahr Youssef in the new DGR model to check the protection length, and size D.S., and the procedures are taken to assign the task to HRI, and start the activity as soon as possible
- The revision of Q3D mathematical model analysis explanation report has finished, and a meeting will be held at HRI to discuss the comments with the consultant. Knowing that the consultant has submitted a new progress report of the mathematical Q3D model.

3.5 Dr. Hesham Elshazely presented the activities of WMWG since August 2015 (attach 4) including:

- Site visits from 4th to 10th August to inspect 3main regulators, and 6 branch canals
- Coordination meetings from 22nd February to 5th March to discuss with the central directorates of water distribution, and Telemetry, water distribution directorate in upper Egypt, and the general directorates of irrigation in East Minya, west Minya, and Bani Suef to revise the monitoring plan submitted by the consultant, which included only 41 locations. This mission included also the inspection of two branch canal intakes
- The consultant has not presented a justification report for using SCADA system in order to be discussed with the Central directorate of Telemetry
- The verification of the command areas of the branch canals has finished
- The DD consultant has to finish the inspection of the branch canal intakes gates before deciding the

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location of monitoring sensors

3.6 The D/D consultant presented the following issues: (attached 5)

- Confirmation of the Basic Design Concept, and activities which includes hydraulic design (vent numbers, widths, length of Apron, thickness of Apron & safety for piping, etc.), and structural design concepts including (seismic analysis, expansion joints, and foundation design)
- Difference in Geotechnical setting between existing & new regulator's axis.
- Justification of the WM locations
- Progress of the Mathematical model analysis.
- Future plan of the maintenance bridge, and traffic survey
- Land use plan of the gaining areas from embankments in the canals

4. Decisions in the 14th TAC meeting.

No	Issue	Decisions	Responsibility
1	Dimensions of large scale and small regulators	DWG and D/D consultant has to finalize the basic dimension drawing of all regulators resulted from the hydraulic design including pier lengths, length of aprons will be decided in WG meeting held after 14th TAC meeting. To be submitted to HRI on 13/4/2016.	Eng. Magdi, D/D Consultant Eng Yasser
2	Shaft(s) for small gates	The number of hoisting rods (shafts)/gate is to be discussed jointly with Maintenance and/or Projects directorates to come to a conclusion.	Eng. Magdi,
3	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI ASAP	Eng. Nabila (follow up the letter raised to the head of RGBS)
4	Mathematical model analysis	The Physical and Mathematical model WG will: 1- Utilise all group members 2- Look for outsourcing the group with suitable math. Model reviewer 3- Hold a meeting with consultant, HRI for clarifications of the consultant's reports	Eng. Yasser Eng. Nabila
5	Geotechnical investigation	The consultant should submit the final geotechnical report before the end of April 2016.	Dr. Mohammed Gabr D/D Consultant
6	Topographic surveying works report	The surveying works report which submitted on 7th March 2016, shall be updated, and finalized before the end of April 2016 based on the sent comments from RGBS.	Dr. Mohammed Gabr D/D Consultant
7	Piezometer observations by	D/D consultant to submit the first monitoring report including the existing wells in the project	Eng. Abd. El-Reheem Dr. Mohammed Gabr

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	ECRI	area before the end of April 2016	D/D Consultant
8	Temporary Land acquisition	• The Environment and land acquisition, and Atyaf WGs shall carry out the comparison among the six alternatives of site installation yard, before 21st April 2016. • Communications to be done to inspire the renting conditions of the cotton gin.	D/D consultant Dr. K. Toubar Dr. Mohammed Gabr Eng. Abd El-Rehiem
9	The two illegal mosques	The Environment and land acquisition, and Atyaf WGs, should: 1- coordinate with Awkaf central directorate in Assiut concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and 2- get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before 22nd April 2016.	Dr. Mohammed Gabr Eng. Abd El-Rehiem
10	Hydraulic Design of the new DGR	D/D consultant will update the hydraulic design report based on the comments raised in the 13th TAC meeting and the final report has to be submitted at the end of May 2016	DD Consultant
11	Seismic design of the new DGR	The consultant will carry out the seismic analysis based on the following considerations: • Egyptian code is the 1st priority to be applied for seismic analysis, and then Japanese code will be applied in the case there is no description in Egyptian Code, and then the International Code • Latest authorized earthquakes zoning map for Egypt from National Research Institute for astronomical, and geophysical studies • Seismic calculation sheet carried out for Monshat El-Dahab regulator (if available)	Eng. Magdy El-Bendary DD Consultant
12	Draft monitoring plan of the water distribution improvement system	D/D consultant will finish the inspection of the branch canals intakes and submit a status report before 14th April 2016	Dr. Hesham Elshazely DD consultant
13		D/D consultant will submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the	

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		using of SCADA before 14th April 2016	
14		D/D consultant requested to hold the WG meeting with Water Distribution and Telemetry Department about the reselection of monitoring sites and the installation systems after the submission of the inspection report which clarifies current intake gate conditions.	
15	Width of bridges over the NDGR	The TAC agreed that: 1- the bridge width over Ibrahimia, Bahr Youssef as well as the Dairoutiah & Badrman regulators will be 12.5m in total (10m road way + 2 sidewalks * 1.0m + 2 handrails * 0.25m). 2- For the other small regulators, the width of maintenance bridge to be 6.5m in total (6m road way + 2 handrails * 0.25m) 3- Possible limited changes of road widths after presentation before the PIU are controllable in design or the hydraulic model.	D/D Consultant
16	Future plan of the bridge, and road network at the DGR site	The DD consultant will upgrade the traffic survey data collected in the F/S phase to a traffic study by carrying out analysis and deriving recommendations. TAC will depend on this study among others to present before PIU and get approval.	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant
17	Location of borrow sites	• D/D consultant will carry out detailed material analysis of the suitability of the quarries materials at CRI • The Environment WG will identify the necessary procedures required from MWRI side for getting approvals, and permits from the localities in Minya	Dr. M. Gabr Eng. Abd El-Reheem D/D Consultant
18	The landscape of expected area gained in Ibrahimia, and Bahr Youssef waterways	Design and Environment WGs will coordinate with the D/D consultant to enhance the landscape layout delivered by the consultant to ensure smooth water flow at the entrances and outlets of the NDGRs. Final landscape in B/D stage that will affect the physical model shall reach HRI before next TAC meeting, as a maximum, to avoid any delay due to this.	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant

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19	Structure and name of members for each Working Group	D/D consultant requested the structure and the name of members for each working group, and it will be delivered to the consultant before the next TAC meeting.	Eng Nabila Bahaa

4. Closing remarks: The head of TAC thanked the attendant of the meeting for their valuable contribution and closed the meeting at 01:30 pm
5. Next meeting: The next meeting will be held at 9:30 a.m. on Tuesday, April 26th,2016 on MWRI building 1st floor

For

Eng. Nabila Bahaa El-Dien

Khw 4/4/16

Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Meeting Memo (15th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	26th April 2016 (Tue.) / 9:30~13:30
Place	Conference Room in the Ministry of Water Resources and Irrigation (MWRI) Building (1st Floor)
Attendance	MWRI: Eng. Nabila, Dr. K.Tobar, Eng. Yasser, Eng.Magdy, Eng.Refaat, Eng.Amal, Eng. Sayed Shalaby, Dr.Hesham Elshazely , Eng.Mahmoud Rafee, Dr.Mohamed Gabr, Dr.Abd El-Azim Ali, Eng. Abd El-Rehiem, Eng. Mahmoud Nagi, Dr. Ahmad Anwar, Eng. Hani Mostafa **Consultant:** Engs, Kawabe, Iida, Arakawa, Murase, William, Mariam and El Hussein

1. Eng.Nabila Bahaa, the head of TAC welcomed all the participants from the TAC members (Attach.1), and stated the TAC meeting Agenda (Attach.2) and highlighted the main issues to be discussed according to the Agenda and starting by the follow up of the 14th TAC meeting decisions.

2. Follow up of the 14th TAC meeting

No	Issue	Decisions	Responsibility	Status
1	Dimensions of large scale and small regulators	DWG and D/D consultant has to finalize the basic dimension drawing of all regulators resulted from the hydraulic design including pier lengths, length of aprons will be decided in WG meeting held after 14th TAC meeting. To be submitted to HRI on 13/4/2016.	Eng. Magdi, D/D Consultant Eng Yasser	The drawings are submitted to HRI on 17th April 2016, and a detailed layout, and Landscape are still needed
2	Shaft(s) for small gates	The number of hoisting rods (shafts)/gate is to be discussed jointly with Maintenance and/or Projects directorates to come to a conclusion.	Eng. Magdi,	Achieved, and agreed that an actuator motor with two rods will be installed for vents≥2m
3	Physical model	The constructing of flume within the physical hydraulic model of new DGR to test the protection length and riprap D.S., should be finalized with HRI ASAP	Eng. Nabila (follow up the letter raised to the head of RGBS)	Finalized, and a request for financial, and technical proposal from HRI is ongoing
4	Mathematical model analysis	The Physical and Mathematical model WG will:	Eng. Yasser Eng. Nabila	finalized

		1- Utilise all group members 2- Look for outsourcing the group with suitable math. Model reviewer 3- Hold a meeting with consultant, HRI for clarifications of the consultant's reports		
5	Geotechnical investigation	The consultant should submit the final geotechnical report before the end of April 2016.	Dr. Mohammed Gabr D/D Consultant	Draft ver.0 was submitted on 22nd April 2016
6	Topographic surveying works report	The surveying works report which submitted on 7th March 2016, shall be updated, and finalized before the end of April 2016 based on the sent comments from RGBS.	Dr. Mohammed Gabr D/D Consultant	Draft ver.0 was submitted on 22nd April 2016
7	Piezometer observations by ECRI	D/D consultant to submit the first monitoring report including the existing wells in the project area before the end of April 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr D/D Consultant	GW monitoring report was submitted in draft ver0 of the Field survey report on 22nd April 2016
8	Temporary Land acquisition	• The Environment and land acquisition, and Atyaf WGs shall carry out the comparison among the six alternatives of site installation yard, before 21st April 2016. • Communications to be done to inspire the renting conditions of the cotton gin.	D/D consultant Dr. K. Toubar Dr. Gabr Eng. Abd El-Rehiem	Ongoing
9	The two illegal mosques	The Environment and land acquisition, and Atyaf WGs, should: 1- coordinate with Awkaf central directorate in Assiut concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and 2- get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before 22nd April 2016.	Dr. Mohammed Gabr Eng. Abd El-Rehiem	Ongoing, and Explanatory not was raised to the undersecretary of Awkaf in Assiut

10	Hydraulic Design of the new DGR	D/D consultant will update the hydraulic design report based on the comments raised in the 13th TAC meeting and the final report has to be submitted at the end of May 2016	DD Consultant	ongoing
11	Seismic design of the new DGR	The consultant will carry out the seismic analysis based on the following considerations: • Egyptian code is the 1st priority to be applied for seismic analysis, and then Japanese code will be applied in the case there is no description in Egyptian Code, and then the International Code • Latest authorized earthquakes zoning map for Egypt from National Research Institute for astronomical, and geophysical studies • Seismic calculation sheet carried out for Monshat El-Dahab regulator (if available)	Eng. Magdy El-Bendary DD Consultant	Zoning map was submitted from NRIAG
12	Draft monitoring plan of the water distribution improvement system	D/D consultant will finish the inspection of the branch canals intakes and submit a status report before 14th April 2016	Dr. Hesham Elshazely DD consultant	Pending
13		D/D consultant will submit an explanatory report regarding using SCADA in the monitoring house with a comparison between using telemetry calling modem with sufficient software, and the using of SCADA before 14th April 2016		Explanatory presentation was presented
14		D/D consultant requested to hold the WG meeting with Water Distribution and Telemetry Department about the reselection of monitoring sites and the installation systems after the submission of the inspection report which clarifies current intake gate conditions.		Meeting with Telemetry on 17th, and with WD central directorates and Telemetry on 21st April 2016
15	Width of bridges over the NDGR	The TAC agreed that: 1- the bridge width over Ibrahimia, Bahr Youssef as well as the Dairoutiah & Badrman regulators will be 12.5m in total (10m road way + 2 sidewalks * 1.0m + 2 handrails * 0.25m). 2- For the other small regulators, the width of maintenance bridge to be 6.5m in total	D/D Consultant	achieved

		(6m road way + 2 handrails * 0.25m) 3- Possible limited changes of road widths after presentation before the PIU are controllable in design or the hydraulic model.		
16	Future plan of the bridge, and road network at the DGR site	The DD consultant will upgrade the traffic survey data collected in the F/S phase to a traffic study by carrying out analysis and deriving recommendations. TAC will depend on this study among others to present before PIU and get approval.	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant	The consultant will update the traffic survey before the DD stage
17	Location of borrow sites	• D/D consultant will carry out detailed material analysis of the suitability of the quarries materials at CRI • The Environment WG will identify the necessary procedures required from MWRI side for getting approvals, and permits from the localities in Minya	Dr. M. Gabr D/D Consultant Eng. Abd El-Reheem	On going
18	The landscape of expected area gained in Ibrahimia, and Bahr Youssef waterways	Design and Environment WGs will coordinate with the D/D consultant to enhance the landscape layout delivered by the consultant to ensure smooth water flow at the entrances and outlets of the NDGRs. Final landscape in B/D stage that will affect the physical model shall reach HRI before next TAC meeting, as a maximum, to avoid any delay due to this.	Eng. Magdy El-Bendary Eng. Abd El-Reheem D/D Consultant	Ongoing and final landscape considering the inlets and outlets of the regulators will be submitted within two week
19	Structure and name of members for each Working Group	D/D consultant requested the structure and the name of members for each working group, and it will be delivered to the consultant before the next TAC meeting.	Eng Nabila Bahaa	Ongoing

3. Discussion Record

3.1 Dr. Mohammed Gabr presented the activities of field investigations and cost estimate WGs namely:

- Main findings of the draft ver.0 of Geotechnical, and survey reports
- The contact with Awkaf directorate in Assiut to get their agreement on the alternative area of Youssefy mosque
- The current activities of the Contracts, and cost estimate WG
- Situation of the temporary yard and the need to compare between the available alternatives, to get an

area of 14500m^2 as recommended by the consultant, and a letter is sent to the chairman of cotton company regarding the possibility of an installation yard in the cotton gin on Bahr Youssef about 400m downstream the construction site

3.2 Eng. Abd El-Reheem presented activities of Environmental WG including

- Main findings of groundwater monitoring report within draft ver.0 of Field survey report
- An explanatory note concerning Youssefy mosque was raised to the Head of Awkaf central directorate in Assiut and preliminary No objection is achieved
- Comparison between the four alternatives of site installation yards alternatives, is ongoing
- The need to send a letter to the Head of Dirout Municipality District regarding the crossing of the maintenance bridge and the road over NDGRs with the railway in Dirout
- The need to get lists of the accredited quarries in El-Minya by sending a letter to Minya Municipality Authorities

3.3 Eng. Magdy El-Bendari presented the activities of the DWG namely:

- Setting the NDGR new axis, 140m downstream the old Dairout Group of Regulators.
- Agreement on using the Egyptian code of practice as a priority 1 in design then the Japanese codes then international codes.
- Agreement on the design principals for the NDGR from both the hydraulic and structural points of view.
- Agreement on the number and width of vents for each regulator included in the NDGR.
- Agreement on the gate lifting systems (hoists) for each regulator included in the NDGR.
- Revision of the hydraulic design
- Temporary works, and Diversion canals for both (Ibrahimia & Bahr Yousif) regulators
- Seismic action and analysis criteria of NDGR
- Gained area and landscape of the area around NDGRs
- Main findings of Geotechnical report, and study the necessity for deep foundation
- Design of piers, and aprons
- Design of temporary works, and diversion channels

3.4 Eng. Yasser presented the status of the Physical Hydraulic Model, namely:

- The physical, and Mathematical model WG delivered the detailed drawings of the hydraulic design NDGRs to HRI on 17th April 2016, but a detailed layout with coordinates of NDGRs and finalized landscape have to be delivered.
- The revision of Q3D mathematical model analysis explanation report has finished, and a meeting was held at HRI to discuss the comments with the consultant`s new progress report of the mathematical Q3D model but the calibration report has to be submitted from the DD consultant in the end of April.
- Regarding the Mathematical model study, the WG requested to the DD consultant to include the diversion channels and temporary construction works. The DD consultant explained following two points, but the head of TAC requested to the DD consultant for importance of the study in this case (during construction)..
- 1) It is enough to make clear the hydraulic situation by the non-uniform flow calculation.
- 2) The DD consultant has no right to adopt the additional TOR on the JICA study without

- approval by JICA H/Q.
- The hydraulic data of water levels, and discharges for the years 2009 to 2015 including daily discharges data of DGRs have to be submitted to the DD consultant in order to be analyzed to get maximum, minimum, and dominant discharges required by HRI for the physical hydraulic model, and for the DD consultant for the Mathematical model

3.5 Dr. Hesham Elshazely presented the activities of WMWG during the current mission of the WM specialists from the DD consultant:

- Holding two meetings with WMWG in the attendance of the Head of Telemetry CD on 21st April, and the head of WDCD to discuss the following topics issues:
  - ☒ All attendance had mutual understanding that the SCADA software is flexible and low cost system, and this SCADA system has compatible software with current system formulated by Telemetry CD.
  - ☒ The final list of monitoring locations after considering the defected gates
  - ☒ The need to urgent maintenance of the defected gates of the branch canals intakes
  - ☒ The need to receive a detailed site, and branch canals gates inspection report including US, and DS marbles status
  - ☒ ***Data flow diagram (Flow chart of data flow) to show how are the sites connected with the central control house***

3.6 The D/D consultant presented the following issues: (attached 3)

- Proposed monitoring system of water management
- Mathematical Model status
- Activities of the Environmental specialist within the DD consultant

4. Decisions in the 15th TAC meeting.

No	Issue	Decisions	Responsibility
1	Final hydraulic drawings of large scale and small regulators	The final layout of the NDGRs with the coordinates has to be submitted from the DD consultant on 27th April 2016, and hence to HRI via Physical, and Mathematical WG	Eng. Magdi, D/D Consultant Eng Yasser
2	Shaft(s) for small gates	The number of hoisting rods (shafts) of actuator motor /gate two for each gate width equal to or greater than 2m	Eng. Magdi,
3	Physical model	The physical, and mathematical WG has to get a technical, and financial proposal from HRI regarding constructing one vent flume in for Bahr Youssef regulator for negotiate HRI before 16th May 2016 to start implementation ASAP	**Eng. Yasser**
4		The hydraulic data of water levels, and discharges for the years 2009 to 2015 including daily discharges data of DGRs have to be submitted to the DD consultant in order to be analyzed to get	**Eng. Yasser** **DD consultant**

		maximum, minimum, and dominant discharges required by HRI for the physical hydraulic model, and for the DD consultant for the Mathematical model	
5	Mathematical model analysis	The DD consultant has to submit the calibration report before 30th April 2016	Eng. Yasser DD consultant
6	Mathematical model analysis	TAC requested to the DD consultant for modeling the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities, and the need for protection works	Eng. Yasser DD consultant
7	Geotechnical investigation report	The Design WG and geotechnical investigation and topographic survey WG have jointly to finalize scrutinizing, and submit the comments on the draft ver.0 report before the end of April 2016	Eng. Magdy Bendary Dr. Mohammed Gabr
8	Topographic surveying works report	The field works WG has to scrutinize the Topographic survey report ver.0 and send any comments before the end of April 2016	Dr. Mohammed Gabr
9	Piezometer observations by ECRI	The Environmental WG has to scrutinize the groundwater monitoring report within draft ver.0 of Field survey report before the end of April 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr
10	Survey of the Existing Conditions report	the Environmental WG has to scrutinize the survey of the Existing Conditions report within draft ver.0 of Field survey report before the end of April 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr
11	Survey of Construction Equipment and Materials	The Contracts and cost estimate WG has to scrutinize the Survey of Construction Equipment and Materials within draft ver.0 of Field survey report before the end of April 2016	Dr. Mohammed Gabr
12	Temporary Land acquisition	The Environment and land acquisition, and Atyaf WGs shall carry out the comparison among the four alternatives of site installation yard, before 10th May 2016. Communications to be done to inspire the renting conditions of the cotton gin.	DD consultant Dr. K. Toubar Dr. Mohammed Gabr Eng. Abd El-Rehiem
13	The two illegal mosques	The Environment and land acquisition, and Atyaf WGs, should: - Continue the coordination with Awkaf central	Dr. Mohammed Gabr Eng. Abd El-Rehiem

		directorate in Assiut, and Engineering affairs department in Cairo concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and prepare the design - get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before 10th May 2016.	
14	Contact with Dirout City Council for studying the road bridge crossing the railway at Dirout	Environmental WG has to prepare a draft letter to the Head of Dirout City Council regarding the crossing of the railway by road, then hand it to DWR for finalization in order to send the letters before 10th May 2016	Eng. Abd El-Rehiem Eng. Magdy
15	Future plan of the bridge, and road network at the DGR site	The DD consultant will upgrade the traffic survey data collected in the F/S phase to a traffic study by carrying out analysis and deriving recommendations. TAC will depend on this study among others to present before starting the DD stage	DD Consultant
16	Contact with Assiut,and Minya Municipalities regarding the accredited quarries	The Environmental WG has to get lists of the accredited quarries in El-Minya, and Assiut govenorates before 10th May 2016	Eng. Abd El-Rehiem
17	Location of borrow sites	D/D consultant will carry out material analysis of the suitability of the quarries materials at CRI The Environment WG will identify the necessary procedures required from MWRI side for getting approvals, and permit from the localities in Minya	Dr. Mohammed Gabr Eng. Abd El-Rehiem DD Consultant
18	Seismic design of the new DGR	The consultant will carry out the seismic analysis taking into account the considerations stated before in the previous TAC MEMOs	Eng. Magdy El-Bendary DD Consultant
19	Draft monitoring plan of the water distribution improvement system	D/D consultant will finish the inspection of the branch canals intakes and submit a status report before 30th April 2016	Dr. Hesham Elshazely DD consultant
20		TAC requested to DD consultant and WG for studying the possibility of remote control(not only	

		monitor) Bahr Youssef's four regulators from the control house through the proposed SCADA system before 16th May 2016	
21	The landscape of expected area gained in Ibrahimia, and Bahr Youssef waterways	Design and Environment WGs will coordinate with the D/D consultant to finalize the landscape layout delivered by the consultant to ensure smooth water flow at the entrances and outlets of the NDGRs before 30th April 2016	Eng. Magdy El-Bendary Eng. Abd El-Reheem DD Consultant
22	Structure and name of members for each Working Group	The Resident Engineer has to finalized the proposed restructuring of the WGs including the new structure and the name of members for each working group, in order to be delivered to the consultant	Dr. Khaled Tobar
23	The WG reports about the activities from July 2015 to March 2016	All the seven WGs under the TAC have to submit a comprehensive report about the WG activities from July 2015 to March 2016	Eng. Yassser Eng. Magdy Dr. M. Gabr Dr. Hesham Elshazely

4. Closing remarks: The head of TAC thanked the attendant of the meeting for their valuable contribution and closed the meeting at 01:30 pm
5. Next meeting: The next meeting will be held at 9:30 a.m. on Monday, May 16th,2016 on MWRI building 1st floor

Eng. Nabila Bahaa El-Dien

Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

for **Eng. Tomiji Shimoji**

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Meeting Memo (17th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	20th June 2016 (Mon.) / 10:00～12:45
Place	Water communication meeting's room (MWRI) Building (1st Floor)
Attendance	**MWRI**: Eng. Nabila, Dr. Khaled Tobar, Eng. Yasser, Eng.Magdy, Dr.Mohamed Gabr, Eng.Refaat, Eng.Amal Ahmed Aly, Dr.Hesham Elshazely , Eng. M. Abdelaliem, Eng. Ehab Elgohary, Eng. Sayed El-Shahat, Eng.Mahmoud Rafee, Dr.Abd El-Azim Ali, Dr. Ahmad Anwar, Eng. Hani Mostafa, Eng. Abdelreheem Ali, Dr. Ibrahim Ragab, Dr. Amira Abd El-Hady **Consultant**: Engs Tomiji SHIMOJI, Hitoshi TOKU, Kazuma AKIYOSHI, Futoshi KUROMI, Izumi KATO, Tomoyuki KAWABE, Shigeru OTSUKI, Masanobu KADOWAKI, Kazunori TAKASAKI, Fusataka ARAKAWA, Hajime KITA, William, Mariam and El Hussein **JICA**: Mr.Hajime Yamazaki, Dr. Ashraf El-Abd

1. Eng.Nabila Bahaa, the head of TAC welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives. Eng. Nabila stated the TAC meeting Agenda (Attach.2) and highlighted the main project events during the last two months , namely:
   - The meeting with the Governor of Assiut governorate on 31st May 2016 to settle some problems and obstacles facing the project implementation, and agree on issuing a decree to establish a committee headed by H.E. the Governor to deal with the obstacles facing the project
   - The CDSD sent the final RFP of the consultancy service for the construction supervision of NDGRs and a short list of the Japanese consultants to JICA for concurrence on 9th June 2016
   - The TAC received the version 0, and version 1 of the Field survey report from the DD consultant
   - The TAC received the version 0, and version 1 of the B/D report from the DD consultant
2. Eng. Nabila stated the main issues to be discussed in the WGs after the TAC meeting namely,
   - Mathematical modeling of the temporary works and diversion channels during construction
   - The need for extra two on-water boreholes in Bahr Youssef D.S the current NDGRs axis including flat dilatometer test
   - DD Consultant's opinion regarding the use of SCADA in remote controlling of Bahr Youssef four regulators
   - Hydraulic design of Abo Gbal, Delgawy, and Sahelia regulators and the apron levels which are higher than water levels in low demand period according to the water level records 1999-2015
   - Rough cost estimate for all the project components has to be submitted with the B/D report. It is very early to be done at this phase so, CEWG will just help DD consultant in case of any inquiries
3. Mr. Yamazaki stated that the JICA's concurrence regarding the RFP will be submitted next week

4. Follow up of the 14,15, and 16 TAC meetings:

No	Issue	Decisions	Responsibility	status
1	Final hydraulic drawings of large scale and small regulators	The final layout of the NDGRs with the coordinates has to be submitted from the DD consultant on 27th April 2016, and hence to HRI via Physical, and Mathematical WG	Eng. Magdi, D/D Consultant, Eng Yasser	Modified layout was prepared by the consultant and sent to HRI by Eng. Yasser on 23rd May 2016, and meetings were held on 5, 6, and 7June in HRI with the attendance of consultant`s representative and it was agreed that HRI will follow the benchmarks and Georeference points used by the consultant and implement the physical model of NDGRs according to the sent modified layout
2	Shaft(s) for small gates	The number of hoisting rods (shafts) of actuator motor /gate two for each gate width equal to or greater than 2m	Eng. Magdi,	Achieved
3-1	Physical model	The physical, and mathematical WG has to get a technical, and financial proposal from HRI regarding constructing one vent flume in for Bahr Youssef regulator for negotiate HRI before 16th May 2016 to start implementation ASAP	Eng. Yasser &HRI representative	The technical and financial offer was sent and the negotiation with HRI was carried out on13th June 2016 and it was agreed to implement the flume in six month`s study
3-2	Physical model	The hydraulic data of water levels, and discharges for the years 2009 to 2015 including daily discharges data of DGRs have to be submitted to the DD consultant in order to be analyzed to get maximum, minimum, and dominant discharges required by HRI for the physical hydraulic model, and for the DD consultant for the Mathematical model	Eng. Yasser DD consultant	The data of water levels and discharges 1999-2015 were sent to the DD consultant including DGRs and Ibrahimuia intake in Assiut
3-3	Physical model	The DD consultant has to submit the calibration report before 30th April 2016	Eng. Yasser DD consultant	The updated calibration report was sent and the comments were submitted to the consultant

4	Mathematical model analysis	TAC requested to the DD consultant for modeling the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities, and the need for protection works	Eng. Yasser DD consultant	It is discussed in the mathematical and physical model WG and the consultant agreed on modelling the diversion channels during construction
5	Geotechnical investigation report	The Design WG and geotechnical investigation and topographic survey WG have jointly to finalize scrutinizing, and submit the comments on the draft ver.0 report before the end of April 2016	Eng. Magdy Bendary Dr. Mohammed Gabr	The comments were sent to the consultant in an official letter on 9th June 2016, and the consultant replied on it on 15th June 2016
6	Topographic surveying works report	The field works WG has to scrutinize the Topographic survey report ver.0 and send any comments before the end of April 2016	Dr. Mohammed Gabr	The comments were sent to the consultant in an official letter on 9th June 2016, and the consultant replied on it on 15th June 2016
7	Piezometer observations by ECRI	The Environmental WG has to scrutinize the groundwater monitoring report within draft ver.0 of Field survey report before the end of April 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr	The comments were sent to the consultant in an official letter on 9th June 2016 including the unserveyed existing wells and hand pumps problem (only one hand pump is surveyed out of 20), and the consultant replied on it on 15th June 2016. This needs a check and official reply from EWG within 10days
8	Survey of the Existing Conditions report	the Environmental WG has to scrutinize the survey of the Existing Conditions report within draft ver.0 of Field survey report before the end of April 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr	The comments were sent to the consultant in an official letter on 9th June 2016, and the consultant replied on it on 15th June 2016

9	Survey of Construction Equipment and Materials	The Contracts and cost estimate WG has to scrutinize the Survey of Construction Equipment and Materials within draft ver.0 of Field survey report before the end of April 2016	Dr. Mohammed Gabr	The comments were sent to the consultant in an official letter on 9th June 2016, and the consultant replied on it on 15th June 2016
10	Temporary Land acquisition	The Environment and land acquisition, and Atyaf WGs shall carry out the comparison among the four alternatives of site installation yard, before 23rd May 2016. Communications to be done to inspire the renting conditions of the cotton gin.	DD consultant Dr. K. Toubar Dr. Mohammed, Gabr Eng. Abd El-Rehiem	The cotton company refused to rent the gin yard in an official letter dated 12th June 2016, and the comparison of the other three proposed sites were done and the best site of installation is located in the U.S. of Ibrahimia canal at agricultural road 2.6 Km south NDGRs (attach.3). EWG must visit the site and send comprehensive WG report within 10days.
11	The two illegal mosques	The Environment and land acquisition, and Atyaf WGs, should: - Continue the coordination with Awkaf central directorate in Assiut, and Engineering affairs department in Cairo concerning the Youssefy Mosque, to get its approval regarding the alternative location for reconstruction, and prepare the design -get the approval of the irrigation sector regarding the alternative building for Dirout district, and irrigation mosque before 10th May 2016.	Dr. Mohammed Gabr Eng. Abd El-Rehiem	Following Atyaf 3rd meeting on 9th May 2016, a contact with the engineering affairs directorate in Awkaf Assiut to inspect the youssefy, and confirm the area and the alternative site for the mosque`s reconstruction. Office meeting between EWG and Awqaf is needed within one week.

12	Contact with Dirout City Council for studying the road bridge crossing the railway at Dirout	Environmental WG has to prepare a draft letter to the Head of Dirout City Council regarding the crossing of the railway by road, then hand it to DWR for finalization in order to send the letters before 10th May 2016	Eng. Abd El-Rehiem Eng. Magdy	A letter from the city council was received stated that Dirout city needs the level crossing at the railway and coordination is needed with the railway authority, and with the committee which will be headed by the governor
13	Future plan of the bridge, and road network at the DGR site	The DD consultant will upgrade the traffic survey data collected in the F/S phase to a traffic study by carrying out analysis and deriving recommendations. TAC will depend on this study among others to present before starting the DD stage	DD Consultant	Updated of the traffic analysis was submitted from a traffic design specialist from Cairo university, and the results will be presented in this TAC meeting
14	Contact with Assiut,and Minya Municipalities regarding the accredited quarries	The Environmental WG has to get lists of the accredited quarries in El-Minya, and Assiut govenorates before 10th May 2016	Eng. Abd El-Rehiem	Two letters were sent to Minya and Assiut governorates and the list of accredited quarries in Assiut was submitted on 22nd May 2016. Following up is needed from EWG
15	Location of borrow sites	D/D consultant will carry out material analysis of the suitability of the quarries materials at CRI. The Environment WG will identify the necessary procedures required from MWRI side for getting approvals, and permit from the localities in Minya	Dr. Mohammed Gabr Eng. Abd El-Rehiem DD Consultant	The B/D report doesn't include the material test analysis carried out by CRI. The environmental WG sent an official letter to Minya governorate on 15th June 2016 regarding the available borrow pits

16	Seismic design of the new DGR	The consultant will carry out the seismic analysis taking into account the considerations stated before in the previous TAC MEMOs, and report is required before May 31st , 2016	Eng. Magdy El-Bendary DD Consultant	The draft report of seismic analysis is under preparation by CRI. Following up is needed from DWG
17	Draft monitoring plan of the water distribution improvement system	D/D consultant will finish the inspection of the branch canals intakes and submit a status report before 30th April 2016	Dr. Hesham Elshazely DD consultant	Achieved, and comments were sent from the WG regarding the defects and required maintenance of selected BC gates but no update of the report is submitted from the consultant
18		TAC requested the DD consultant and WG for studying the possibility of remote control(not only monitor) Bahr Youssef's four regulators from the control house through the proposed SCADA system before 16th May 2016		The consultant sent an email notifying that additional control unit for each regulator and high speed communication line is required. Confirmation is needed from WMWG
19	The landscape of expected area gained in Ibrahimia, and Bahr Youssef waterways	Design and Environment WGs will coordinate with the D/D consultant to finalize the landscape layout delivered by the consultant to ensure smooth water flow at the entrances and outlets of the NDGRs before 30th April 2016	Eng. Magdy El-Bendary Eng. Abd El-Reheem DD Consultant	A landscape layout is submitted in the B/D report but enhancement is still needed to avoid recirculation areas. This will be the responsibility of DD consultant, DWG, EWG, and MMWG
20	Structure and name of members for each Working Group	The Resident Engineer has to finalized the proposed restructuring of the WGs including the new structure and the name of members for each working group, in order to be delivered to the consultant	Dr. Khaled Tobar	Finalized on 21st May 2016

21	The WG reports about the activities from July 2015 to March 2016	All the seven WGs under the TAC have to submit a comprehensive report about the WG activities from July 2015 to March 2016, and must be final on May 23rd , 2016	Eng. Yassser Eng. Magdy Dr. M. Gabr Dr. Hesham Elshazely	Updated reports was submitted to the Resident engineer to follow his letter ref.9 dated on 24th April 2016

5. Discussion Record

5.1 Eng. Magdi presented the DWG performance up to 20th June 2016 (Attach.4) including the agreement on the NDGRs axis, design criteria, design codes, hydraulic design, and gate lifting mechanism. Eng. Magdi stated that the hydraulic design of Abo Gabal, Delgawy, and Sahylia need modifications because the apron levels are higher than water levels in low demand period according to the water level records 1999-2015. Eng. Magdi stated that the pending issues include the geotechnical description and bearing capacities of the soil, the need for additional boreholes in Bahr Youssef canal bed to confirm the soil characteristics, foundation type, and seismic design is not included in the B/D report.

5.2 Eng. Abdelreheem presented that the cotton company refused to rent the gin yard in an official letter dated 12th June 2016, and the comparison of the other three proposed sites were done and the best site installation site is located in the U.S. of Ibrahimia canal at agricultural road 2.6 Km south NDGRs. He stated also that currently there is a contact with the engineering affairs directorate in Awkaf Assiut to inspect the youssefy, and confirm the area and the alternative site for reconstruction mosque. Eng. Abdelreheem stated that two letters were sent to Minya and Assiut governorates and the list of accredited quarries in Assiut was submitted on 22nd May 2016. He also stated that a letter from the city council was received stated that Dirout city needs the crossing at the railway and coordination is needed with the railway authority. He stated also that the environmental and Atyaf WG has no comments regarding the GW monitoring, survey of existing conditions in the field survey report submitted by the consultant. However, the number of existing wells and hand pumps in the project area affected by groundwater rise has to be checked jointly with the consultant.

Eng. Nabila commented that the water quality tests of the ground water indicated pollution by wastewater and this has to be highlighted by the environmental WG through official letter to the city council of Dirout and Assiut governorate.

5.3 Eng. Yasser stated that a modified layout of NDGRs was prepared by the consultant and sent to HRI by Eng. Yasser on 23rd May 2016, and meetings were held on 5, 6, and 7June in HRI with the attendance of consultant's representative and it was agreed that HRI will follow the benchmarks and Georeference points used by the consultant and implement the physical model of NDGRs according to the sent modified layout, and also use the same dimensions of old DGRs. She stated that the technical and financial offer was sent and the negotiation with HRI was carried out on13th June 2016 and agreed to implement the flume in six month's study. She also stated that the WG has submitted comments on the calibration report of the mathematical model to the DD consultant

5.4 Dr. Gabr stated that the details of laboratory and field tests during construction are missed as concrete tests, soil laboratory tests and compaction tests. He stated that the project procurement plan including goods

and equipment that needn't to be procured from Japan as H-steel, Bly wood, frameworks, steel scaffolding, dredging, and embankment equipment.

5.5 Dr. Hesham El-Shazely stated that the WMWG has submitted the comments regarding the inspection of BC intakes carried by the consultant and asked him to update the report and present in details the type of defects and maintenance need for each gate. He stated also that the consultant sent an email notifying that additional control unit for each regulator and high speed communication line is required but the WG answered that is not reasonable but the only requirements are communication modem, cables and interface to transmit the signal to the gates. He stated also the comments of the WG regarding the basic design report version 1 (attach.5)

5.6 The DD consultant presented the following items (Attach.6) namely:

- Geotechnical investigation results
- Foundation treatment method
- Drawings for Hydraulic design and physical hydraulic model test
- Statistical analysis of hydraulic data for MM and PHM.
- Upgrade traffic analysis
- The possibility of using SCADA system for controlling Bahr Youssef regulators
- Conceptual landscape plan
- Cost estimation
- Schedule of the JICA study team in the 5th Assignment

6. Decisions

No	Issue	Decisions	Responsibility
1	The need for additional boreholes in Bahr Youssef canal bed to confirm the soil characteristics, foundation type	The DWG has to study the need for additional boreholes in Bahr Youssef canal bed to confirm the soil characteristics, and foundation treatment method	Dr. K.Tobar Eng. Magdi, D/D Consultant
2	Hydraulic design of Abo Gabal, Delgawy, and Sahylia	The hydraulic design of Abo Gabal, Delgawy, and Sahylia has to be modified in apron levels to be lower than water levels in low demand period according to the water level records 1999-2015, and also matching with the natural channel beds. After that the DD consultant has to update the hydraulic design report and include it in the B/D report.	Eng. Magdi, DD consultant
3	Seismic design	The DD consultant has to include the seismic design prepared by CRI in the B/D report	Eng. Magdi, DD consultant

4	Landscape layout	The DD consultant has to modify the landscape layout to avoid recirculation area in the current version in order to be submitted to HRI before 5th July 2016	Eng. Magdi, DD consultant
5	Physical model	The physical, and mathematical WG has to revise the statistical analysis of the hydraulic data including dominant discharge in coordination with HRI	Eng. Yasser DD consultant
6		The WG has to urge HRI to speed up the construction of the physical model of NDGRs and follow up through joint visits with the DD consultant to HRI	Eng. Yasser HRI DD consultant
7	Mathematical model analysis	The WG has to follow TAC letter to HRI to nominate a mathematical model specialist to join the WG according to the 14th TAC meeting decisions	Eng. Yasser
8		The DD consultant has to update the calibration report based on the WG comments before 30thJune 2016	Eng. Yasser DD consultant
9		TAC asked the DD consultant to start the mathematical modeling analysis for the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities according to Egyptian code, design protection works, carry out riprap calculation and river bed protection design in the mathematical model	Eng. Yasser DD consultant
10-a	Geotechnical investigation report	The DD consultant has to revise the FSR version 1 according to the sent comments by TAC on 9th June 2016 and reply on the unimplemented soil tests and the decrease of the number of carried out tests compared with the IC/R	DD consultant
10-b		The DD consultant explain that the carried field laboratory tests are enough according to the field investigation carried by the DD consultant	
10-c		The DWG has to check the effect of the unimplemented test on the foundation treatment method	Eng. Magdy Bendary Dr. Mohammed Gabr

11	Topographic surveying works, Survey of Construction Equipment and Materials report	The DD consultant has to revise the FSR version 1 according to the sent comments by TAC on 9th June	Dr. Mohammed Gabr DD consultant
12	Piezometer observations by ECRI	The EWG has to check and officially reply the DD consultant answer regarding the comments within 10days The DD consultant has to revise the FSR version 1 according to the sent comments by TAC on 9th June	Eng. Abd. El-Reheem DD consultant
13		The environmental WG has to inspect the hand pumps and existing wells in the affected project area by GW rise jointly with the DD consultant	Eng. Abd. El-Reheem Dr. Mohammed Gabr DD consultant
14		The environmental WG has to prepare a draft letter to Dirout city council, and Assiut governorate indicating that the water quality tests of the groundwater indicating that there is a pollution by wastewater	Eng. Abd. El-Reheem DD consultant
15	Project rough cost estimate	The contracts and project cost WG has to revise in details the rough cost estimate to be submitted by the consultant on real price offers from local contractors, and Japanese suppliers	Dr. Mohammed Gabr DD consultant
16	Temporary Land acquisition	The Environmen and Atyaf WGs shall prepare a letter for the electric company regarding the high voltage line in the selected area located in the U.S. of Ibrahimia canal at agricultural road 2.6 Km south NDGRs. EWG must visit the site and send comprehensive WG report within 10days.	DD consultant Dr. K. Toubar Dr. Mohammed Gabr Eng. Abd El-Rehiem
17	The two illegal mosques	The Environment and and Atyaf WGs has to contact with the engineering affairs directorate in Awkaf Assiut to inspect the youssefy, and confirm the area and the alternative site for the mosque`s reconstruction. Office meeting between EWG and Awqaf is needed within one week.	Dr. Mohammed Gabr Eng. Abd El-Rehiem

18	studying the road bridge level crossing with the railway at Dirout	TAC asked the DD consultant to consider both of the traffic line through the maintenance road and also the traffic line parallel to Ibrahimia right bank and the level crossing with the rail way at Dirout at Dirout . The DD consultant explained that the level crossing is out his study`s scope	Eng. Abd El-Rehiem Eng. Magdy Eng. Magdy DD consultant
19	Updated traffic analysis	The DD consultant has to study the new traffic analysis in the DWG according to the future traffic plan of Dirout city	Eng. Magdi, DD consultant
20	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Eng. Abd El-Rehiem DD Consultant
21		The DD consultant has to include the material tests results carried out by CRI in the B/D report	Dr. M.Gabr DD consultant
22	Draft monitoring plan of the water distribution improvement system	D/D consultant has to update the inspection of the branch canals intakes report and present in details the defects of the gates in the final version of the B/D report	Dr. Hesham Elshazely DD consultant
23		D/D consultant has to update the B/D report based on the comments submitted by the WMWG	

4. Closing remarks: The head of TAC thanked the attendants of the meeting for their valuable contribution and closed the meeting at 12:45
5. Next meeting: The next meeting will be held at 10:00 a.m. on Monday, July 11th 2016 on MWRI building 1st floor in shaa Allah.

Eng. Nabila Bahaa El-Dien

Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Meeting Memo (18th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	11th July 2016 (Mon.) / 10:00～13:45
Place	Water communication meeting's room (MWRI) Building (1st Floor)
Attendance	**MWRI**: Eng. Nabila, Dr. Khaled Tobar, Eng. Yasser, Eng.Magdy, Dr.Mohamed Gabr, Eng.Refaat, Eng.Amal Ahmed Aly, Dr.Hesham Elshazely , Eng. Sayed El-Shahat, Eng.Mahmoud Rafee, Eng. Rania Hassan, Dr. Ahmad Anwar, Eng. Abdelreheem Ali, Dr. Amira Abd El-Hady, Dr.M.Abdelatif **Consultant**: Engs Tomiji SHIMOJI, Hitoshi TOKU, Kazuma AKIYOSHI, Futoshi KUROMI, Izumi KATO, Tomoyuki KAWABE, Shigeru OTSUKI, Masanobu KADOWAKI, Kazunori TAKASAKI, Hajime KITA, William, Dr.M.Israel, Mariam and El Hussein **JICA**: Mr.Hajime Yamazaki, Dr. Ashraf El-Abd

1. Eng.Nabila Bahaa, the head of TAC welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives. Eng. Nabila stated the TAC meeting Agenda (Attach.2) and highlighted the main project events during the last two weeks , namely:
   - The DD study for NDGRs second phase, which is the basic design has ended up with the submission of the B/D reports. However there are still major differences in opinion between TAC and DD consultants regarding some of the design aspects which will affect the cost of the project namely, the foundation treatment method and using steel piles, purchasing of the small scale regulators' gates from local purchaser, the lowering of apron level of the small scale regulators to comply with the current and future low water levels
   - The JICA has sent the comments of the Request for Proposal RFP for the consultancy services, and the final RFP will be resent to JICA for concurrence
   - The necessity of attendance of all the WGs members for all the WGs activities especially the DWG.
   - The necessity of signing all the reports submitted from the DD consultant to the WGs during the basic design stage before starting the detailed design
   - The TAC received the draft version 0, version 1, and draft version 2 of the Field survey report from the DD consultant, and the final comments will be submitted officially to the consultant through the WGs final meetings from 12th to 15th July 2016
   - The necessity of having counterpart members from the DD consultant team in Environmental and Atyaf WG. Hoever, the TAC is not satisfied with the mismanagement of the DD consultant to arrange the Environmental WG activities with Eng. AbdelReheem.
2. Eng. Nabila stated that two important site visits have to be arranged by the DD consultant this week namely, Site visit for CRI representative to check the soil samples collected from the previously carried out on-land and off-shore borings during the field survey stage, and site visit for the environmental WG to survey the hand pumps and supervise the seasonal water quality monitoring of the installed piezometers

3. Follow up of the 17 TAC meetings:

No	Issue	Decisions	Responsibility	Action
1	The need for additional boreholes in Bahr Youssef canal bed to confirm the soil characteristics, foundation type	The DWG has to study the need for additional boreholes in Bahr Youssef canal bed to confirm the soil characteristics, and foundation treatment method	Dr. K.Tobar Eng. Magdi, D/D Consultant	The request for additional boreholes was cancelled in the meeting held between head of TAC and Resident Engineer of NDGRs with the consultant on 27th June 2016 (Attch.3)
2	Hydraulic design of Abo Gabal, Delgawy, and Sahylia	The hydraulic design of Abo Gabal, Delgawy, and Sahylia has to be modified in apron levels to be lower than water levels in low demand period according to the water level records 1999-2015, and also matching with the natural channel beds. After that the DD consultant has to update the hydraulic design report and include it in the B/D report.	Eng. Magdi, DD consultant	Pending as the DD consultant is adhering to his original design. But the TAC draw the consultant`s attention to the necessity of modifying the hydraulic design
3	Seismic design	The DD consultant has to include the seismic design prepared by CRI in the B/D report	Eng. Magdi, DD consultant	Preliminary calculations of the seismic design parameters were done (attch.4)
4	Landscape layout	The DD consultant has to modify the landscape layout to avoid recirculation area in the current version in order to be submitted to HRI before 5th July 2016	Eng. Magdi, DD consultant	pending

5	Physical model	The physical, and mathematical WG has to revise the statistical analysis of the hydraulic data including dominant discharge in coordination with HRI	Eng. Yasser, DD consultant	HRI submitted the dominant discharges calculation, and the DD consultant has to unify the dominant discharges in mathematical and physical models
6		The WG has to urge HRI to speed up the construction of the physical model of NDGRs and follow up through joint visits with the DD consultant to HRI	Eng. Yasser HRI, DD consultant	A joint visit was conducted on 29th June 2016. And the forms of the new regulators are ready to be constructed on the physical model of NDGRs
7	Mathematical model analysis	The WG has to follow TAC letter to HRI to nominate a mathematical model specialist to join the WG according to the 14th TAC meeting decisions	Eng. Yasser	HRI nominated Dr. Ahmed Nada
8		The DD consultant has to update the calibration report based on the WG comments before 30thJune 2016	Eng. Yasser, DD consultant	Version 2,and 3 of the reports were submitted

9		TAC asked the DD consultant to start the mathematical modeling analysis for the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities according to Egyptian code, design protection works, carry out riprap calculation and river bed protection design in the mathematical model	Eng. Yasser, DD consultant	Agreed on the coordination meeting with the consultant on 27th June 2016,and preliminary calculations were presented in the 18th TAC meeting
10-a	Geotechnical investigation report	The DD consultant has to revise the FSR version 1 according to the sent comments by TAC on 9th June 2016 and reply on the unimplemented soil tests and the decrease of the number of carried out tests compared with the IC/R	DD consultant	DD consultant replied to WGs comments on 15th June 2016
10-b		The DD consultant explain that the carried field laboratory tests are enough according to the field investigation carried by the DD consultant		
10-c		The DWG has to check the effect of the unimplemented test on the foundation treatment method	Eng. Magdy Bendary Dr. M. Gabr	pending
11	Topographic surveying works, Survey of Construction Equipment and Materials report	The DD consultant has to revise the FSR version 1 according to the sent comments by TAC on 9th June	Dr. M. Gabr DD consultant	DD consultant replied to WGs comments on 15th June 2016
12	Piezometer observations by ECRI	The EWG has to check and officially reply the DD consultant answer regarding the comments within 10days The DD consultant has to revise the FSR version 1 after getting the official reply from EWG	Eng. Abd. El-Reheem DD consultant	pending

13		The environmental WG has to inspect the hand pumps and existing wells in the affected project area by GW rise jointly with the DD consultant	Eng. Abd. El-Rehem Dr. M. Gabr DD consultant	Joint site visit will be conducted on 13th July 2016
14		The environmental WG has to prepare a draft letter to Dirout city council, and Assiut governorate indicating that the water quality tests of the groundwater indicating that there is a pollution by wastewater	Eng. Abd. El-Rehem DD consultant	Achieved (attach.5)
15	Project rough cost estimate	The contracts and project cost WG has to revise in details the rough cost estimate to be submitted by the consultant on real price offers from local contractors, and Japanese suppliers	Dr. M. Gabr DD consultant	Preliminary rough cost estimate was prepared. However, real cost estimate can only achieved at the end of DD stage
16	Temporary Land acquisition	The Environmen and Atyaf WGs shall prepare a letter for the electric company regarding the high voltage line in the selected area located in the U.S. of Ibrahimia canal at agricultural road 2.6 Km south NDGRs. EWG must visit the site and send comprehensive WG report within 10days.	DD consultant Dr. K. Toubar, Dr. Mohammed Gabr Eng. Abd El-Rehiem	The obstacles of the site installation yard will be discussed through the committee headed by H.E. the Governor of Assiut

17	The two illegal mosques	The Environment and and Atyaf WGs has to contact with the engineering affairs directorate in Awkaf Assiut to inspect the youssefy, and confirm the area and the alternative site for the mosque`s reconstruction. Office meeting between EWG and Awqaf is needed within one week.	Dr. Mohammed Gabr Eng. Abd El-Rehiem	An architectural plan of the new Youssefy mosque was submitted (attach.6). However the architectural plan of irrigation mosque was not completed
18	studying the road bridge level crossing with the railway at Dirout	TAC asked the DD consultant to consider both of the traffic line through the maintenance road and also the traffic line parallel to Ibrahimia right bank and the level crossing with the rail way at Dirout. The DD consultant explained that the level crossing is out his study`s scope.	Eng. Abd El-Rehiem Eng. Magdy DD consultant	The arrangement with railway authority in Assiut will be done after the meeting of the committee headed by H.E. the Governor of Assiut
19	Updated traffic analysis	The DD consultant has to study the new traffic analysis in the DWG according to the future traffic plan of Dirout city	Eng. Magdi Eng.Abdelrehem DD consultant	A planning map of Dirout city was submitted by official letter from Dirout city council (attach.7)
20	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Eng. Abd El-RehiemDD Consultant	pending

21		The DD consultant has to include the material tests results carried out by CRI in the B/D report	Dr. M.Gabr, DD consultant	The basic tests are only carried out and included in draft B/D report
22	Draft monitoring plan of the water distribution improvement system	D/D consultant has to update the inspection of the branch canals intakes report and present in details the defects of the gates in the final version of the B/D report	Dr. Hesham Elshazely DD consultant	pending
23		D/D consultant has to update the B/D report based on the comments submitted by the WMWG		Draft ver.3 was submitted

4. Discussion Record

4.1 Eng. Magdi presented the DWG pending issues with the DDconsultant (Attach.8) including the geotechnical description and bearing capacities of the soil by Terzaghi equations, foundation treatment methods, retaining wall type (Ltype, T type, and one body raft), and the apron level of small regulators (Sahylia, Irad Delgawy, and Abou Gabal).He stated that the preliminary calculation of seismic parameters are agreed upon by CRI, RGBS and the DD consultant

4.2 Eng. Abdelreheem stated that he recommends new members for Environmental WG (attach.9). He stated that a joint site visit with the consultant will be carried out on 13th July 2016 to inspect hand pumps, and carrying out water quality campaign for the pizometers of the summer season. He stated that an architectural plan of the new Youssefy mosque was submitted. However the architectural plan of irrigation mosque was not completed. He brought an official planning map of Dirout city including the planned bridges in Dirout city master plan. He stated that the arrangement with railway authority in Assiut regarding the site installation yard will be done after the meeting of the committee headed by H.E.the Governor of Assiut

4.3 Eng. Yasser stated that the model forms of the new regulators of the physical hydraulic model for NDGRs are ready. However, the apron levels of the small scale regulators are needed by HRI. She stated that accordingly, it is expected that the physical model completion date will be delayed. She stated that the mathematical modeling of the temporary works and diversion channels is ongoing. She stated that the DD consultant submitted modified ver. 2, and 3 of the mathematical model calibration, and backwater curve analysis reports.

Dr. M.Abdelatif from HRI stated that the quasi 3D model is not suitable for area downstream the gates where highly 3D mathematical model is recommended. However, Mr.Shimoji explained that the quasi 3D model is sufficient for the mathematical modelling of NDGRs project

4.4 Dr. Gabr stated that the consultant submitted the basic tests for embankment materials and aggregates, and will be included in B/D report. He stated that the preliminary cost estimate submitted by the consultants showed that goods purchased from Japan will be about 50% of the STEP loan amount. However, real cost estimate can only achieved at the end of DD stage

4.5 Dr. Hesham El-Shazely stated that the WMWG has submitted the comments regarding the inspection of BC intakes carried by the consultant and asked him to update the report and present in details the type of defects and maintenance need for each gate. He stated also that the consultant submitted a new version of the WM part in the B/D report. However, WMWG opinion is that the new version does not include the characteristics and design of water balance module, the required layout and facilities of the control house for WM, and description of data flow within the new water distribution monitoring system. He stated also the water balance module suggested by the consultant does not express real water balance because it depends upon theoretical water demands assumed in the database at the control house, and does not depends on real cropping pattern, real consumptive use, does not consider drinking, and industrial water uses, losses from the system, and drains out flow

4.6 The DD consultant presented the following items (Attach.10) namely:

- Hydraulic design of the small regulator, and the DD consultant adherence to the original design. However TAC draw the Consultant`s attention to the unfavorable high apron level, which require soil replacement under bed level, and the risk of losing the capability of passing discharges during low demand periods, winter closure, and upcoming drought periods of the Nile river in the next years.
- Foundation design flow chart and the difference between the modified Terzaghi method used by the DD consultant, and the ordinary Terzaghi method used by the Egyptian code for shallow foundation design
- Construction Plan & Cost Estimation WG,
- Water Management WG,
- Mathematical Model Analysis WG
- Environmental & Social Consideration
- The next steps to finalize B/D by the mid of August 2016

5. Decisions

No	Issue	Decisions	Responsibility
1	Hydraulic design of Abo Gabal, Delgawy, and Sahylia	The hydraulic design of Abo Gabal, Delgawy, and Sahylia has to be modified in apron levels to be lower than water levels in low demand periods and matching with the natural bed levels. TAC draw the Consultant`s attention to the unfavorable high apron level, which require soil replacement under bed level, and the risk of losing the capability of passing discharges during low demand periods, winter closure	Eng. Magdi, DD consultant
2	Foundation treatment method	The DD consultant has to submit a comparison table based on technical and economical aspects for the foundation design including steel piles, bored R.C. piles, driven R.C piles, soil improvement methods for raft foundation including soil injection, soil mixing, soil replacement before 20th July 2016	Eng. Magdi, DD consultant

3	Landscape layout	The DD consultant will modify the landscape layout to avoid recirculation area in the current version in order to be submitted to HRI for physical model implementation	Eng. Magdi, DD consultant
4	Physical model	The DD consultant has to submit the dominant discharges for the mathematical and physical models within one week	Eng. Yasser DD consultant
5		The DD consultant has to submit the B/D drawings for small regulators to HRI, and RGBS within one week to speed up the construction of the physical model of NDGRs	Eng. Yasser HRI DD consultant
6	Mathematical model analysis	The WG has to invite HRI representative to WG meetings, and report accordingly to the head of TAC	Eng. Yasser
7		The WG has to submit the comments of the version 2,3, and 4 of the mathematical model calibration reports, and backwater curve analysis latest by 14th July 2016,and consultant has to update the calibration, and backwater curve reports based on the WG comments before 21st July 2016	Eng. Yasser DD consultant
8		WG has to check the mathematical modeling analysis for the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities according to Egyptian code, design protection works, carry out riprap calculation and river bed protection design in the mathematical model	Eng. Yasser DD consultant
9	Geotechnical investigation report/FSR	The DWG has to answer the consultant`s reply to the previously sent comments on 9th June 2016 and check the effect of the unimplemented test on the foundation treatment method before 22nd July 2016	Eng. Magdy Bendary DD consultant
10	Field survey report ver.1	The DD consultant has to revise the FSR version 1 after getting the reply of DWG and submit the final report latest by 22nd July 2016	Dr. Mohammed Gabr DD consultant
11	Piezometer observations by ECRI	The EWG has to check and officially reply the DD consultant regarding GW part within FSR latest by 14th July 2016	Eng. Abd. El-Reheem DD consultant
		The environmental WG has to inspect the hand pumps and existing wells in the affected project area by GW rise jointly with the DD consultant on 13th July 2016	Eng. Abd. El-Reheem Dr. Mohammed Gabr DD consultant

12	The two illegal mosques	The Environment and Atyaf WGs has to contact with the engineering affairs directorate in Awkaf Assiut to inspect the Youssefy mosque, and Irrigation mosque to confirm the area and the alternative site for the mosque`s reconstruction. Office meeting between EWG and Awqaf Assiut is needed as soon as possible.	Dr. Mohammed Gabr Eng. Abd El-Rehiem
13	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Eng. Abd El-Rehiem DD Consultant
14		The DD consultant will carry out detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1, and no.2 during the DD phase	Dr. M.Gabr DD consultant
15	Draft monitoring plan of the water distribution improvement system	D/D consultant will update the inspection of the branch canals intakes report and present in details the defects of the gates in the final version of the B/D report	Dr. Hesham Elshazely DD consultant
16		TAC and DD consultant agreed on the no need for remote control by SCADA for Bahr Youssef regulators from the central control house for WM in Dirout	
17		TAC and DD consultant agreed on the location of the central control house for WM in Dirout	
18		The DD consultant has to submit the following items by the beginning of August 2016 : • Layout of the central control house for WM in Dirout including the facilities including the general requirements • Layout of the NDGRs control room in Dirout indicating special loading conditions and facility arrangements. RGBS will decide upon that whether both control rooms will be in the same building. RGBS will start the construction tendering early August, so the DD consultant should share required information perior to that date	
19		D/D consultant has to update the B/D report based on the comments submitted by the WMWG to the consultant	

20	Reconstruction of Dirout irrigation district building including central control house for WM, control room of NDGRs, construction supervision consultant office, RGBS office, and rest rooms	TAC raised the proposal of reconstruction of Dirout irrigation district including central control house for WM, control room of NDGRs, construction supervision's consultant office, RGBS office, and rest rooms to the Head of ID. The designs, construction and supervision costs will be financed from the local budget. However the planning, layout, and demarcation of the central control of WM, and control room of the NDGRs have to be prepared by the DD consultant by the beginning of August.JICA will be officially informed by the head of TAC to consider the consequences regarding the DD consultant contract and responsibilities with JICA.	Dr.Khaled Tobar Eng.Magdy Dr.Hesham DD.Consultant

4. Closing remarks: The head of TAC thanked the attendants of the meeting for their valuable contribution and closed the meeting at 13:45
5. Next meeting: The next meeting will be held at 10:00 a.m. on Monday, August 15th 2016 on MWRI building 1st floor in shaa Allah.

Eng. Nabila Bahaa El-Dien

Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Design WG Meeting Memo

Reg. No.	DWG:6-1

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	22 August 2016 (Mon) / 10:00～14:00	
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (19th Floor)	22 August 2016
Attendance	MWRI: Engs. Magdy, El Sayed, Hagress Consultant: Engs. Shimoji, Toku, Kuromi, Akiyoshi, Kita, William	

1. Record of the meeting

1.1 Hydraulic design for te small scale regulators under the new hydraulic conditions

D/D consultant explained to DWG members about their consideration results with the paper (attachment1), and followings are the comments from WG members and answers from D/D consultants.

No.	Comments from RGBS	Answer from D/D consultant
1	What is the justification of "Design cross section of canal (NG)" in the figure on page 2	To be discussed
2	What is the justification of check 1-3 in the table on page 5	D/D consultant explained by the table in the meeting, and they accepted it.
3	If any case cannot meet the Egyptian code, even the gate width can be modified to meet the condition (max. design discharge).	D/D consultant accepted that idea if necessary.
4	Eng. Magdy stated that WG member can accept the apron level only if it is lower than EL.42.75m (up to 0.75m higher than the existing apron level)	D/D consultant explained the intention of the current design (to prevent the sedimentation) because suggested by RGBS apron level could cause more sedimentation on upstream (further comment regarding this answer is on comment No.5).
5	Eng. Magdy stated that D/D consultant does not have to care that problem, but they have to mention about the sedimentation problem, and recommend yearly dredging.	D/D consultant explained the suggested low apron level (up to EL.42.75m) is not necessary because minimum discharge is already achieved by the apron level EL.43.90m.

In the meeting RGBS drew the new suggested canal cross sections which they can approve, and showed it to D/D consultant (refer to the picture on the next page).

2. Decisions

WG members and D/D consultants agreed that D/D consultant will make a new calculation under the condition of new DS canal cross section which was suggested by WG members.

The component of the new conditions is;

- Sill will be constructed under the gates of the 3 small regulators with a crest level of EL. 43.60m according to the following conditions suggested by RGBS:

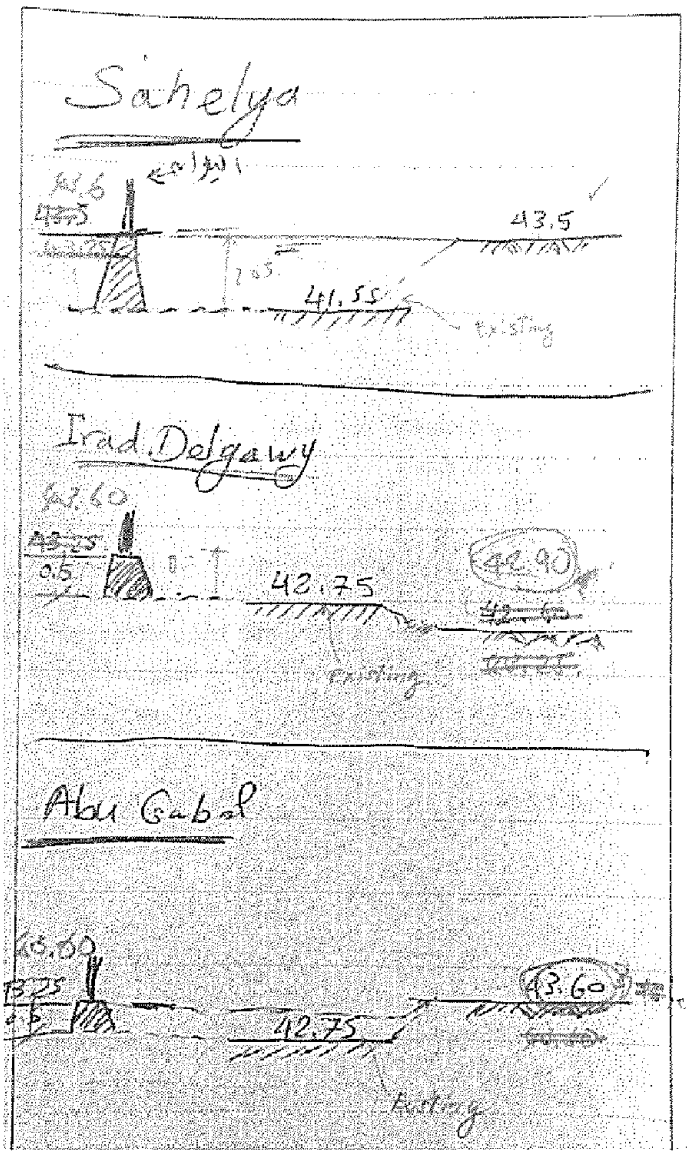
- Sill level should not be less than 50 cm higher than the existing apron level.
- Sill level should not be less than the downstream canal bed level.
- The apron level of all the 3 small regulators will be the same as the old one of each.

- In the condition of design maximum discharge, the hydraulic condition must satisfy the Egyptian Code. And in this case, changing the gate breadth will be an alternative to satisfy the condition of the velocities in the Egyptian code, and in this case the width of the gate must be at least 1.5m as a condition for the calculation. However, in the design minimum discharge, the small values of velocities (smaller than the limits of the Egyptian code) can be accepted because it lasts for a very limited time.

- The advantage of making the same level of the crest of the sills under the gates in the three regulators will be that the gate size for the three small scale regulators will be the same.

- The calculation result will be reported by D/D consultant in next meeting (24th August 2016).

Picture: Suggested Cross Section Maps for the three small scale regulators



Design WG Meeting Memo

Reg. No.	DWG:6-2

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	24 August 2016 (Mon) / 11:15～14:00	
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (19th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayd, Hagrass, Dr. Mashad Consultant: Engs. Shimoji, Toku, Kuromi, Akiyoshi, Kita, William, Dr. Magdy	

1. Follow up of the last meeting

No follow up

2. Meeting Record

No.	Comments from RGBS	Answer from D/D consultant
1	RGBS questioned Vi (vent velocity) must be the same as Vr in Egyptian Code because it actually shows different values.	According to the Egyptian Code, Vr is calculated based on the downstream water level, while Vi is based on the upstream water level.
2	RGBS understood the D/D consultant recommendation that two vents with 2m width are better to consider the Japanese Code (Vi), but RGBS said to discuss JP code among WG members.	D/D consultants also recommended the 2m width because it makes velocity lower, which is physical safer considering the damage.
3	RGBS stated the length of crest for all the three small regulators seems to be longer than the picture drawn in the last meeting.	D/D consultant will reconsider the length of crest as much as possible.
4	RGBS questioned that the hydraulic confirmation would be necessary to protect the apron from water falling from the crest.	D/D consultant made their opinion that there is no problem considering the water level on the downstream canal.

3. Decisions

Attendants agreed followings:

- D/D consultant will add the case that two (2) and one (1) vent with 1.5m width for the new Abo Gabal Regulator to complete the check table for hydraulic conditions.
- WG members in RGBS will have a meeting if they can consider the Japanese code (the constraint of Vi) with Hydrology experts.
- The length of crest will be reconsidered based on the result of discussion.
- The next WG meeting is 28th August 2016 from 11am to complete the matter discussed on the last and this meetings.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:6-3

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	28 August 2016 (Mon) / 11:00～14:30	
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (19th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayd, Hagrass, Dr. Gabr Consultant: Engs. Shimoji, Toku, Kuromi, Akiyoshi,	

1. Follow up of the last meeting

No follow up

2. Meeting Record

No.	Comments from RGBS	Answer from D/D consultant
1	RGBS requested to make comparison table between 2.0m vent width and 1.5m vent width to clarify the advantage and disadvantage.	D/D consultant add the comparison table on PPT
2	RGBS requested to provide with calculation sheet by excel.	D/D consultants sends the excel sheet soon. (On the same day has been sent)
3	RGBS accepted the design section on Abo Gabal and Sahelyia regulator, even their height of stoplog are larger than the previous design and the cost could be increased.	D/D consultant follow RGBS opinion.
4	As for the bearing capacity, RGBS requested to reconsider the settlement method in the condition of clay layer.	D/D consultant follow RGBS opinion.
5	As for the foundation type, RGBS requested to show the working period for selected type, in addition, the cost should be evaluated with Egyptian market.	D/D consultant follows RGBS opinion. The working period is added to the table on PPT, but the cost matter is still needed to clarify.
6	In addition of comment No.5, the working period of selected foundation type should be more accurate. RGBS suggested to make the supporting letter to invite some Egyptian contractors.	D/D consultant follows RGBS opinion and will submit the necessary information for the supporting letter. D/D consultant especially checks the unit periods per day and machine
7	As for the steel pile type, the corrosion effect need to be clarified the corrosion effect. The cost should be shown with and without the unti-corrosion works.	D/D consultant explained that the design is including the extra thickness as 1mm based on JP code. In usual, the corrosion effect is not serious matter in the situation deep under the ground because of less Oxygen. But D/D consultant checks the cost for unti-corrosion.

3. Decisions

Attendants agreed followings:

- The suggested cross section will make consensus in 19th TAC.
- D/D consultant will add the comparison table between 2.0m vent width and 1.5m to PPT for 19th PPT.
- D/D consultant will send the calculation sheet by excel to RGBS (It has been sent)
- D/D consultant will add the working period to the table on PPT and the working period should be more accurately evaluated by interview or survey to Egyptian contractor. RGBS will provide the supporting letter.
- D/D consultant take into consideration the cost of unti- corrosion works.

End of memo.

Design WG Meeting Memo

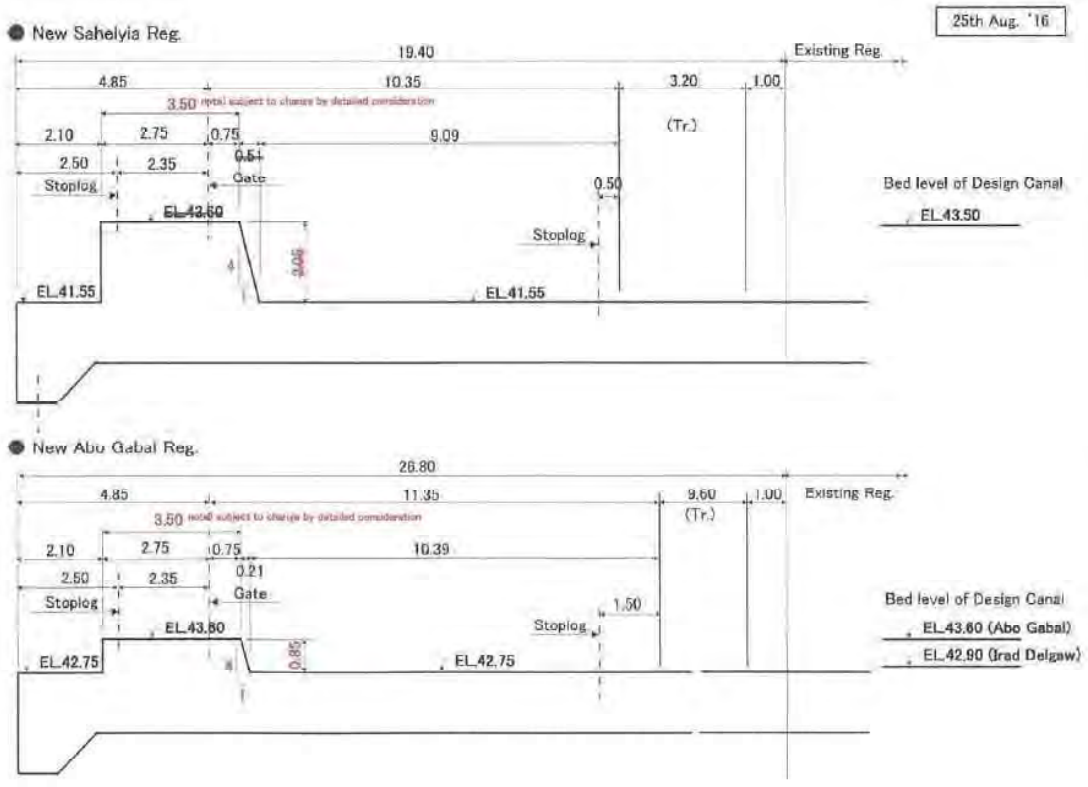
Reg. No.	DWG:6-34

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	29 August 2016 (Mon) / 14:00～15:30	
Place	Meeting Room in the Ministry of Water Resources and Irrigation (MWRI) Building (3rd Floor)	
Attendance	MWRI: Engs. Magdy, El Sayd, Hagrass, Dr. Abdel Azim Mohamed Ali Consultant: Engs. Kuromi, Akiyoshi,	

1. Decisions

Attendants agreed followings:

- DWG agreed to 2vents with 2m width for Sahelyia, Abo Gabal and Irad Delgaw.
- The elevation of the apron and the sill which are shown blow was agreed by DWG excluding the Sahelyia Regulator. But as for Sahelyia, HRI strongly recommended that elevation of sill for Sahelyia shall be less than EL43.0 for the smooth flow and hydraulic advantage based on their experience, which cause too low velocity at DS of gate due to the substantial difference between the sill level and bed level of DS canal. Accordingly, the elevation of sill for Sahelyia became EL43.0m and which was agreed with DWG.
- D/D consultant requested HRI to make the recommendation report and HRI agreed with it. D/D consultant and HRI hold a the meeting on 30th Aug. at HRI.



End of memo.

Meeting Memo (19th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	29th August 2016 (Mon.) / 10:00~13:45
Place	Central library meeting's room (MWRI) Building (2nd Floor)
Attendance	**MWRI:** Dr. Khaled Tobar, Eng. Yasser, Eng. Magdy, Dr.Mohamed Gabr, Dr.Hesham Elshazely , Eng. Sayed El-Shahat, Eng.Mahmoud Rafee, Eng. Rania Hassan, Dr. Abdel-Azim Aly, Dr. Ibrahim Ragab, Eng. Hany Mostafa **Consultant:** Engs Tomiji SHIMOJI, Hitoshi TOKU, Kazuma AKIYOSHI, Futoshi KUROMI, Tomoyuki KAWABE, Fusataka ARAKAWA, Susumu MURASE, Hajime KITA, William, Dr.M.Israel, Mariam **JICA**: Mr.Hajime Yamazaki

1. Dr. Khaled Toubar, the Resident Engineer welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives. Dr. Toubar stated the TAC meeting Agenda (Attach.2)

2. Follow up of the 18 TAC meetings:

No	Issue	Decisions	Responsibility	Status
1	Hydraulic design of Abo Gabal, Delgawy, and Sahylia	The hydraulic design of Abo Gabal, Delgawy, and Sahylia has to be modified in apron levels to be lower than water levels in low demand periods and matching with the natural bed levels. TAC draw the Consultant's attention to the unfavorable high apron level, which require soil replacement under bed level, and the risk of losing the capability of passing discharges during low demand periods, winter closure	Eng. Magdi, DD consultant	DD consultant has delivered all of his comments regarding the hydraulic design of the small scale regulators in order to settle down the situation of the hydraulic design and raft levels
2	Foundation treatment method	The DD consultant has to submit a comparison table based on technical and economic aspects for the foundation design including steel piles, bored R.C. piles, driven R.C piles, soil improvement methods for raft foundation including soil injection, soil mixing, soil replacement before 20th July 2016	Eng. Magdi, DD consultant	D/D consultant submitted the comparison table on 20th July 2016, and a PoE will be held on 7th September 2016

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3	Landscape layout	The DD consultant will modify the landscape layout to avoid recirculation area in the current version in order to be submitted to HRI for physical model implementation	Eng. Magdi, DD consultant	On-going
4	Physical model	The DD consultant has to submit the dominant discharges for the mathematical and physical models within one week	Eng. Yasser DD consultant	achieved
5		The DD consultant has to submit the B/D drawings for small regulators to HRI, and RGBS within one week to speed up the construction of the physical model of NDGRs	Eng. Yasser HRI DD consultant	The physical model is constructed based on the drawings submitted on on 17th April 2016
6	Mathematical model analysis	The WG has to invite HRI representative to WG meetings, and report accordingly to the head of TAC	Eng. Yasser	achieved
7		The WG has to submit the comments of the version 2,3, and 4 of the mathematical model calibration reports, and backwater curve analysis latest by 14th July 2016,and consultant has to update the calibration, and backwater curve reports based on the WG comments before 21st July 2016	Eng. Yasser DD consultant	achieved
8		WG has to check the mathematical modeling analysis for the diversions reaches of Bahr youssef, and Ibrahimia, including temporary works in the Mathematical model to check the velocities according to Egyptian code, design protection works, carry out riprap calculation and river bed protection design in the mathematical model	Eng. Yasser DD consultant	On-going

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9	Geotechnical investigation report/FSR	The DWG has to answer the consultant`s reply to the previously sent comments on 9th June 2016 and check the effect of the unimplemented test on the foundation treatment method before 22nd July 2016	Eng. Magdy Bendary DD consultant	Achieved
10	Field survey report ver.1	The DD consultant has to revise the FSR version 1 after getting the reply of DWG and submit the final report latest	Dr. Mohammed Gabr DD consultant	Final FSR submitted on 10th August 2016
11	Piezometer observations by ECRI	The EWG has to check and officially reply the DD consultant regarding GW part within FSR latest by 14th July 2016	Dr. Mohammed Gabr DD consultant	Achieved and comments sent to the consultant on 8th August 2016
		The environmental WG has to inspect the hand pumps and existing wells in the affected project area by GW rise jointly with the DD consultant on 13th July 2016	Eng. Hossam Dr. Mohammed Gabr DD consultant	achieved
12	The two illegal mosques	The Environment and Atyaf WGs has to contact with the engineering affairs directorate in Awkaf Assiut to inspect the Youssefy mosque, and Irrigation mosque to confirm the area and the alternative site for the mosque`s reconstruction. Office meeting between EWG and Awqaf Assiut is needed as soon as possible.	Dr. Mohammed Gabr Eng. Hossam	A letter was sent to Awkaf Assiut on7th August to approve the architectural plans of the two mosques, and a meeting was held with the undersecretary of Assiut governorate on 26th July 2016
13	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Dr. Mohammed Gabr, Eng. Hossam	ongoing

14		The DD consultant will carry out detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1, and no.2 during the DD phase	Dr. M.Gabr DD consultant	Basic tests were carried out and laboratory analysis is carried out at CRI
15	Draft monitoring plan of the water distribution improvement system	D/D consultant will update the inspection of the branch canals intakes report and present in details the defects of the gates in the final version of the B/D report	Dr. Hesham Elshazely DD consultant	Achieved
16		TAC and DD consultant agreed on the no need for remote control by SCADA for Bahr Youssef regulators from the central control house for WM in Dirout		
17		TAC and DD consultant agreed on the location of the central control house for WM in Dirout		
18		The DD consultant has to submit the following items by the beginning of August 2016 : • Layout of the central control house for WM in Dirout including the facilities including the general requirements • Layout of the NDGRs control room in Dirout indicating special loading conditions and facility arrangements. RGBS will decide upon that whether both control rooms will be in the same building. RGBS will start the construction tendering early August, so the DD consultant should share required information perior to that date		
19		D/D consultant has to update the B/D report based on the comments submitted by the WMWG to the consultant		Achieved on 15th August 2016

KhW 7/9/16

20	Reconstruction of Dirout irrigation district building including central control house for WM, control room of NDGRs, construction supervision consultant office, RGBS office, and rest rooms	TAC raised the proposal of reconstruction of Dirout irrigation district including central monitoring house for WM, control room of NDGRs, construction supervision's consultant office, RGBS office, and rest rooms to the Head of ID. The designs, construction and supervision costs will be financed from the local budget. However the planning, layout, and demarcation of the central monitoring of WM, and monitoring room of the NDGRs have to be prepared by the DD consultant by the beginning of August .JICA will be officially informed by the head of TAC to consider the consequences regarding the DD consultant contract and responsibilities with JICA.	Dr.Khaled Tobar Eng.Magdy Dr.Hesham DD.Consultant	The WMWG agreed on 25th August upon the construction of WM monitoring house in the planned administration building in Dirout

3. Discussion Record

4.1 Eng. Magdi presented the DWG pending issues with the DDconsultant (Attach.3) including the bearing capacities of the soil by Terzaghi equations, and foundation treatment methods, which will be discussed next week by 7th September 2016, and the apron level of small regulators (Sahylia, Irad Delgawy, and Abou Gabal) will be constructed on the same level of the old regulators' raft, and a concrete sill will be constructed under the gates with higher crest levels. He stated that the DD consultant used the Japanese code in checking the velocity. He stated that the seismic design of the NDGRs will be based on the Japanese and Egyptian codes. He presented also the Consultant's hydraulic design regarding the vent widths 1.5m, and 2m, and sill crest levels

4.2 Dr. Gabr stated that the RFP for consultancy services for the construction supervision was finalized and approved from JICA. The Invitations were sent to the consultants on 24th August 2016. He stated that the drawings and bidding documents of the two mosques and the administrative building are under preparation by the Central Directorates of RGBS projects. He stated also that a letter was sent to the Engineering affairs department of Awqaf in Cairo on 7th August 2016 to get their approval on the architectural plans. The site installation yard in the cotton gin yard or in the private area south of the DGRs, which needs to transfer the H.V. cable. The inspection of piezometers has been done on 28th August 2016. The other environmental activities including preparations of EMP are ongoing.

Dr. Tobar asked the EWG to check the requirements of EEAA in preparation of the EMP internally with the DD consultant or through contact with. He asked also the EWG to proceed with the available alternatives of the site installation yard in parallel

4.3 Eng. Yasser stated that the construction of the new regulators of the physical hydraulic model for NDGRs is finished and the water current is released. However, the apron levels of the small scale regulators and widths are implemented by HRI according to the design submitted by the consultant on 17th April 2016. She stated that accordingly, it is expected that the physical model completion date will be on 13th October

2016. She stated that the mathematical modeling of the temporary works and diversion channels is finished. She stated that the DD consultant submitted modified ver. 2, 3, 4, and 5 of the mathematical model calibration, and backwater curve analysis reports However there are comments of HRI regarding the Mathematical Model. She added that the DD consultant will run the mathematical model considering the gates of navigation lock of the existing Bahr Youssef regulator opened, and the gates of navigation lock of existing Ibrahimia regulator closed. She added that the flume experimental test will be started next Tuesday.

4.5 Dr. Hesham El-Shazely stated that the WMWG has submitted the comments regarding the final BDR and discussed with the DD consultant. He stated that the WMWG and the consultant agreed on the location of the WM monitoring house and the NDGRs control house to be in the common bank between Diroutia, and Ibrahimia common banks. He stated also the water balance module suggested by the consultant does not express real water balance because it depends upon theoretical water demands assumed in the database at the monitoring house, and does not depends on real cropping pattern, real consumptive use, does not consider drinking, and industrial water uses, losses from the system, and drains out flow

4.6 The DD consultant presented the following items (Attach.4) namely:

- Finalization of the final BDR by the end of August 2016,based on the comments from WGs submitted by 3rd August 2016, and the reply from the DD consultant on 9th August 2016
- The confirmation of the work schedule for DD study phase
- Determination of design conditions of the main issues at starting point of the D/D study stage
- The hydraulic design for the small regulators namely Sahelia, and Abo Gabal regulators to satisfy min. Discharge in the condition of WL=44.30m. Apron of Sahelyia, and Abo Gabal regulators must be the same level as the existing ones, cross section plans at canals for Sahelyia, Abo Gabal, and Irad Delgaw should be appropriated by hydraulic consideration. A comparison between widths of 2m, and 1.5m was provided, and 2m width of vent for Sahylia, and Abo Gabal regulators seem to be in the suitable velocity range according to the JP code
- The difference between the bearing capacity calculations by the Terzaghi method based on the Egyptian and Japanese codes
- The foundation type for Bahr Youssef, and Ibrahimia regulators
- Location of the WM monitoring house, and the NDGRs control building in Dirout, and the tentative layouts for the two buildings, and the flow of water balance monitoring
- The Mathematical model analysis including back water profile study, mathematical model analysis, river bed variation analysis
- Confirmation of the progress of procedure of EMP based on the requirements of EEAA

4. Decisions

No	Issue	Decisions	Responsibility
1	Hydraulic design of Abo Gabal, Delgawy, and Sahylia	The hydraulic design of Abo Gabal, Delgawy, and Sahylia will be of 2m width, and the crest level under the gate will be 43.60m, while for Sahylia regulator will be 43.00m. After TAC meeting, WG and D/D consultant agreed above matters after additional meeting. Dr Abdelazim Aly will make an evidence letter for interpretation of the hydraulic design.	Eng. Magdi, Dr.Abdelazim DD consultant

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2	Foundation treatment method	A panel of Expert POE will be held on 7th September to discuss the Bearing capacity and the foundation treatment method and decide the final foundation design of Bahr Youssef, and Ibrahimia	Eng. Magdi, DD consultant
3	Landscape layout	The DD consultant will study the landscape layout to enhance the approach area between the DGRs, and NDGRs, and recommend the protection of the approach distance of NDGRs.	Eng. Magdi, DD consultant
4	Physical model	The HMWG must follow up regularly the process of implementation and operation of the physical model to receive the recommendation and final report by 13th October	Eng. Yasser DD consultant
5		The HMWG has to check the approach reach between the NDGRs, and old DGRs and the required protection length to prevent fine material from making deposition US NDGRs	Eng. Yasser HRI DD consultant
6	Mathematical model analysis	The HMWG has to send the final comments regarding the backwater profile study, the mathematical model analysis scenarios, and the river bed variation analysis	Eng. Yasser
7	Field survey report ver.1	The DD consultant has to submit the final version of FSR in hard and soft copies according to the IC/R	Dr. Mohammed Gabr DD consultant
8	Final BD report	The WGs has to submit the last comments of the final BD report version 2 by 7th September 2016, and the DD consultant has to submit the final version according to these comments as soon as possible.	Dr. Hesham DD consultant
9	The two illegal mosques	The Environment and Atyaf WG has to finalize the drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf by 30th September 2016 in order to start the advertisement and bidding process by 1st October 2016	Dr. Mohammed Gabr Eng. Hossam
10	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Dr. Mohammed Gabr
11		The DD consultant will carry out detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1, and no.2 and submit the results of the tests carried by CRI by 30th September 2016	Dr. M.Gabr DD consultant
12	Site installation yard	EWG to proceed with the available alternatives of the site installation yard in parallel	Dr. M.Gabr Eng. Hossam

13	Preparation of EMP	EWG has to check the requirements of EEAA in preparation of the EMP internally with the DD consultant or through contact with EEAA	Dr. M.Gabr DD consultant
14	Draft monitoring plan of the water distribution improvement system	The TAC approves the decision taken by the WMWG the location of the WM monitoring house to be in Dirout, within the new administrative building in the ground floor and has an area of 300m^2 and a monitoring display will be established in Minya. Those new buildings will be designed, constructed and supervised by the local budget.	Dr. Hesham Elshazely DD consultant
15		WMWG has to provide the tentative layouts of the WM monitoring house, and NDGRs control house to the Atyaf, and EWG	
16		TAC and DD consultant agreed on the location of the control house for NDGRs to be in a separate building.	
17		D/D consultant has to update the B/D report based on the comments submitted by the WMWG to the consultant.	

4. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 13:45

5. Next meeting: The next meeting will be held at 10:00 a.m. on Monday, September 26th 2016 on MWRI building 1st floor in shaa Allah.

for
Eng. Nabila Bahaa El-Dien 7/9
KHW 18
Head TAC, CDSD, and CDSD

Reservoirs and Grand Barrages Sector

(RGBS)

C.C. Head of RGBS

C.C. TAC Members

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

7th September 2016

Determination of foundation type for NDGRs Projects

Expert Panel Meeting 7/9/2016

Day	Wednesday 7/9/2016
Time	From 10.00 am to 12.15 pm
Place	Central Library Hall
Attendances	Attachment (1)
Objectives	Determination of foundation type for NDGRs Projects

Period	Program
10.00 to 10.10	Welcome and Open Workshop by Engineer Nabila – Presenting Workshop Objectives
10.10 to 10.50	SANYU Consultant Presentation By Team Leader Mr.Shimoji (Attachment 2) & the Experts
10.50 to 12.00	Discussions : all discussion is in attachment 3 (on going)
12.00 to 12.15	**Conclusion:** 1. More confirmation of off – shore Boreholes is recommended to be done in implementation phase with more lab tests, two in the Bahr Youssef Canal and two in the Ibrahimia Canal. 2. Bearing capacity calculation will follow the Egyptian Code, in which the check of settlement will limit the BC in sand layers. 3. Raft foundation cannot be used due to limited BC. Soil replacement is not recommended because it is costly especially the required replacement thickness is about 10 m depth from foundation level. 4. Pile solution is recommended and will be studied in comprehensive comparison (technically and economically for steel, RC driven or bored).
12.15 to 12.20	Closing Work Shop by Engineer Nabila

DD consultant

Team Leader Mr.Shimoji

7th September 2016

RE-NDGRs

Resident Engineer

Dr. Khaled Toubar

7/9/16 2016 Eng. Nabila

Meeting Memo (20th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	30th October 2016 (Sun.) / 10:00~12:00
Place	Central library meeting's room (MWRI) Building (2nd Floor)
Attendance	**MWRI:** Dr. Khaled Toubar, Eng. Yasser, Eng. Magdy El-Bendary, Eng. M. Rafea, Eng. M. Abdelaleem, Eng. Hossam Abdelaziz, Dr. Hesham Elshazely, Eng. Mahmoud Rafee, Eng. Amal Mcala, Eng. Refaat Elsayed, Dr. Abdel-Azim Aly, Dr. Ibrahim Ragab, Eng. Hany Mostafa, Dr. Dina Emara **Consultant:** Engs Hitoshi TOKU, Tomoyuki KAWABE, Hajime KITA, Masanobu KADAWAKI, Kazunori TAKASAKI, William, Mariam **JICA**: Mr. Hajime Yamazaki

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives. Dr. Tobar stated the TAC meeting Agenda (Attach.2)

2. Follow up of the 19 TAC meetings:

No	Issue	Decisions	Responsibility	status
1	Hydraulic design of Abo Gabal, Delgaw, and Sahelyia	The hydraulic design of Abo Gabal, Delgaw, and Sahelyia will be of 2m width, and the crest level under the gate will be 43.60m, while for Sahelyia regulator will be 43.00m. After TAC meeting, WG and D/D consultant agreed above matters after additional meeting. Dr Abdel Azim Aly will make an evidence letter for interpretation of the hydraulic design.	Eng. Magdy, Dr. Abdel Azim DD consultant	achieved
2	Foundation treatment method	A panel of Expert POE will be held on 7th September to discuss the Bearing capacity and the foundation treatment method and decide the final foundation design of Bahr Youssef, and Ibrahimia	Eng. Magdy, DD consultant	achieved
3	Landscape layout	The DD consultant will study the landscape layout to enhance the approach area between the DGRs, and NDGRs, and recommend the protection of the approach distance of NDGRs.	Eng. Magdy, DD consultant	ongoing

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4	Physical model	The PHMWG must follow up regularly the process of implementation and operation of the physical model to receive the recommendation and final report by 13th October	Eng. Yasser DD consultant	The final report is expected to be submitted on 14th November 2016
5		The PHMWG has to check the approach reach between the NDGRs, and old DGRs and the required protection length to prevent fine material from making deposition US NDGRs	Eng. Yasser HRI DD consultant	To be done before the next TAC meeting
6	Mathematical model analysis	The MMWG has to send the final comments regarding the backwater profile study, the mathematical model analysis scenarios, and the river bed variation analysis	Eng. Yasser	achieved
7	Field survey report ver.1	The DD consultant has to submit the final version of FSR in hard and soft copies according to the IC/R	Dr. Mohammed Gabr DD consultant	Achieved on 18th September 2016
8	Final BD report	The WGs has to submit the last comments of the final BD report version 2 by 7th September 2016, and the DD consultant has to submit the final version according to these comments as soon as possible.	Dr. Hesham DD consultant	Achieved on 24th October 2016
9	The two illegal mosques	The Environment and Atyaf WGs has to finalize the drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf by 30th September 2016 in order to start the advertisement and bidding process by 1st October 2016	Dr. Mohammed Gabr Eng. Hossam	Achieved, and the Awkaf directorate approved the architectural design of the two mosques
10	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Dr. Mohammed Gabr	Ongoing

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11		The DD consultant will carry out detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1, and no.2 and submit the results of the tests carried by CRI by 30th September 2016	Dr. M. Gabr DD consultant	Tests were carried out and CRI report will be submitted soon
12	Site installation yard	EWG to proceed with the available alternatives of the site installation yard in parallel	Dr. M. Gabr Eng. Hossam	An official letter has to be sent to the Ministry of Business sector
13	Preparation of EMP	EWG has to check the requirements of EEAA in preparation of the EMP internally with the DD consultant or through contact with EEAA	Dr. M. Gabr DD consultant	It will be discussed with The DD consultant during the 7th mission in Egypt
14	Draft monitoring plan of the water distribution improvement system	The TAC approve the decision taken by the WMWG the location of the WM monitoring house to be in Dirout, within the new administrative building in the ground floor and has an area of 300m^2 and a monitoring display will be established in Minya. Those new buildings will be designed, constructed and supervised by the local budget.	Dr. Hesham Elshazely DD consultant	Achieved
15		WMWG has to provide the tentative layouts of the WM monitoring house, and NDGRs control house to the Atyaf, and EWG		
16		TAC and DD consultant agreed on the location of the control house for NDGRs to be in a separate building at the common bank between Dairutiah, and Ibrahimia bank.		
17		D/D consultant has to update the B/D report based on the comments submitted by the WMWG to the consultant.		

3. Discussion Record

4.1 Eng. Magdy presented the DWG pending issues that has been solved with the DD consultant including:

- The Design Apron level of Abo Gabal, and Sahelyia, which will be constructed on the same level of the old regulators` raft, and a concrete sill will be constructed under the gates with higher crest

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levels

- Bearing capacities of the soil by modified Terzaghi equations, and settlement method recommended by the Egyptian code in case of large breadth footings
- Foundation treatment methods, which were discussed on 7th September 2016, and the agreed decision regarding the deep foundation of the large scale regulators (Ibrahimia, and Bahr Youssef)
- The seismic design of the NDGRs will be based on the Japanese and Egyptian codes
- Deep foundation type will be discussed in details in the DD stage, however there is an understanding from the DD consultant that steel driven piles is not common in Egypt, and cast in-situ (bored piles) is preferable

4.2 Eng. M. Rafea present the situation of cost estimate WG, and Environment, and Atyaf WG (Attach3) and stated that:

- Total Construction cost (with consulting services + contingencies + Interest) was estimated to be **7,667,856,000 Yen**
- The percentage of Goods to be imported from Japan is 42.1%
- He stated that the architectural plan of the two mosques was approved by Awkaf in Assiut and bidding documents of the two mosques and the administrative buildings are under preparation by the Central Directorates of RGBS projects
- The site installation yard in the cotton gin yard was discussed during the meeting with Assiut Governor on 22nd October 2016, and an official letter has to be sent from MWRI to the Ministry of Business sector. The other alternative site of the installation yard is a private area south of the DGRs, which needs to transfer the H.V. cable.

4.3 Eng. Yasser stated that:

- Tests of the physical hydraulic model for uniform operated gates have been done by the following scenarios:

  ☒ The small scale Regulators (Abo Gabal, Badraman and Sahelyia) in all cases of (Max, Min &Dominant) discharges controlled by under flow gate operation for single leaf gate.

  ☒ The large scale Regulators (Bahr Yusef, Ibrahimia): Two cases of (Min & Dominant) discharges controlled by over flow gate operation for double leaf gate, and cases of Max discharges controlled by both under flow & over flow gate operation for double leaf gate.

- RGBS WG requested HRI to test the operation of emergency cases for large scale Regulators (Bahr Yusef, and Ibrahimia) in case of closing one or two gates in case of Max discharge and the D/D consultant accepted to do it.
- Regarding the two dimension physical model of DGRs (flume) at HRI:
  - ☒ The two dimension physical model of NDGRs already installed with scale 1: 8.5 for one gate of (new Bahr Yusef regulator) at HRI.
  - ☒ HRI released the water flow current in the model for the tests performance.
  - ☒ The start date of the model time schedule modified to be in 25th Jul 2016 instead of 25th Jun 201 six months` duration and will be finished on 24th Jan 2017.

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- Regarding the Mathematical model including hydrodynamic model, sediments transport and the backwater curve (water surface profile) of DGRs & NDGRs by the DD consultant, Eng.Yasser stated that :
  a. Many versions of the draft MM & BWC reports submitted by the consultant Sanyu, however there are still many comments from HRI and RGBS comments and DD consultant answers did not satisfy and cover these comments.
  b. The DD consultant held a workshop for two days at HRI on 19th and 20th October 2016 attended by the HRI team members, RGBS representative and experts from Japan. The presentations included the analysis of the MM calibration, the water surface profile, the backwater curve analysis followed by an open discussion for the comments of HRI.
  c. Accordingly to the above workshop discussion, HRI raised their comments on the calibration stage analysis report officially to RGBS on 26th October 2016.
  d. The HRI letter contains many comments and mentioned that the hydrodynamic part of the mod not working well especially the calibration of the existing DGRs, and the output water surface profiles, and velocity sections are not logic. The modelled area D.S is not quite enough to cove morphological changes (scour and sediments` transport) model calibration and results were no discussed during workshop and only the mentioned comments is only valid for the hydrodynar model.
  e. There is an urgent need that the DD consultant has to revise his mathematical model calibration model running, and the model outputs from the different scenarios and submit the final mathematical modelling report including sediments transport before the end of December 201

4.4 The DD consultant presented the following items (Attach.4) namely:

- Schedule for the activities of the WGs in the 7th mission of the DD consultant in Egypt as follows:
  - DWG: deep foundation works by cast in-situ RC piles, stability and structural analysis, design of concrete structures, design of gate facilities, design of bridges and access roads. DWG will hold two meetings every week during the 7th mission (on Sundays and Wednesdays)
  - The construction planning and cost estimation WG and bidding documents WG will discuss the site installation yard, market price of construction materials, and procurement of steel sheet piles in Egypt or from third country, and preparation of pre-qualification documents for the construction contract by January 2017. The bidding documents will be submitted by the end of April 2017
  - WMWG: the design of telemetry facilities, software, technical specifications, drawings, and bill of quantities
  - Mathematical and Physical model WG: The DD consultant will reply to HRI comments regarding the mathematical model analysis, and update the model calibration, run, and output of the model. The DD consultant stated that he has no objection to carry out the mathematical model analysis by Delft-3D planned by HRI. According to HRI, the hydrodynamic analysis by Delft 3D can be completed by the end of December 2016, and the riverbed variation analysis can be completed by the end of January 2017
  - Environment WG: GW monitoring, follow up of the mosques transfer, EMP, and EMoP

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4. Decisions			
No	**Issue**	**Decisions**	**Responsibility**
1	Physical model	PHMWG has to follow up HRI to receive the recommendation and final report by 14th November 2016	Eng. Yasser DD consultant
2	Mathematical model analysis	The DD consultant has to update the mathematical model calibration, water surface profile, the velocity cross sections of the scenarios outputs, the backwater curve analysis, in addition to answering all the comments submitted by HRI on 27th October 2016. The deadline of these activities is end of November 2016	Eng. Yasser DD consultant
3		The morphological part of the model concerning river bed scouring and sedimentation is not approved by RGBS due to the inaccurate assumptions, and absence of available field data for the model inputs	Eng. Yasser DD consultant
4		The DD consultant has to refer to the results of mathematical model for testing the flow velocity, direction, and discharge in the small regulators namely Sahelyia, Delgaw, and Abo Gabal and propose recommendation for flow guiding, and reduced sedimentation	Eng. Yasser Eng. Magdy DD consultant
5	The two illegal mosques	The Environment WG has to finalize the drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf on the bidding documents by 10th November 2016	Eng. Hossam Eng. Mahmoud Rafea
6	Location of borrow sites, and quarries	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Eng. Hossam Eng. Mahmoud Rafea
7	Location of borrow sites, and quarries Site installation yard	The DD consultant has to submit a report on the detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1 and no.2 carried out by CRI before 10th November 2016	Eng. Hossam Eng. Mahmoud Rafea DD consultant
8	Location of borrow sites, and quarries Site installation yard	EWG has to prepare a draft letter from MWRI to the Ministry of Business sector regarding the cotton gin before 10th November 2016 and at the same time proceeding with the other available alternatives of the site installation yard in parallel	Eng. Mahmoud Rafea DD consultant

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9	Administrative building of East Dirout District	The administrative building will be constructed including the control house for NDGRs, and the control house for monitoring the water management locations in Bahr Youssef, and Ibrahimia command areas. The EWG has to follow up the finalization of the drawings, and tender documents of the new administrative building	Eng. Hossam Eng. Mahmoud Rafea DD consultant
10	Assignment Schedule of the major activities of the DD consultant in the 7th mission in Egypt from 16th October to 1st December 2016	• The DWG meetings will be on Mondays and Thursdays instead of Sundays and Wednesdays during this mission • The construction planning and cost estimation WG meetings will be on Tuesdays, and bidding documents WG will be held on Sundays and Thursdays • The WMWG meetings will be on Tuesdays • PHMWG meetings will be on Tuesdays, and Thursdays • EWG meetings will be on Tuesdays	

4. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 13:45

5. Next meeting: The next meeting will be held at 10:00 a.m. on Monday, November 14th 2016 on MWRI building 1st floor in shaa Allah.

Dr. Khaled Toubar 8/11 Khw 16
Head TAC, NDGRs, and Head of Central Dept. for Studies, and Designs Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji
Team Leader / D/D Consultant
DCA Nov. 2016

C.C. Head of RGBS
C.C. TAC Members

Design WG Meeting Memo

Reg. No.	DWG:7-1

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	7th November 2016 (Mon) / 10:00～12:00	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	8th Nov. 2016
Attendance	MWRI: Engs. Magdy, El Sayed Consultant: Engs. Shimoji, Toku, Kuromi, Akiyoshi	

1. Follow up of the last meeting

No follow up

2. Meeting Record

The D/D consultant suggested the necessary agenda and the meeting schedule of the DWG for this 7th stay. RGBS and the D/D consultant discussed these matters and finally both sides agreed on the meeting schedule as following:.

Discussion schedule of DWG meetings

Day		Agenda of Discussion
1st week	7th Nov.	➢Review of basic conditions so far ➢Alignment plan of road and bridge from Bahr Yusef canal to Ibrahimia canal
	10th Nov.	➢Foundation type (1st)
2nd week	15th Nov.	➢21st TAC ➢Review of 21st TAC / Gate facility
	17th Nov.	➢Gate facility
3rd week	21st Nov.	➢Foundation type (2nd) ➢Administration and control building at NDGRs (1st)
	24th Nov.	➢Administration and control building at NDGRs (2nd) ➢Drawings
4th week	28th Nov.	➢22nd TAC (It should be confirmed with Dr. Khaled)
	1st Dec.	➢Others ➢Review and confirmation of the meeting results of DWG

In the discussion of the schedule above, RGBS requested the followings;

- ✓ Topic of gate facility should be concentrated in 2nd weeks because of the availability of the expert from Assuit.
- ✓ Seepage analysis should be discussed in Environmental group.
- ✓ The administration building should not be discussed with DWG, but only the control building should be focused by DWG. The demarcation of budget on the target building would be confirmed by Dr. Khaled and in the TAC meeting.
- ✓ 22nd TAC should be confirmed with Dr. Khalid who has the responsibility for TAC because TAC is supposed to hold once in a month.

After the decision and confirmation about the schedule on DWG meetings during the 7th stay, the D/D consultant proceeded to the detailed discussion, according to the schedule. Both sides discussed the following three topics.

- ✓ Review of basic design conditions so far
- ✓ Alignment plan of road and bridge from Bahr Yusef canal to Ibrahimia canal
- ✓ Brief review of Q and A about a comparison table on the foundation type.

3. Decisions

Attendants agreed on followings:

- D/D consultant should submit the drawing with soft copy, which is already made.
- D/D consultant should submit the calculation sheet of bearing capacity.
- D/D consultant should submit the calculation sheet of pile design
- The corrosion protection could be required on the surface of permanent sheet piles and it should be considered in the design documents.
- D/D consultant will submit a comparison table on the applicable type of railway crossing, which will be discussed on 9th Nov. at Dirout city.
- D/D consultant should make a memorandum for each DWG meeting and both sides confirm it for their understanding.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:7-2

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	10th November 2016 (Thu) / 10:00～12:30	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	**MWRI:** Engs. Magdy, El Sayed, Mah. Hagrass, Moh.Abdel Wahab, CRI and ECRI representatives. **Consultant:** Engs. Kuromi, Wakatsuki, Akiyoshi	

1. Follow up of the last meeting

The D/D consultant submitted the memorandum of last meeting which were agreed by both sides.

As for the meeting schedule, RGBS suggested to postpone the DWG meeting on 14th Nov. to ensure the availability of the RGBS Electro-mechanical expert engineer from Assuit and to concentrate into the consecutive two day of 15th and 16th for the discussion on gate facility. The D/D consultant agreed to their suggestion above and RGBS will confirm the convenience of the RGBS Electro-mechanical expert engineer from Assuit. The updated schedule of the DWG meeting is the following table.

Discussion schedule of DWG meetings (updated)

Day		Agenda of Discussion
1st week	7th Nov.	➢Review of basic conditions so far ➢Alignment plan of road and bridge from Bahr Yusef canal to Ibrahimia canal
	10th Nov.	➢Foundation type (1st)
2nd week	15th Nov.	➢21st TAC ➢Review of 21st TAC / Gate facility
	16th or 17th Nov.	➢Gate facility (the convenience of the expert engineer would be confirmed)
3rd week	21st Nov.	➢Foundation type (2nd) ➢Administration and control building at NDGRs (1st)
	24th Nov.	➢Administration and control building at NDGRs (2nd) ➢Drawings
4th week	28th Nov.	➢22nd TAC (It should be confirmed with Dr. Khaled)
	1st Dec.	➢Others ➢Review and confirmation of the meeting results of DWG

2. Meeting Record

1) In the basis of the agreed schedule at 1st meeting, both sides discussed "the foundation type" as the main topic today. The D/D consultants submitted handout which include the following items;
   - ✓ Outline of foundation type
   - ✓ Selection of the pile type foundation for Bahr Yusef and Ibrahimia regulator including the comparison table and "the Question and Answer" on that one.
   - ✓ Concept of the pile design
2) The D/D consultant explained the " Outline of foundation type " and the comparison table on the "Selection of the pile type foundation for Bahr Yusef and Ibrahimia regulator". RGBS gave some comments and requests for the comparison table and the D/D consultants agreed to revise the comparison table as followings;
   - ✓ For the Cast in place RC pile on the item of "1st Reliability of Foundation", the friction between

soil and concrete should be evaluated by "E of excellent" instead of "G of good".

- ✓ For the Pre-casting concrete pile on the item of "1st Reliability of Foundation", the friction between soil and concrete should be added to the evaluation which is identified as "G of good".
- ✓ For all of pile types on the item of "2nd Ease of Construction", the evaluation of necessary yard for works should be added to the evaluation which are as followings;
  - ➢ Steel pipe pile is evaluated by "E of excellent"
  - ➢ Cast in place RC pile is evaluated by "G of good"
  - ➢ Pre-casting concrete pile is evaluated by "P of poor"

3) The D/D consultant explained about the cost estimation on the comparison table that it does not the final one but it used only to show the trend and ratio among these pile types, which enable to give the reasonable evaluation for the pile type selection. RGBS agreed to the evaluation of the economic aspects on that table and requested to the specified evaluation based on multiple quotations in the actual design. In addition, RGBS would support the D/D consultant to collect the quotations, if the D/D consultant requested it. The D/D consultant agreed to the above.

4) RGBS requested to confirm the number of piles for Bahr Yusef and Ibrahimia regulator on Cast in place RC pile in the table and to clarify the reason of the same piles number of both regulators. The D/D consultant agreed to it and will explain at next DWG meeting.

3. Decisions

Attendants agreed on followings:

- The D/D consultant should revise the comparison table as the meeting records above.
- The cost on the comparison table should be only used in the comparison of the pile type selection, the actual design of pile should be evaluated by the multiple quotations and not depending only on one quotation.
- The D/D consultant should explain about the piles number of Bahr Yusef and Ibrahimia regulator

4. Others

- The D/D consultant should take into consideration the reasonable driving method for the sheet pile works in order to avoid and alleviate the effect to the residential area, the existing NDGRs and the railway.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG.7-3

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	15th November 2016 (Tue) / 13:30～15:00	17/11/2016 T. Shimoji 17th Nov. 2016
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayed, Mahmoud Ali Abdel Aliem, Dr.Hashim Consultant: Engs. Shimoji, Toku, Kuromi, Akiyoshi, Wakatsuki	

Both sides discussed the gate facility on 15th and 16th November 2016. The detailed records on 15th November are shown as followings.

Meeting Record

(1) Design Conditions

- D/D consultant showed tables of design conditions of main gate and stoplogs. The types of steel, operation speed, number of shaft for small regulators and so on were approved. RGBS advised to take care of the material of the rod.
- Regarding the stoplogs, one set means a pair of a upstream and downstream stoplogs for the same vent.
- The necessary number of stoplogs is one set for each large regulator and only two sets for all small regulators.
- RGBS requested the D/D consultant to submit the JIS (Japanese Industrial Standards) and related design criteria written in English to compare with other international standards such as DIN and also to enable reviewing the calculation sheets of electro-mechanical equipments of the regulators.

(2) Hydraulic equipment

- Hydraulic equipment (gate facilities) should be arranged to enable both local control and remote control.
- HPU (Hydraulic Power Unit) and local control board should be installed in a small room at the point of two large regulators respectively.
- Exact location and space of control building should be studied in detail.

(3) Stoplogs

- The most recommendable height and number of pieces for both large regulators and small regulators were proposed by D/D consultant.
- D/D consultant proposed that all stoplogs should be stored in a house. On the other hand, RGBS showed another idea that all pieces were kept just above the each gate groove.

(4) Others

- CCTV (Closed Circuit Television) cameras are not necessary because the status of regulators can be monitored visually from the control building.
- Power receiving voltage at Dirout city will be confirmed by RGBS.
- All load power capacity including hoisting devices and instruments in the control building shall be considered in the design of power receiving system and emergency generator.

End of memo.

Meeting Memo (21st TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	15th November 2016 (Tue.) / 10:00~12:45
Place	Water communication meeting's room (MWRI) Building (1st Floor)
Attendance	**MWRI:** Dr. Khaled Toubar, Eng. Yasser, Eng. Magdy El-Bendary, Eng. M. Rafea, Eng. M. Abdelaleem, Dr. Hesham Elshazely, Eng. Mahmoud Rafee, Eng. Amal Meala, Eng. Ehab El-Gohary, Eng. Refaat Elsayed, Dr. Abdel-Azim Aly, Dr.Dina Emara, Eng. , Dr. Dina Emara, Eng. Mefreh Abbas El-Sayed **Consultant:** Engs Tomiji SHIMOJI, Hitoshi TOKU, Tomoyuki KAWABE, Futoshi KUROMI, Izumi KATO, Akira SUDO, Fusataka ARAKAWA, Kazuma AKIYOSHI, Motohisa WAKATSUKI, Hajime KITA, Masanobu KADOWAKI, Kazunori TAKASAKI, William, Mariam **JICA**: Mr. Hajime Yamazaki, Dr.Ashraf Mabrouk

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Dr. Tobar stated the TAC meeting Agenda (Attach.2)
3. **Follow up of the 20 TAC meetings:**

No	Issue	Decisions	Responsibility	status
1	Physical model	PHMWG has to follow up HRI to receive the recommendation and final report by 14th November 2016	Eng. Yasser	Draft report is prepared, and the final will be submitted next week
2	Mathematical model analysis	The DD consultant has to update the mathematical model calibration, water surface profile, the velocity cross sections of the scenarios outputs, the water surface profile, and backwater curve analysis, in addition to answering all the comments submitted by HRI on 27th October 2016. The deadline of these activities is the end of November 2016	Eng. Yasser DD consultant	The DD consultant replied to the comments of HRI on 8thNovember 2016
3		The morphological part of the model concerning river bed scouring and sedimentation is not approved by RGBS due to the inaccurate assumptions, and absence of available field data for the model inputs	Eng. Yasser DD consultant	confirmed

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4		The DD consultant has to refer to the results of mathematical model for testing the flow velocity, direction, and discharge in the small regulators namely Sahelyia, Delgaw, and Abo Gabal and propose recommendation for flow guiding, and reduced sedimentation	Eng. Yasser Eng. Magdy DD consultant	ongoing
5	The two illegal mosques	The Environment WG has to finalize the drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf on the bidding documents by 10th November 2016	Eng. Hossam Eng. M.Rafea	Arch. drawing approved by Awkaf
6	Location of borrow sites, and quarrics	The Environmental WG has to follow the letter sent to Minya governorate on 15th June 2016	Eng. Hossam Eng. M.Rafea	ongoing
7	Location of borrow sites, and quarries Site installation yard	The DD consultant has to submit a report on the detailed tests of the embankment materials, and aggregates of the samples taken from Borrow sites no.1 and no.2 carried out by CRI before 10th November 2016	Eng. Hossam Eng. M. Rafea DD consultant	Draft Report submitted by CRI and under evaluation by the DD consultant
8	Location of borrow sites, and quarries Site installation yard	EWG has to prepare a draft letter from MWRI to the Ministry of Business sector regarding the cotton gin before 10th November 2016 and at the same time proceeding with the other available alternatives of the site installation yard in parallel	Eng. M. Rafea DD consultant	Draft letter is sent to the head of RGBS
9	Administrative building of East Dirout District	The administrative building will be constructed including the control house for NDGRs, and the control house for monitoring the water management locations in Bahr Youssef, and Ibrahimia command areas. The EWG has to follow up the finalization of the drawings, and tender documents of the new administrative building	Eng. Hossam Eng. M.Rafea DD consultant	On going
10	Assignment Schedule of the major	• The DWG meetings will be on Mondays and Thursdays instead of Sundays and Wednesdays during this mission	Eng. Yasser Eng. Magdy Eng. Hossam	achieved

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		activities of the DD consultant from 16th October to 1st December 2016	•The construction planning and cost estimation WG meetings will be on Tuesdays, and bidding documents WG will be held on Sundays and Thursdays •The WMWG meetings will be on Tuesdays •PHMWG meetings will be on Tuesdays, and Thursdays •EWG meetings will be on Tuesdays	Eng. M.Rafea DD consultant	

4. Decisions

No.	Issue	Decisions	Responsibility
1.	Pile foundation of Ibrahimia, and Bahr Youssef	The DD consultant has to submit detailed calculation sheet of the design of the three alternatives, namely steel pipe piles, cast in-situ RC piles, and precast RC piles according to the DWG request. DWG has to take a decision on the next meeting of the working group on 24th November 2016.	Eng.Magdy DD consultant
2.	L-sec retaining wall	The DD consultant has to submit the calculation sheet of the U-sec. and L-sec for the raft retaining walls connection. The DWG has to take a decision on the next meeting of the working group on 24th November 2016.	Eng.Magdy DD consultant
3	The project design area	Enhancement the shape of the banks and the outlet of the downstream side of the NDGRs to the natural canal sections of Ibrahimia, and Bahr Youssef, and avoidance of recirculation areas.	Eng.Magdy DD consultant
4.	Physical model	PHMWG has to follow up HRI to receive the recommendation and final report by 22nd November 2016. The DD consultant has to submit the design of bed protection to be tested by physical model	Eng.Yasser DD consultant
5	Mathematical Model	The DD consultant has to use the calibrated model at the same survey of August 2015 to simulate the planned NDGRs effect and submit the final mathematical modelling report including counter measures against DS scouring and US sedimentation of the NDGRs. The DD consultant has also to update the water surface profile, the velocity cross sections of the scenarios outputs, and fulfill the additional comments raised by HRI on the meeting held on 13th November 2016.	Eng.Yasser DD consultant
6		The DD consultant has to refer to the results of mathematical model for testing the flow velocity, direction, and discharge in the small regulators namely Sahelyia, Delgaw, and Abo Gabal and propose recommendation for flow guiding, and reduced sedimentation before.	Eng.Yasser DD consultant

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7	Cost estimate WG	The DD consultant will get unit price quotation and market research for civil construction material including the main construction companies in Egypt and sheet pile manufacturers in Europe, and the middle east, and companies for pile foundation works implementation before 27th November 2016.	Eng. M.Rafea DD consultant
8	Prequalification documents of the contractor's contract for NDGRs	The DD consultant has to submit Prequalification documents of the contractor's contract for NDGRs before the End of January 2017.	Eng. M.Rafea DD consultant
9	The two illegal mosques	The Environment WG has to finalize the structural drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf on the bidding documents by 27th November 2016.	Eng. Hossam Eng. M.Rafea
10	Location of borrow sites, and quarries Site installation yard	EWG has to follow the letter from MWRI to the Ministry of Business sector regarding the cotton gin before 27th November 2016 and at the same time proceeding with the other available alternatives of the site installation yard in parallel.	Eng.Hossam Eng. M.Rafea DD consultant
11	Administrative building of East Dirout District	The administrative building will be constructed on 440 sq. meters for the sole use by the East Dirout District, Supervision consultant's offices of NDGRs, RGBS's offices, and guest house. The EWG has to follow up the finalization of the drawings, and tender documents of the new administrative building. The construction costs will be financed from the local fund and should end before the start of the construction of NDGRs.	Eng. Hossam Eng. M.Rafea DD consultant
12	The control house for NDGRs, and WM	The control house for NDGRs, and WM monitoring control house will be constructed on another separated building (ca. 240 sq. meters) upstream of NDGRs and located on the edge of south edge of the common bank between Diroutia, and left Ibrahimia bank. The DD consultant is responsible for the design and preparation of tender documents, and the construction cost will be financed by the loan.	Dr.Hesham DD consultant
13	Panel pumps for the monitoring locations for WM	The WMWG has to prepare a draft letter to MED regarding the installation of pump panels for five pump stations among the 36 locations, in order to be connected with the telemetry system. If MED will not carryout this task, it shall be included in NDGRs activities, and costs.	Dr.Hesham DDconsultant

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14	36 WM monitoring locations	The WMWG has to prepare a draft letter to IS regarding the 18 structures for new WM monitoring and telemetry system, which need urgent rehabilitation implementation before February 2020.	Dr.Hesham DD consultant
15	Environmental activities	Environmental monitoring activities will be ended by April 2017.EWG has to take action for sustainable monitoring after that.	Eng.Hossam Eng.M.Rafee DD consultant

5. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 12:45

6. Next meeting: The next meeting will be held at 10:00 a.m. on Sunday, November 27th 2016 on MWRI building 1st floor in shaa Allah.

Dr. Khaled Toubar
KhT 23/11/16
Head TAC, NDGRs, and Head of Central
Dept. for Studies, and Designs
Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji
Team Leader / D/D Consultant

C.C. Head of RGBS
C.C. TAC Members

Design WG Meeting Memo

Reg. No.	DWG:7-4

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	16th November 2016 (Wed) / 10:00~12:00	17/11/2016 17 Nov. 2016
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, Mahmoud Ali Aliem Consultant: Engs. Shimoji, Kuromi, Akiyoshi, Wakatsuki	

Both sides discussed the gate facility on 15th and 16th November 2016. The detailed record on 16th November and decisions for 2days discussion are shown as followings.

1. Meeting Record

(1) Design Conditions

- D/D consultant showed the revised tables of design conditions, RGBS agreed on them.
- RGBS advised D/D consultant to consider temperature load, wave height due to earthquake and so on in the calculation.
- RGBS advised that easy maintenance and necessary protection against weather condition should be considered in the design.

(2) Hydraulic equipment

- RGBS requested D/D consultant to show the detailed design concept of hydraulic system later.

(3) Storage of stoplogs

- D/D consultant showed the disadvantages of RGBS's idea of installation method. RGBS agreed on the D/D consultant's original idea.
- RGBS commented that the necessary space of storage house and the location should be studied in detail.

2. Decisions for two days meeting on gate facility

Attendants agreed on followings:

- Design conditions of main gates and stoplogs are as the Attachment -1.
- The height of stoplog pieces is as follows.

	Required highest height	Composition of stoplogs	Number of sets required
for Small regulators	4.60m	0.95m x4 +0.85m=4.65m	2 sets
for Large regulators	6.57m	1.35m x4 +1.20m=6.60m	2 sets

- All the pieces of stoplogs shall be stored in a house and the installation of stoplogs shall be applied according to the Attachment -2 and -3.
- The construction and procurement of power receiving system including transformer is covered by Japanese loan.

3. Review of comments on 21st TAC meeting

DWG received comments in the 21st TAC meeting. DWG of RGBS and the D/D consultants reviewed and confirmed the understanding as following comments.

(1) Understanding of the project area

As for the connection with the railway and bridge of NDGRs, TAC gave a comment that the surface level

between the railway and bridge of NDGRs should be same and the approach slop should be designed. However, since the approaching way is depended on the actual road plan by Dirout city, as the result of discussion in DWG, DWG should wait for submission of the road and bridge plans from Assuit governorate. The D/D consultant suggests keeping the current design and RGBS understand that but prefer to wait for the reply from Assuit governorate..

(2) Understanding of the bank shape

HRI recommended to design the approach shape like curve at downstream of Bahr Yusef and Ibrahimia regulator. However the D/D consultant thinks that it needs discussion from the view point of the necessity and several aspects. The D/D consultant suggested to submit the comparison table between "plan A" with smooth bank slope and "plan B" without smooth bank slope. Both sides agreed to discuss with the comparison table.

(3) Wall type at DS. of Bahr Yusef and Ibrahimia regulator

TAC gave a comment about the wall type at downstream foundation of Bahr Yusef and Ibrahimia regulator either to be U-section or L-section. In the DWG, the D/D consultant had already submitted the comparison table about it. Next meeting of DWG, both sides agreed to discuss this matter.

- Attachment -1: Design conditions of main gates
- Attachment -2: Design conditions of stoplog gates
- Attachment -3: Method of installation at regulators of stoplog gates

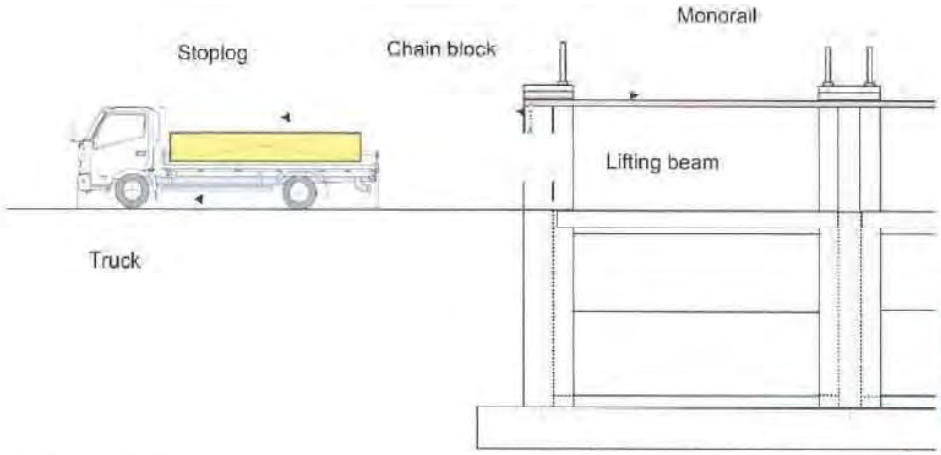
End of memo.

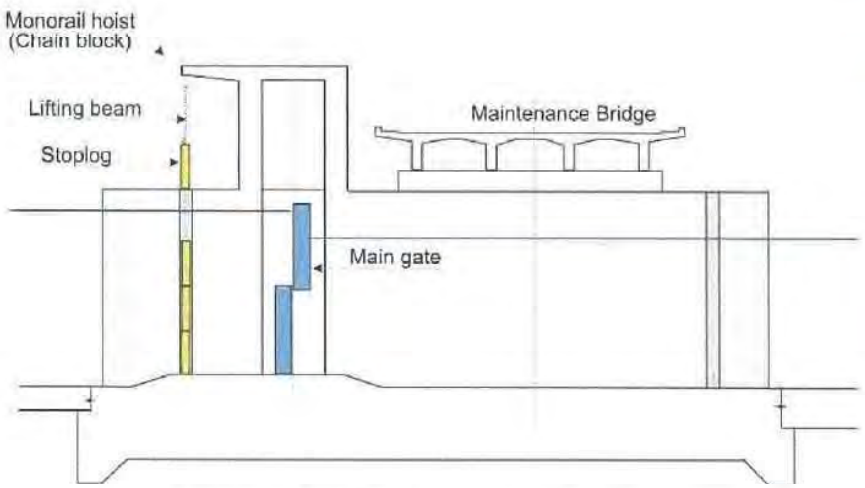
1. Design Conditions of Gate Facilities

1-1. Design Conditions of Main Gate

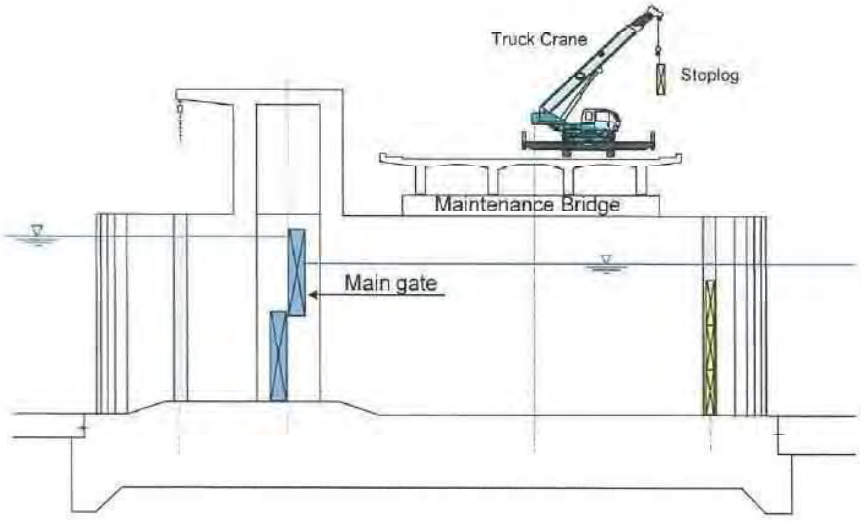
		Large regulators		Small regulators				Remarks
Name		**Bahr Yusef**	**Ibrahimia**	**Badraman**	**Diroutiah**	**AboGabal**	**Sahelyia**	
Gate type		Double leaf Fixed wheel gate	Double leaf Fixed wheel gate	Single leaf Slide gate	Single leaf Slide gate	Single leaf Slide gate	Single leaf Slide gate	
Clear width of opening		6.00m	6.00m	2.00m	2.00m	2.00m	2.00m	
Total height		6.55m	6.55m	2.65m	2.35m	2.95m	3.55m	
Number of gate		4	4	2	3	4	2	
Gate crest elevation		EL46.55m	EL46.55m	EL46.55m	EL46.55m	EL46.55m	EL46.55m	Freeboard=0.25m
Gate sil elevation		EL40.00m	EL40.00m	EL43.90m	EL44.20m	EL43.60m	EL43.00m	
Design water level(Upstream)		EL46.55m	EL46.55m	EL46.55m	EL46.55m	EL46.55m	EL46.55m	
Design water height		6.55m	6.55m	2.65m	2.35m	2.95m	3.55m	
Bottom height when lifted up		EL47.50m	EL47.50m	EL47.50m	EL47.50m	EL47.50m	EL47.50m	HHWL+0.5m
Lifting height		7.50m	7.50m	3.60m	3.30m	3.90m	4.50m	
Operating speed		0.3m/min	0.3m/min	0.3m/min	0.3m/min	0.3m/min	0.3m/min	
Control method		Remote/Local control	Remote/Local control	Remote/Local control	Remote/Local control	Remote/Local control	Remote/Local control	
Hoist type (Number of rod per gate)		Hydraulic cylinder	Hydraulic cylinder	Electric rack gear (2-rods)	Electric rack gear (2-rods)	Electric rack gear (2-rods)	Electric rack gear (2-rods)	
Seal type		3-side rubber seal [1]	3-side rubber seal [1]	3-side rubber seal	3-side rubber seal	3-side rubber seal	3-side rubber seal	
Materials	Skin plate	Stainless steel	Stainless steel	Rolled steel	Rolled steel	Rolled steel	Rolled steel	
	Main beam	Rolled steel	Rolled steel	Rolled steel	Rolled steel	Rolled steel	Rolled steel	
	Wheels	Stainless steel	Stainless steel	-	-	-	-	
	Gate guide frame	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	
	Bolt,Nut &Washer	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	
	Hydraulic pipe	Stainless steel	Stainless steel	-	-	-	-	
Deflection		1/800	1/800	1/800	1/800	1/800	1/800	
Allowable stress		According to JIS (Japanese Industrial Srandards) or relevant standards						

Note: 1) Lower leaf has a upper side seal. (4-side seal)





Measure to place Upstream stoplogs for Large regulators



Measure to place Downstream stoplogs for Large regulators

Attachment - 3

Design WG Meeting Memo

Reg. No.	DWG:7-5

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	21st November 2016 (Mon) / 10:00~12:00	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. El Sayed, Mah. Hagrass, Moh.Abdel Wahab, CRI and ECRI representatives. Consultant: Engs. Shimoji, Kuromii, Wakatsuki, Toku, Akiyoshi	

1. Follow up of the last meeting

The D/D consultant submitted the updated comparison table of the pile foundation. The attendants discussed the foundation type with the material submitted in the last DWG meeting.

2. Meeting Record

(1) Comparison table of the pile foundation

- D/D consultant showed the updated comparison table which was revised according to the comment of last DWG meeting. D/D consultant explained the basic concept of the pile nos., length and diameter which are based on the typical condition to clarify the general trend among the selected pile types.

(2) Concept of pile design

- D/D consultant explained the concept along handouts. RGBS requested that the each equations and factors should be compared between Egyptian and Japanese code. The result of comparison will be reported in the next DWG meeting on 24th November.

(3) Comparison table on wall types

- D/D consultant showed the comparison table which was already submitted in the Basic Design Report. RGBS requested to submit the calculation sheets under the condition of the revised dimension of each structures as a reference.

3. Decisions of meeting

Attendants agreed on followings:

- RGBS who attended at the meeting agreed on the cast in-place RC pile for the foundation type and L-type wall as the applied ones. But, these decisions will be made by TAC through the approval of the DWG chairman, Eng Magdy
- As for the design concept of pile design, D/D consultant should report the difference between Egyptian and Japanese code
- Next meeting of DWG is scheduled on 24th November.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:7-6

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	27th November 2016 (Sun) / 14:15～16:00	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayed, RGBS engineer, CRI representatives, Consultant: Eng. Akiyoshi, Dr. Magdy Salam	

1. Follow up of the last meeting

The D/D consultant submitted the updated comparison table on the retaining wall and the brief report on the pile design concept between Egyptian and Japanese code, based on the last DWG meeting. The attendants discussed the matters above.

2. Meeting Record

(1) Comparison table on wall types

- D/D consultant showed the updated comparison table including the calculation results of L, T and U type wall . D/D consultant explained the feature of all the types, especially, about the disadvantage of U type wall from the view point of high structural stress at the center of footing due to the large span of footing.

(2) Concept of pile design

- D/D consultant explained the evaluation of the differences on the pile design concept between Egyptian and Japanese code and submitted the brief report. The differences are not significant between both codes.

  As the result of evaluation, the number of piles at Bahr Yusef Regulator, the design by EGP code makes one less line of piles possible compared to the design by JP code, due to the slightly differences in bearing capacity between both codes. However, in the view from the cost aspect, the pile number by JP code slightly takes an advantage because less number of piles cause the reinforcement bars to be intensified and lead to the cost increasing. Accordingly, the D/D consultant recommend to apply JP code due to the following reasons;

  ✓ The differences are not significant between both codes, and

  ✓ But JP code slightly takes an advantage of the cost aspect in this project case.

3. Decisions of meeting

Attendants agreed on the followings:

- RGBS engineers who attended the meeting understood the D/D consultant explanation about the L type wall and the pile design concept. They said that the decision will be made on Thursday of 1st December 2016.
- The other topics such as the layout of control house will be discussed on the same day above and decision will be same day as the L type wall and the pile design concept.
- Next meeting of DWG is scheduled on 29th November, which will be a joint meeting with Mathematical Model Working Group.

End of memo.

Meeting Memo (22nd TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	27th November 2016 (Sun.) / 10:00～14:45
Place	Water communication meeting's room (MWRI) Building (1st Floor)
Attendance	**MWRI**:Dr.Khaled Toubar, Eng.Hossam Abd-El-Aziz, Eng. Yasser Gomaa, Eng.Magdy El-Bendary, Eng. M. Rafea, Eng.Sayed El-Shahat, Dr. Hesham Elshazely, Eng. Amal Meala, Eng. Rania Nashaat, Eng. Refaat Elsayed, Dr. Abdel-Azim Aly, Dr.Dina Emara, Eng. Mefreh Abbas El-Sayed, Eng.Hany Mostafa **Consultant**: Engs Tomiji SHIMOJI, Hitoshi TOKU, Tomoyuki KAWABE, Futoshi KUROMI, Izumi KATO, Akira SUDO, Fusataka ARAKAWA, Kazuma AKIYOSHI, Motohisa WAKATSUKI, Hajime KITA, William, Mariam, Dr.Magdy Israel **JICA**: Dr.Ashraf Mabrouk

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Dr. Khaled Toubar stated the TAC meeting Agenda (Attach.2)

3. Follow up of the 21st TAC meetings:

No.	Issue	Decisions	Responsibility	Status
1.	Pile foundation of Ibrahimia, and Bahr Youssef	The DD consultant has to submit detailed calculation sheet of the design of the three alternatives, namely steel pipe piles, cast in-situ RC piles, and precast RC piles according to the DWG request. DWG has to take a decision on the next meeting of the working group on 24th November 2016.	Eng.Magdy DD consultant	achieved
2.	L-sec retaining wall	The DD consultant has to submit the calculation sheet of the U-sec. and L-sec for the raft retaining walls connection. The DWG has to take a decision on the next meeting of the working group on 24th November 2016.	Eng.Magdy DD consultant	Ongoing, and will be discussed on the DWG Today's meeting
3	The project design area	Enhancement the shape of the banks and the outlet of the downstream side of the NDGRs to the natural canal sections of Ibrahimia, and Bahr Youssef, and avoidance of recirculation areas.	Eng.Magdy DD consultant	ongoing
4.	Physical model	PHMWG has to follow up HRI to receive the recommendation and final report by 22nd November 2016. The DD consultant has to submit the design of bed protection to be tested by physical model	Eng.Yasser DD consultant	ongoing
5	Mathematical	The DD consultant has to use the calibrated model at	Eng.Yasser	Model run

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	Model	the same survey of August 2015 to simulate the planned NDGRs effect and submit the final mathematical modelling report including counter measures against DS scouring and US sedimentation of the NDGRs. The DD consultant has also to update the water surface profile, the velocity cross sections of the scenarios outputs, and fulfill the additional comments raised by HRI on the meeting held on 13th November 2016.	DD consultant	using the calibration data of Aug.2015 was done
6		The DD consultant has to refer to the results of mathematical model for testing the flow velocity, direction, and discharge in the small regulators namely Sahelyia, Delgaw, and Abo Gabal and propose recommendation for flow guiding, and reduced sedimentation before.	Eng.Yasser DD consultant	ongoing
7	Cost estimate WG	The DD consultant will get unit price quotation and market research for civil construction material including the main construction companies in Egypt and sheet pile manufacturers in Europe, and the middle east, and companies for pile foundation works implementation before 27th November 2016.	Eng. M.Rafea DD consultant	ongoing
8	PQ documents of the contractor`s contract for NDGRs	The DD consultant has to submit Prequalification documents of the contractor`s contract for NDGRs before the End of January 2017.	Eng. M.Rafea DD consultant	Draft PQ document is being prepared
9	The two illegal mosques	The Environment WG has to finalize the structural drawings and tender documents of the two mosques, and get approval from the engineering affairs directorate in Awkaf on the bidding documents by 27th November 2016.	Eng. Hossam Eng. M.Rafea	Achieved, and the local finance for 2016/2017 was secured
10	Location of borrow sites, and quarries Site installation yard	EWG has to follow the letter from MWRI to the Ministry of Business sector regarding the cotton gin before 27th November 2016 and at the same time proceeding with the other available alternatives of the site installation yard in parallel.	Eng.Hossam Eng. M.Rafea DD consultant	ongoing
11	Administrative	The administrative building will be constructed on	Eng. Hossam	Finalization

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	building of East Dirout District	440 sq. meters for the sole use by the East Dirout District, Supervision consultant's offices of NDGRs, RGBS's offices, and guest house. The EWG has to follow up the finalization of the drawings, and tender documents of the new administrative building. The construction costs will be financed from the local fund and should end before the start of the construction of NDGRs.	Eng. M.Rafea	of drawings, and tender documents are ongoing
12	The control house for NDGRs, and WM	The control house for NDGRs, and WM monitoring control house will be constructed on another separated building (ca. 240 sq. meters) upstream of NDGRs and located on the edge of south edge of the common bank between Diroutia, and left Ibrahimia bank. The DD consultant is responsible for the design and preparation of tender documents, and the construction cost will be financed by the loan.	Dr.Hesham DD consultant	Plan of the building's floors are prepared by the DD consultant
13	Panel pumps for the monitoring locations for WM	The WMWG has to prepare a draft letter to MED regarding the installation of pump panels for five pump stations among the 36 locations, in order to be connected with the telemetry system. If MED will not carryout this task, it shall be included in NDGRs activities, and costs.	Dr.Hesham DDconsultant	ongoing
14	36 WM monitoring locations	The WMWG has to prepare a draft letter to IS regarding the 18 structures for new WM monitoring and telemetry system, which need urgent rehabilitation implementation before February 2020.	Dr.Hesham DD consultant	ongoing
15	Environmental activities	Environmental monitoring activities will be ended by April 2017.EWG has to take action for sustainable monitoring after that.	Eng.Hossam Eng.M.Rafe DD consultant e	

4. Decisions

No.	Issue	Decisions	Responsibility
1.	Outline of the design	The DD submitted outline of the design (Attach. No.3) to be confirmed by TAC	Eng.Magdy DD consultant
2	Pile foundation of Ibrahimia, and Bahr Youssef	Regarding the foundation type for the two (2) large regulators, the table below is approved by TAC. The actual design, diameter, length and numbers of piles need to be considered as soon as possible in DWG.	Eng.Magdy DD consultant

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3	The project design area	The DD consultant has to discuss the shape of the banks and the outlet of the downstream side of the NDGRs to the natural canal sections of Ibrahimia, and Bahr Youssef, and avoidance of recirculation areas before 31st December 2016.	Eng.Magdy DD consultant
4	Physical model	PHMWG has to follow up HRI to receive the recommendation and final report before 1st December 2016.The DD consultant has to submit the design of bed protection to be tested by physical model before 29th November 2016	Eng.Yasser DD consultant
5	Mathematical Model	The DD consultant has to submit the final mathematical modelling report for the result of water surface profile, hydrodynamic model analysis, riverbed variation analysis including counter measures against DS scouring and US sedimentation of the NDGRs.	Eng.Yasser DD consultant
6		The DD consultant has to refer to the results of mathematical model for testing the flow velocity, direction, and discharge in the small regulators namely Sahelyia, and Abo Gabal and submit comments on guiding wall, and reduced sedimentation before 31st December 2016.	Eng.Yasser DD consultant
7	Cost estimate WG	The DD consultant has to get unit price quotation and market research for civil construction material included Arab Contractors, Samcrete, and Orascom, and four sheet pile manufacturers in Europe and the middle east, and seven companies for pile foundation works before 31st December 2016	Eng. M.Rafea DD consultant
8	Prequalification documents of the contractor's contract for NDGRs	The DD consultant may submit draft Prequalification documents of the contractor's contract for NDGRs before the End of January 2017, with condition that JICA approves to submit part of products of DD consultant Team.	Eng. M.Rafea DD consultant
9	The two illegal mosques	The Environment WG has to support the maintenance directorate in tendering to start implementation as soon as possible. Regarding the small mosque between Bahr Youssef and Ibrahimia, the EWG has to check if this mosque is belonging to Awkaf or not. If it belongs to Awkaf, the design should be modified to avoid the mosque's building	Eng. Hossam Eng. M.Rafea
10	Site installation yard	EWG has to follow the letter from MWRI to the Ministry of Business sector regarding the cotton gin and at the same time proceeding with the other available alternatives of the site installation yard in parallel.	Eng.Hossam Eng. M.Rafea DD consultant
11	Administrative building of East Dirout District	The EWG has to review the drawings of the administrative building jointly with the cost estimate, and tendering WG. EWG has to communicate with the drainage directorate in Minia for	Eng. Hossam Eng. M.Rafea DD

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		getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District.	consultant
12	36 WM monitoring locations	The WMWG has to prepare a draft letter to IS regarding the 18 structures for new WM monitoring and telemetry system, which need urgent rehabilitation implementation before February 2020.	Dr.Hesham DD consultant
13	Environmental activities	The cost Estimate and Didding WG has to include the Environmental monitoring activities starting from May 2017 within the TOR of the supervision consultancy services for the construction of NDGRs during answering the clarification of the consultants and before the proposals' submission on 8th December 2016.	Eng.Hossam Eng.M.Rafee DD consultant
14	Illegal building beside Abo Gabal regulator	Head of TAC stated that RGBS will try its best with IS to remove the illegal building, but the possibility is not high, and asked D/D consultant to prepare alternative site plan including access service road close to the building.	Eng.Hossam Eng.M.Rafee DD consultant

5. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 12:45
6. Next meeting: The next meeting will be held at 10:00 a.m. on Monday, December 12th 2016 on MWRI building 1st floor in shaa Allah.

Dr. Khaled Toubar 1/12 KhW 16
Head TAC, NDGRs, and Head of Central
Dept. for Studies, and Designs
Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji 1st Dec. 2016
Team Leader / D/D Consultant

Design WG Meeting Memo(Joint)

Reg. No.	DWG.7-7

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	29th November 2016 (Tue) / 10:00~15:30	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	15th Dec. '16
Attendance	MWRI: Engs. Magdy, El Sayed, Yassor Gomaa, Raffaat El Syed Ahmend, Mah Hagrass, RGBS engineers, HRI : Dr. Abdel Azim Consultant: Eng. Kawabe, Kuromi, Wakatsuki, Akiyoshi, Shimoji and Toku	

1. Follow up of the last meeting

In the response to the request by 22nd TAC, DWG and MMG held the joint meeting to discuss the following matters,

1.Bed protection

- **Protection length**
- **Block weight**

2.Bank shape of downstream at Bahr Yusef and Ibrahimia regulator

3.Measure for the sedimentation at Abo Gabal and Sahelyia regulator

2. Meeting Record

(1) Bed protection

- D/D consultant submitted the report on the design of bed protection length and block weight.
- They explained that the necessary length of Bahr Yusef and Ibrahimia reg. are 30m from the end of concrete apron due to the negative occurrence of the free hydraulic jump, namely, the target hydraulic jump in these regs. is the submerged jump. According to the JP code, in the conditions above, 3~5 times of upstream water depth are stipulated as the necessary length, D/D consultant explained.
- Regarding concrete blocks, D/D consultant shown the evaluation of block weight. Almost 30kg per block is evaluated, in addition, the target velocity is 1.5~2.0m/s at the downstream of apron.
- DWG agree with D/D consultant to place the rip rap downstream the concrete apron without using the concrete blocks.
- DWG accepted consultant's explanation, but the length of bed protection should be finalized by the evaluation of physical model test include the one vent close situation, in addition, the block weight should be evaluated by other several equations and decided by D/D consultant.
- RGBS requested D/D consultant to finalize the design of Badraman and Darioutiah regs. by the result of Mathematical Model (MM).
- DWG requests the D/D consultant to consider the of closing one gate of Bahr Yousef and Ibrahimia Regulator in designing the bed protection.
- DWG request the D/D consultant to design the complete thickness and layers of the rip rap which includes the surface layer, the filter and the geotextile.

(2) Bank shape of downstream at Bahr Yusef and Ibrahimia regulator

- D/D consultant explained with the comparison table about the advantage and disadvantage between the original plan and the upgrading plan. The most important point is the increasing cost for the construction works of the embankment area, in addition, in the original plan, the any harmful situation is not observed in the MM results and the other completed JP project in Bahr Yusef canal, D/D consultant

explained.

- RGBS and HRI insisted that the design should be optimized to the hydraulic conditions and the embankment area is not difficult construction with lower cost than the consultant estimation. D/D consultant, however, said that the cost is in basis of the actual quotation and the influence of the canal water should be considered in the construction works, so the works is not easy.
- As the result of discussion, RGBS requested to make the optimum design from the point of hydraulic advantage regardless the cost matters.

(3) Measure for the sedimentation at Abo Gabal and Sahelyia regulator

- D/D consultant explained with the comparison table about the advantage and disadvantage among the three alternative plans. The guide wall plan in the alternatives does not prevent the sedimentation, the other two plans should be combined, which make the effective solution to the sedimentation.
- HRI accepted the consultant's explanations and said that Abo Gabal and Sahelyia reg. have the enough clearance to the existing canal bed which are evaluated by 3.5~4m between the gate sill and the average bed level. Therefore, the present design is capable to save the sedimentation for a few years. However the sustainable monitoring will make the actual deposit size realized.

(4) Others

- HRI make the comment that in the diversion works at Bahr Yusef and Ibrahimia, the bed protection works should be considered and D/D consultant should explain about the idea and design to those matters. In addition, the shape of corner of double sheet pile at upstream should be designed so that it could make the flow smooth.
- D/D consultant explained that the velocity of the diversion works is evaluated by 1.6m/s based on the calculation which was already discussed in last meeting.
- RGBS requested to show the draft final design of the bed protection in diversion works.

3. Decisions of meeting

Attendants agreed on the followings:

- 30m length of bed protection was agreed by the RGBS and HRI, however, it should be finalized by the evaluation of physical model test.
- The block weight should be evaluated by other several equations and decided by D/D consultant.
- D/D consultant should finalize the design of Badraman and Darioutiah regs. by the result of Mathematical Model (MM).
- The bank shape should be optimized from the view of the hydraulic advantage regardless the cost matter, which should be compared by the two of designs, the sheet pile type and the wet stone pitching type.
- The present plans of Abo Gabal and Sahelyia were agreed as the optimum plan of the the measure to the sedimentation.
- D/D consultant should submit the draft final design of the bed protection in diversion works.
- Next joint meeting is scheduled on 1st December, which will make decision of the block weight and bank shape at downstream in Bahr Yusef and Ibrahimia.

End of memo.

Design WG Meeting Memo(Joint)

Reg. No.	DWG.7-8

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	1st December 2016 (Thu) / 11:00～13:30	1/12/2016 / 1st Dec. '16
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayed, Rafaat, Moh Abdel Wahab, Mah Hagrass, RGBS engineers, HRI : Dr. Abdel Azim, CRI: Dr.Dina, ECRI: Dr.Dina Consultant: Eng. Kawabe, Kuromi, Wakatsuki, Akiyoshi,Shimoji,Toku, Kato	

1. Follow up of the last meeting

DWG and MMG held the joint meeting to discuss the following matters.

1. **Weight of riprap**
2. **Bed protection length of Badraman regulator including Diroutiah canal**
3. **Bank shape at the downstream of Bahr Yusef and Ibrahimia regulator**
4. **Decision of the type of walls at Bahr Yusef and Ibrahimia regulator**
5. **Decision of pile numbers and diameter of Bahr Yusef and Ibrahimia regulator including the wall.**
6. **Others**

2. Decisions of meeting

Attendants agreed on the followings:

- Average diameter (D_{50}) and weight (W_{50}) of riprap for Bahr Yusef and Ibrahimia regulator are 0.4m and 60kg respectively and those for Badraman regulator including Diroutiah are 0.2m and 10kg respectively.
- Bed protection length downstream of Bahr Yusef and Ibrahimia regulator are 30m, Badraman regulator is 15m. However this length might be modified according to the result of physical hydraulic model experiment.
- Regarding the structure of the downstream bank protection works, D/D consultant shall compare wet stone pitching , stone riprap and gabion type from the points of cost and construction period. The necessity of the lateral steel sheet pile wall shall be reviewed together with the bank protection works.
- Type of wall for Bahr Yusef and Ibrahimia regulator is L-shape wall with piles. The foundation of concrete apron between the L-shape walls is raft foundation.
- Diameter and number of piles for Bahr Yusef and Ibrahimia regulator will be decided by RGBS before the 11th December based on the D/D consultant's calculation results.

End of memo.

Design WG Meeting Memo(Joint)

Reg. No.	DWG:7-9

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	22nd December 2016 (Thu) / 11:30~14:30	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, El Sayed Shalaby Mohamed Abdel Wahab, Mahmoud Hagrass, RGBS engineers, CRI: Dr. Dina Consultant: Eng. William, Dr. Magdy	

1. Follow up of the last meeting

In the response to the discussion in the 23rd TAC meeting, DWG discussed the concept of the pile design based on the Egyptian code.

2. Decisions of meeting

- Pile of each structures are designed according to the Egyptian code (settlement method) and the results will be as the following table and both sides agreed to its design.

Structure	Nos. of piles	dia.	Length of piles	note
Bahr Yusef reg.	8x9=72	1,000mm	13.5m	Cast in-place concrete pile
Ibrahimia reg.	7x8=56	1,000mm	15.0m	ditto
Bahr Yusef L-type wall	2x8=16	1,000mm	7.5m	ditto
Ibrahimia L-type wall	2x8=16	1,000mm	7.0m	ditto

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:8-1

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	9th February 2017 (Thu) / 10:00～11:30	
Place	Mr. Ayman Amin Abdelsalam's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Mr. Ayman Amin Abdel Salam, Ahmed Abd Elhamid Abo Elkomsam, Eng. Magdy Consultant: Eng. Shimoji, Toku, Kuromi, Akiyoshi	

1. Agenda and purpose

- The preservation works for the exiting DGRs
- The Consultant identifies the basic concept to preserve the old barrages and regulators in Egypt and collect the experience of similar works by RGBS

2. Discussion

RGBS and the Consultant discussed the handouts made by the Consultant including the questionnaire. The Consultant was provided with the following information from the discussion.

- The existing DGRs is one of 10 old irrigation structures in the Egypt.
- The menu of rehabilitation works depends on the purpose and the status of structures. The structural survey by the visual check and lab. test are usually carried out to check the status of structure, then the reasonable works are planned. Especially, as for the structure preserved without irrigation function, two measures are usually taken as follows;
  1) Limitation and prohibition of the traffic on the structure are applied. In the limitation of traffic, the pedestrian, bikes and/or small cars are commonly allowed, and
  2) The existing gates are removed from the structure or left with fully open. The usual maintenances are the checking steel parts, the painting against corrosion, the visual observation and so on.
- In addition to the above measures, in case the structure is required that the regulation and/or the traffic function are mentioned or enhanced, injection works to the regulator body and remedy for the damaged parts will be necessary.
- To recover the appearance of structure, the sand blaster was applied according to the experience of RGBS.
- The existing DGRs has been rehabilitated two years ago, 2015 with the cost of 3.5 million LE.
- Ministry of Antiquities is responsible, in case barrage/regulators is preserved as a monument. On the other hand, MWRI is responsible for the maintenance and improvement as an irrigation facility.

3. Decision

- The Consultant will make alternative plans for the preservation works based on the TOR and understanding as follows;
  - ✓To consider the preservation of the existing DGRs as a historical architecture without any gates for regulation and the traffic on the regulator excluding the designated traffic.
  - ✓To show the alternative plans for the preservation of the existing DGRs
  - ✓The purpose of the preservation is not to recover the original function as the regulators
- RGBS provided the picture of rehabilitation works and the specification of its works.
- RGBS will provide the contractor list on 12th Feb. which has the experiences of the similar preservation and rehabilitation works with the works expected to the existing DGRS.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:8-2

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	13th February 2017 (Mon) / 10:00~13:00	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Engs. Magdy, Mah Hagrass, RGBS engineers, CRI : Dr. Dina, HRI: Dr. Lateef Consultant: Eng. Shimoji, Kuromi, Akiyoshi, William	

1. Agenda

- Share the entire schedule of DWG meeting
- Review of the bed protection
- Review of the pile design on Bahr Yusef and Ibrahimia
- Type of Bank type at downstream on Bahr Yusef and Ibrahimia

2. Discussion

1) Share the entire schedule of DWG meeting

- D/D consultant explained about the entire agenda and schedule.

2) Review of the bed protection

- D/D consultant explained the design of bed protection based on the last DWG meeting held on the 1st December 2016. RGBS requested D/D consultant to clarify the filter layer beneath the stone pitching of bed protection, but D/D consultant insisted that geotextile is installed with filter layer and, so it's enough design for the suction and the consideration is not needed any more.

3) Review of the pile design

- D/D consultant explained the design of the pile design based on the last DWG meeting held on the 22nd December 2016.

4) Type of Bank type at downstream on Bahr Yusef and Ibrahimia

- D/D consultant explained the three alternative plans of bank type which are Sheet pile type, Wet stone pitching and Gabions wall. D/D consultant recommend the Gabions wall because of the ease of construction works and matching construction periods with winter closure periods.

3. Decision

- RGBS agreed the discussion schedule.
- RGBS will make sure the design of filter layer of bed protection include with Dr. Abdel Azim.
- RGBS and D/D consultant agreed to the pile design of Bahr Yusef and Ibrahimia which are same specification with the result of discussion on the 22nd December 2016.
- RGBS will discuss and make the decision of bank type till next meeting.

4. Others

- The next meeting will be held in 15th Feb. and the other meeting will be held in 16th Feb.
- D/D consultant submitted the drawing of the regulators and buildings to RGBS to ask for their comments.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:8-3

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	15th February 2017 (Wed) / 10:30～13:00	16/2/2017 / 16th Feb. 2017
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Eng. Magdy, Eng. Mohmoud Rafee Mohamed Consultant: Eng. Shimoji, Kuromi, Akiyoshi, William	

1. Agenda

- Share the status of discussion in WG on the bank shape
- Structural analysis of the regulators
- Road alignment plan

2. Discussion

1) Share the status of discussion in RGBS on the bank shape

- RGBS requested D/D consultant to postpone the discussion to the next meeting on this Thursday.

2) Structural analysis of the regulators

- D/D consultant explained the result of structural analysis and how it was calculated. D/D consultant showed the output of the analysis on Bahr Yusef regulator which was done by the commercialized software made by Japanese developer. In addition, D/D consultant made sure of the basic conditions such as the allowable stress of concrete and reinforce bar, and 13 loading cases.
- RGBS requested to show the abbreviation of loading cases and summary table of result.

3) Road alignment plan

- D/D consultant showed the alternative approach plan to the existing DGRs. D/D consultant explained some difficulties in evaluation of the exiting bank facility. Finally D/D consultant insisted that the approaching method to the existing DGRs and the railway crossing are out of D/D consultants scope, and the implementation of that idea is costly.

3. Decision

- D/D consultant agreed to postpone the discussion of the bank shape.
- RGBS understood the way of structure analysis, but they requested to show the simple calculation of the main parts in order to check the calculation done by Japanese software.
- RGBS requested D/D consultant to make a report on the road alignment plan with the construction cost and to explain the concept in TAC meeting which will be held on 20th February.

4. Others

- Regarding the construction yard, RGBS would show their idea in the meeting from the Working Group of Construction Plan.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:8-4

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	16th February 2017 (Thu) / 11:15～15:00	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	RGBS: Eng. Magdy, Eng. Mohmoud, Eng. Hagrass, Eng. Mohamed CRI: Dr. Dina HRI: Dr. Abdel Azim Consultant: Eng. Kuromi, Akiyoshi, Otsuki, Kita, William, Dr. Magdy	

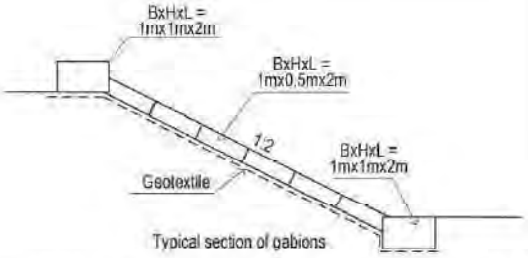
Handout material

- Comparison table of the bank shape at downstream of Bahr Yusef and Ibrahimia in NDGRs
- Examination of structural analysis for the regulators (with the 3D general view of re-bar arrangement)

1. Agenda

1) Design of bank shape
2) Structural analysis of the regulators
3) Design of bed protection
4) Road alignment plan

Design of Gabion after discussion



2. Decision

1) Design of Bank Shape

- Gabion work is applied with the change in bank slope ratio (1:2) and in their placement method (parallel to the bank shape).
- The D/D consultant should carry out the check stability for the side slope.
- The dimensions of gabions are the followings:
  On the top and toe : W x H x L = 1.0m x 1.0m x 2.0m
  The gabions on the slope : W x H x L = 1.0m x 0.5m x 2.0m.
- D/D consultant will send the cost comparison of the gabion work between the design before (slope ratio = 1:1) and after (slope ratio = 1:2) today's DWG meeting.

2) Structural analysis of the regulators

- DWG received the all the drawings and the calculation results (summary).
- The cost estimation work can be proceeded based on the submitted documents above although DWG will parallelly check the submitted ones and will try to make comment up to 28th February 2017.

3) Design of the Bed Protection

- DWG agreed on the drawings D/D consultant explained in the meeting, and asked to add the table to show the diameter of stone (D_{15}, D_{50}, D_{85}) for top layer, filter and the base material. Also, the D/D consultant should submit the complete design calculation for the complete protection layer.

4) Road Alignment Plan

- RGBS decided to raise this plan in 25th TAC meeting although D/D consultant insisted that including the plan in detailed design will make delay of the D/D study because of its progress and also because the authorized organization is Assiut governorate.

Abdelazim

End of memo.

Meeting Memo (25th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	20th February 2017 (Mon.) / 10:00~14:30
Place	Central library meeting's room (MWRI) Building (2nd Floor)
Attendance	**MWRI**:Dr.Khaled Toubar, Eng. Ramadan Kamal, Eng. Yasser Gomaa, Eng.Hossam Abdelaziz, Eng.Magdy El-Bendary, Eng.M.Abdelaleim, Eng.Ehab El-Gouhary, Eng. M. Rafee, Dr. Hesham Elshazely, Eng. Amal Meala, Eng. Rania Nashaat, Eng. Refaat Elsayed,Dr. Abdel-Azim Aly, Dr.Amira Abdelhady, Dr.Ibrahim Ragab, Dr.Dina Emara, Dr.Hany Mostafa, Eng.Mahmoud Hagras, Eng.Ashraf Nagi, Eng.Nahed Sabra **Consultant**: Engs Tomiji Shimoji, Hitoshi Toku, Tomoyuki Kawabe, Shigeru Otsuki, Fusataka Arakawa, Akira Sudo, Rie Kitao, Hajime Kita,William, Mariam **JICA**: Mr.Yamazaki Hajime

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Dr. Khaled Toubar stated the TAC meeting Agenda (Attach.2)

3. Follow up of the 24th TAC meetings:

Dr.Hesham El-Shazely presented the follow up of the last 24th TAC meeting

No.	Issue	Decisions	Responsibility	Status
1	The outlet shape of the banks DS the NDGRs	The DWG has to follow up the DD consultant to submit the final drawings of the shape of the banks and the outlet of the downstream side of the NDGRs to the natural canal sections of Ibrahimia, and Bahr Youssef, and make sure the avoidance of recirculation areas, and submit it to the PHMWG	Eng. Magdy	Achieved, and submitted to HRI on 16th February 2017
2	Design of Riprap	The DWG has to follow up the DD consultant to submit a complete design of Riprap protection layers DS the NDGRs	Eng. Magdy	Achieved
3	Physical model	PHMWG has to discuss the comments of the draft final report with HRI	Eng. Yasser	Achieved
4		The PHMWG has to submit the final drawings of the shape of the banks and the outlet of the downstream side of the NDGRs to the natural canal sections of Ibrahimia, and Bahr Youssef to HRI in order to complete the physical model study, and flume study	Eng. Yasser	Ongoing

5	Cost estimate WG	Preparation of Tender documents and cost estimate WG has to submit an updated itemized costs by project components	Eng. M. Rafee	Ongoing, a draft will be submitted by the middle of March 2017
6	The two illegal mosques	Environment WG has to follow up the decision of the 3rd PIU to get the allocation decree of land construction from IS	Eng. Hossam Eng. M. Rafee	A letter was issued from the Head of ID to the head of RGBS
7	Site installation yard	Preparation of Tender documents and cost estimate WG has to study the possibility of making a sealed bid auction for renting the available lands for site installation nearby the project site	Eng. M. Rafee	Other alternatives are being studied
8	Administrative building of East Dirout District	The studies, Researches, and Contracts Directorate has to contact the drainage directorate in Minia for getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District.	Eng. Hossam Eng. M. Rafee	Ongoing
9	36 WM monitoring locations	The WMWG has to follow up letter to IS regarding the 18 structures for new WM monitoring and telemetry system, which need urgent rehabilitation implementation before February 2020.	Dr. Hesham	Ongoing
10	H-Q curve for the 42 locations	The WMWG has to prepare a note regarding art. 8.1 of the MD dated 21st May 2014 regarding the grant for Technical Assistance (TA) to finance the O&M of facilities and equipment, how to include discharge measuring equipment as ADCP in the grant proposal	Dr. Hesham	Ongoing
11	Environmental activities	The EWG has to discuss how the piezometers monitoring activities will continue after May 2017.	Eng. Hossam Eng. M. Rafee	Ongoing

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4. Discussion:

4.1 Eng. M. Rafee presented the situation of the cost estimate and preparation of tender documents (Attach.3)

4.2 Eng. Magdy presented the performance of the DWG (Attach.4)

4.3 Eng. Yasser presented the updated situation for physical, and mathematical models WG (Attach.5)

4.4 Dr. Hesham Elshazely presented the updated situation for WMWG (Attach.6)

4.5 The DD consultant presented the updated situation of the DD Phase during the currently 8th Assignment of the DD Consultant (Attach.7) as follows:

4.5.1 The future work schedule till the end of May 2017: The cost estimate will be completed by the end of February 2017, and will be submitted to JICA by the beginning of March 2017, and the cost estimate Experts will start their next field visit by the middle of March 2017 after getting the approval of JICA H/Q in order to finalize the cost estimate report and submit it on 20th April 2017.The next mission of the DD consultant (9th Assignment) for the rest of the team will be by the beginning of April 2017.The draft final report of the study is currently prepared, and will be submitted to JICA H/Q by the end of March 2017, and will be discussed with RGBS during April 2017, and finalized during May 2017 after getting RGBS comments.

4.5.2 Status of the Design activities: The Enhancement of the outlet shape of the banks DS the NDGRs, bed protection works (riprap), and embankment works are finalized, while the preservation works of the old DGRs as a historical architecture. In this matter RGBS requested D/D consultant to visualize the landscape of NDGRs and DGRs to check the matching of old and new architecture according to the guidelines of the Ministry of State of Antiquities., and the road alignment between NDGRs and DGRs and connection of the service road over NDGRs with the existing approaching roads west and east of the project site were discussed among RGBS, JICA and D/D consultants. D/D consultant explained it is out of project scope. But RGBS asked D/D consultant to study the road alignment. JICA stated that it is out of scope and therefore this task should be asked JICA first by the official letter, and RGBS agreed.

4.5.3 The construction Planning: the site installation yards are not available in the cotton gin yard, and alternative plan of using the common bank between Diroutia and Ibrahimia (3000m^2) as an area of the batching plant, and the common bank between Badrman, and Bahr Youssef (the area of west Dirout District and WD buildings app.2800m^2) will be used as a stock area. For the other facilities required in the site installation yards, RGBS presented their idea that the contractor rents an area of two feddan during the construction period of Bahr Youssef new regulator (about two years), and this task is included in the BOQ of the contractor's bidding documents. The EWG has to take all the arrangements with WD directorate in Assiut, and GD of Irrigation in Minya regarding the reallocation of the employees in the old WD and west Dirout district buildings in the new Administrative building.

The double sheet piling and diversion channel sheet piling works are newly planned by consultants to make negative effect as small as possible to the Illegal Lawyers club building on the left bank of Irad Delgaw canal. The material testing of

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aggregates, and sand from the quarries of 4 borrow sites, one in Minia, two in Assiut, and one in Dirout are still going on.

4.5.4 Achievement of Bidding Documents: The DD consultant submitted the first draft of the bidding documents, in which the Prequalification documents are separated from the other bidding documents. Similar bidding documents of Yen STEP loan projects financed by JICA in Egypt are requested from JICA Cairo office for clarifying Tax issues (custom, duties, and VAT). The General Technical specifications for civil and electromechanical equipment will be separated. The revised draft bidding documents will be submitted to JICA-HQ on 24th February 2017

4.5.5 Physical, and Mathematical Hydraulic Models WG: The installation of the Physical hydraulic model at HRI laboratory hall must be modified according to the new downstream banks shape, length of bed protection with riprap (15m for the small scale regulators, and 30m in the large scale regulators).

4.5.6 Ongoing activities of the Environment WG: The review of the EIA report and the base line monitoring activities in pre-construction stage were discussed.

4.5.7 Ongoing activities of the WMWG: a draft of the technical specifications, BOQ, and drawings of the new telemetry facilities have been submitted to the WMWG on 6th February 2017. The details of Cost estimation, O&M plan, and Equipment of maintenance will be submitted by the end of the 8th Assignment. The WMWG has updated and corrected the telemetry sites survey carried out on last September 2016, during a site visit from 12to 14th February 2017.

4.5.8 Ongoing activities of the project cost Estimation: A new cost estimation is under preparation, and started in the last mission of the cost estimate Japanese Expert on last December 2016 including the procurement of construction materials from the local market (sheet piles, and the gates for small scale regulators), and Japanese products for procurement will be Double leaf gates for large scale regulators only.

5. **Decisions**:

No.	Issue	Decisions	Responsibility
1.	The shape of the banks, and the outlet DS NDGRs	The TAC agreed on the submitted outlet streamlined shape of the banks, and the bank protection works DS will be constructed with Gabion type, However the DD Consultant must submit the design of the Gabion cross section, and the calculation sheet including checking the stability of slope before 20th March 2017	Eng. Magdy DD consultant
2	Bed protection	The TAC agreed on the submitted drawings of the bed protection layers DS the NDGRs from armor 90 cm thickness riprap layer,10cm filter layer, and Geotextile sheet (30m length of Ibrahimia, and Bahr Youssef, and 15m) for the Badraman regulator	Eng. Magdy DD consultant
3	Service Road alignment	RGBS asked the DD consultant to prepare the design of the service road over NDGRs with its connection with the existing approaching roads west and east of the project site, and the approach road to the level crossing at the old DGR with the	RGBS JICA

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		railway before 20th March 2017, However JICA asked RGBS to send the official letter to discuss this matter.	
4	Preservation of the old DGR	The DD consultant will collect the information related experiences in Egypt and propose the alternative plans for the preservation works of the old DGRs as a historical architecture according to the guidelines of the Ministry of State of Antiquities, identify the measure of preservation, landscape requirements, and the matching between the old architecture of DGR and the new architecture of NDGRs before 20th March 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study.	Eng. Magdy DD consultant
5	Physical model	PHMWG has to submit the new shapes of the banks, and the outlet DS NDGRs, the bed protection details, and the bank protection works to HRI, and considering the opening of the old Ibrahimia lock to finalize the physical hydraulic model tests according to the Negotiation minutes with HRI before 20th March 2017	Eng. Yasser
6		PHMWG has to follow up the fulfillment of all the comments from the DD consultant, and the WG on the draft pre-final report with HRI before 20th March 2017	Eng. Yasser
7	Cost estimate WG	The DD consultant has to update the cost estimate report including the procurement of construction materials from the local market (sheet piles, and the gates for small scale regulators), and Japanese products for procurement will be Double leaf gates for large scale regulators only, and finalize the cost estimate report and submit it to TAC before 20th ~~April~~ March 2017	Eng. M. Rafee DD consultant
8	Bidding documents of the contractor's contract for NDGRs	The DD consultant has to submit the draft final bidding documents of the construction contract of NDGRs with both pattern (separate document for the Prequalification, and combined documents) for NDGRs including the lessons learned from similar bidding documents of Yen STEP loan projects financed by JICA in Egypt especially for Tax issues (custom, duties, and VAT).The General Technical specifications for civil and electromechanical equipment have to be separated. The revised draft bidding documents have to be submitted to TAC before 20th March 2017	Eng. M. Rafee DD consultant
9	The two illegal mosques	The Environment WG has to support the maintenance directorate in the tendering process to start implementation as soon as possible.	Eng. Hossam Eng. M. Rafee

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10	Site installation yard	TAC approved the consultant proposal to install the batching plant at the common bank between Diroutia and Ibrahimia of the old building of East Dirout District (3000m^2)	Eng. Hossam Eng. M. Rafee DD consultant
11	Administrative building of East Dirout District	The EWG has to review the drawings of the administrative building jointly with the cost estimate, and tendering WG. EWG has to communicate with the drainage directorate in Minia for getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District before 20th March 2017	Eng. Hossam Eng. M. Rafee
12	WM activities	The DD consultant has update the specifications, BOQ, and drawings of the new telemetry facilities based on the site surveys, and include Digital on/off sensor for the five pump stations. These sensors will be connected with the connector/relay spare at the pump electrical panel, to the RTU in the telemetry enclosure where the sensors of WL recorders will also be connected	Dr. Hesham DD consultant
13	Environmental activities	The baseline environmental monitoring survey for the pre-construction stage will be done within the contract of consultancy services for supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee DD consultant

6. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 2:30 PM. The next TAC meeting will be held on Monday 20th March 2017 at Central library meeting's room (MWRI) Building (2nd Floor).

Dr. Khaled Toubar 2/3/17

Head TAC, NDGRs, and Head of Central Dept. for Studies, and Designs

Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Design WG Meeting Memo

Reg. No.	DWG:8-5

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	23rd February 2017 (Thursday) / 10:30~13:00	23/2/2017 23rd Feb 2017
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Eng. Magdy, Eng. Mohamed Abd El Wahab , Dr. Dina, Eng. Diana Ibrahim, Eng. Mahmoud Rafee Consultant: Eng. Shimoji, Dr. Magdy, Eng. Mariam	

1. Discussion

- Complete the revision of all structural analyses of the regulators components (Bridge, foundation, piers, , abutment, piles)
- RGBS requested all the structural analysis component's drawings in a hardcopy
- reviewing all the structural analyses calculations of the control buildings (foundation, beams, slabs, stairs, columns) with submission of the hardcopy and softcopy as well
- RGBS advices to put in the tender documents an obligation to the contractor to make at least two pore holes for the control buildings sites to check the soil baring capacity and then review the design of footings and columns according to the results. This must be mentioned also in the SANYU consultant's final report.
- RGBS asked the consultant to submit the design of the Electro-mechanical system (gate system).

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:8-6

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	28th February 2017 (Wed) / 10:30～11:20	
Place	Eng. Magdy's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	MWRI: Eng. Magdy, Eng. Mohamed Abd El Wahab, Dr. Dina, Eng. Dinna Ibrahim Consultant: Eng. Shimoji, Eng. William, Dr. Magdy	

1. Confirmation on the Meeting

1) Design of the Bridge

- Differential settlement of all the bridge was discussed.

  RGBS asked DD consultants to check the effect of differential settlement if it is within the allowable range. DD consultants explained the result of the check by the software, and RGBS accepted it.

2) Design of the Regulators

- Design of all the new regulators were checked by RGBS.

  RGBS has no objection and no comment on the design.

3) Design of the Buildings

- Design of all the buildings were reviewed by RGBS.

  RGBS accepted the result of the design of the buildings, but RGBS asked DD consultants to mention in the Draft Final Report that the bearing capacity of the soil layer by borehole survey must be checked before the construction to review the design of the foundation.

End of memo.

Memo of Wrap Up Meeting of the Eighth Assignment Activity

1. Working Group

1-1 Design WG

Following issues were discussed to finalize the design, drawings and BQ of the construction of NDGRs, and to proceed the 1st version of the cost estimation.

- Outlet shape of the banks for the two large scale regulators (New Bahr Yusef and Ibrahimia Regulators).
- Downstream canal bed protection work by the riprap layers.
- Alternative plans for the preservation works will be proposed based on the similar experiences in Egypt collected by DD Consultants.
- Stability analysis for the bank slope with gabion carried out by DD Consultants.

Safety factor = 1.757 (Normal case)
= 1.232 (Earth quake case Kh=0.08)

1-2 Water Management WG

- Following first version of documents were submitted through WG and under checking by Central Directorate for Telemetry.
- Technical specification
- Drawing for water management system
- Bill of Quantity
- Drawing for tentative location of water level sensors.
- Operation and maintenance plan will be discussed and proposed.

1-3 Construction Plan WG

- The location of the temporary stock yard and its use were confirmed between RGBS and DD Consultants as follows,

  (1) Batching plant will be installed at the common bank between the Dirouti a and Ibrahimia canal, where the existing buildings of East Dirout District is located.

  (2) The remaining required stock yard of about two (2) feddans will be covered by several numbers of alternative plans. Even if there is still remaining area after the alternative plans, it will be procured as leased land before the commencement of the real construction stage by contractor.

- Construction plan

  To make negative effect as small as possible to the illegal Lawyers club building on the left bank of Irad Delgaw canal, DD consultants newly planned the double sheet piling and diversion channel works.

1-4 Bidding Document WG

- Initial draft of Bidding Documents was presented and series of discussions have been made.
- Focuses of discussions were mainly on the Information to Bidders (ITB), BDS (Bid Data Sheet), EQC (Evaluation and Qualification Criteria) and PC (Particular Condition).
- Together with information from JICA on other projects (mainly Metro Project), Draft Bidding Documents was made, and submitted to JICA-HQ (both combined type and separated type) on 24 February 2017 for scrutiny.
- Part of 1st draft of Technical Specifications, such as "General Provision" and "General TS", was submitted to WG members for review and comment.
- Remaining part, such as "Particular TS", will be submitted as soon as it is completed.

1-5 Environmental & Social Consideration WG

At the EWG, following matters are agreed:

- Relocation sites of two mosques under the Ministry of Awqaf were fixed and they will be shifted before works.
- Illegal club will not be damaged by the construction works except noise and dust during construction period, and it is does not need to relocate.
- Stockyard area will be rented from some private land owners nearby based on the bidding and contract. It was confirmed that there are some owners who have willingness to rent their lands.
- S/V consultant will be responsible for the environmental monitoring during pre-construction stage.
- RGBS is requested to secure budget for environmental monitoring during the operation stage, as mentioned in the Minutes of Discussions.

Based on the discussion with EEAA, Environmental Monitoring Plan will be updated by the D/D consultant, and RGBS will review it.

1-6 Physical Hydraulic Model Test WG

- Regarding the 3D Physical Hydraulic Model Test and 2D Model Test, integrated evaluation was carried out by DD Consultants based on the report which was submitted by HRI.

- DD Consultants will send the final design of the downstream canal bed protection work by the riprap layers as soon as possible.
- DD Consultants explained the result of the Mathematical Model Analysis in the case of opening of navigation lock of the Ibrahimia regulator.

2. Progress & Future Schedule of the Cost Estimation

2-1 Cost Estimation

- The first version of the cost estimation will be submitted to JICA H/Q on 2nd March 2017.
- It will take two (2) weeks for getting an approval by JICA H/Q.
- The cost estimation experts will come to CAIRO on 17th March and submit the result of cost estimation to RGBS.
- A series of discussion on the construction cost estimation of the NDGRs will be held until 20th April and the second version of the cost estimation will be finalized at the same time.

2-2 Draft Final Report (DF/R)

- The first version of the DF/R will be submitted to JICA H/Q on 20th March 2017.
- DD Consultants will receive the comments from JICA H/Q on 30th March 2017.
- DD Consultants will come to CAIRO on 1st April 2017.
- A series of discussion on the DF/R will be started on 2nd April 2017 in parallel with the cost estimation WG meeting.
- The discussion will be held until 20th April and the second version of the DF/R will be finalized after getting comments from RGBS by end of April 2017.

Cairo 2nd March 2017

KhT 2/3/17

Dr. Khaled Touber
Head of Central Department for CD-SD,
RGBS, Ministry of Water Resources and Irrigation

Eng. Tomiji Shimoji
Team Leader of JICA Study Team

Meeting Memo (26th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	20th March 2017 (Mon.) / 10:00～12:30
Place	Central library meeting's room (MWRI) Building (2nd Floor)
Attendance	**MWRI**:Dr.Khaled Toubar, Eng. Ramadan Kamal, Eng. Yasser Gomaa, Eng.Hossam Abdelaziz, Eng. Ahmed Abou El-Qomsan, Eng. M. Rafee, Dr. Hesham Elshazely, Eng. Amal Meala, Eng. Rania Nashaat,Dr. Abdel-Azim Aly, Dr.Amr Sinaa, Dr.Ibrahim Ragab, Dr.Dina Emara, Dr.Hany Mostafa, and Eng.Mahmoud Hagras, Eng.Abou Bakr Taha **Consultant**: Engs Tomiji Shimoji, Takasaki, Kadawaki, William, Mariam **JICA**: Mr.Yamazaki Hajime, Dr.Ashraf Mabrouk

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Dr. Khaled Toubar stated the TAC meeting Agenda (Attach.2)

3. Follow up of the 25th TAC meetings:

Dr.Hesham El-Shazely presented the follow up of the last 25th TAC meeting

No.	Issue	Decisions	Responsibility	status
1.	The shape of the banks, and the outlet DS NDGRs	The TAC agreed on the submitted outlet streamlined shape of the banks, and the bank protection works DS will be constructed with Gabion type, However the DD Consultant must submit the design of the Gabion cross section, and the calculation sheet including checking the stability of slope before 20th March 2017	Eng. Magdy DD consultant	achieved
2	Bed protection	The TAC agreed on the submitted drawings of the bed protection layers DS the NDGRs from armour 90 cm thickness riprap layer,10cm filter layer, and Geotextile sheet (30m length of Ibrahimia, and Bahr Youssef, and 15m) for the Badraman regulator	Eng. Magdy DD consultant	achieved
3	Service Road alignment	RGBS asked the DD consultant to prepare the design of the service road over NDGRs with its connection with the existing approaching roads west and east of the project site, and the approach road to the level crossing at the old DGR with the railway before 20th March 2017, However JICA asked RGBS to send the official letter to discuss this matter.	RGBS	pending
4	Preservation of the old DGR	The DD consultant will collect the information related experiences in Egypt and propose the alternative plans for the preservation works of the old	Eng. Magdy DD consultant	ongoing

		DGRs as a historical architecture according to the guidelines of the Ministry of State of Antiquities, identify the measure of preservation, landscape requirements, and the matching between the old architecture of DGR and the new architecture of NDGRs before 20th March 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study.		
5	Physical model	PHMWG has to submit the new shapes of the banks, and the outlet DS NDGRs, the bed protection details, and the bank protection works to HRI, and considering the opening of the old Ibrahimia lock to finalize the physical hydraulic model tests according to the Negotiation minutes with HRI before 20th March 2017	Eng. Yasser	ongoing
6		PHMWG has to follow up the fulfillment of all the comments from the DD consultant, and the WG on the draft pre-final report with HRI before 20th March 2017	Eng. Yasser	ongoing
7	Cost estimate WG	The DD consultant has to update the cost estimate report including the procurement of construction materials from the local market (sheet piles, and the gates for small scale regulators), and Japanese products for procurement will be Double leaf gates for large scale regulators only, and finalize the cost estimate report and submit it to TAC before 20th March 2017	Eng. M. Rafee DD consultant	achieved
8	Bidding documents of the contractor's contract for NDGRs	The DD consultant has to submit the draft bidding documents of the construction contract of NDGRs with both pattern (separate document for the Prequalification, and combined documents) for NDGRs including the lessons learned from similar bidding documents of Yen STEP loan projects financed by JICA in Egypt especially for Tax issues (custom, duties, and VAT).The General Technical specifications for civil and electromechanical equipment have to be separated. The revised draft bidding documents have to be submitted to TAC before 20th March 2017	Eng. M. Rafee DD consultant	ongoing

KH TS

9	The two illegal mosques	The Environment WG has to support the maintenance directorate in the tendering process to start implementation as soon as possible.	Eng. Hossam Eng. M. Rafee	ongoing
10	Site installation yard	TAC approved the consultant proposal to install the batching plant at the common bank between Diroutia and Ibrahimia of the old building of East Dirout District (3000m^2)	Eng. Hossam Eng. M. Rafee DD consultant	achieved
11	Administrative building of East Dirout District	The EWG has to review the drawings of the administrative building jointly with the cost estimate, and tendering WG. EWG has to communicate with the drainage directorate in Minia for getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District before 20th March 2017	Eng. Hossam Eng. M. Rafee	ongoing
12	WM activities	The DD consultant has update the specifications, BOQ, and drawings of the new telemetry facilities based on the site surveys, and include Digital on/off sensor for the five pump stations. These sensors will be connected with the connector/relay spare at the pump electrical panel, to the RTU in the telemetry enclosure where the sensors of WL recorders will also be connected	Dr. Hesham DD consultant	ongoing
13	Environmental activities	The baseline environmental monitoring survey for the pre-construction stage will be done within the contract of consultancy services for supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee, DD consultant	achieved

4. Discussion:

4.1 Eng. M. Rafee presented the situation of the cost estimate and preparation of tender documents (Attach.3), and highlighted the following items:

4.1.1 The new cost estimate of the project is 7,738,305,000 Yen, which is still higher than the loan amount, and a cost overrun of 1.9Billion Yen is expected (about 300 million LE) and an itemized cost estimate per project components will be submitted

4.1.2 The construction yard areas allocation in the available areas in west Dirout district, and water distribution buildings

4.1.3 The sand quarries sampling in Minya Governorate, where very fine sand, and high chloride content in gravel were recorded

4.1.4 The new environmental monitoring parameters for the baseline study before

construction

4.1.5 The survey of the potentially affected people PAPs by the project implementation (e.g. fishermen) will be included in the environmental activities including the compensation mechanism

4.1.6 The final monitoring report of the piezometers will be submitted by the middle of April 2017, and the monitoring activities after that will be done by the East Minya directorate till the beginning of the consultancy services of the project

4.1.7 The need to speed up the process of removal of the violated constructions which impede the project`s construction as the lawyers club, and the stock yard for crop on the left bank of Irad Delgawy regulator

4.2 Eng. Ahmed Abou El-Qomsan presented the performance of the DWG (Attach.4) and highlighted the following items:

4.2.1 The DD consultant is currently check the stability of slope for the embankment works DS Ibrahimia canal, the failure envelope of the slope, and stability analysis report will be submitted

4.3 Eng. Yasser presented the updated situation for physical, and mathematical models WG and highlighted the following items:

4.3.1 The PHMWG submitted the new shapes of the banks, the outlet DS NDGRs, the bed protection details, the bank protection works, considering the opening of the old Ibrahimia lock, and the new laboratory tests package to HRI in order to finalize the physical hydraulic model tests, and submit the final report before 30th April 2017

4.4 Dr. Hesham Elshazely presented the updated situation for WMWG, and highlighted the following items:

4.4.1 The WMWG sent the comments of the tender documents to the DD consultant, and the DD consultant submitted a modified version for the drawings and specifications of the new telemetry facilities to be installed within NDGRs project

4.5 The DD consultant presented the updated situation of the DD Phase during the currently 9th Assignment of the DD Consultant (Attach.5) as follows:

4.5.1 The Detailed cost estimate (Analysis based on the end of January 2017)was submitted after the approval of JICA HQ. The expected price escalation till the beginning of the project construction is also presented

4.5.2 The draft English version of the final DD report will be submitted to JICA on 31st march 2017, and the comments of JICA will be delivered on 9th April 2017, in parallel way, DF/R will be submitted to TAC on 31st March 2017 by Email.The WG comments are expected for submission by the end of April 2017

4.5.3 The final study report editing will be completed by the end of May 2017

5. Decisions:

No.	Issue	Decisions	Responsibility
1.	The shape of the banks, and the outlet DS NDGRs	The DD Consultant must submit the check of slope stability, and the design of the Gabion cross section to the DWG before 23rd March 2017.The DWG has to approve and sign the drawings and submit it to the PHMWG	Eng. Abou El-Qomsan DD consultant
2	Preservation of the old DGR	The DD consultant has to submit preservation methods of the old DGRs as a historical architecture according to the guidelines of the Ministry of State of Antiquities, taking into consideration the matching between the old architecture of DGR and the new architecture of NDGRs before 20th April 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study.	Eng. Abou El-Qomsan DD consultant
3	Physical model	PHMWG has to submit the new shapes of the banks, and the outlet DS NDGRs to HRI, and considering the opening of the old Ibrahimia lock to finalize the physical hydraulic model tests according to the minutes with HRI before 10th April 2017	Eng. Yasser
4		PHMWG has to follow up the the comments from the DD consultant, and the WG on the draft pre-final report with HRI to prepare the final version after carrying out the required tests for small regulators alternatives, and the riprap protection layer before 30th April 2017	Eng. Yasser
5	Cost estimate WG	The DD consultant has to update the cost estimate report according to the instructions of the CEWG and submit an itemized cost estimate per project components and submit it to TAC	Eng. M. Rafee DD consultant
6	The two illegal mosques	The Environment WG will follow the maintenance directorate to start the tendering process to start implementation as soon as possible.	Eng. Hossam Eng. M. Rafee
7	Site installation yard	EWG has to get the necessary approvals regarding using the areas within the west Dirout and water distribution buildings to secure the required areas of all site installation and stock yards facilities	Eng. Hossam Eng. M. Rafee
8	Administrative building of East Dirout District	The EWG has to communicate with the drainage directorate in Minia for getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District	Eng. Hossam Eng. M. Rafee

9	Environmental activities	The environmental monitoring activities for piezometers observation will be done by the east Minya directorate from the Middle of April 2017 till the beginning of the consultancy services of the supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee
10	WM activities	The WMWG has to revise the updated specifications, BOQ, and drawings of the new telemetry facilities. The EMWG has to prepare needs assessment for the necessary equipment to carry out the discharge measurements for preparing the H-Q curves for the selected 48 locations, and also for the piezometers recording. WMWG has to prepare technical and financial proposal regarding the Technical Assistance Grant which is considered to finance technical support activities during construction, O&M of civil and hydro-mechanical works as well as water distribution system according to the MD signed between RGBS and JICA on 21st May 2014	Dr. Hesham DD consultant

6. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 12:30 PM. The next TAC meeting will be held on Monday 10th April 2017 at Central library meeting's room (MWRI) Building (2nd Floor).

Dr. Khaled Toubar 28/3/17

Head TAC, NDGRs, and Head of Central Dept. for Studies, and Designs

Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

28th March 2017

C.C. Head of RGBS

C.C. TAC Members

Meeting Memo (27th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	10th April 2017 (Mon.) / 10:00~12:30
Place	Central library meeting's room (MWRI) Building (2nd Floor)
Attendance	**MWRI:** Dr.Khaled Toubar, Eng. Ramadan Kamal, Eng. Yasser Gomaa, Eng.Hossam Abdelaziz, Eng. Ahmed Abou El-Qomsan, Eng. M. Rafee, Dr. Hesham Elshazely, Eng. Amal Meala, Eng. Rania Nashaat,Dr. Abdel-Azim Aly, Dr.Ibrahim Ragab, Dr.Dina Emara, Dr.Hany Mostafa, Eng.Mahmoud Hagras,Eng. Eman Fathy **Consultant:** Engs Tomiji Shimoji, Hitoshi Toku, Kazumi Akyoshi, Futoshi Kuromi, Masanobu Kadawaki, Kazunori Takasaki, Motohisa Wakatsuki, Fusataka Arakawa, Susumu Murase Shigeru Otsuki, Akira Sudo,Rie Kitao, Hajime Kita ,William, and Mariam **JICA:** Mr.Yamazaki Hajime

1. Dr. Khaled Toubar, the Head of central directorate of Studies, and Designs, and Head of TAC, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Dr. Khaled Toubar stated the TAC meeting Agenda (Attach.2)

3. Follow up of the 26th TAC meetings:

Dr.Hesham El-Shazely presented the follow up of the last 25th TAC meeting

No.	Issue	Decisions	Responsibility	status
1.	The shape of the banks, and the outlet DS NDGRs	The DD Consultant must submit the check of slope stability, and the design of the Gabion cross section to the DWG before 23rd March 2017.The DWG has to approve and sign the drawings and submit it to the PHMWG	Eng. Abou El-Qomsan DD consultant	achieved
2	Preservation of the old DGR	The DD consultant has to submit preservation methods of the old DGR as a historical architecture according to the guidelines of the Ministry of State of Antiquities taking into consideration the matching between the old architecture of DGR and the new architecture of NDGRs before 20th March 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study.	Eng. Abou El-Qomsan DD consultant	pending
3	Physical model	PHMWG has to submit the new shapes of the banks, and the outlet DS NDGRs, and considering the opening of the old Ibrahimia lock to finalize the physical hydraulic model tests according to the Negotiation minutes with HRI before 10th April 2017	Eng. Yasser	achieved

4		PHMWG has to follow up the comments from the DD consultant, and the WG on the draft pre-final report with HRI to prepare the final version after carrying out the required tests for small regulators alternatives, and the riprap protection layer before 30th April 2017	Eng. Yasser	pending
5	Cost estimate WG	The DD consultant has to update the cost estimate report according to the instructions of the CEWG and submit an itemized cost estimate per project components and submit it to TAC	Eng. M. Rafee DD consultant	achieved
6	The two illegal mosques	The Environment WG has to support the maintenance directorate in the tendering process to start implementation as soon as possible.	Eng. Hossam Eng. M. Rafee	achieved
7	Site installation yard	EWG has to get the necessary approvals regarding using the areas within the west Dirout and water distribution buildings to secure the required areas of all site installation and stock yards facilities	Eng. Hossam Eng. M. Rafee DD consultant	pending
8	Administrative building of East Dirout District	The EWG has to with the drainage directorate in Minia for getting its approval regarding the layout of the building and its boundary inside the area of Dirout Drainage District	Eng. Hossam Eng. M. Rafee	A coordination meeting with the Drainage directorate was held and there is a preliminary approval
9	Environmental activities	The environmental monitoring activities for piezometers observation will be done by the east Minya directorate from the Middle of April 2017 till the beginning of the consultancy services of the supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee DD consultant	pending
10	WM activities	The WMWG has to revise the updated specifications, BOQ, and drawings of the new telemetry facilities. The EMWG has to prepare needs assessment for the necessary equipment to carry out the discharge measurements for preparing the H-Q curves for the selected 48 locations, and also for the piezometers' recording. WMWG has to prepare a technical and financial proposal regarding the Technical Assistance Grant which is considered to finance technical	Dr. Hesham DD consultant	ongoing

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		support activities during construction, O&M of civil and hydro-mechanical works as well as water distribution system according to the MD signed between RGBS and JICA on 21st May 2014		

4. Discussion:

4.1 The DD consultant presented the updated situation of the DD Phase during the currently 9th Assignment of the DD Consultant (Attach.3) as follows:

4.1.1 Future Work Schedule by the end of May 2017

4.1.2 Progress of the cost estimation: *Price escalation (for LC)* was recalculated based on two additional approach curved line and approximate curved line and this reduced Price escalation cost to525,874,000 (JPY) resulting in a reduction of 230,000,000 JPY

4.1.3 Status of the draft final report: There are still some items to be finalized in the WGs such as:

4.1.3.1 *Review of main point of NDGRs* (*Design outline*, and *Main design conditions)*

4.1.3.2 *Discuss pending issue of previous stay* (*Stability check of Gabions protection, Preservation works of existing DGRs*, and *Others*

4.1.3.3 Finalizing the revision of the technical specifications, drawings and cost estimate of the WM new telemetry facilities

4.1.3.4 The Technical Specifications (TS) is under modification in compliance with the comments by JICA Head Quarter. In addition, TS will be finalized taking into consideration the final results of the detailed design and construction plan of NDGRs.

4.1.3.5 Identification of the potentially affected people PAPs from the project such fishermen and how to set the compensation rate. 8 monitoring parameters will be checked by environmental monitoring in the pre-construction phase

4.1.3.6 The results of piezometers monitoring, the final monitoring report to RGBS will be submitted on 13th April 2017,and the Handover the piezometers to RGBS for the monitoring during/after the construction of NDGRs

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5. Decisions:

No.	Issue	Decisions	Responsibility
1.	Main detailed design outputs, and final drawings in DF/R	The DWG has to revise the Main detailed design outputs, and final civil and Electromechanical drawings in DF/R jointly with DD Consultant and submit the comments before 26th April 2017	Eng. Abou El-Qomsan DD consultant
2	Preservation of the old DGR	The DD consultant has to submit preservation methods of the old DGR as a historical architecture according to the guidelines of the Ministry of State of Antiquities taking into consideration the matching between the old architecture of DGR and the new architecture of NDGRs before 20th March 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study	Eng. Abou El-Qomsan DD consultant
3	Physical model	PHMWG has to speed up the process of finalizing the tests of the Physical Hydraulic Model according to the new alternatives for small regulators and the riprap protection layer submitted to HRI before 26th April 2017	Eng. Yasser
4		PHMWG has to follow up the fulfillment of all the comments from the DD consultant, and the WG on the draft pre-final report with HRI in order to prepare the final version before 26th April 2017	Eng. Yasser
5	Cost estimate WG	The DD consultant has to update the cost estimate report according to the new comments of the CEWG, and submit an itemized cost estimate per project components and submit it to TAC before 26th April 2017. All the members of the CEWG must be invited for the remaining meetings of the WG, and the approval of the final cost estimate must be signed from all the WG members	Eng. M. Rafee DD consultant
7	Site installation yard	EWG has to make sure that the architectural design of the new administrative building includes the necessary offices for west Dirout and water distribution districts before 26th April 2017	Eng. Hossam Eng. M. Rafee DD consultant
8	Environmental activities	The environmental monitoring activities for piezometers observation will be done by East Minya directorate from the Middle of April 2017 till the beginning of the consultancy services of the supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee DD consultant
9	Construction Plan WG	CPWG has to check the laboratory tests of the aggregate samples from the three quarries, to decide the recommended quarries for aggregate to be used during construction	Eng. M. Rafee DD consultant

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10	WMWG	The WMWG has to revise the updated specifications, BOQ, cost estimate, and drawings of the new telemetry facilities, and submit the comments before 26th April 2017	Dr.Hesham DD consultant

6. Closing remarks: The head of TAC meeting thanked the attendants of the meeting for their valuable contribution and closed the meeting at 12:30 PM. The next TAC meeting will be held on Wednesday 26th April 2017 at Central library meeting's room (MWRI) Building (2nd Floor).

23/4/17

Dr. Khaled Toubar

Head TAC, NDGRs, and Head of Central Dept. for Studies, and Designs

Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members

Design WG Meeting Memo

Reg. No.	DWG:9-1

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	10th April 2017 (Mon) / 12:00～14:30	
Place	Eng. Ahmed's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	RGBS: Eng. Ahmed Abd Elhamid Abo Elkomsam, Eng. Hagrass, Eng. Mohamed, Eng. Iman Fathy Abdel Aziz CRI: Dr. Dina HRI: Dr. Abdel Azim Consultant: Eng. Kuromi, Wakatsuki, Akiyoshi, William, Shimoji	

Handout material

- Agenda and schedule of the DWG meeting in 9th mission

1. Agenda

1) Entire schedule of DWG meeting in 9th mission

2) Review of the design of NDGRs

3) Stability of bank protection of gabions at downstream in Bahr Yusef and Ibrahimia regulator

4) Understanding of road alignment

2. Decision

1) Entire schedule of DWG meeting in 9th mission

- Next meeting will be held on 18th April.
- The other meeting days will be decided as necessity in next meeting

2) Review of the design of NDGRs

- RGBS received the entire design of NDGRs
- The D/D consultant agreed to add the detail information of the bed protection such as the diameter, density, length and thickness to the table of design conditions and modify the some miss description in the table.
- As for the drawings submitted on 16th February 2017, RGBS agreed to the submitted drawings were excluded the riprap design at the upstream of Bahr Yusef and Ibrahima regulators. HRI will report the reasonable size of upstream riprap based on the physical model test to the D/D consultant until 24th April. The D/D consultant will evaluate the result and modify the drawing if necessary.

3) Pending issue in the previous stay (preservation works of the existing DGRs) to be discussed

a) Stability of bank protection with gabions at the downstream of the Bahr Yusef and Ibrahimia regulators

- The D/D consultant reported the result of the stability analysis of gabions protection at the downstream of the Bahr Yusef and Ibrahima regulators. In addition, the D/D consultant explained the design concept at the left bank of the Ibrahimia regulator. RGBS understood and agreed to that design.
- The D/D consultant should submit the calculation result on that stability check.

b) Understanding of road alignment

- D/D consultant explained to RGBS the demarcation of the loan project based on the understanding on 26th TAC meeting.
- The road alignment plan with rough cost estimation should be attached on the Final Report as appendix. The D/D consultant accepted and submitted the soft copy to RGBS.

4) Others

- DWG explained the adverse effect of the sedimentation between the NDGRs and the existing DGRs on

Bahr Yusef and Ibrahimia canals, and the upstream of the existing DGRs, DWG insisted and referred to the DWG meeting with D/D consultant on (20th of March 2017) the dredging and leveling works should be included in the construction works of NDGRs, and to an agreed elevation 39.5m US existing DGRs and for the zone between the NDGRs to existing DGRs to an agreed elevation of EL.39.5m (top of aprons lvels).

- The D/D consultant explained that those works should be regarded as the maintenance works, not the construction works. RGBS will make the comment to the DFR as the recommendation.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:9-2

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	18th April 2017 (Tue) / 10:00～15:00	
Place	Eng. Ahmed's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	RGBS: Eng. Ahmed Abd Elhamid Abo Elkomsam, Eng. Hagrass, Eng. Mohamed Consultant: Eng. Kuromi, Akiyoshi, William	

1. Handout material

- 1) Revised table on the design conditions
- 2) Meeting memo of the previous discussion
- 3) Preservation works on the existing DGRs

2. Decision

1) Revised table on the design conditions

- The minimum discharge of the Ibrahimia should be revised to correct value of 23.6m^3/s from 33.1m^3/s.
- The diameter of bed protection on the Bahr Yusef and the Ibrahimia regulators should be unified into 40cm as correct value between the handout table (material no.1) and the draft final report.

2) Meeting memo on previous discussion

- RGBS revised original memo made by the D/D consultant. The D/D consultant insisted on the following points. Both sides agreed to finalize the memo in the next meeting on the 20th April.

3) Preservation works on the existing DGRs

- The D/D consultant explained the present status of the existing DGRs, suggested to update the deterioration curve and to finalize the necessary the preservation works after the survey.
- DWG understood the evaluation method for the preservation works and the D/D consultant requested to make more the necessary survey because of the following reasons;
  - ✓ to evaluate the actual present strength and durability of the existing DGRs,
  - ✓ to specify the type of the preservation works, i.g., the enhancement of foundations and piers, and
  - ✓ to determine the maximum allowable traffic load after the preservation works.
- The D/D consultant agreed to the request and will report in the next meeting on the 20th April.
- The D/D consultant confirmed the situation on the preservation works between the MWRI and the Ministry of Antiquities as followings;
  - ✓ MWRI and the Ministry of Antiquities have not discussed this matter because the detailed preservation works has not been decided.
  - ✓ DWG confirmed that the approval is needed from the Ministry of Antiquities on the preservation works before the implementation of the preservation works.
  - ✓ RGBS is in charge of the inspection of the works under the Ministry of Antiquities.

4) Others

- Next meeting will be held on the 20th April at 10am.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:9-3

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	20th April 2017 (Thu) / 10:00～13:00	
Place	Eng. Ahmed's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	RGBS: Eng. Ahmed Abd Elhamid Abo Elkomsam, Eng. Hagrass CRI: Dr. Dina HRI: Dr. Abdel Azim Consultant: Eng. Kuromi, Wakatsuki, Akiyoshi, William, Shimoji	

1. Handout material

- 1) Meeting memo of the previous discussion
- 2) Preservation works on the existing DGRs

2. Decision

1) Meeting memo on previous discussion

- The both side agreed to the revised meeting memo discussed on 10th April.
- The another memo on 18th April will be finalized on 24th April

2) Preservation works on the existing DGRs

- The D/D consultant explained the recommendation on the necessary survey and the recommendable preservation works based on the present data.
- DWG requested to the D/D consultant to add the recommendation that the dredging works (EL39.5m at U.S. and D.S. of the existing DGRs) is necessary to complete before the existing gates fully opened and the recommendations of the preservation works should be included to the agenda of the coming TAC meeting. The D/D consultant accepted it.
- RGBS should finalize the actual preservation works after the detailed survey of the exiting DGRs. Accordingly, RGBS and the D/D consultant do not need to discuss with the Ministry of Antiquities for now, but the discussion will be done by RGBS after the completion of plan of the preservation works based on the recommendation shown on the meeting materials by the D/D consultant. The D/D consultant recommended more investigation works in the existing DGRs to make the preservation plan. RGBS will decide who will make the preservation plan.

3) Others

- As for the design of the Sahelyia and Abo Gabal regulators, there are partially demolition works at the connection between the new regulator and old one. The D/D consultant explained the necessity of that works to DWG. DWG understood and requested to prepare the explanation materials to the Ministry of Antiquities. The D/D consultant agreed to it and the explanation materials will be submitted in the next DWG meeting.
- In addition to the mentioned above, the both side confirmed that the discussion with the Railway Authority shall be done by RGBS after the completion of the detailed design stage, since the construction works of Sahelyia regulator is near the railway.
- The RGBS and the D/D consultant confirmed that the comments of the DF/R submitted on 30th March 2017 shall be received till 26th April from RGBS. Even though the further additional comments from RGBS will be accepted till 10th May, if any.

End of memo.

Design WG Meeting Memo

Reg. No.	DWG:9-4

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)	Signature
Date / Time	24th April 2017 (Mon) / 10:00~15:00	
Place	Eng. Ahmed's office Room in the Ministry of Water Resources and Irrigation (MWRI) Building (12th Floor)	
Attendance	RGBS: Eng. Ahmed Abd Elhamid Abo Elkomsam, Eng. Hagrass Consultant: Eng. Kuromi, Wakatsuki, Akiyoshi, William, Shimoji	

1. Handout material

1) Meeting memo of the previous discussion
2) Construction works of Abo Gabal and Sahelyia regulators
3) Dredging works
4) Agenda of DWG for the 28th TAC meeting
5) Stability calculation of gabions at D.S. of Ibrahimia regulator on the left side

2. Decision

1) Meeting memo on previous discussion

- The both sides finalized and agreed to the meeting memo discussed on 18th and 20th April.

2) Construction works of Abo Gabal and Sahelyia regulators

- The D/D consultant explained the two design concepts (plan A and B) on the connecting works for Abo Gabal and Sahelyia between the new and existing regulators.
- DWG requested the D/D consultant to modify the handout material based on the meeting and to report the design concept in the coming TAC meeting. The D/D consultant accepted it and made a presentation in the 28th TAC meeting. The D/D consultant submitted the revised materials to the DWG to discuss with the Ministry of Antiquities.
- In the discussion on those matters for the detailed design stage, the design of plan A is applied as the drawing submitted on 30th March 2017. However, DWG recommended the opposite plan (plan B) to prevent any damage to the existing structures and requested to modify the design drawings mentioned above. The D/D consultant insisted on the necessity of plan A and suggested to add the remarks on the drawing and the specification such as checking the displacement, vibration and cracks to avoid the adverse effect to those regulators during the construction works. In addition the D/D consultant recommended to apply the careful demolishing works such as the hand works in the construction works.
- DWG and the D/D consultant understood to obtain the approval in advance from the Ministry of Antiquities regarding the connecting works.

3) The dredging works

- The D/D consultant explained the entire dredging works of the NDGRs , which should take the design bed level for the sheet pile protection into consideration.
- DWG understood the plan of the dredging works and requested the D/D consultant to report the result of discussion on those matters to the coming TAC meeting. The D/D consultant accepted it.

4) The agenda of DWG for the 28th TAC meeting

- The D/D consultant showed the expected agenda for the coming TAC meeting. DWG accepted those agenda.

5) Stability calculation of gabions at D.S. of Ibrahimia regulator on the left side

- DWG requested the calculation sheet of the gabions protection at D.S. of Ibrahimia regulator on the left side in case that bank slope ratio is 1:1 with step type gabion method. The D/D consultant submitted it.

End of memo.

Minutes of Discussion

RGBS and JICA Study Team (DD Consultants) held series of the Working Group Meetings and the TAC Meetings on the issues for the Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs). At the occasion of the end of the 9th Assignment in Egypt of DD Consultants, both RGBS and DD Consultants confirm the following understandings.

1. Cost Estimation of the Project

After series of the Working Group Discussion between both RGBS and DD Consultants based on the first version of the cost estimation submitted to RGBS on 19th March 2017 by DD Consultants. The project cost is 6.71 billion Japanese Yen. Attached list shows the project cost recommended by DD Consultants. As well as project cost as proposed by RGBS, RGBS recommends to apply MD approach, and this can be attained by: (for example)

- Procurement and Manufacturing of Double Leaf Gates of Ibrahimia & Bahr Yosif Regulators from Egypt, while the hoist and the gate's accessories will be procured from Japan.
- Pile Foundation & Double sheet piles need more investigations to study their lengths, number of tie rods and temporary bridges.

DD Consultants strongly stated that procurement of the double leaf gate should be Japanese manufactures from the point of view of responsibility of the products.

As a result of the differing point of views between RGBS and DD Consultants, DD Consultants confirmed with RGBS for further efforts to realize the possibility of reduction of the project cost looking ahead to the next stage for the preparation of implementation works.

2. Draft Final Report

After series of the Working Group Discussion on the first version of the Draft Final Report (DF/R) submitted to RGBS on 30th March 2017 by DD Consultants, DD Consultants has already revised the first version of the DF/R in accordance with the comments by RGBS.

At the closing of the discussion on the DF/R, DD Consultants received the final comments from RGBS during the period from 10th April 2017 to 26th April 2017.

Due to modification of draft version, RGBS will send additional comments on/or before 10th May 2017.

The DD Consultants will reflect these comments on the editing work to finalize the report as the Final Report. (Bidding Documents and Cost Estimate Documents could be modified in the next stage under management of RGBS by S/V consultant with the concurrence of JICA)

Cairo, 24th April 2017

24/4/17

Dr. Khaled Toubar
Deputy Head of RGBS
Ministry of Water Resources and Irrigation

Eng. Tomiji SHIMOJI
Team Leader of Study Team of JICA
for Detailed Design on the Project
for Construction of the NDGRs

Comparison table for Revised version of the DD Cost Estimation

Item			Detailed Design Study		Proposal by RGBS (Requires more efforts to be finalized)
			Draft version (19th March of 2017)	Revised version (23rd April of 2017)	
1. Precondition					
Exchange rate			(Average of 3 month)	(Average of last 3 month)	
		1$=	115.57 (JPY)	113.34 (JPY)	
		1EUR=	122.95 (JPY)	121.26 (JPY)	
		1LE=	6.48 (JPY)	6.49 (JPY)	
Selection of Unit Price			Average of 4 companies	Average of 4 companies	Lowest company
Price escalation for LC		per year (%)	4.6	1.0	1.0
		Total (%)	31.7	18.9	18.9
Price escalation for FC		per year (%)	1.6	1.6	1.6
		Total (%)	4.2	4.2	4.2
2. Project Cost					
1) Construction Cost		JPY	6,005,608,000	5,365,263,000	4,851,475,000
	procured by USD		7,767,695 (14.9%)	6,138,654 (13.0%)	5,879,745 (13.7%)
	procured by LE		367,210,212 (39.6%)	377,480,579 (45.7%)	352,877,373 (47.2%)
	procured by JPY		2,728,373,249 (45.5%)	2,219,659,487 (41.3%)	1,894,890,468 (39.1%)
2) Consultant Service (CS)		JPY	388,609,000	388,607,000	388,607,000
	procured by USD		0 (0.0%)	0 (0.0%)	0 (0.0%)
	procured by LE		17,158,088 (28.6%)	17,131,288 (28.6%)	17,131,288 (28.6%)
	procured by JPY		277,426,230 (71.4%)	277,426,230 (71.4%)	277,426,230 (71.4%)
3) A. Price Escalation for Construction (LC)		JPY	754,309,000	463,021,000	432,843,000
B. Price Escalation for CS (LC)		JPY	35,245,000	21,013,000	21,013,000
4) A. Price Escalation for Construction (FC)		JPY	152,296,000	122,448,000	107,574,000
B. Price Escalation for CS (FC)		JPY	11,652,000	11,652,000	11,652,000
5) A. Physical Contingency for Construction		JPY	345,611,000	297,537,000	269,595,000
B. Physical Contingency for CS		JPY	21,775,000	21,064,000	21,064,000
7) Interest During Construction		JPY	23,200,000	20,100,000	18,300,000
8) Project Cost (1 ～ 7)		JPY	7,738,305,000	6,710,705,000	6,122,123,000
	procured by USD		8,498,635 (12.7%)	6,716,301 (11.3%)	6,433,029 (11.9%)
	procured by LE		531,523,704 (44.5%)	492,653,185 (47.6%)	461,937,313 (49.0%)
	procured by JPY		3,311,845,210 (42.8%)	2,752,161,483 (41.1%)	2,395,031,699 (39.1%)

24/4/17

Project for Construction of the NDGRs

1	as of Estimation	January. 2017
2	Country	ARAB REPUBLIC OF EGYPT
3	Project	THE PROJECT FOR CONSTRUCTION OF THE NEW DIROUT GROUP OF REGULATORS
4	Class	AGRICULTURE

Exchange Rate	1USD= 113.34 (YEN)
	1EUR= 121.26 (YEN)
	1LE= 6.49 (YEN)

Item				Unit	Quantity	Amount US$	Amount LE	Amount YEN	Total (Exchange to "YEN")	Remarks
I Construction Cost	I-1 Direct Cost	A. Civil Works	A-1. Excavation	LS	1.0		2,983,317.60		19,361,000	
			A-2. Embankment	LS	1.0		12,339,320.65		80,082,000	
			A-3. Demolition work	LS	1.0		90,590.02		587,000	
			A-4. Sheet pile bank protection	LS	1.0	636,160.04	5,016,900.71	6,996,465	111,658,000	
			A-5. Rip rap bank protection	LS	1.0		4,652,046.73	10,700,560	40,092,000	
			A-6. Canal bed protection	LS	1.0	196,050.69	1,866,635.18		34,336,000	
			A-7. Concrete work for regulators	LS	1.0		42,315,592.79	585,206	275,320,000	
			A-8. Pile foundation work	LS	1.0		13,202,063.72		85,681,000	
			A-9. Accessory works	LS	1.0		18,579,853.79	17,569,265	138,162,000	
			A-10. Electric works	LS	1.0		3,696,424.06	9,050,000	33,972,000	
			A-11. Gate manufactures and works	LS	1.0		29,999,396.71	1,357,024,600	1,551,720,000	
			A-12. Expense of the machine and facilities	LS	1.0	221,309.66	20,782,686.80	53,661,990	213,624,000	
			sub total (Civil works)			1,053,520.39	155,715,988.77	1,455,269,086	2,585,291,000	
		B. Temporary works	B-1. Temporary Cofter Dam	LS	1.0	714,241.74	14,254,269.84	110,691,135	284,153,000	
			B-2. Single Sheet Pile	LS	1.0	372,444.70	2,041,534.12	6,347,427	61,808,000	
			B-3. Temporary bridge	LS	1.0		3,257,379.37	53,423,642	74,564,000	
			B-4. Dewatering	LS	1.0		9,863,770.00		64,015,000	
			B-5. Temporary road & preparation	LS	1.0		5,188,325.85		33,672,000	
			B-6. diversion works	LS	1.0		10,489,883.36		68,079,000	
			B-7. Other temporary works	LS	1.0		13,995,481.18	17,112,000	107,942,000	
			B-8. Transpolation / Shipment	LS	1.0	1,913,684.57	18,428,520.10	75,199,268	411,687,000	
			sub total (Temporary works)			3,000,371.01	77,519,163.82	262,773,470	1,105,934,000	
		C. Building works	C-1. Control house	LS	1.0		1,977,780.00		12,835,000	
			C-2. Local contrl house	LS	1.0		301,980.00		1,959,000	
			C-3. Local contrl house	LS	1.0		301,980.00		1,959,000	
			C-4. Stop log room	LS	1.0		818,360.00		5,310,000	
			sub total (Building works)				3,399,700.00		22,064,000	
		D. Integrated Water Management System	D-1. IWMS manufactures	LS	1.0		15,676,946.12		101,740,000	
			D-2. Installation for IWMS	LS	1.0		15,951,997.71		103,527,000	
			sub total (Integrated Water Management System)				31,628,443.83		205,269,000	
		E. Dispute Board	E-1. Dispute Board	LS	1.0	407,000.00			46,129,000	
			sub total (Dispute Board)			407,000.00			46,129,000	
						4,460,891.40	266,263,296.42	1,718,062,556	3,964,688,000	
	I-2 Indirect Cost					1,418,853.60	84,614,076.58	176,937,912	886,786,000	
						5,879,745.00	352,877,373.00	1,894,999,468	4,851,475,000	
						13.7%	47.2%	39.1%		
II Consultant Service	Remuneration			LS	1.0		10,092,110.00	230,920,000	296,920,000	
	Direct Expense			LS	1.0		7,039,178.00	46,603,236	92,287,000	
							17,131,288.00	277,426,230	388,607,000	
III Contingency for Construction	Price Contingency		LC: 1.0%/year, total ratio is 18.9%	LS	1.0		68,693,823.50		432,843,000	
			FC: 1.6%/year, total ratio is 4.2%	LS	1.0	246,949.29		79,585,400	107,574,000	
	Physical Contingency			%	5.0	306,334.71	20,978,559.02	98,723,793	269,595,000	
IV Contingency for Consultant Service	Price Contingency		LC: 1.0%/year, total ratio is 18.9%	LS	1.0		3,237,813.43		21,013,000	
			FC: 1.6%/year, total ratio is 4.2%	LS	1.0			11,651,902	11,652,000	
	Physical Contingency			%	5.0		1,018,455.07	14,453,907	21,064,000	
V Interest During Construction	0.01 %/year			LS	1.0			18,300,000	18,300,000	
Total Construction Cost (I~V)						6,433,029.00	401,937,312.83	2,395,031,699	6,122,123,000	
						11.9%	49.0%	39.1%		
VI Administration Cost										
VII VAT										
VIII Front-end Fee										
Project Cost (I~VIII)										

Project for Construction of the NDGRs

1	as of Estimation	January. 2017
2	Country	ARAB REPUBLIC OF EGYPT
3	Project	THE PROJECT FOR CONSTRUCTION OF THE NEW DIROUT GROUP OF REGULATORS
4	Class	AGRICULTURE

Exchange Rate	1USD= 113.34 (YEN)
	1EUR= 121.29 (YEN)
	1LE= 6.49 (YEN)

Item				Unit	Quantity	Amount US$	Amount LE	Amount YEN	Total (Exchange to "YEN")	Remarks
I Construction Cost	I-1 Direct Cost	A. Civil Works	A-1. Excavation	LS	1.0		4,438,016.50		28,802,000	
			A-2. Embankment	LS	1.0		18,816,688.70		122,113,000	
			A-3. Demolition work	LS	1.0		131,996.64		856,000	
			A-4. Sheet pile bank protection	LS	1.0	636,160.04	5,394,080.56	6,996,465	114,106,000	
			A-5. Rip rap bank protection	LS	1.0		5,023,275.06	10,700,560	43,301,000	
			A-6. Canal bed protection	LS	1.0	196,050.69	2,641,631.39		39,364,000	
			A-7. Concrete work for regulators	LS	1.0		44,873,249.71	686,206	291,913,000	
			A-8. Pile foundation work	LS	1.0		13,382,883.34		86,854,000	
			A-9. Accessory works	LS	1.0		19,616,170.59	17,569,265	144,229,000	
			A-10. Electric works	LS	1.0		3,626,535.45	8,650,000	32,186,000	
			A-11. Gate manufactures and works	LS	1.0		19,081,522.83	1,672,334,600	1,796,173,000	
			A-12. Expense of the machine and facilities	LS	1.0	221,309.66	23,815,178.13	53,661,990	233,305,000	
				sub total (Civil works)		1,053,520.39	160,740,228.90	1,770,599,086	2,933,209,000	
		B. Temporary works	B-1. Temporary Coffer Dam	LS	1.0	840,284.40	19,099,569.97	110,691,135	329,885,000	
			B-2. Single Sheet Pile	LS	1.0	438,170.24	2,790,300.38	6,347,427	74,118,000	
			B-3. Temporary bridge	LS	1.0		4,976,786.73	53,423,642	85,722,000	
			B-4. Dewatering	LS	1.0		10,519,709.00		68,272,000	
			B-5. Temporary road & preparation	LS	1.0		7,783,260.59		50,513,000	
			B-6. diversion works	LS	1.0		11,759,640.95		76,320,000	
			B-7. Other temporary works	LS	1.0		18,178,115.27	17,112,000	135,087,000	
			B-8. Transpotation / Shipment	LS	1.0	1,913,684.57	13,325,895.23	75,199,059	378,581,000	
				sub total (Temporary works)		3,192,139.21	88,433,278.12	262,773,263	1,198,502,000	
		C. Building works	C-1. Control house	LS	1.0		1,977,700.00		12,835,000	
			C-2. Local contrl house	LS	1.0		301,900.00		1,959,000	
			C-3. Local contrl house	LS	1.0		301,900.00		1,959,000	
			C-4. Stop log room	LS	1.0		818,200.00		5,310,000	
				sub total (Building works)			3,399,700.00		22,064,000	
		D. Integrated Water Management System	D-1. IWMS manufactures	LS	1.0		15,676,546.12		101,740,000	
			D-2. Installation for IWMS	LS	1.0		15,951,697.71		103,527,000	
				sub total (Integrated Water Management System)			31,628,443.83		205,268,000	
		E. Dispute Board	E-1. Dispute Board	LS	1.0	407,000.00			46,129,000	
				sub total (Dispute Board)		407,000.00			46,129,000	
						4,652,659.60	284,201,650.85	2,033,372,349	4,405,173,000	
	I-2 Indirect Cost					1,485,994.40	93,278,928.15	186,287,138	960,089,000	
						6,138,654.00	377,480,579.00	2,219,659,487	5,365,263,000	
						13.0%	45.7%	41.3%		
II Consultant Service	Remuneration			LS	1.0		10,092,110.00	230,823,000	296,320,000	
	Direct Expense			LS	1.0		7,039,178.00	46,603,230	92,287,000	
							17,131,288.00	277,426,230	388,607,000	
III Contingency for Construction	Price Contingency		LC: 1.0%/year, total ratio is 18.9%	LS	1.0		71,343,829.43		463,021,000	
			FC: 1.6%/year, total ratio is 4.2%	LS	1.0	257,823.47		93,225,698	122,448,000	
	Physical Contingency			%	5.0	319,823.87	22,441,220.42	115,644,259	297,537,000	
IV Contingency for Consultant Service	Price Contingency		LC: 1.0%/year, total ratio is 18.9%	LS	1.0		3,237,613.43		21,013,000	
			FC: 1.6%/year, total ratio is 4.2%	LS	1.0			11,651,902	11,652,000	
	Physical Contingency			%	5.0		1,018,455.07	14,453,907	21,064,000	
V Interest During Construction	0.01 %/year			LS	1.0			20,100,000	20,100,000	
Total Construction Cost (I~V)						6,716,301.34	492,653,185.36	2,752,161,483	6,710,705,000	
						11.3%	47.6%	41.1%		
VI Administration Cost										
VII VAT										
VIII Front-end Fee										
Project Cost (I~VIII)										

Meeting Memo (28th TAC Meeting)

Reg. No.	General /

Project Name	Detailed Design on the Project for Construction of the New Dirout Group of Regulators (NDGRs)
Date / Time	26th April 2017 (Wed.) / 10:00~12:30
Place	Central library meeting`s room (MWRI) Building (2nd Floor)
Attendance	**MWRI**:Eng. Ashraf Hebiesh, Eng. Yasser Gomaa, Eng.M. Abdelaliem, Eng. Ahmed Abou El-Qomsan,Eng. M.Rafee , Dr. Hesham Elshazely, Eng. Amal Moalla, Eng. Rania Nashaat,Dr. Abdel-Azim Aly, Dr.Ibrahim Ragab, Dr.Dina Emara, Dr.Hany Mostafa, Eng.Mahmoud Hagras,Eng. Eman Fathy **Consultant**: Engs Tomiji Shimoji, Hitoshi Toku, Kazumi Akyoshi, Futoshi Kuromi, Masanobu Kadawaki, Kazunori Takasaki, Motohisa Wakatsuki, Fusataka Arakawa, Shigeru Otsuki, Akira Sudo, Hajime Kita ,William, and Mariam **JICA**: Mr.Yamazaki Hajime, Mr. M.Adam

1. Eng. Yasser, the General Director of Information Center at RGBS, welcomed all the participants from the TAC members (Attach.1), and the DD consultant team, and JICA representatives.
2. Eng. Yasser stated the TAC meeting Agenda (Attach.2)

3. Follow up of the 27th TAC meetings:

Dr.Hesham El-Shazely presented the follow up of the last 27th TAC meeting

No.	Issue	Decisions	Responsibility	status
1.	Main detailed design outputs, and final drawings in DF/R	The DWG has to revise the Main detailed design outputs, and final civil and Electromechanical drawings in DF/R jointly with DD Consultant and submit the comments before 26th April 2017	Eng. Abou El-Qomsan DD consultant	ongoing
2	Preservation of the old DGR	The DD consultant has to submit preservation methods of the old DGR as a historical architecture according to the guidelines of the Ministry of State of Antiquities taking into consideration the matching between the old architecture of DGR and the new architecture of NDGRs before 20th March 2017. Modification of the design may be arisen by the review from the Ministry of Antiquities, which would be implemented after Detailed Design study	Eng. Abou El-Qomsan DD consultant	pending
3	Physical Model	PHMWG has to speed up the process of finalizing the tests of the Physical Hydraulic Model according to the new alternatives for small regulators and the riprap protection layer submitted to HRI before 26th April 2017	Eng. Yasser	ongoing

Yasser

4		PHMWG has to follow up the fulfillment of all the comments from the DD consultant, and the WG on the draft pre-final report with HRI in order to prepare the final version before 26th April 2017	Eng. Yasser	ongoing
5	Cost estimate WG	The DD consultant has to update the cost estimate report according to the new comments of the CEWG, and submit an itemized cost estimate per project components and submit it to TAC before 26th April 2017.	Eng. M. Rafee DD consultant	achieved
6	Site installation yard	EWG has to make shore that the architectural design of the new administrative building include the necessary offices for west Dirout and water distribution districts before 26th April 2017	Eng. Hossam Eng. M. Rafee	ongoing
7	Environmental activities	The environmental monitoring activities for piezometers observation will be done by the east Minya directorate from the Middle of April 2017 till the beginning of the consultancy services of the supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee DD consultant	ongoing
8	Construction Plan WG	CPWG has to check the laboratory tests of the aggregate samples from the three quarries, to decide the recommended quarries for aggregate to be used during construction	Eng. Hossam Eng. M. Rafee	Still waiting for CRI reply
9	WMWG	The WMWG has to revise the updated specifications, BOQ, cost estimate, and drawings of the new telemetry facilities, and submit the comments before 26th April 2017	Eng. Hossam Eng. M. Rafee DD consultant	pending

4. Discussion:

4.1 Eng. Ahmed Abou El-Qomsan presented the main pending issues in the DWG namely:

4.1.1 Preservation works of existing DGRs, and the request of the DD consultant for additional survey, and inspection to specify the type of preservation works, and the maximum allowable traffic load

4.1.2 The connecting works of Abo Gabal and Sahelia regulators, where the DD consultant proposed two alternatives:

4.1.2.1 Demolishing of two meters of the existing masonry piers, and foundations and rehabilitation of edge at pier and foundation

4.1.2.2 Direct contact of the new pier and the existing pier and foundation and concreting around the pier nose

4.1.3 The coordination with the railway authority regarding construction works of Sahelyia new regulator

4.1.4 The dredging of the upstream of old DGRs to the design bed level (39.5) before the fully opened of the old DGRs gates, and the need to include the dredging quantities

in the BOQ of the contractor's contract

4.2 Eng. M.Rafee presented the main pending issues in project cost estimate, construction plan, and bidding documents as follows:

4.2.1 The price escalation was reduced to 18.9% instead of 31.7%

4.2.2 The indirect cost is 3% for Gates facilities, and 35% of permanent civil and temporary works

4.2.3 The DD consultant decided the final project cost estimation to be 6,710,705,000 JPY, However RGBS assured to include additional approach of the cost estimate according to the MD signed with JICA on 21st May 2014, which supposed the manufacturing of the gates in Egypt instead of Japan, and this will minimize the project cost to 6.1 Billion JPY.

4.3 Eng. Yasser presented the situation of the PHMWG, and stated that the riprap layer was laid down in the physical model, and the necessary tests to be carried out is under discussion with HRI

4.4 Dr. Hesham presented the situation of the WMWG, and stated that series of meetings were conducted with the DD consultant on 3rd, 9th, 12th, 19th April 2017, and series of comments were delivered to the DD consultant, and most of the comments were fulfilled, while the comments regarding environmental conditions of telemetry devices, power supply condition, I/O spare parts, and SMS function are still on going.

4.5 The DD consultant presented the updated situation of the DD Phase during the currently 9th Assignment of the DD Consultant (Attach.3) as follows:

4.5.1 Future Work Schedule by the end of May 2017

4.5.2 Progress of the cost estimation: *Price escalation (for LC)* was recalculated based on two additional approach curved line and approximate curved line and this reduced Price escalation to 18.9% instead of 31.7%

4.5.3 Status of the draft final report: There are still some items to be finalized in the WGs such as:

4.5.3.1 Review of final drawings, and specifications

4.5.3.2 Preservation works of existing DGRs

4.5.3.3 The connecting works of Abo Gabal and Sahelia regulators

4.5.3.4 Including the recommended dredging works in the BOQ of the final bidding documents

4.5.3.5 Securing an area of 12,000 m^2 for site installation temporary yards in the construction plan,

4.5.3.6 Layout drawings

4.5.3.7 Draft bidding documents submitted to JICA and RGBS on 24th April 2017 after fulfilling most of the JICA's comments. The draft bidding documents will be finalized on 12th May 2017

 Yasser

5. Decisions:

No.	Issue	Decisions	Responsibility
1.	Main detailed design outputs, and final drawings in DF/R	The DWG has to revise the main detailed design outputs, and final civil and Electromechanical drawings, and specifications in DF/R and submit the comments before 10th May 2017	Eng. Abou El-Qomsan DD consultant
2	Preservation of the old DGR	The DD consultant has to submit preservation methods of the old DGR as a historical architecture according to the contract between JICA and DD consultant and taking into consideration the matching between the old architecture of DGR and the new architecture of NDGRs before the submission of the final report. RGBS will discuss with the Ministry of Antiquities to clarify the common measures.	Eng. Abou El-Qomsan DD consultant
3	The connecting works of Abo Gabal and Sahelia regulators	TAC asked the DD to insert the first and the second proposal as two alternatives in the drawings, specs and the BOQ. However, RGBS prefers the direct contact of the new pier and the existing pier and foundation and concreting around the pier nose. The DD consultant requested TAC to discuss with the Ministry of Antiquities to explain the possibility of implementing of the first proposal because of the registration of NDGRs as an antiquity	Eng. Abou El-Qomsan DD consultant
4	Dredging works of the area US old DGR	TAC asked the DD consultant to include the dredging works of the area US the old DGR to the design bed level (39.50) in the contractor`s contract, and to include the dredging quantities in the BOQ. The implementation of dredging will be postponed in the project time schedule, and construction plan to be implemented at the final stage of the project before operation tests of the new gates, and fully opened of the old DGRs gates	Eng. Abou El-Qomsan DD consultant
5	Physical model	PHMWG has to speed up the process of finalizing the tests of the Physical Hydraulic Model according to the new alternatives for small regulators and the tests package submitted to HRI before 10th May 2017	Eng. Yasser
6		PHMWG has to follow up the fulfillment of all the comments from the DD consultant, and the WG on the draft pre-final report with HRI in order to prepare the final version before 10th May 2017	Eng. Yasser
7	Cost estimate WG	The project cost recommended by DD Consultants is 6.71 billion Japanese Yen. However, RGBS recommends to apply the 21st May 2014 MD approach, and this can be attained by:	Eng. M. Rafee DD consultant

Yasser

		• Procurement and Manufacturing of Double Leaf Gates of Ibrahimia & Bahr Yosif Regulators from Egypt, while the hoist and the gate's accessories will be procured from Japan. • Pile Foundation & Double sheet piles need more investigations to study their lengths, number of tie rods and temporary bridges. RGBS asked the DD Consultant to include the additional approach of the cost estimate according to the MD signed with JICA on 21st May 2014, in further study, and this will minimize the project cost to 6.1 Billion JPY.	
8	New administrative building	EWG has to make sure that the architectural design of the new administrative building include the necessary offices for west Dirout and water distribution districts	Eng. Hossam Eng. M. Rafee DD consultant
9	Environmental activities	The environmental monitoring activities for piezometers observation will be done by the East Minya Directorate from the Middle of April 2017 till the beginning of the consultancy services of the supervision of the construction of NDGRs	Eng. Hossam Eng. M. Rafee DD consultant
10	Construction Plan, and bidding documents WG	CPWG has to revise the site installation yards layout in the drawings submitted by the DD consultant, and the bidding documents and submitted the comments to the DD consultant before 10th May 2017	Eng. Abou El-Qomsan Eng. M. Rafee DD consultant
11	WMWG	The WMWG has to revise the updated specifications, BOQ, cost estimate, and drawings of the new telemetry facilities, and submit the comments on the DF/R to the DD consultant before 10th May 2017	Dr.Hesham DD Consultant

6. Closing remarks: Eng. Ashraf Hebiesh The head of RGBS thanked the DD consultant for his efforts during the DD study in the last 22 months, and thanked also all the TAC members for their valuable contribution during the detailed design study stages and closed the meeting at 12:30 PM.

Dr. Khaled Toubar

Head TAC, NDGRs, and Head of Central Dept. for Studies, and Designs

Reservoirs and Grand Barrages Sector

Eng. Tomiji Shimoji

Team Leader / D/D Consultant

C.C. Head of RGBS

C.C. TAC Members