

JAPAN INTERNATIONAL COOPERATION AGENCY

Tajikairnavigation (TAN)

**The Project for Capacity
Development in Air Traffic Services
in the Republic of Tajikistan**

Project Completion Report

December 2018

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AIR TRAFFIC CONTROL ASSOCIATION JAPAN
ATCAJ

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ABBREVIATIONS

ACC	Area Control Center
AD	Aerodrome
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Services
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATS	Air Traffic Services
ATFM-C	Air Traffic Flow Management Center
AWP	Annual Working Plan
BL	Baseline
CA	Chief Advisor
CAA	Civil Aviation Authority
CNS	Communication, Navigation and Surveillance
C/P	Counterpart
CP	Contingency Plan
CR	Chief Representative
DCA	Department of Civil Aviation
DDG	Deputy Director General
DG	Director General
EBRD	European Bank for Reconstruction and Development
FPD	Flight Procedure Design
FPS	Flight Progress Strip
GIT	General Instructor Training
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ILS	Instrument Landing System
INV	ATM Occurrence Investigation and Analysis
IFC	International Finance Corporation
JCAB	Civil Aviation Bureau of Japan
JCC	Joint Coordination Committee
MAvA	Malaysia Aviation Academy
NOTAM	Notice to Airman
ODA	Official Development Assistance
OJT	On the Job Training
O/M	Operation Manual
OS	Operation System
PANS-OPS	Procedures for Air Navigation Services - Aircraft Operations
PBN	Performance Based Navigation
PCM/n	Project Coordination Meeting
PD	Project Director
PDM	Project Design MatrixINV

PO	Plan of Operation
PM	Project Manager
QMS	Quality Management System
R/M&S/A	Risk Management and Safety Assurance
SA	Safety Assessment
SAF	Introduction to Safety Assessment Methodology (SAF-SA1) ATM
SAR	Search and Rescue
SID/STAR	Standard Instrument Departure/Standard Terminal Arrival Route
SMS	Safety Management System
TAN	Tajikairnavigation
TBD	To Be Determined
TFnM	Taskforce-n Meeting
TOR	Terms Of Reference
ToT	Training of Trainer
TRACECA	Transport Corridor Europe-Caucasus-Asia
UTDD	Dushanbe International Airport
UTDK	Kulab International Airport
UTDL	Khujand International Airport
UTDT	Kurgan-tyube Airport
VOR/DME	VHF Omnidirectional Range/Distance Measuring Equipment
W/G	Working Group
W/S	Workshop
WGS84	World Geodetic System 1984

1 Basic Information of the Project

1.1 Country

The Republic of Tajikistan

1.2 Title of the Project

“The Project for Capacity Development in Air Traffic Services”

1.3 Duration of the Project (Planned and Actual)

The project was implemented for the period from March 2016 to December 2018 as planned.

1.4 Background (from Record of Discussions(R/D))

Air transport in Tajikistan, which is a land-locked country with 93% of the area being mountainous, plays an important role to support socio-economic activities. Air transport has great importance in international and long-distance domestic transport, having comparative advantage over road and rail transport. With recent economic growth, air traffic demand in Tajikistan has been increasing rapidly. The number of air passengers at Dushanbe International Airport has grown by 1.4 times between 2009 and 2013, reaching to 1.3 million passengers in 2013. Air cargo traffic as well increased rapidly by 1.7 times during the same period, reaching to 2,370 tons at Dushanbe International Airport in 2013. These growth trends are expected to continue toward the future.

With recognition that coping with increasing air traffic demand is an urgent need, Tajikistan has been upgrading aviation infrastructure at its major airports with assistance of EBRD, World Bank, the Government of France and the Government of Japan. However, in order to adequately handle further growth of air traffic, human resource development is equally important.

Air Traffic Control (ATC) services in Tajikistan needs modernization and capacity development. With a safety oversight on the civil aviation system in Tajikistan in 2008, International Civil Aviation Organization (ICAO) focused on old Soviet era-based rules, guidelines and operational manuals, which do not fully comply with international air navigation requirements. ICAO also found that the implementation of training program for ATC instructors/officers is necessary.

In response to ICAO's recommendations, the Ministry of Transport started establishing civil aviation regulations complied with international standards since 2008, and these changes required retraining of air traffic control officers to new ATC standard operation procedures.

1.5 Overall Goal and Project Purpose (from Record of Discussions(R/D))

1.5.1 Overall Goal

The Project's overall goal statement is: "To improve Air Traffic Service (ATS) in Tajikistan".

1.5.2 Project Purpose

The Project's purpose statement is: "To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Service".

1.6 Implementing Agency

Tajikairnavigation (TAN)

2 Results of the Project

2.1 Results of the Project

2.1.1 Input by the Japanese side (Planned and Actual)

a. Total cost

370 million Japanese Yen (planned)

310 million Japanese Yen (actual)

b. JICA Experts

Table 2-1 shows the list of experts dispatched from Japanese side for the Project. A total of approximately 68.92 person-months of experts have been provided to the Project. This translates into an input of approximately 24.32 person-months per year.

Table 2-1: List of JICA Experts in Person-Months

<i>Position/Technical Field</i>	<i>Person-Months</i>	
	<i>Planned</i>	<i>Actual</i>
Chief Advisor/ ATC Expert (1)	18.00 months	15.78 months
Deputy Chief Advisor/ATC Expert (2)	8.60 months	4.27 months
Simulator Training Expert	4.70 months	2.47 months
AIS Expert	3.80 months	4.60 months
Flight Procedure Design Expert	5.80 months	8.30 months
Evaluation Expert	-	0.50 months
Project Coordinator	33.00	33.00 months
Total	73.90 months	68.92months

The number of days, which the experts were engaged in the activities in Tajikistan is shown in Table 2-2.

Table 2-2: Dispatched Duration (days) of JICA Experts

<i>Position/Technical Field</i>	<i>Duration (days)</i>
Chief Advisor/ ATC Expert (1)	394
Deputy Chief Advisor/ATC Expert (2)	128
Simulator Training Expert	74
AIS Expert	138
Flight Procedure Design Expert	252
Evaluation Expert	15
Project Coordinator	974
Total	1975

c. Training Materials

The following training materials and other documents were produced during this Project.

<i>Training Material</i>			
Task force	Sub-activities	No.	Title
TF-1	2-1-1	1	Contingency Plan Basic Training Text Book
TF-3	3-4	3	Outline of Flight Procedure Design (FPD) Guidance of FPD Exercise Map procurement specification
<i>Presentations, Draft of Manuals, other documents by TF and Expert team</i>			
Task force	Sub-activities	No.	Title
TF-1	1-4	7	Operation Manual Review Observation on ATC facility ATS system Capacity in TAN Calculation work flow Calculation detail procedure Runway capacity (sliding scale) MVA Map development
	1-5	7	OJT Instructor Training course OJT-I Hand Book in Japan OJT-I Hand Book in TAN Check list for OJT-I training (translate to Russian) Training Material List (ACC, Approach, Radar, Tower) Air Traffic Controller's Training in Japan Examination system development in TAN
	1-7	4	ATC Tower Training with 3D Tower Simulator Operation Record Form Malfunction Report Form AD Simulator Supplementary Manual
TF-2	2-1-1	1	Contingency Plan in TAN (approved by CAA)
	2-1-3	1	Contingency Exercise Plan

	2-2-2	2	The result of analysis on draft of SMS manual in TAN SMS manual in TAN (approved by CAA)
	2-2-4	2	Human Factor in TAN Airport Hazard Mapping
TF-3	3-1	2	Draft of RCC Operation Manual Draft of RCC Coordination Exercise Plan
	3-2	1	Presentation for Catch-up Exercise on Aeronautical Chart Drawing
	3-3	3	Draft of NOTAM operating procedure Manual TAN Draft of AIS Organization Manual Draft of AIP Process Manual
	3-5	12	Sample of Data Format Requirement, WGS-84 Survey for UTDD Survey points of WGS-84 Implementation, UTDD Outline of OJT on Flight procedure Design Guidance of OJT on FPD Guidance of Observation for FPD in Dushanbe airport Draft AIP of FPD (UTDD) Draft AIP of WGS-84 List (UTDD) Finalizing & AIP Charting Reference FPD-QA Preliminary Material Follow-up Guidance of FPD Outline of FPD Quality Assurance & Ground validation
Total		46	

d. Training Equipment (39 million Japanese Yen)

The following training equipment was procured for the implementation of the Project:

The grant equipment of AD Simulator system was successfully handed over to TAN on 8th September 2017.

Project procured 3 sets of 55" 4k UHD TV and stand in July 2017 and coordinated tax waiver custom clearance for importing equipment in August 2017.

NTT-data Corporation installed AD simulator system, then conducted "user training" and "maintenance training" successfully from August to September 2017.

Table 2-3: List of Learning Aids and Office Equipment Provided by Japanese Side

<Procured in Japan>

Name of Product	Qty	Procured Date	Price JPY
AD simulator	1	September 2017	39,067,837
		Total	39,067,837

e. Overseas Training (47.6 million Japanese Yen) Oct.2018JICA rate113.029

The list of overseas training conducted under Japanese budget is shown in Table 2-4. The number of overseas training was (16), and a total of (56) trainees. Out of the (16) trainings, (8) were conducted in Malaysia.

Table 2-4: List of Overseas Training Conducted under Japanese Budget

<i>Name of Training</i>	<i>Target Persons</i>	<i>No. of Trainees</i>	<i>Remarks</i>
Aerodrome Control (#052)	Air Traffic Controller Officers (ATCOs)	4	Jul, Oct 2016
Approach Control (#053)	ATCOs	3	Jul, Oct 2016
Approach Control (#054)	ATCOs	4	Jul, Oct 2016
Area Control (#055)	ATCOs	4	Jul 2016
Area Control (#054)	ATCOs	3	Jul, Oct 2016
General Instructor (#211)	AD Sim Instructors	8	Feb 2017
OJT Instructor (#219)	OJT Instructors	6	Jan, May 2017
Management	TF-1 managements	6	May 2017
SAF-SA1	Safety officers	2	Oct 2016
SAF-INV	Safety officers	2	Mar 2017
SAF-SA2	Safety officer	1	Jul 2017
Trainers Training for SMS	Safety officer and ATC	2	Jul 2017
Investigation ATC Incident	Safety officers	2	Feb 2018
SAF-HFA	Safety officer	1	Jun 2018
AIS Basic	AIS officers	4	Aug 2017
SAR Administration	AIS officers	4	Sep 2017
Total		56	

Note: # indicates ICAO Training Code Number

f. Overseas Activities Cost (9.5 million Japanese Yen)

Overseas Activities Cost were used for employment expenses of project assistant, transportation expenses and stationery purchase expenses.

2.1.2 Input by the TAN side (Planned and Actual)

a. Counterpart Personnel (C/P)

The Counterpart personnel assigned for the Project are shown in Table 2-5.

Table 2-5: List of Counterparts

<i>Role in project</i>	<i>Name (Planned)</i>	<i>Name (Actual as of October 2018)</i>
Project Director	Mr. Jobirov Ibrohim (Director General, TAN)	Mr. Ashurov Loik (Director General, TAN)
Project Deputy Director	Mr. Shambiev Alisher (Fist Deputy Director, TAN)	No change
Project Manager	Mr. Bakhtiyor Sheraliev (Head of the Safety and Quality Department)	No change
Taskforce 1 Leader	Mr. Davlyatov Daylat (Head of ATS)	Mr. Davron (Head of ATS)
Sub-Leader	Mr. Mansuri Makhmad (Chief of ACC Dushanbe)	Mr. Khusenov Payrav (Chief of ACC Dushanbe)
Taskforce 2 Leader	Mr. Bakhtiyor Sheraliev (Head of	No change

Sub-Leader	the Safety and Quality Department) Mr. Toshmatov Ulugbek (Safety and Quality inspector)	No change
Taskforce 3 Leader	Mr. Khumorov Bakhtiyor (Head of ATFMC)	Mr. Mukhamadaminshoev Firuz (Head of ATFMC)
Sub-Leader	Mr. Mukhamadaminshoev Firuz (Head of AIS)	Mr. Khumorov Bakhtiyor (Head of AIS)

b. Project Office Space

Office space for the Project was provided in Head Quarter of TAN. TAN also provided desks, chairs and internet connection for the Project office.

Project Office Expenses

Utility cost was paid by TAN. JICA provided the following expenses for the project office.

<i>No.</i>	<i>Item</i>	<i>Cost (TJS)</i>
1	Purchase of Projector / EPSON EB-X04:	4,661
2	Purchase of Safe box / MAHAMAYI VS100K	3,605
3	Purchase of Scanner / HP Scanjet Pro 3000 s2	3,550
4	Purchase of Note-PC/ Lenovo ideapad FLEX4	8,310
5	Purchase of Note-PC/ Lenovo ideapad FLEX3	6,990
6	Purchase of Printer EPSON L1300	5,362
	Total	32,478

2.1.3 Activities (Planned and Actual)

a. Activities Related to Output 1

There are 7 activities related to Output 1: “To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards” in the PDM. The results of each activity are shown below.

<i>PDM Activities</i>	<i>Planning</i>	<i>Results</i>
1-1. To conduct training of ATC officers on aerodrome, approach and area control services	<u>Aerodrome #052</u> Jul. 2016-Sep. 2016 Oct.2016-Dec.2016 <u>Approach procedure #053</u> Jul. 2016-Sep. 2016 Nov.2016-Jan.2017 <u>Approach surveillance #054</u> Jul. 2016-Sep. 2016 Oct.2016-Dec.2016 <u>Area procedure #055</u> Jul. 2016-Sep. 2016 <u>Area surveillance #054</u> Jul. 2016-Sep. 2016 Oct.2016-Dec.2016	<u>Completed:</u> Eighteen (18) ATC officers successfully completed ICAO authorized #052-#055 trainings in Malaysia Aviation Academy (MAvA) until August 2018.

1-2. To conduct OJT instructor training for selected ATC officers	<u>OJT-I #219</u> May2017	<u>Completed:</u> Five (5) instructors successfully completed ICAO authorized #219 training in MAVa in January 2017.
1-3. To conduct instructor training for the simulator trainers	<u>Simulator trainer (GIT)#211</u> Feb2017	<u>Completed:</u> Eight (8) instructors successfully completed ICAO authorized #211 training in MAVa in February 2017.
1-4. To review and if necessary improve Operation manuals	<u>Translation documents (Rus.-Eng.)</u> Jul2016-Aug2016 <u>Develop and update</u> Sep2016-Jan2017 <u>Expert reporting session</u> Aug.2017 <u>Workshop on Operation Manual Review</u> Dec2017/Jan&May2018 <u>ATC Capacity Assessment (new request)</u> May2018	<u>Partially Completed:</u> All operation manual was reviewed. Improvement of the manuals have not been completed for all reviewed results.
1-5. To conduct OJT on aerodrome, approach and area control services	<u>OJT-I training</u> Aug2017 <u>Workshop on OJT-I Material and Training Plan Dev.</u> Nov2017/May2018 <u>Observation of OJT by CP Instructors</u> Nov2017	<u>Completed:</u> ATC-1 expert observed several instructors are capable of providing OJT on aerodrome, approach and are services according to the ICAO standard.
1-6. To procure aerodrome simulator	<u>User Training on Aerodrome Simulator</u> Sep 2017 <u>Maintenance and Operation Training on Aerodrome Sim</u> Sep2017	<u>Completed:</u> Hand-over ceremony in September 2017. Certificate by CAA in December 2017.
1-7. To conduct simulator trainings	<u>Aerodrome Simulator Trainer's Training</u> Jan2018 <u>Workshop on Simulator Tr's Material & Training Plan Dev</u> Jan2018 <u>Observation of Aerodrome Simulator by CP Trainers</u> Jan2018	<u>Completed:</u> AD Sim training materials/periodical plan were developed, and trainings were done in accordance with the plan.

b. Activities Related to Output 2

There are 9 activities related to Output 2: "To enhance capacity of training for ATC officers

with regard to ICAO recommendations” in the PDM. The results of each activity are shown below.

<i>PDM Activities</i>	<i>Planning</i>	<i>Results</i>
2-1-1. To conduct basic training on contingency plan	<u>Translation documents (Rus.-Eng.)</u> Jun2016-Aug2016 <u>Contingency Plan (CP) Basic</u> Aug 2016	<u>Completed:</u> ATC-2 Expert conducted the lecture of “Contingency Plan (CP) Basic” in 21 July 2016.
2-1-2. To improve the draft contingency plans	<u>Develop Contingency Plan</u> Aug2016-Nov2016	<u>Completed:</u> CP was improved, and CP completion seminar was conducted.
2-1-3. To conduct exercise of contingency procedures	<u>Make Exercise Plan</u> Dec2016-Jan2017 <u>Workshop on CP Exercise</u> May2018	<u>Completed:</u> CP exercise were conducted twice. (in April 2017, in May 2018)
2-1-4 To request approval of CAA on the contingency plans for implementation	<u>Monitoring on approval process for CP (changed)</u> Jul2017	<u>Completed:</u> MOT approved Contingency Plan in TAN on 25th July 2017.
2-2-1. To obtain necessary knowledge of SMS	<u>SAF/SA 1</u> Oct2016 <u>SAF/SA 2</u> Dec2016 <u>SAF/INV</u> Sep2016 <u>SAF-SA2 in EUROCONTROL</u> Jul2017 <u>Follow-up training on SMS</u> Apr2017/Jul2017	<u>Completed:</u> Two (2) Safety officers successfully completed SAF-SA1 in October 2016 and SAF-INV in March 2017 by EUROCONTROLE Luxemburg.
2-2-2. To develop and update SMS Manual	<u>Develop SMS Manual</u> Aug2016-Oct2016 <u>Study on SMS Implementation</u> Jul2017 <u>W/S on Developing SMS Manual</u> Jul2017 <u>Seminar on Completion of SMS Manual</u> Jul2017	<u>Completed:</u> SMS manual was improved, and Seminar on SMS manual completion was conducted.
2-2-3. To establish risk management process		<u>Completed:</u> TAN’s voluntary reporting system is working on Web site. VOICES seminar was conducted in October 2017.
2-2-4. To implement safety risk management and safety assurance	<u>Training on Basic Human Factors</u> Apr2017 <u>W/S on Runway Safety Program</u> May2018	<u>Completed:</u> HF basic training was conducted in April 2017. SAF-HFA course in IANS was completed in June 2018. RWY safety WS was conducted. Three

		airports have RST and made hazard-map.
2-2-5. To conduct SMS training and education for ATC officers	<u>Make SMS Training Plan</u> Dec2016	<u>Completed:</u> Additional SMS ToT in Russia for instructor was done. SMS training was conducted at 4 airports, and will be continuously conducted for in September, October 2018

c. Activities Related to Output 3

There are 6 activities related to Output 3: “To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations” in the PDM. The results of each activity are shown below.

<i>PDM Activities</i>	<i>Planning</i>	<i>Results</i>
3-1. To conduct basic training on AIS	<u>AIS/General& AIS/Cartography</u> Jun-Jul2016 <u>W/S on SAR coordination manual development</u> Apr2018 <u>SAR Coordination Exercise</u> Jul2018 <u>Seminar on SAR Coordination Manual</u> Jul2018	<u>Completed:</u> 4 AIS officers successfully completed “AIS Basic” training provided by Group EAD in Frankfurt in August 2016. 4 officers participated in SAR administration training in Malaysia in September 2017, then AIS expert provided the workshop on SAR coordination manual development in April 2018 to organize SAR coordination exercise in July 2018 finally.
3-2. To conduct basic training on aeronautical charts		<u>Completed:</u> Project provides catch-up trainings of aeronautical chart drawing exercise as Sub-activities by AIS Expert from in February and August 2017 by FPD expert.
3-3. To develop operation manual for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP)	<u>NOTAM & AIP Procedure Manual Development W/S</u> Aug&Nov2017 <u>NOTAM & AIP Procedure Manual Development W/S</u> Apr2018	<u>Completed:</u> Operation manual for NOTAM, AIC and AIP were developed in August 2017 and January 2018.
3-4. To conduct basic training on flight procedure design (FPD)	<u>Training on basic PANSOPS FPD</u> Apr2017-May2017	<u>Completed:</u> FPD expert conducted PANS-OPS FPD training in April to May 2017. 5 AIS/ATC participants successfully obtained certification.
3-5. To conduct OJT of	<u>WGS-84 data survey</u>	<u>Completed:</u>

flight procedure designers for model airport	<u>(Step-1)</u> May2017-Jun2017 <u>WGS-84 data survey</u> <u>(Step-2a/2b)</u> Sep2017 <u>WGS-84 data survey</u> <u>(Remote oversight)</u> Feb2018 <u>OJT on FPD in DYU</u> Nov2017-Dec2017 <u>Observation for FPD in DYU</u> Feb2018/Sep2018 <u>PBN IFPD in Japan</u> Jun-Jul2017/ Jun-Jul2018 <u>FPD-QA, GV/FV</u> Sep2018	WGS-84 survey (newly included Projected activity in May and September 2017) was completed in DYU. FPD expert conducted on OJT on FPD in November and December. Moreover, FPD expert conducted the training for FPD Quality Assurance (QA) in September 2018.
3-6. To produce draft of AIP of the model airport	<u>AIP design Exercise on Dushanbe Airport</u> Apr2018 <u>Seminar on AIP development completion</u> Apr2018	<u>Completed:</u> AIS/FPD created draft of 6 AIPs (5 FPD and WGS-84) by VISIO in April. FPD team was fully engaged in DIA' ILS27 issued in 2018.

2.2 Achievements of the Project

2.2.1 Outputs and Indicators (Target values and actual values achieved at completion)

The achievements of the three project outputs indicated below are summarized in the following table according to the PDM indicators.

- Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards.
- Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations.
- Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers regard to ICAO recommendations.

Output 1 has been almost achieved since two of five indicators attained 100% achievement, and the remaining three indicators reached to 60% to 85% rates based on the assessment of objectively verifiable indicators of the PDM. It is estimated that two unfinished indicators will reach 100% by the end of 2018, and the remaining one indicator in 2019.

Output 2 has been almost achieved since seven of eight indicators attained 100%, and remaining one indicator reached 70% . It is estimated that unfinished indicator will reach 100% in 2019. Output 3 also fully achieved with 100% achievement of all of 11 indicators.

<i>Indicators for the PDM Outputs</i>	<i>Achievement as of October 2018</i>
<i>Output 1</i>	
1-1. At least 80% officers/OJT instructors/Simulator trainers who attended training courses have	<u>Achieved:</u> 100%. ATC officers have completed trainings successfully and they were certified.

completed trainings successfully	<u>Achieved: 100%.</u> OJT instructors have completed trainings successfully and they were certified.
	<u>Achieved: 100%.</u> Simulator trainers have completed trainings successfully and they were certified.
1-2. Operation Manual has been reviewed and improved if necessary	<u>Partially Achieved: 60%</u> Expert reviewed the 35 documents, there were 29 findings such as the difference with ICAO PANS-ATM in 8 documents. Most of the expert's recommendation has been accepted. However, recommendation is not fully implemented as planned. It is estimated that this indicator will be fully achieved in 2019. Improvement of the manual will continue after the Project completes.
1-3. Each OJT instructors has conducted OJT on aerodrome, approach and area control services at least 2 times.	<u>Partially Achieved: 70%</u> OJT-I training was implemented. 20% (completed) W/S was conducted successfully. 20% (completed) Expert observed and lecture to 3 OJT Instructors. 30% (completed) 2 more OJT instructors will conduct OJT in 2019.
1-4. Aerodrome simulator has been operational.	<u>Achieved: 100%</u> Aerodrome simulator was installed and operational.
1-5. Each simulator trainers have been conducting simulator training at least 3 times per month.	<u>Almost Achieved: 85%</u> Sim-ToT was conducted. 40% (completed) W/S was implemented. 20% (completed) Expert observed and had lecture to CP instructor. 10% (completed) CP instructors were training AD simulator three times a month. 15% (completed) Some instructors, who have not performed simulator training 3 times a month, will achieve the target frequency in 2019.
<i>Output 2</i>	
2-1-1 2 ATC officers have completed basic course on contingency plan successfully.	<u>Achieved: 100%</u> Basic course on contingency plan was completed successfully.
2-1-2 Exercise of contingency procedures has been conducted successfully.	<u>Achieved: 100%</u> Exercise of contingency procedures have been conducted twice successfully.
2-1-3 The contingency plan has been approved by CAA for implementation.	<u>Achieved: 100%</u> The contingency plan has been approved by MOT on 25 July 2017.
2-2-1 2 ATC officers have been completed courses on SMS successfully.	<u>Achieved: 100%</u> SAF-SA1, -SA2, -INV courses were completed and 2 ATC officers were certified.
2-2-2 SMS manual has been developed and updated.	<u>Achieved: 100%</u> SMS manual has been developed. F/U training, W/S and Seminar were conducted successfully.

2-2-3 Risk management process has been established.	<u>Achieved:</u> 100% TAN established risk management process in the safety management manual. TAN started to operate Voluntary Reporting System, which is one important element of the risk management process.
2-2-4 Safety risk management and safety assurance have been implemented.	<u>Partially Achieved:</u> 75% TAN is currently implementing safety risk management. TAN is capable of conducting risk assessment (identify the hazard) with the knowledge of Human Factors, established a system of analyzing data obtained from the Runway Safety Team (RST) activities. Safety assurance is not implemented yet. It will achieve the target in 2019.
2-2-5 SMS training and education for all ATC officers have been conducted.	<u>Achieved:</u> 100% SMS ToT abroad and Conducted training SMS are completed successfully.
<i>Output 3</i>	
3-1 2 AIS officers have been successfully completed basic course on AIS	<u>Achieved:</u> 100% Basic course on AIS was completed successfully.
3-2 2 AIS officers have successfully completed basic course on aeronautical charts	<u>Achieved:</u> 100% Basic course on aeronautical charts was completed successfully.
3-3 Operation manual for Notice to Airman (NOTAM), Aeronautical Information Circular (AIC) and Aeronautical Information Publication (AIP) have been developed	<u>Achieved:</u> 100% Operation manual of NOTAM, AIC, AIP were developed.
3-4 2 flight procedure designers have successfully completed basic course on PANS-OPS	<u>Achieved:</u> 100% Basic course on PANS-OPS was completed successfully.
3-5 2 flight procedure designers have successfully completed OJT on conventional flight procedure design (FPD)	<u>Achieved:</u> 100% OJT on conventional flight procedure design was completed successfully.
WGS-84 (newly included Project in May 2017)	<u>Achieved:</u> 100% WGS-84 survey was completed in DYU.
FPD-QA (conducted by association)	<u>Achieved:</u> 100% FPD-QA training was completed successfully.
3-6 Draft of Aeronautical Information Publication (AIP) of the model airport has been produced	<u>Achieved:</u> 100% Draft of Aeronautical Information Publication (AIP) of the model airport was produced in April 2018.
3-7 4 AIS officers have successfully completed basic course on SAR	<u>Achieved:</u> 100% Basic course on SAR was completed successfully in April 2018.
3-8 SAR coordination manual has been developed	<u>Achieved:</u> 100% SAR coordination manual was developed in July and September 2018.
3-9 SAR coordination exercise has	<u>Achieved:</u> 100%

been conducted successfully	SAR coordination exercise was conducted successfully in October 2018.
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2.2.2 Project Purpose and Indicators (Target values and actual values achieved at completion)

The Project Purpose “To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)” was almost achieved based on the assessment of objectively verifiable indicators of the PDM. The achievements of the Project Purpose at the time of this evaluation are summarized in the following table. The Project Purpose is expected to achieve 100% in 2019.

<i>Indicator for Project Purpose</i>	<i>Achievement as of October 2018</i>
1 All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers	<u>Almost Achieved:</u> TAN’s OJT instructors and simulator trainers have provided trainings for ATC officers. Operation Manual needs further modification to fully comply with ICAO standards, and this will be completed in 2019.
2 The Contingency Plan and SMS for ATC have been implemented	<u>Achieved:</u> Contingency Plan was approved by MOT. SMS has been implemented.
3 The draft AIP of model airport has been compliant with ICAO standards	<u>Achieved:</u> 5 (FPs) and 1 (WGS-84) AIP (AD) in UTDD were drafted by VISIO, and Expert confirmed it as ICAO standard quality.

2.3 History of PDM Modification

The Project revised the PDM once from the PDM version 1.0 dated 26 April 2016 as shown below to suit to assistance needs. The indicator for newly added SAR in PDM was changed in accordance of discussion at JCC/2. The revisions contributed to indicate the achievement of the Project Purpose more accurately. The details of the revisions are shown in Annex 3.

(1) The 1st revision dated 16 June 2017

Indicators of Outputs 3: Three indicators on SAR were added the PDM as follows;
Indicator 3-7: 4 AIS officers have successfully completed basic course on SAR.
Indicator 3-8: SAR coordination manual has been developed.
Indicator 3-9: SAR coordination exercise has been conducted successfully.

2.4 Others

2.4.1 Results of Environmental and Social Considerations (if applicable)

Not applicable.

2.4.2 Results of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

Not applicable.

3 Results of Joint Review

3.1 Results of Review based on DAC Evaluation Criteria

The Project is reviewed jointly by both the Japanese side and the TAN side from the viewpoint of Five Evaluation Criteria, defined by JICA which was originally proposed by DAC (OECD) shown in the following table.

Table 3-1: Five Evaluation Criteria

<i>Criteria</i>	<i>Description</i>
1.Relevance	Degree of compatibility between the development assistance and priority of policy of the target group, the recipient, and the donor.
2.Effectiveness	A measure of the extent to which an aid activity attains its objectives.
3.Efficiency	Efficiency measures the outputs -- qualitative and quantitative -- in relation to the inputs. It is an economic term which is used to assess the extent to which aid uses the least costly resources possible in order to achieve the desired results. This generally requires comparing alternative approaches to achieving the same outputs, to see whether the most efficient process has been adopted
4.Impact	The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended. This involves the main impacts and effects resulting from the activity on the local social, economic, environmental and other development indicators.
5.Sustainability	Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn. Projects need to be environmentally as well as financially sustainable.

Source: JICA Project Evaluation Guideline (2010), JICA

The table below indicates summary of the evaluation results. Since effectiveness of the Project, which measures achievement of outputs, have differences between the three outputs, this part of the results is shown for each output and the total of the Project.

Table 3-2: Evaluation based on DAC Criteria

Relevance	High
Effectiveness	High Output 1: Fair, Output 2: High, Output 3: High
Efficiency	Fair
Impact	High
Sustainability	High

3.1.1 Relevance

The relevance of the Project is judged “High” for the following reasons:

Since 93% of the Tajikistan territory is mountainous area, civil aviation is a very critical mode to complement the road and railroad transportation. The “National Target Development Strategy for Transport Sector of the Republic Tajikistan to the Year 2025” (2011) mentions necessity of the air navigation improvement to support economic development. Thus, safe and smooth operation of civil aviation is a priority policy of the nation.

In January 2015, International Civil Aviation Organization (ICAO) conducted a Validation Mission to TAN and made recommendation on air transportation services such as Training program, Contingency plan, planning and implementation of Safety Management System, Aeronautical Information Services, etc. The Project has been planned to carry out these ICAO recommendations.

JICA’s supporting policy for Tajikistan puts importance on transportation infrastructure for vitalization of regional connection and sustainable economic development. Recently JICA implemented a grant project “Dushanbe International Airport Improvement Plan (2014-2016)” which can generate synergistic effects with the Project.

Even though the number of flights in Tajikistan has been fluctuating in recent years due to, mainly, regional issues such as disturbances in Afghanistan, this country has a good potential to handle more air passengers and cargo. To prepare for the future increase in air traffic, TAN has a crucial need to improve its capacity that meets the ICAO’s standard.

3.1.2 Effectiveness

The effectiveness of the Project is judged “High” for the following reasons:

The Project purpose and outputs were defined in PDM in the following way;

- Project purpose: To enhance capacity of Tajik-air-navigation (TAN) in Air Traffic Services (ATS)
 - Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards.
 - Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations.
 - Output3: To enhance capacity of Aeronautical Information Services (AIS) officers regard to ICAO recommendations.

Achievement of the project purpose and outputs were examined by their indicators. As is shown in 2.2 of this report, most of the outputs and project purpose have been attained to the satisfactory extent.

- Output 1

Three major components of Output 1 are overseas trainings, conducting various training in TAN and revising TAN’s operation manuals. Overseas trainings were successfully conducted in Malaysia and other countries (refer to Table 2-4: List of Overseas Training Conducted under Japanese Budget). Human resource of ATC and OJT instruction has been enhanced successfully and instructors are active for trainings. Another component, revising operation manual was not fully completed during the project period, and improvement of the manual will continue after the project completes.

- Output 2

Concerning Output 2, “enhance capacity of ATC officers”, the achievement was good. Even before the Project, C/P had some knowledge of Contingency Plan, Safety Management System, etc. to some extent. This Project enhanced their capacity to international level. The Project well implemented the activity plan with conducting lectures, manual editing and other tasks. As a result, effectiveness of Task force 2 is high.

- Output 3

Activities of Output 3 includes training on Aeronautical Information System (AIS). The Project successfully completed developed NOTAM, AIC and AIP manual, which are compliant to ICAO standard.

Activities of Output 3 also includes Search and Rescue (SAR). Four TAN officers learned basic of SAR in Malaysia. This is a new task of TAN, which was pointed out by ICAO audit. What the training participants learned in Malaysia was how to plan SAR system. They acquired knowledge on how to manage the SAR implementation, developed SAR coordination manual and successfully conducted SAR coordination exercise.

Flight Procedure Design (FPD) is also under the category of Output3. TAN dispatched four participants to JICA group training in Japan, and the JICA experts provided practical training of FDP in Tajikistan. Those TAN staff have successfully drafted Aeronautical Information Publication (AIP) of the model airport and indicated that their FDP-related AIS capacity have been enhanced by the Project.

Judging from indicators of Output 3 mentioned in Project Design Matrix (PDM), effectiveness of Output 3 is high.

3.1.3 Efficiency

The efficiency of the Project is Fair. The Project allocated almost all the planed and added inputs within the scheduled period and achieved expected outputs with some exceptions such as remaining work for operation manual revision. As is mentioned in “2.1 Results of the Project” items of inputs and their cost is reasonable and total cost was enough below the plan. However, joint evaluation team found some faults that damaged the effective operation of the Project.

Preferable side

a) Preprimary Trainings

The C/P of the Task Forces has attended the third county trainings of ICAO standard at MAVA, Malaysia. This system prepared readiness of C/Ps to receive higher technical transfer from Japanese experts. Within the limited assignment allocation of the C/P and JICA experts, this project has input almost all the resources planned and conducted most of the necessary activities as scheduled. Main language of communication between C/P and JICA experts was English. Nomination of participants to the third country trainings considered English ability. In some cases, both of JICA experts and C/Ps felt difficulty in English communication.

b) Development of Training Capacity

For the enhancement of training capacity of TAN, the Project dispatched six Air Traffic Controllers to OJT-I training and another eight Air Traffic Controllers to GIT training in Malaysia, and now they are active in OJT and simulator training. This strategy (Training of Trainers) was very efficient. JICA granted tower navigation simulator to TAN, which is very effective equipment to improve and examine the capacity of ATCOs. Establishing training system in TAN is more cost-efficient comparing with technical transfer between JICA experts and TAN’s C/P.

c) Assignment of JICA Experts

At the beginning, the Project expected longer assignment of the JICA experts. But, assignment of JICA experts was rationalized during the implementation of the Project. The experts completed all the activities within this shorter-than-planned assignment period, and this change, as a result, improved the efficiency of the Project.

Unpreferable side

a) Attendance Rate to Lectures of JICA Experts

JICA experts have organized many lectures. According to the report of the lectures, attendance ratio was not always high. C/Ps participate to lectures at the off time of their work shift. Sometimes C/Ps are on their shift and could not attend lectures of JICA experts. Some C/P mentioned lectures were not always interactive, excited and very relevant to needs of them. Not all the responsibility of lecture preparation and execution belong to JICA experts. Task force leaders and resource persons of TAN especially these trained in Malaysia could have made some improvement of this lecture issue.

b) Delay in Preparation of Detailed Project Activity Plan

Preparation of the detailed Project activity plan was produced after one year from the commencement of the Project, which disturbed the efficiency of the technical cooperation. Project activities and their break down should logically connected to the three outputs of the Project. Thus, JICA expert should be aware that how each detailed activity contributes to the relevant output. The Project might have regarded that detailed activities do not have to be prepared before the completion of MAVa trainings. This delay caused various hindrances for the smooth activities of the Project, especially in Task Force 1. In other words, Task force 2 & 3 got less damages from this delay. Because activities of Task Force 2 were already planned with some details and those of Task Force 3 were scheduled to start from the middle of 2017.

3.1.4 Impact

Impact of the Project is High

This project has achieved its goal to an appropriate extent and TAN is even making steady steps towards accomplishment of its overall goal, which is “To improve Air Traffic Services (ATS) in Tajikistan”. TAN has established an integrated training, rating, and examination system to improve quality of its human resources. These systems will lead TAN to the achievement of the Overall goal.

C/P trainings in foreign countries such as Malaysia, Japan, Russia, Kazakhstan, Germany and Luxemburg raised capacity of TAN’s participants. These trainings pulled up the level of C/P and let them be ready for the technical transfer from the JICA experts. In addition to this direct effect, these training occasions have stimulated TAN staff. They became more aware and motivated to learn English language and to learn Air Traffic Services through comparison between systems of TAN and other countries. This project opened their eyes to the outer world.

With ICAO’s audit and this Project, TAN become aware of the world out of the former Soviet Union. C/Ps have been exposed to new concept and tasks such as Search and Rescue (SAR), Flight Procedure Design (FPD), WGS-84, FPD-QA, G/V. Also, during the Project C/P got ideas of road map for the future that include Performance Based Navigation (PBN). The impact of the Project that released TAN from “isolated situation” was significant.

3.1.5 Sustainability

Sustainability of the Project is High.

Policy and Institutional Aspect

Smooth and safe civil aviation will remain important national policy for sound socioeconomic development. Even though air traffic count is not regularly increasing, Air Traffic Service is an essential infrastructure to manage prospective economic development.

Organizational aspect

a) Structural Revising

During the project, a new section named Development Department has been organized. This section handles newly introduced tasks by the Project such as Safety Management System, Flight Procedure Design of the Task Force 3. Under a very capable manager, this department has very high potential to establish and implement these new tasks.

b) Personnel policy of TAN

Recently, the TAN's Head of Personnel Department got another assignment as the Head of the Training Center of TAN. This will make stronger connection between human resource development and treatment. TAN has made incentive for human resource development. For example, if navigation officer gets one more rating (license of sub-work), he/she can get 5% of salary increase. Also, navigation officers working for Flight Procedure Design get 30% of salary increase. These personnel policy facilitates staff motivation to challenge new task and ratings.

Technical aspect

During the Project, TAN has established training system with multi methodologies as shown below. This system will continuously contribute to the human resource development of TAN.

a) Training System

- OJT

One-to-one and face-to-face training (theoretical, practical and using-simulator) for the position of Briefing, Tower, Air Control Center (ACC), Approach and Radar are in operation by six OJT instructors.

- Technical Trainings

Monthly one-day training and seasonal trainings (twice a year) are conducted by lecture and by simulators. Also, Web Based Training by Russian system is available for theoretical training.

- English refreshing course

TAN has two English teachers and a class room facility.

b) Examination system

- Rating examination

Air traffic officers should take a license to work in the position of Briefing, Tower, Area Control Center, Approach and Radar. Trainees learn these practical skills through OJT. Examination are conducted twice; 1st one by TAN and 2nd one by CAA.

- Seasonal Examination

At the beginning of summer and winter season, Air Traffic Controllers with each rating should take writing and interview examination to check their readiness for the coming season. In addition to this examination, each officer should work for certain hours in each

rating position to maintain their ratings.

- **Examination of License Renewal**

All the Air Traffic Controllers should take exam of 11 subjects to maintain their license. Without passing this examination, no Air Traffic Controllers can renew their license. In addition to this examination, each officer should work for certain hours in air navigation to maintain their license.

Among the items mentioned above, OJT and Aerodrome simulation training have been established by the Project. TAN will surely optimize these new training methods.

Financial aspect

Revenue of TAN is charge of air navigation and aeronautical information services. Income of 2017 was some 70 million Somoni, which is some 6.40 million US\$. Revenue of 2018 would be improved. Number of airways connecting points between Tajikistan and neighboring countries was 54 in 2017. It has increased to 65 now in 2018. The more the connecting points the smoother the flight lines. And it would attract more airlines to use over pass navigation service of Tajikistan. Since TAN is making effort to increase air navigation revenues, it is estimated that TAN can sustain the effect of the Project in financial aspect.

3.2 Evaluation on the results of the Project Risk Management

There are two kinds of risks in this project, resignation of CPs trained by the Project and motivation of Task Force Leaders.

1) Resignation

Since the TAN's salary is not good enough from the international standard, there is a significant potential that trained and capable Project C/P might resign for a better paid job. As countermeasures, TAN provided additional salary if a C/P undertakes additional tasks (such as Flight Procedure Design trained by the Project) in addition to his ordinal work, the officer gets supplementary salary. The Project also selected participants to overseas training from those who would work continuously for TAN.

2) Motivation of Task Force Leaders

Attitude and enthusiasm toward the Project varied among task force leaders. At the ending period of the Project, the most motivated leader was assigned for some difficult task such as operation manual revising, Flight Procedure Design (FPD) and Search and Rescue with some organizational change of TAN so that the Project effects can survive after its completion.

3.3 Lessons Learnt

(1) Preferable Aspects

1) Training in Japan and third countries

This project dispatched its C/P to Japan (JICA's group Training) Malaysia, Germany, Russia and Luxemburg. These trainings gave the participants enormous knowledge, skill, stimulation, motivation and awareness of different navigation system and its teaching methods of ICAO standards. JICA experts supported these ex-trainees in an effective way because all these C/P has reached to an appropriate technical level. These trainings abroad were very effective eye openers to motive them learning from different system.

2) Building capacity of Training

The Project aimed not only capacity of TAN officers, but also capacity of training for sustainable capacity development. System of Training of Trainers (TOT), OJT, lecture and simulation types of trainings are well implemented as routine tasks of the organization. This secures sustainability of the Project achievement.

3) Flexible Project Management

Introduction, technical improvement and institutional development of “Search and Rescue (SAR)” WGS-84, FPD-QA, G/V, Third Country training for TF 2 were added to the Project activities after commencement. These are an important topic to change air navigation system consistent with ICAO standard. Upon request from TAN, JICA side affirmatively consider these and agree to include these new topics into the Project. Any project plan may be good enough at the starting point, however, if situations change, the Project also change to produce the most preferable results at the end of the Project. Inclusion of SAR and other items is a good practice for project management.

(2) Unpreferable Aspect

1) Delay of Detailed Action Planning

Project Design Matrix (PDM) prepared by JICA mentions Project Activities as a part of narrative summary. But PDM is not enough to implement the Project. The Project members should have prepared a detailed action plan at an earlier stage of the Project and it should be shared among all the Project stakeholders. Detailed activity plan facilitates practical assignment frequency and period of the JICA experts and gives clear ideas for preparation of activities.

Since major activities of Task Force 1 were expected to start after the third country trainings at MAVA, Malaysia, the Project may have misunderstood this as a moratorium of detailed planning. The project caught up the schedule of detailed planning at the 2nd year and learned detailed plan should be prepared enough beforehand, because often an output of activity “A” is an input of the next activity “B”. Detailed plan is necessary to have a good glance of the entire Project for a better management.

2) Contribution of C/P after Trainings in Third Countries

Trainings of C/P in third countries later facilitated effective technical transfer from the JICA experts. However, some expected contributions were not fulfilled. Not all the ex-trainees were passionate to support the smooth and efficient implementation of the Project. If their contribution were more, the Project could have fully complete revision of TAN’s operation manuals and organized more vivid lectures for technical transfer. Projects should have some mechanism to overcome this issue. Even though C/Ps of Task Force 1 were motivated enough just after the trainings at MAVA, their momentum may have decreased by the not-well-prepared technical support at the early stage of the Project.

3) Coordination of C/Ps’ work shift and incentive to attend the experts’ lectures

At the early stage of the Project for the C/Ps, there were no incentive and compensation to attend the experts’ lectures at their shift off time. And C/Ps on their shift could not attend the lecture. The Project started necessary arrangement at the later stage. Since paying overtime and change of work-shift may need change of rules and additional cost, a careful attention should

have been paid to this issue at the planning stage of the Projects.

4) Language skill

Working language of TAN is basically Russian, with which no JICA experts are friendly. Even though Air Traffic Controllers use English language in their work, their English skill are not necessarily good enough to learn technical matters in this language. JICA side should dispatch experts with a good English skill at least. In addition to that, the Project should have been aware of necessity for the Russian-English translation and interpretation. When the Project prepares the detailed action plan at the beginning, it should examine if each action can be executed without language problem.

4 For the Achievement of Overall Goals after the Project Completion

4.1 Prospects to achieve Overall Goal

Possibility of TAN to achieve the overall goal is high. Because training systems in TAN has been established during the Project and they are making effects. This is partly because the overall goal and project purpose are very similar with each other, which means achievement of the Project purpose is nearly equal to accomplishment of the overall goal.

- Project purpose: To enhance capacity of Tajik-air-navigation (TAN) in Air Traffic Services (ATS)
- Overall Goal: To improve Air Traffic Services (ATS) in Tajikistan

4.2 Implementation Structure and Plan of Operation of the TAN side to achieve Overall Goal

(1) Relevant structure of the Project to achieve the overall goal

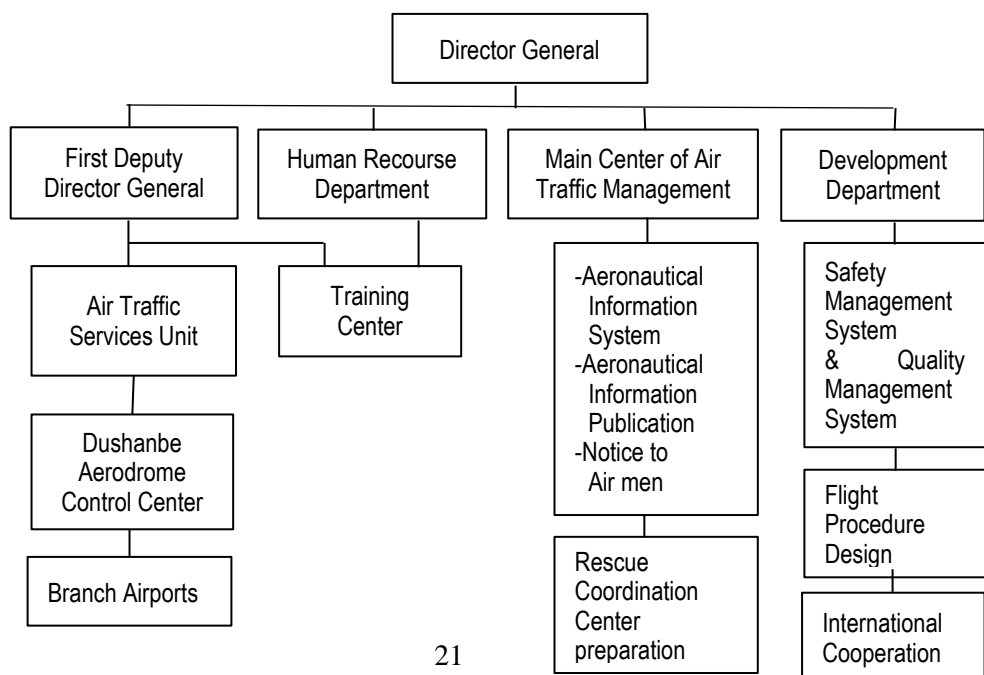


Figure 3-2: Structure of TAN (only the Project relevant parts)

TAN has an organizational structure as shown in the Figure 3-2 above. Some of the structure has been changed to maintain the achievement of the Project.

(2) Plan of operation of TAN to achieve the overall goal

Plan of operation of TAN to achieve the overall goal has not yet been prepared. However, TAN has enhanced human resource development system with the Project. Training and examination system of TAN is mentioned in “Organizational aspect” of “3.1.5 Sustainability”. These multi-layered trainings, rating and examination system will continuously develop human resource of TAN and achieve the overall goal.

4.3 Recommendations for the TAN and Tajikistan Government side

(1) Plan of Management and Operation of TAN after the Project

TAN should have management and operation plan to further develop its capacity. Even after the improvement by the Project, TAN has issues to overcome and challenge. For an organization in an environment of rapid technical progress, long and mid-term management and operation plan would help to judge priority with limited resources.

(2) Continuous Relation with JICA and other countries

- 1) TAN should often remind the request of next technical cooperation on PBN to JICA. Tajikistan PBN implementation plan shall be improved for effective cooperation with JICA. TAN should continuously monitor the availability of JICA group trainings on relevant technical topics of ATS.
- 2) This project used existing training system in third countries such as Malaysia, Russia, Germany, and Luxemburg, which were good opportunities for TAN officers to compare TAN system with others. There can be some chances for TAN to send its officers to these training at an affordable cost. The newly established International Cooperation Unit of Development Department of TAN should actively look for these occasions.
- 3) Cooperation with neighboring countries is important with two aspects. One is that most of them are on the way to adapt ICAO system to their Air Navigation and as “fellow organization”, TAN could mutually learn with them.

Second aspect is overpass flights. Neighboring countries should make cooperation to set reasonable over flight routes. TAN should actively build good relations with its neighboring counterpart organizations and get the newest information.

(3) Capacity building of Civil Aviation Agency (CAA)

CAA is a government organization to make grand design of civil aviation and supervise TAN. However, no one of the CAA officers has experience of Air Traffic Control Services, which disturbs to develop and amend policies of civil aviation including Air Traffic Control Services. CAA and TAN should make coordination so that at least one CAA officer has practical knowledge of Air Traffic Control Services.

ANNEXES

ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)

ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

ANNEX 3: PDM (All versions of PDM)

ANNEX 4: R/D, M/M, Minutes of JCC (copy) (*)

ANNEX 5: Monitoring Sheet (copy) (*)

Separate Volume: Copy of Products Produced by the Project

ANNEX 1-1

- List of Dispatched Experts

Name	Role in the Project	Assigned Period (Person-Month)
Toshio YOSHIDA	Chief Advisor/ Air Traffic Controller (ATC 1), Training Specialist ~Sep 2017	9.37 months
Hideo WATANABE	Chief Advisor/ Air Traffic Controller (ATC 1), Training Specialist Oct 2017~	2.66 months
Hideo WATANABE	Deputy Chief Advisor/ Air Traffic Controller (ATC 2) Contingency Plan and Safety Expert	4.27 months
Akio SAKAE	Simulator Training Expert	2.47 months
Atsushi YAMANE	FPD Expert	8.44 months
Tsuyoshi SHIRAI	AIS Expert	1.23 months
Shinichiro SUKEGAWA	AIS and SAR Expert	3.37 months
Hideo SAKAMOTO	Evaluation Expert	0.5 month
Tomonori ORITA	Project coordinator	33 months

ANNEX 1-2 List of Counterparts & Support Staff

● List of Counterparts

Role in the Project	Name	Affiliation (Division, Section, Unit)
Project Director	Mr. J. Ibrohim	Director General of Tajikairnavigation(TAN) ~Oct. 2016
Project Director	Mr. A. Loik	Director General of TAN Nov. 2016~
Project Deputy Director	Mr. S. Alisher	First Deputy Director, TAN
Project Manager	Mr. B. Sheraliev	Head of the safety and Quality Department, TAN
Project Coordinator	Mr. T. Orita	Project coordinator, TJ-ATS project, JICA
Taskforce 1 leader	Mr. D. Daylat	Head of ATS, TAN ~Jan 2018
	Mr. D. Rajabov	Head of ATS, TAN Feb.2018~
Taskforce 1 sub-leader	Mr. M. Makhmad	Chief of ACC Dushanbe, TAN ~Jan 2018
	Mr. K. Payrav	Chief of ACC Dushanbe, TAN Feb 2018~
Taskforce 2 leader	Mr. B. Sheraliev	Head of the safety and Quality Department, TAN
Taskforce 2 sub-leader	Mr. T. Ulugbek	Safety and Quality inspector, TAN
Taskforce 3 leader	Mr. K. Bakhtiyor	Head of ATFM, TAN ~ Jan 2018
	Mr. M. Firuz	Head of ATFM, TAN Feb 2018~
Taskforce 3 sub-leader	Mr. M. Firuz	Head of AIS, TAN ~ Jan 2018
	Mr. K. Bakhtiyor	Head of AIS, TAN Feb 2018~

ANNEX 1-3

● List of Trainings

<Overseas>

Course Title	No. of Trainees	Duration
Aerodrome Control #052 (MAvA, Malaysia)	2	2016/07/26-09/23 8 weeks
Approach Control (Procedural) #053 (MAvA, Malaysia)	2	2016/07/26-09/30 8 weeks
Approach Control (Surveillance) #054(MAvA, Malaysia)	2	2016/07/26-09/30 8 weeks
Area Control (Procedural) #055 (MAvA, Malaysia)	2	2016/07/26-10/21 12 weeks
Area Control (Surveillance) #054 (MAvA, Malaysia)	2	2016/07/26-09/30 8 weeks
Aerodrome Control #052 (MAvA, Malaysia)	2	2016/10/18-12/23 8 weeks
Approach Control (Procedural) #053 (MAvA, Malaysia)	1	2016/10/18-12/23 8 weeks
Approach Control (Surveillance) #054 (MAvA, Malaysia)	2	2016/10/18-12/23 8 weeks
Area Control (Surveillance) #054 (MAvA, Malaysia)	3	2016/10/18-12/23 8 weeks
OJT Instructor Training #219 (MAvA, Malaysia)	5	2017/01/09-01/20 2 weeks
General Instructor Training (BIT) #211 (MAvA, Malaysia)	8	2017/02/13-02/17 1 week
OJT Instructor Training #219 (MAvA, Malaysia)	1	2017/05/08-05/19 2 weeks
TF1 Management Training (MAvA, Malaysia)	7	2017/05/08-05/12 1 week
Safety Assessment SAF-SA1 (Theoretical) (EURCNT, Luxemburg)	2	2016/10/17-10/21 1 week

ATM Occurrence Investigation & Analysis (EURCNT, Luxemburg)	2	2017/03/20-03/24 1 week
Safety Assessment SAF-SA2 (Practical) (EURCNT, Luxemburg)	1	2017/07/03-07/07 1 week
AIS Training (AIS basic / Aeronautical Chart) (GroupEAD, Germany)	4	2016/08/15-09/03 3 weeks
PBN Instrument FPD in Japan	2	2017/06/12-07/31 6 weeks
PBN Instrument FPD in Japan	2	2018/06/6-07/14 6 weeks
Total		

<Tajikistan>

Course Title	No. of Trainees	Duration
English Writing Training in Dushanbe (Mehrbonu)	6	2016/08/22-10/14 8 weeks
English Writing Training in Khujand (DONO)	2	2016/08/22-10/14 8 weeks
Operation Manual review Working Group formation meeting + Shearing technical findings of MAvA among Jul, Oct-G and Expert	18+	2017/02/08-02/08 1 day
Follow-up seminar on aerodrome control	18+	2017/02/21-02/24 4 days
AD-Sim Operation Training by NTT-Data	4	2017/09/04-08 1 week
Contingency Plan Basic	2	2016/07/21-07/21 1 day
Human Factor Training	2	2017/04/10-04/14 1 week
SAF-INV F/U Training (Included reporting)	2	2017/04/07-04/07 1 day
CP Exercise / Implement WS	2	2017/04/18-04/18 1 day
CP Completion Seminar	2	2017/04/20-04/20 1 day

Aeronautical Information Service (AIS) Seminar	N/A	2017/02/09-02/09 1 day
Catchup exercise on Aeronautical Chart drawing -1	4	2017/02/13-02/17 1 week
NOTAM/AIP Procedure Manual Development W/S	4	2017/02/27-03/02 1 week
Training on basic PANS-OPS Flight Procedure Design	4	2017/04/12-05/24 7 weeks
Total		

ANNEX 2: List of Products Produced by the Project

- Reports

<i>Name of Products</i>
Inception Report
Work Plan
Monitoring Sheet I
Monitoring Sheet II

- Training Materials and Other documents

<i>Name of Products</i>	
TF-1	(1) Operation Manual Review
	(2) Observation on ATC facility
	(3) ATS system Capacity in TAN
	(4) Calculation work flow
	(5) Calculation detail procedure
	(6) Runway capacity (sliding scale)
	(7) MVA Map development
	(8) OJT Instructor Training course
	(9) OJT-I Hand Book in Japan
	(10) OJT-I Hand Book in TAN
	(11) Check list for OJT-I training (translate to Russian)
	(12) Training Material List (ACC, Approach, Radar, Tower)
	(13) Air Traffic Controller's Training in Japan
	(14) Examination system development in TAN
	(15) ATC Tower Training with 3D Tower Simulator

	<ul style="list-style-type: none"> (16) Operation Record Form (17) Malfunction Report Form (18) AD Simulator Supplementary Manual
TF-2	<ul style="list-style-type: none"> (19) Contingency Plan Basic Training Text Book (20) Contingency Plan in TAN (approved by CAA) (21) Contingency Exercise Plan (22) The result of analysis on draft of SMS manual in TAN (23) SMS manual in TAN (24) Human Factor in TAN (25) Airport Hazard Mapping

TF-3	<ul style="list-style-type: none"> (26) Outline of Flight Procedure Design (FPD) (27) Guidance of FPD Exercise (28) Map procurement specification (29) Draft of RCC Operation Manual (30) Draft of RCC Coordination Exercise Plan (31) Presentation for Catch-up Exercise on Aeronautical <li style="padding-left: 40px;">Chart Drawing (32) Draft of NOTAM operating procedure Manual TAN (33) Draft of AIS Organization Manual (34) Draft of AIP Process Manual (35) Sample of Data Format Requirement, WGS-84 (36) Survey for UTDD (37) Survey points of WGS-84 Implementation, UTDD (38) Outline of OJT on Flight procedure Design (39) Guidance of OJT on FPD (40) Guidance of Observation for FPD in Dushanbe airport (41) Draft AIP of FPD (UTDD) (42) Draft AIP of WGS-84 List (UTDD) (43) Finalizing & AIP Charting Reference (44) FPD-QA Preliminary Material (45) Follow-up Guidance of FPD (46) Outline of FPD Quality Assurance & Ground validation
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ANNEX3-1

PDM Version 1.0

Project Design Matrix

Version 1.0
26 April 2016

Project Title: The Project for Capacity Development in Air Traffic Services

Implementing agency: SUE "TAJIKAIRNAVIGATION" (TAN), Project term: 33 months from 28 March 2016, Project site: TAN in Dushanbe

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal	Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	- Rating record - Survey	
To improve Air Traffic Services (ATS) in Tajikistan			
Project Purpose	Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.	- Project Monitoring Sheet	- CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN
To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)			
Outputs	Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.	- Project Monitoring Sheet	- Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN
Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards			
Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations	Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC officers have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted		
Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations	Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.		

Activities	Inputs		Important Assumption
	Japanese side	Tajikistan side	
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary Training in the third countries: - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: - Aerodrome Simulator	Counterparts: - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary Project Offices (with desks/chairs and internet connection): - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: - Class rooms - Aerodrome simulator room Running Cost: - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and Information related to the Project	
2-1. To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on the contingency plans for implementation 2-2. To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers			Pre-conditions - TAN ensures the budget for input by Tajikistan side - TAN assigns AIS personnel
3-1: To conduct basic training on AIS 3-2: To conduct basic training on aeronautical charts 3-3: To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4: To conduct basic training on flight procedure design 3-5: To conduct OJT of flight procedure designers for a model airport 3-6: To produce draft of AIP of the model airport			

ANNEX3-2

PDM Version 1.1

Project Design Matrix

Project Title: The Project for Capacity Development in Air Traffic Services

Implementing Agency: Tajikairnavigation (TAN)

Target Group: Tajikairnavigation ATS Officers

Period of the Project: 33 months

Project Site: TAN and TAN Training Center, Dushanbe

Version 1.1

Dated 16 June 2017

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
To improve Air Traffic Services (ATS) in Tajikistan	Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The rate of unsafe occurrences with regard to ATC in Tajikistan will decrease Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	- Rating record - Survey	
Project Purpose			
To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been compliant with ICAO standards.	- Project Monitoring Sheet	- Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN
Outputs			
Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards	Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.	- Project Monitoring Sheet	- Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN
Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations	Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC offices have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted		
Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations	Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced. Indicator 3-7: 4 AIS officers have successfully completed basic course on SAR. Indicator 3-8: SAR coordination manual has been developed. Indicator 3-9: SAR coordination exercise has been conducted successfully.		

Activities	Inputs		Important Assumption
	Japanese side	Tajikistan side	
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: <ul style="list-style-type: none"> - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary 	Counterparts: <ul style="list-style-type: none"> - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary 	
2-1. To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on the contingency plans for implementation 2-2. To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers	Training in the third countries: <ul style="list-style-type: none"> - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: <ul style="list-style-type: none"> - Aerodrome Simulator 	Project Offices (with desks/chairs and internet connection): <ul style="list-style-type: none"> - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: <ul style="list-style-type: none"> - Class rooms - Aerodrome simulator room Running Cost: <ul style="list-style-type: none"> - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and Information related to the Project	Pre-conditions <ul style="list-style-type: none"> - TAN assigns AIS personnel
3-1. To conduct basic training on AIS 3-2. To conduct basic training on aeronautical charts 3-3. To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4. To conduct basic training on flight procedure design 3-5. To conduct OJT of flight procedure designers for a model airport 3-6. To produce draft of AIP of the model airport			<Issues and countermeasures >

ANNEX3-3

Plan of Operation 1.0

ANNEX3-4

Plan of Operation 2.0

ANNEX3-5

Plan of Operation 3.0

Plan of Operations

Version 3.0
3 May 2018

Project Title: The Project for Capacity Development in Air Traffic Services

Inputs				2016												2017												2018												2019						Remarks																					
				Plan												Actual												Plan												Actual												Plan						Actual									
Expert																																																																			
Chief Advisor/ATC Expert (1)				Plan												Actual												Plan												Actual												Plan						Actual									
ATC Expert (2)				Plan												Actual												Plan												Actual												Plan						Actual									
Simulator Training Expert				Plan												Actual												Plan												Actual												Plan						Actual									
AIS Expert				Plan												Actual												Plan												Actual												Plan						Actual									
Flight Procedure Design Expert				Plan												Actual												Plan												Actual												Plan						Actual									
Project Coordinator/ Training Planner				Plan												Actual												Plan												Actual												Plan						Actual									
Equipment																																																																			
Aerodrome Simulator				Plan												Actual												Plan												Actual												Plan						Actual									
Training in the third country																																																																			
Training of ATC officers on ATC services				Plan												Actual												Plan												Actual												Plan						Actual									
OJT instructor training for selected ATC officers				Plan												Actual												Plan												Actual												Plan						Actual									
Instructor Training for simulator trainers				Plan												Actual												Plan												Actual												Plan						Actual									
SMS Training				Plan												Actual												Plan												Actual												Plan						Actual									
AIS Training /SAR training				Plan												Actual												Plan												Actual												Plan						Actual									
Activities																																																																			
Sub-Activities				Plan												Actual												Plan												Actual												Plan						Actual						Responsible Organization			
				IV												I												II												III												IV						I						Japan		Tajikistan	
				1												2												3												4												5						6									
Output 1: To enhance capacity of Air Traffic Control (ATC) officers in line with ICAO standards																																																																			
1-1: To conduct training of ATC officers on aerodrome, approach and area control services				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-2: To conduct OJT instructor training for selected ATC officers				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-3: To conduct instructor training for simulator trainers				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-4: To review and if necessary improve Operation Manuals				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-5: To conduct OJT on aerodrome, approach and area control services				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-6: To procure aerodrome simulator				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
1-7: To conduct simulator trainings				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
Output 2: To improve ATC services with regard to ICAO recommendations																																																																			
2-1-1: To conduct basic training on contingency plan				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-1-2: To improve the draft contingency plans				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-1-3: To conduct exercise of contingency procedures				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-1-4: To request approval of CAA on the contingency plans for implementation				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-2-1: To obtain necessary knowledge of SMS				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-2-2: To develop and update SMS Manual				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-2-3: To establish risk management process				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-2-4: To implement safety risk management and safety assurance				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
2-2-5: To conduct SMS training and education for ATC officers				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
Output 3: To improve Aeronautical Information Services (AIS) with regard to ICAO recommendations																																																																			
3-1. To conduct basic training on AIS				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
3-2. To conduct basic training on aeronautical charts				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
3-3. To develop operation manuals for NOTAM, AIC and AIP				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
3-4. To conduct basic training on flight procedure design				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
3-5. To conduct OJT of flight procedure designers for a model airport				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
3-6. To produce draft of AIP of the model airport				Plan												Actual												Plan												Actual												Plan						Actual						JICA		TAN	
Duration / Phasing				Plan												Actual												Plan												Actual												Plan						Actual									
Monitoring Plan																																																																			
Monitoring				Plan												Actual												Plan												Actual												Plan						Actual									
Joint Coordination Committee				Plan												Actual												Plan												Actual												Plan						Actual									
Joint Monitoring (Project Monitoring Sheet)				Plan												Actual												Plan												Actual												Plan						Actual									
Post Monitoring (End of Year 2021)				Plan												Actual												Plan												Actual												Plan						Actual									
Reports/Documents																																																																			
Minutes of Meeting (JCC)				Plan												Actual												Plan												Actual												Plan						Actual									
Completion Report				Plan												Actual												Plan												Actual												Plan						Actual									

ANNEX4-1

Record of Discussion

RECORD OF DISCUSSIONS
ON
THE PROJECT FOR CAPACITY DEVELOPMENT IN AIR TRAFFIC SERVICES
IN
THE REPUBLIC OF TAJIKISTAN

AGREED UPON BETWEEN

TAJIKAIRNAVIGATION, MINISTRY OF TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Dushanbe, 4 December 2015

Kiyoshi Ishii
Resident Representative
JICA Tajikistan Office

Shambiev Alsher
First Deputy Director General
State Unitary Enterprise "Tajikairnavigation"

Rahmon Usuf Azim
Head of Civil Aviation Department
Ministry of Transport

Based on the Minutes of Meetings on the Detailed Planning Survey on the Project for Capacity Development in Air Traffic Services (hereinafter referred to as "the Project") signed on 2 September 2015 between Tajikairnavigation (hereinafter referred to as "TAN"), Ministry of Transport (hereinafter referred to as "MOT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with TAN and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and other points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that TAN, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Tajikistan.

The Project will be implemented within the framework of the "Agreement on Technical Cooperation between the Government of the Republic of Tajikistan and the Government of Japan" signed on February 15, 2005 (hereinafter referred to as "the Agreement") and the Note Verbales to be exchanged between the Government of Japan (hereinafter referred to as "GOJ") and the Government of the Republic of Tajikistan (hereinafter referred to as "GOT")

- Appendix 1: Project Description
- Appendix 2: Other Points Discussed
- Appendix 3: Minutes of Meetings on the Detailed Planning Survey on the Project for Capacity Development in Air Traffic Services



PROJECT DESCRIPTION

I. BACKGROUND

Air transport in Tajikistan, which is a land-locked country with 93% of the area being mountainous, plays an important role to support socio-economic activities. Air transport has great importance in international and long-distance transport, having comparative advantage over road and rail transport. With recent economic growth, air traffic demand in Tajikistan has been increasing rapidly. The number of air passengers at Dushanbe International Airport has grown by 1.4 times between 2009 and 2013, reaching to 1.3 million passengers in 2013. Air cargo traffic as well increased rapidly by 1.7 times during the same period, reaching to 2,370 tons at Dushanbe International Airport in 2013. These growth trends are expected to continue toward the future.

With recognition that coping with increasing air traffic demand is an urgent need, Tajikistan has been upgrading aviation infrastructure at its major airports with assistance of EBRD, World Bank, the Government of France and the Government of Japan. However, in order to adequately handle further growth of air traffic, human resource development is equally important.

Air Traffic Control (ATC) services in Tajikistan needs modernization and capacity development. With a safety oversight on the civil aviation system in Tajikistan in 2008, International Civil Aviation Organization (ICAO) focused on old Soviet era based rules, guidelines and operational manuals, which do not fully comply with international air navigation requirements. ICAO also found that the implementation of training program for ATC instructors/officers is necessary.

In response to ICAO's recommendations, the Ministry of Transport started establishing civil aviation regulations complied with international standards since 2008, and these changes required retraining of air traffic control officers to new ATC standard operation procedures. State Unitary Enterprise "Tajikiairnavigation" (TAN) of the Ministry of Transport, which provides air navigation services for whole Tajikistan, has been making effort to comply with ICAO's recommendations by implementing in-country/overseas training as well as reconstruction of Training Center.

However, TAN found that it will require international assistance to develop ICAO compliant operation procedures, and to establish training program for ATC instructors/trainers and officers. Therefore, TAN requested the implementation of this Technical Cooperation project to the Government of Japan.

In January 2015, the ICAO Coordinated Validation Mission (ICVM) conducted evaluation of the status of implementation of the corrective action plan in response to ICAO's audit. As a result of the mission, ICVM required GOT to improve ATC services such as establishment and implementation of training program, Contingency Plan and Safety Management System (SMS) and to improve Aeronautical Information Services (AIS).

With regard to these recommendations, Japan International Cooperation Agency (JICA) and TAN reviewed a detailed plan of the Project in the Detailed Planning Survey.

II. OUTLINE OF THE PROJECT

Details of the Project are described in the Project Design Matrix (PDM) in Annex 1 and the Plan of Operation (PO) in Annex 2.

1. Title of the Project

The Project for Capacity Development in Air Traffic Services

2. Input

(1) Input by JICA

(a) Dispatch of Experts

- Chief Advisor/ATC (Air Traffic Control) Expert (1)
- ATC Expert (2)
- Simulator Training Expert
- AIS (Aeronautical Information Services) Expert
- Flight Procedure Design Expert
- Project Coordinator/Training Planner
- Others as necessary

(b) Training abroad

- Training of ATC officers on ATC services
- OJT Instructor Training for selected ATC officers
- Instructor Training for simulator trainers
- SMS (Safety Management System) Training
- AIS Training
- Others as necessary

(c) Equipment

- Aerodrome Simulator

In case of importation, the machinery, equipment and other materials under II-2 (1) (c) above will become the property of the GOT upon being delivered and installed at location of training in the Republic of Tajikistan.

Input other than indicated above will be determined through mutual consultations between JICA and TAN during the implementation of the Project, as necessary.

(2) Input by TAN

TAN will take necessary measures to provide at its own expense:

- (a) Services of TAN counterpart personnel and administrative personnel as referred to in II-3;
- (b) Office with Desks/Chairs and Internet Connection
 - In TAN Headquarters
 - In TAN Training Center
- (c) Facilities of TAN Training Center:
 - Class rooms
 - Aerodrome simulator room

- (d) Running Cost
 - Operation and maintenance of Aerodrome Simulator;
 - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA;
 - In-country travel expenses of TAN counterpart personnel
- (e) Data (including maps and photographs) and Information related to the Project

3. Implementation Structure

The project organization chart is given in the Annex 3. The roles and assignments of relevant organizations are as follows:

(1) TAN

- (a) Director General, as the Project Director, will bear overall responsibility for administration and implementation of the Project.
- (b) First Deputy Director General, as the Deputy Project Director, will assist Project Director in administration and implementation of the Project.
- (c) Head of Safety and Quality Department, as the Project Manager, will be responsible for managerial and technical matters of the Project.
- (d) The following task forces will be established with assignment of a leader and members:
 - ATC Training Task Force
 - Contingency Plan/SMS Task Force
 - AIS/Flight Procedure Design Task Force
 - Interpreter as necessary

(2) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to TAN on any matters pertaining to the implementation of the Project.

(3) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will review the progress, revise the overall plan when necessary, approve an annual work plan, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the Annex 4.

4. Project Sites and Beneficiaries

Project sites and beneficiaries of the Project are as follows:

- Project Sites: TAN and TAN Training Center, Dushanbe
- Direct Beneficiaries of the Project: TAN ATS officers
- Indirect Beneficiaries of the Project: Airlines and users of air transportation in Tajikistan

5. Duration

The duration of the technical cooperation for the Project will be thirty three (33) months from the arrival of the first expert.

6. Reports

TAN and JICA will jointly prepare the following reports in English with unofficial translation in Russian.

- Project Monitoring Sheets on semiannual basis until the Project completion
- Project Completion Reports at the time of Project completion

7. Environmental and Social Considerations

TAN and JICA agreed to follow 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF TAN AND MOT

1. On the basis of the Agreement, TAN and MOT will take necessary measures to, and/or coordinate with relevant government authorities to:
 - (1) ensure that the technologies and knowledge acquired by the Tajikistan nationals as a result of Japanese technical cooperation contributes to the economic and social development of the Republic of Tajikistan, and that the knowledge and experience acquired by the personnel of the Republic of Tajikistan from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project;
 - (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-2 (1) (a) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in the Republic of Tajikistan.
 - (3) provide credentials or identification cards for the JICA experts;
 - (4) provide information as well as support in obtaining medical service for the JICA experts;
 - (5) provide security-related information as well as measures to ensure the safety of the JICA experts;
 - (6) permit the JICA experts to enter, leave and sojourn in the Republic of Tajikistan for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
 - (7) exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
 - (8) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project;
 - (9) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-2 (1) (c) above, necessary for the implementation of the Project; and
 - (10) provide necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into the Republic of Tajikistan from Japan in connection with the implementation of the Project.
2. TAN will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation

of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

IV. MONITORING AND EVALUATION

JICA and TAN will jointly and regularly monitor the progress of the Project through the Project Monitoring Sheets based on the Project Design Matrix (PDM) and Plan of Operation (PO). The Project Monitoring Sheets will be reviewed every six (6) months.

Also, Project Completion Report will be drawn up one (1) month before the termination of the Project.

JICA will conduct the following evaluations and surveys to verify sustainability and impact of the Project and draw lessons. TAN is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, TAN will take appropriate measures to make the Project widely known to the people of the Republic of Tajikistan.

VI. MISCONDUCT

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, TAN and relevant organizations will provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of the Republic of Tajikistan.

TAN and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and TAN will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA, Ministry of Transport and TAN. However, PO may be amended in the Project Monitoring Sheets.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

List of Annexes

- Annex 1: Project Design Matrix (PDM)
- Annex 2: Plan of Operation (PO)
- Annex 3: Project Organization Chart
- Annex 4: A List of Proposed Members of Joint Coordinating Committee (JCC)

Project Design Matrix

Version 0.0
Dated 4 December 2015

Project Title: The Project for Capacity Development in Air Traffic Services

Implementing Agency: Tajikairnavigation (TAN)

Target Group: Tajikairnavigation ATS Officers

Period of the Project: 33 months

Project Site: TAN and TAN Training Center, Dushanbe

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal To improve Air Traffic Services (ATS) in Tajikistan</p>	<p>Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.</p>	<ul style="list-style-type: none"> Rating record Survey 			
<p>Project Purpose To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)</p>	<p>Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.</p>	<ul style="list-style-type: none"> Project Monitoring Sheet 	<ul style="list-style-type: none"> Trained ATC officers continue to work in TAN Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN 		
<p>Outputs Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards</p>	<p>Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.</p>	<ul style="list-style-type: none"> Project Monitoring Sheet 	<ul style="list-style-type: none"> Trained ATC officers continue to work in TAN Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN 		
<p>Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations</p>	<p>Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC offices have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted</p>				
<p>Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations</p>	<p>Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.</p>				

Activities	Japanese side	Tajikistan side	Important Assumption
<p>1-1: To conduct training of ATC officers on aerodrome, approach and area control services</p> <p>1-2: To conduct OJT instructor training for selected ATC officers</p> <p>1-3: To conduct instructor training for simulator trainers</p> <p>1-4: To review and if necessary improve Operation Manuals</p> <p>1-5: To conduct OJT on aerodrome, approach and area control services</p> <p>1-6: To procure aerodrome simulator</p> <p>1-7: To conduct simulator trainings</p>	<p>Experts:</p> <ul style="list-style-type: none"> - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary <p>Training in the third countries:</p> <ul style="list-style-type: none"> - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary <p>Equipment:</p> <ul style="list-style-type: none"> - Aerodrome Simulator 	<p>Counterparts:</p> <ul style="list-style-type: none"> - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary <p>Project Offices (with desks/chairs and internet connection):</p> <ul style="list-style-type: none"> - In TAN Headquarters - In TAN Training Center <p>Facilities of TAN Training Center:</p> <ul style="list-style-type: none"> - Class rooms - Aerodrome simulator room <p>Running Cost:</p> <ul style="list-style-type: none"> - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel <p>Data and information related to the Project</p>	<p>Pre-conditions</p> <ul style="list-style-type: none"> - TAN assigns AIS personnel
<p>2-1: To develop ATC contingency plan</p> <p>2-1-1: To conduct basic training on contingency plan</p> <p>2-1-2: To improve the draft contingency plans</p> <p>2-1-3: To conduct exercise of contingency procedures</p> <p>2-1-4: To request approval of CAA on the contingency plans for implementation</p> <p>2-2: To improve Safety Management System (SMS)</p> <p>2-2-1: To obtain necessary knowledge of SMS</p> <p>2-2-2: To develop and update SMS Manual</p> <p>2-2-3: To establish risk management process</p> <p>2-2-4: To implement safety risk management and safety assurance</p> <p>2-2-5: To conduct SMS training and education for ATC officers</p>			
<p>3-1: To conduct basic training on AIS</p> <p>3-2: To develop operation manuals for aeronautical charts</p> <p>3-3: To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP)</p> <p>3-4: To conduct basic training on flight procedure design</p> <p>3-5: To conduct OJT of flight procedure designers for a model airport</p> <p>3-6: To produce draft of AIP of the model airport</p>			<p><Issues and countermeasures ></p>

Tentative Plan of Operations

Version 0.0
Dated 4 December 2015

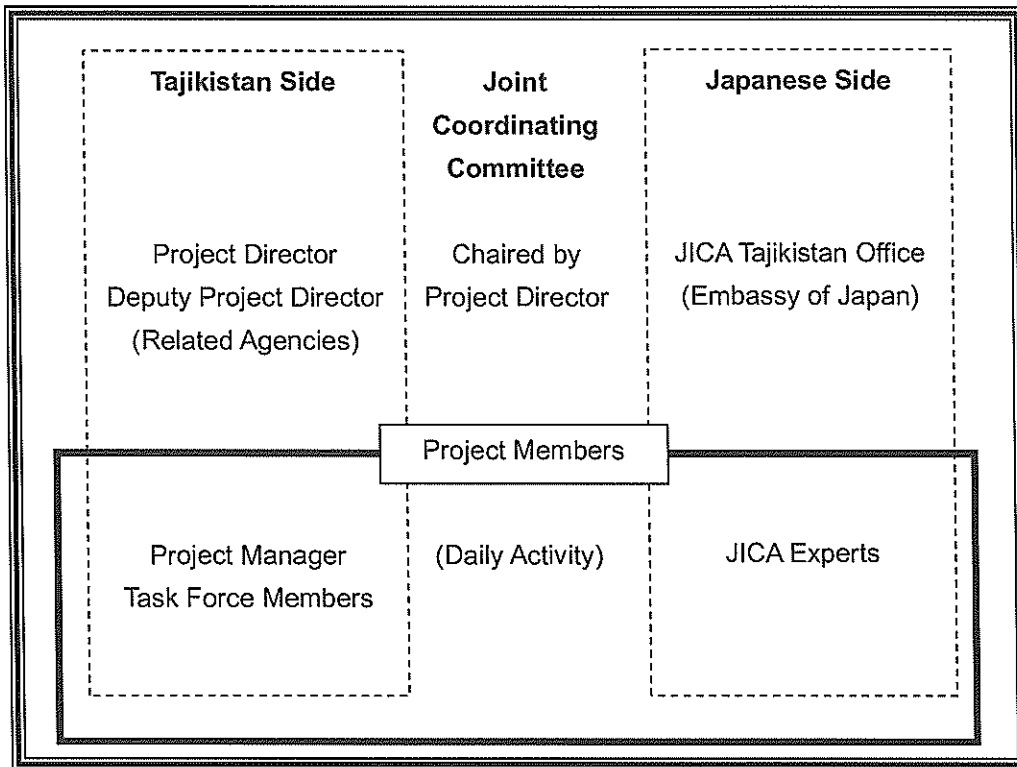
Project Title: The Project for Capacity Development in Air Traffic Services

Inputs	2016		2017		2018		2019		Remarks	Monitoring	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual		Issue	Solution
Expert											
Chief Advisor/ATC Expert (1)	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
ATC Expert (2)	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Simulator Training Expert	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
AIS Expert	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Flight Procedure Design Expert	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Project Coordinator/ Training Planner	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Equipment											
Aerodrome Simulator	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Training in the third country											
Training of ATC officers on ATC services	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
OJT instructor training for selected ATC officers	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Instructor Training for simulator trainers	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
SMS Training	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
AIS Training	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Activities											
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Responsible Organization	Achievements	Issue & Countermeasures
Sub-Activities									Japan	Tajikistan	
Output 1: To enhance capacity of Air Traffic Control (ATC) officers in line with ICAO standards											
1-1. To conduct training of ATC officers on aerodrome, approach and area control services	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-2. To conduct OJT instructor training for selected ATC officers	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-3. To conduct instructor training for simulator trainers	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-4. To review and if necessary improve Operation Manuals	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-5. To conduct OJT on aerodrome, approach and area control services	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-6. To procure aerodrome simulator	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
1-7. To conduct simulator trainings	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	
Output 2: To improve ATC services with regard to ICAO recommendations											
2-1-1. To conduct basic training on contingency plan	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	JICA	TAN	

Annex 3: Project Organization Chart

The Project will be implemented by TAN in cooperation with JICA. The Project Organization Chart indicating joint implementation structure is shown below:

Joint Implementation Structure of the Project



[Handwritten signature]

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[Handwritten signature]

Annex 4: Proposed Members of Joint Coordinating Committee (JCC)

The Proposed chairperson and the members of the JCC will be as follows:

- 1) Chairperson
 - Project Director
- 2) Members from the Tajikistan Side
 - Deputy Project Director
 - Project Manager
 - Members of ATC Training Task Force
 - Members of Contingency Plan/SMS Task Force
 - Members of AIS/Flight Procedure Design Task Force
 - Personnel concerned to be decided by the Tajikistan side
- 3) Members from the Japanese Side
 - Japanese Experts
 - Chief Representative, JICA Tajikistan Office
 - Personnel concerned to be decided by the Japanese Side
- 4) Others
 - Officials of the Ministry of Transport may attend the meeting as observers.
 - Officials of the Embassy of Japan may attend the meeting as observers.
 - Persons who are invited by the Chairperson may attend the meeting as observers.



OTHER POINTS DISCUSSED

This part of the R/D notes remarkable issues for the implementation of the Project that were confirmed by TAN and JICA through discussions during the Detailed Planning Survey in August to September 2015.

1. Training Abroad of ATS Officers

Among the training needs of TAN's ATS officers, the following subjects for instructors, trainers and specialists were identified as efficiently conducted at training institutes abroad.

Training Subjects	Number of Trainees
Aerodrome Control	4
Approach Control (Procedural)	3
Approach Control (Surveillance)	4
Area Control (Procedural)	4
Area Control (Surveillance)	3
OJT Instructor Training	6
General Instructor Training	8
Safety Assessment (Theoretical)	2
Safety Assessment (Practical)	1
ATM Occurrence Investigation and Analysis	2
Aeronautical Information Services	2
Aeronautical Charts (Aeronautical Cartography)	2

Costs for training abroad include training course fees, airfares, accommodation expenses and per diem. Airfare will be with economy class discount fares. Accommodation expenses and per diem will be provided in accordance with the rule of JICA.

JICA will make best effort to secure necessary budget for training abroad; however it may not be able to bear costs for all of those specialized training. In such cases, JICA and TAN will discuss cost sharing for training abroad during the Project period.

The selection of trainees for the above courses will require consensus between TAN and JICA experts.

JICA confirmed that TAN will take effective measures that ATS officers who have attended the specialist training in the Project will continue to work in TAN for at least three years after finishing the training.

2. Aerodrome Simulator

JICA will provide an Aerodrome Simulator for training of ATC officers. TAN and JICA confirmed the major characteristics of the aerodrome simulator as follows:

- Installation Place: TAN training center
- Major Components:
 - Aerodrome Display (180-degree view)
 - 2 Controller Consoles (Meteorological Indicators/Communication Control/Radar /Training Control Monitor)
 - 2 Pilot/Instructor Positions (Aircraft and Ground Vehicle Control/Training Control Monitor)
 - Computer System, Database and Software
- Airport Simulated: Dushanbe (view from New Control Tower), Khujand, Kulob and Qurgonteppa Airports

TAN will be responsible to prepare installation environment including a room with air conditioning, electric power supply, voltage regulator and UPS system.

TAN will provide photographic images of airfields from the control towers, aerodrome maps, aircraft taxiing charts, approach and departure procedure charts, etc., which will be required for production of Aerodrome Simulator data.

**MINUTES OF MEETINGS ON THE DETAILED PLANNING SURVEY ON
THE PROJECT FOR CAPACITY DEVELOPMENT IN AIR TRAFFIC SERVICES**

(Please refer to the following pages)

MINUTES OF MEETINGS
ON
THE DETAILED PLANNING SURVEY
ON
THE JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT FOR CAPACITY DEVELOPMENT IN AIR TRAFFIC SERVICES
IN
THE REPUBLIC OF TAJIKISTAN

The Government of the Republic of Tajikistan (hereinafter referred to as "GOT") made an official request to the Government of Japan (hereinafter referred to as "the GOJ") for the Project for Improvement of Air Navigation Services in 2014.

In response to the request, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Detailed Planning Survey Team (hereinafter referred to as "the Team") headed by Mr. Hiroyuki Ueda, Senior Advisor on Transport Sector, to the Republic of Tajikistan from 24 August to 5 September 2015.

During its stay, both the Team and authorities concerned of GOT had a series of discussions and exchanged views on the Project for Capacity Development in Air Traffic Services. Both Japanese and Tajikistan sides also held meetings to prepare the drafts of the Record of Discussions, the Project Design Matrix and the Plan of Operation (hereinafter referred to as "R/D", "PDM" and "PO" respectively) of the Project.

As a result of the discussions, both sides agreed to the matters referred to in the documents attached hereto.

2 September 2015

Hiroyuki Ueda
Leader
Detailed Planning Survey Team
Japan International Cooperation Agency

Jobirov Ibragim
Director General
State Unitary Enterprise "Tajikairnavigation"

Rahmon Yusuf Azim
Head of Civil Aviation Department
Ministry of Transport

I. Title of the Project

Both Japanese and Tajikistan sides agreed that the title of the Project should be altered from “the Project for Improvement of Air Navigation Services” to “the Project for Capacity Development in Air Traffic Services” in order to more adequately indicates the purpose and outputs of the Project. Both sides also confirmed that both sides shall take necessary procedures to change the title of the Project.

II. Draft PDM and PO

The drafts of the PDM and the PO of the Project were prepared in consultation of stakeholders and through meetings as attached in Attachments I and II. The PDM and the PO will be used as a management tool of the Project, and will be finalized by the time of signing of the R/D.

III. Draft Record of Discussions (R/D)

The draft R/D, as the official document which defines the contents of a technical cooperation project, was prepared and agreed through a series of discussions as attached in Attachment III. The draft R/D will be finalized in the course of further consultations towards the signing.

IV. Provisional Schedule until the Project Commencement

- (1) Signing on the R/D by the end of November 2015
- (2) Commencement of the Project in March 2016

Attachments

- Attachment I: Project Design Matrix (PDM)
Attachment II: Tentative Plan of Operation (PO)
Attachment III: Draft Record of Discussion (R/D)

Project Title: The Project for Capacity Development in Air Traffic Services

Implementing Agency: Tajikairnavigation (TAN)

Target Group: Tajikairnavigation ATS Officers

Period of the Project: 33 months

Project Site: TAN and TAN Training Center, Dushanbe

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal To improve Air Traffic Services (ATS) in Tajikistan</p>	<p>Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.</p>	<ul style="list-style-type: none"> - Rating record - Survey 			
<p>Project Purpose To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)</p>	<p>Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as conforming to ICAO standards by JICA Expert.</p>	<ul style="list-style-type: none"> - Project Monitoring Sheet 	<ul style="list-style-type: none"> - CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN 		
<p>Outputs Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards</p>	<p>Indicator 1-1: At least 80% of ATC officers (OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.</p>	<ul style="list-style-type: none"> - Project Monitoring Sheet 	<ul style="list-style-type: none"> - Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN 		
<p>Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations</p>	<p>Indicator 2-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC officers have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk Management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted</p>				
<p>Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations</p>	<p>Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.</p>				

we 10 A.

Attachment I to the Minutes of Meeting on the Project for Capacity Development in Air Traffic Services

Project Design Matrix (PDM)

Activities	Japanese side	Tajikistan side	Important Assumption
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary Training in the third countries: - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: - Aerodrome Simulator	Counterparts: - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary Project Offices (with desks/chairs and internet connection): - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: - Class rooms - Aerodrome simulator room Running Cost: - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and information related to the Project	- ATC and AIS officers will be released from their daily duties during training period. Pre-conditions - TAN ensures the budget for input by Tajikistan side - TAN assigns AIS personnel
2-1: To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on the contingency plans for implementation 2-2: To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers			
3-1: To conduct basic training on AIS 3-2: To conduct basic training on aeronautical charts 3-3: To develop operation manuals for Notices to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4: To conduct basic training on flight procedure design 3-5: To conduct OJT of flight procedure designers for a model airport 3-6: To produce draft of AIP of the model airport			- Issues and countermeasures >

see to A.

Attachment II to the Minutes of Meeting on the Project for Capacity Development in Air Traffic Services
Tentative Plan of Operation (PO)

Output	Description	2016		2017		2018		2019		Remarks	Issue	Solution
		Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual			
Output 2: To improve ATC services with regard to ICAO recommendations												
2-1-1:	To conduct basic training on contingency plan									JICA	TAN	
2-1-2:	To improve the draft contingency plans									JICA	TAN	
2-1-3:	To conduct exercise of contingency procedures									JICA	TAN	
2-1-4:	To request approval of CAA on the contingency plans for implementation									JICA	TAN	
2-2-1:	To obtain necessary knowledge of SMS									JICA	TAN	
2-2-2:	To develop and update SMS Manual									JICA	TAN	
2-2-3:	To establish risk management process									JICA	TAN	
2-2-4:	To implement safety risk management and safety assurance									JICA	TAN	
2-2-5:	To conduct SMS training and education for ATC officers									JICA	TAN	
Output 3: To improve Aeronautical Information Services (AIS) with regard to ICAO recommendations												
3-1:	To conduct basic training on AIS									JICA	TAN	
3-2:	To conduct basic training on aeronautical charts									JICA	TAN	
3-3:	To develop operation manuals for NOTAM, AIC and AIP									JICA	TAN	
3-4:	To conduct basic training on flight procedure design									JICA	TAN	
3-5:	To conduct OJT of flight procedure designers for a model airport									JICA	TAN	
3-6:	To produce draft of AIP of the model airport									JICA	TAN	
Duration / Phasing												
Monitoring Plan												
Monitoring												
Joint Coordination Committee												
Joint Monitoring (Project Monitoring Sheet)												
Post Monitoring (End of Year 2021)												
Reports/Documents												
Minutes of Meeting (JCC)												
Completion Report												

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DRAFT RECORD OF DISCUSSIONS
ON
THE PROJECT FOR CAPACITY DEVELOPMENT IN AIR TRAFFIC SERVICES
IN
THE REPUBLIC OF TAJIKISTAN

AGREED UPON BETWEEN

TAJIKAIRNAVIGATION, MINISTRY OF TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Dushanbe, xx November 2015

Kiyoshi Ishii
Resident Representative
Tajikistan Office
Japan International Cooperation Agency

Jobirov Ibrohim
Director General
State Unitary Enterprise "Tajikairnavigation"

Minister of Transport

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Based on the Minutes of Meetings on the Detailed Planning Survey on the Project for Capacity Development in Air Traffic Services (hereinafter referred to as "the Project") signed on 2 September 2015 between Tajikairnavigation (hereinafter referred to as "TAN"), Ministry of Transport (hereinafter referred to as "MOT") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with TAN and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and other points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that TAN, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Tajikistan.

The Project will be implemented within the framework of the "Agreement on Technical Cooperation between the Government of the Republic of Tajikistan and the Government of Japan" signed on February 15, 2005 (hereinafter referred to as "the Agreement") and the Note Verbales to be exchanged between the Government of Japan (hereinafter referred to as "GOJ") and the Government of the Republic of Tajikistan (hereinafter referred to as "GOT")

- Appendix 1: Project Description
- Appendix 2: Other Points Discussed
- Appendix 3: Minutes of Meetings on the Detailed Planning Survey on the Project for Capacity Development in Air Traffic Services

Appendix 1 to the R/D

PROJECT DESCRIPTION

I. BACKGROUND

Air transport in Tajikistan, which is a land-locked country with 93% of the area being mountainous, plays an important role to support socio-economic activities. Air transport has great importance in international and long-distance transport, having comparative advantage over road and rail transport. With recent economic growth, air traffic demand in Tajikistan has been increasing rapidly. The number of air passengers at Dushanbe International Airport has grown at 15-18% per year in the last five years, reaching to 1.3 million passengers in 2013. Air cargo traffic as well increased rapidly by 1.6 times between 2009 and 2013, reaching to 2,370 tons at Dushanbe International Airport in 2013. These growth trends are expected to continue toward the future.

With recognition that coping with increasing air traffic demand is an urgent need, Tajikistan has been upgrading aviation infrastructure at its major airports with assistance of EBRD, World Bank, the Government of France and the Government of Japan. However, in order to adequately handle further growth of air traffic, human resource development is equally important.

Air Traffic Control (ATC) services in Tajikistan needs modernization and capacity development. With a safety oversight on the civil aviation system in Tajikistan in 2008, International Civil Aviation Organization (ICAO) focused on old Soviet era based rules, guidelines and operational manuals, which do not fully comply with international air navigation requirements. ICAO also found that the implementation of training program for ATC instructors/officers is necessary.

In response to ICAO's recommendations, the Ministry of Transport started establishing civil aviation regulations complied with international standards since 2008, and these changes required retraining of air traffic control officers to new ATC standard operation procedures. State Unitary Enterprise "Tajiki Air Navigation" (TAN) of the Ministry of Transport, which provides air navigation services for whole Tajikistan, has been making effort to comply with ICAO's recommendations by implementing in-country/overseas training as well as reconstruction of Training Center.

However, TAN found that it will require international assistance to develop ICAO compliant operation procedures, and to establish training program for ATC instructors/trainers and officers. Therefore, TAN requested the implementation of this Technical Cooperation project to the Government of Japan.

In January 2015, the ICAO Coordinated Validation Mission (ICVM) conducted evaluation of the status of implementation of the corrective action plan in response to ICAO's audit. As a result of the mission, ICVM required GOT to improve ATC services such as establishment and implementation of training program, Contingency Plan and Safety Management System (SMS) and to improve Aeronautical Information Services (AIS).

With regard to these recommendations, Japan International Cooperation Agency (JICA) and TAN reviewed a detailed plan of the Project in the Detailed Planning Survey.

II. OUTLINE OF THE PROJECT

Details of the Project are described in the Project Design Matrix (PDM) in Annex 1 and the Plan of Operation (PO) in Annex 2.

1. Title of the Project

The Project for Capacity Development in Air Traffic Services

2. Input

(1) Input by JICA

(a) Dispatch of Experts

- Chief Advisor/ATC (Air Traffic Control) Expert (1)
- ATC Expert (2)
- Simulator Training Expert
- AIS (Aeronautical Information Services) Expert
- Flight Procedure Design Expert
- Project Coordinator/Training Planner
- Others as necessary

(b) Training abroad

- Training of ATC officers on ATC services
- OJT Instructor Training for selected ATC officers
- Instructor Training for simulator trainers
- SMS (Safety Management System) Training
- AIS Training
- Others as necessary

(c) Equipment

- Aerodrome Simulator

In case of importation, the machinery, equipment and other materials under II-2 (1) (c) above will become the property of the GOT upon being delivered and installed at location of training in the Republic of Tajikistan.

Input other than indicated above will be determined through mutual consultations between JICA and TAN during the implementation of the Project, as necessary.

(2) Input by TAN

TAN will take necessary measures to provide at its own expense:

- (a) Services of TAN counterpart personnel and administrative personnel as referred to in II-3;
- (b) Office with Desks/Chairs and Internet Connection
 - In TAN Headquarters
 - In TAN Training Center
- (c) Facilities of TAN Training Center:
 - Class rooms
 - Aerodrome simulator room

(d) Running Cost

- Expenses necessary for operation and maintenance of Aerodrome Simulator;
- Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- In-country travel expenses of TAN counterpart personnel

(e) Data (including maps and photographs) and Information related to the Project

3. Implementation Structure

The project organization chart is given in the Annex 3. The roles and assignments of relevant organizations are as follows:

(1) TAN

- (a) Director General, as the Project Director, will bear overall responsibility for administration and implementation of the Project.
- (b) First Deputy Director General, as the Deputy Project Director, will assist Project Director in administration and implementation of the Project.
- (c) Head of Safety and Quality Department, as the Project Manager, will be responsible for managerial and technical matters of the Project.
- (d) The following task forces will be established with assignment of a leader and members:
 - ATC Training Task Force
 - Contingency Plan/SMS Task Force
 - AIS/Flight Procedure Design Task Force

(2) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to TAN on any matters pertaining to the implementation of the Project.

(3) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least once a year and whenever deems it necessary. JCC will review the progress, revise the overall plan when necessary, approve an annual work plan, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of proposed members of JCC is shown in the Annex 4.

4. Project Sites and Beneficiaries

Project sites and beneficiaries of the Project are as follows:

- Project Sites: TAN and TAN Training Center, Dushanbe
- Direct Beneficiaries of the Project: TAN ATS officers
- Indirect Beneficiaries of the Project: Airlines and users of air transportation in Tajikistan

5. Duration

The duration of the technical cooperation for the Project will be thirty three (33) months from the arrival of the first expert.

6. Reports

TAN and JICA will jointly prepare the following reports in English with unofficial translation in Russian.

- Project Monitoring Sheets on semiannual basis until the Project completion
- Project Completion Reports at the time of Project completion

7. Environmental and Social Considerations

TAN and JICA agreed to follow 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF TAN AND MOT

1. On the basis of the Agreement, TAN and MOT will take necessary measures to, and/or coordinate with relevant government authorities to:
 - (1) ensure that the technologies and knowledge acquired by the Tajikistan nationals as a result of Japanese technical cooperation contributes to the economic and social development of the Republic of Tajikistan, and that the knowledge and experience acquired by the personnel of the Republic of Tajikistan from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project;
 - (2) grant privileges, exemptions and benefits to the JICA experts referred to in II-2 (1) (a) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in the Republic of Tajikistan.
 - (3) provide credentials or identification cards for the JICA experts;
 - (4) provide information as well as support in obtaining medical service for the JICA experts;
 - (5) provide security-related information as well as measures to ensure the safety of the JICA experts;
 - (6) permit the JICA experts to enter, leave and sojourn in the Republic of Tajikistan for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
 - (7) exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
 - (8) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project;
 - (9) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-2 (1) (c) above, necessary for the implementation of the Project; and
 - (10) provide necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into the Republic of Tajikistan from Japan in connection with the implementation of the Project.
2. TAN will bear claims, if any arises, against the JICA experts resulting from, occurring in the

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course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

IV. MONITORING AND EVALUATION

JICA and TAN will jointly and regularly monitor the progress of the Project through the Project Monitoring Sheets based on the Project Design Matrix (PDM) and Plan of Operation (PO). The Project Monitoring Sheets will be reviewed every six (6) months.

Also, Project Completion Report will be drawn up one (1) month before the termination of the Project.

JICA will conduct the following evaluations and surveys to verify sustainability and impact of the Project and draw lessons. TAN is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, TAN will take appropriate measures to make the Project widely known to the people of the Republic of Tajikistan.

VI. MISCONDUCT

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, TAN and relevant organizations will provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of the Republic of Tajikistan.

TAN and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and TAN will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA, Ministry of Transport and TAN. However, PO may be amended in the Project Monitoring Sheets.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

List of Annexes

- Annex 1: Project Design Matrix (PDM)
- Annex 2: Plan of Operation (PO)
- Annex 3: Project Organization Chart
- Annex 4: A List of Proposed Members of Joint Coordinating Committee (JCC)

Attachment III to the Minutes of Meeting on the Project for Capacity Development in Air Traffic Services
Draft Record of Discussions (R/D)

Annex 1: Project Design Matrix (PDM)

(PDM in the Minutes of Meeting with necessary modifications agreed between JICA and TAN will be here.)

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Attachment III to the Minutes of Meeting on the Project for Capacity Development in Air Traffic Services
Draft Record of Discussions (R/D)

Annex 2: Plan of Operation (PO)

(PO in the Minutes of Meeting with necessary modifications agreed between JICA and TAN will be here.)

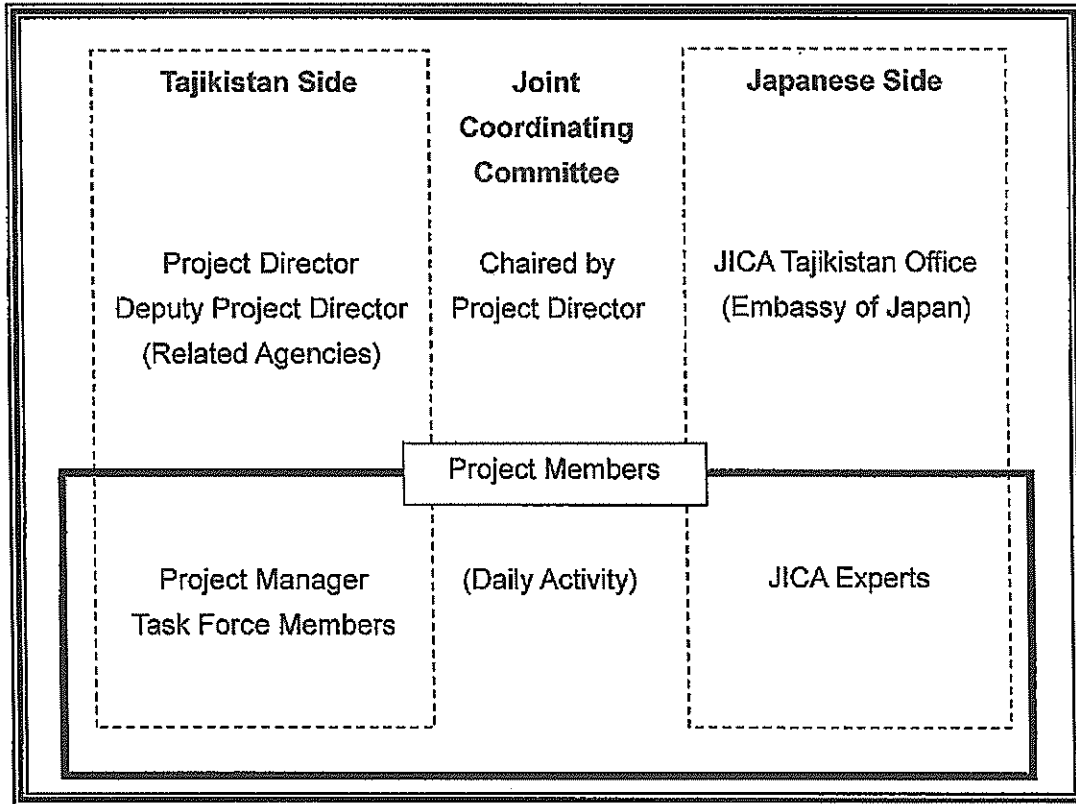
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Annex 3: Project Organization Chart

The Project will be implemented by TAN in cooperation with JICA. The Project Organization Chart indicating joint implementation structure is shown below:

Joint Implementation Structure of the Project



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Annex 4: Proposed Members of Joint Coordinating Committee (JCC)

The Proposed chairperson and the members of the JCC will be as follows:

- 1) Chairperson
 - Project Director
- 2) Members from the Tajikistan Side
 - Deputy Project Director
 - Project Manager
 - Members of ATC Training Task Force
 - Members of Contingency Plan/SMS Task Force
 - Members of AIS/Flight Procedure Design Task Force
 - Personnel concerned to be decided by the Tajikistan side
- 3) Members from the Japanese Side
 - Japanese Experts
 - Chief Representative, JICA Tajikistan Office
 - Personnel concerned to be decided by the Japanese Side
- 4) Others
 - Officials of the Ministry of Transport may attend the meeting as observers.
 - Officials of the Embassy of Japan may attend the meeting as observers.
 - Persons who are invited by the Chairperson may attend the meeting as observers.

Appendix 2 to the R/D

OTHER POINTS DISCUSSED

This part of the R/D notes remarkable issues for the implementation of the Project that were confirmed by TAN and JICA through discussions during the Detailed Planning Survey in August to September 2015.

1. Training Abroad of ATS Officers

Among the training needs of TAN's ATS officers, the following subjects for instructors, trainers and specialists were identified as efficiently conducted at training institutes abroad.

Training Subjects	Number of Trainees
Aerodrome Control	4
Approach Control (Procedural)	3
Approach Control (Surveillance)	4
Area Control (Procedural)	4
Area Control (Surveillance)	3
OJT Instructor Training	6
General Instructor Training	8
Safety Assessment (Theoretical)	2
Safety Assessment (Practical)	1
ATM Occurrence Investigation and Analysis	2
Aeronautical Information Services	2
Aeronautical Charts (Aeronautical Cartography)	2

Costs for training abroad include training course fees, airfares, accommodation expenses and per diem. Airfare will be with economy class discount fares. Accommodation expenses and per diem will be provided in accordance with the rule of JICA.

JICA will make best effort to secure necessary budget for training abroad; however it may not be able to bear costs for all of those specialized training. In such cases, JICA and TAN will discuss cost sharing for training abroad during the Project period.

The selection of trainees for the above courses will require consensus between TAN and JICA experts.

JICA confirmed that TAN will take effective measures that ATS officers who have attended the specialist training in the Project will continue to work in TAN for at least three years after finishing the training.

2. Aerodrome Simulator

JICA will provide an Aerodrome Simulator for training of ATC officers. TAN and JICA

confirmed the major characteristics of the aerodrome simulator as follows:

- Installation Place: TAN training center
- Major Components:
 - Aerodrome Display (180-degree view)
 - 2 Controller Consoles (Meteorological Indicators/Communication Control/Radar /Training Control Monitor)
 - 2 Pilot/Instructor Positions (Aircraft and Ground Vehicle Control/Training Control Monitor)
 - Computer System, Database and Software
- Airport Simulated: Dushanbe (view from New Control Tower), Khujand, Kulob and Qurgonteppa Airports

TAN will be responsible to prepare installation environment including a room with air conditioning, electric power supply, voltage regulator and UPS system.

TAN will provide photographic images of airfields from the control towers, aerodrome maps, aircraft taxiing charts, approach and departure procedure charts, etc., which will be required for production of Aerodrome Simulator data.

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Appendix 3 to the R/D

**MINUTES OF MEETINGS ON THE DETAILED PLANNING SURVEY ON
THE PROJECT FOR CAPACITY DEVELOPMENT IN AIR TRAFFIC SERVICES**

Minutes of Meetings on the Project for Capacity Development in Air Traffic Services on 2 September 2015 will be attached here.

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ANNEX4-2
Minutes of JCC1



**Minutes of the First Meeting of Joint Coordinating Committee (JCC/1) for
“The Project for Capacity Development in Air Traffic Services” in Tajikistan
Dushanbe, 26 April 2016**

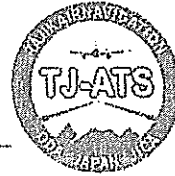
1. The First Meeting of Joint Coordinating Committee (JCC/1) for “The Project for Capacity Development in Air Traffic Services” (hereinafter “the Project”) was held Ministry of Transportation in Dushanbe, Tajikistan on 26 April 2016.
2. Mr. Shambiev Alisher, First Deputy Director of TAJIKAIRNAVIGATION (hereinafter TAN), on behalf of Project Director Mr. Jobirov Ibragim, Director General of TAN who was not available due to an urgent business trip, opened the meeting as the chairman with the presence of the participants listed at Appendix A to this Minutes.
3. Mr. Kiyoshi Ishii, on behalf of JICA, expressed his sincere appreciation for Mr. Shambiev Alisher for having this Meeting and made opening remarks. The representative of Civil Aviation Authority of Ministry of Transportation made opening remarks on the side of Tajikistan.
4. Mr. Hiroyuki Ueda, the senior advisor of JICA headquarters, briefed the Project background.
5. Mr. Toshio Yoshida, the Project Chief Advisor of ATCA-Japan, explained the Project activities in detail, and he presented the committee with Project Design Matrix (PDM) version 1.0, Plan of Operations (PO) version 1.0, Annual Working Plan-2016 (AWP-2016) version 1.0 and Monitoring Sheet- I / II those were attached as Appendix B, C, D, G and H to the Minutes, and the Committee adopted all. He also presented the summary of 3rd country training and explained detail of a technical transfer by the short term experts to the Taskforce-1 for ATC, 2 for SMS and 3 for AIS, and the Committee consented all activates.
6. Mr. Tomonori Orita, the Project Coordinator of JICA, explained the logistics as Appendix-F and travel allowance table for 3rd country training as Appendix-G, and the Committee consented its. He also presented an abbreviation for long project title as “TJ-ATS” and the emblem of the Project, and the Committee adopted all. He promised to establish a dedicated Website for the Project before July 2016, and the Committee made his contribution welcome.
7. Mr. Sheraliev Bakhtiyor, the Project Manager of TAN, explained the input from TAN side and presented a constituent member of the Taskforce-1, 2 and 3, and the Committee consented the Taskforces formulation.
8. Mr. Shambiev Alisher as the chairman made closing address, then close the Meeting.

Dushanbe, 26 April 2016

Shambiev Alisher
First Deputy Director
State Unitary Enterprise “TAJIKAIRNAVIGATION”

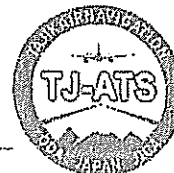
Rahmon Usuf Azim
Head of Civil Aviation Department
Ministry of Transportation

Kiyoshi Ishii
Resident Representative
JICA Tajikistan Office



List of Appendix

- Appendix-A: JCC/1 general, agenda, program, list of document and participant list
- Appendix-B: PDM, Project Design Matrix (ver.-1.0)
- Appendix-C: PO, Plan of Operations (ver.-1.0)
- Appendix-D: AWP-2016, Annual Working Plan for 2016 (ver.-1.0)
- Appendix-E: 3rd Country Training Summary
- Appendix-F: 3rd Country Training Rule and Allowance table
- Appendix-G: Monitoring Sheet- I (PDM + monitoring space)
- Appendix-H: Monitoring Sheet- II (PO + monitoring space)



**The First Meeting of Joint Coordinating Committee (JCC/1) for
 “The Project for Capacity Development in Air Traffic Services” in Tajikistan
 Dushanbe, 26 April 2016**

General:

1. Date: Tuesday, 26 April 2016
2. Venue: Meeting Room in Ministry of Transportation in Dushanbe
3. Working language: English (with TAN's Russian interpreter in case of necessary)
4. Chairman: Mr. Shambiev Alisher, First Deputy Director of SUE “TAJIKAIRNAVIGATION”

Agenda:

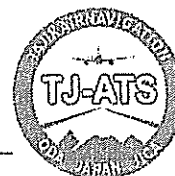
1. The Project activates, PDM, PO and AWP-2016 by the Project Chief Advisor
2. The 3rd country training plan by the Project Chief Advisor
3. The inputs from TAN and the Taskforce-1/2/3 assignments by the Project Manager
4. The logistics and administrative issues by the Project Coordinator
5. Approval of PDM, PO, AWP-2016 Monitoring Sheets, 3rd country training plan, TF members, and other administrative issues by all.

Program:

- 10:00 Opening by the Chairman
 10:05 Opening Remarks by Mr. Kiyoshi Ishii, Resident Representative of JICA Tajikistan
 10:10 Welcome Address by Mr. Rahmon Usuf Azim, Civil Aviation Authority in Ministry of Transportation
 10:15 Introduction of participants Tajik side by Project Manager and Japan side by Project Chief Advisor
 10:20 Presentation by Mr. Hiroyuki Ueda, JICA headquarter
 10:30 Explanation by Mr. Toshio Yoshida (Project activities, PDM, PO, AWP-2016, M/S- I & II), approval
 10:40 Explanation by Mr. Toshio Yoshida (3rd country training and technical transfer), and approval
 10:50 Explanation by Mr. Tomonori Orita (Logistics and administrative issues), and approval
 11:00 Explanation by Mr. Sheraliev Bakhtiyor (Inputs from TAN and Taskforce-1, 2 and 3), and approval
 11:10 Other Discussion and Q&A
 11:20 Closing Remarks by Embassy of Japan in The Republic of Tajikistan
 11:25 Closing by the chairman, First Deputy Director of TAN
 11:30 Sign the Minutes of the Meeting (M/M) by TAN, MOT and JICA
 11:35 Group Photo
 (11:45 Lunch in cafeteria hosted by TAN)

List of Document

1. JCC/1 general, agenda, program, list of document and participant list
2. PDM, Project Design Matrix (Version 1.0)
3. PO, Plan of Operations (Version 1.0)
4. AWP-2016, Annual Working Plan for 2016 (Version 1.0)
5. 3rd Country Training Summary
6. 3rd Country Training Rule and Allowance table
7. Monitoring Sheet- I (PDM + monitoring space, Version 1.0)
8. Monitoring Sheet- II (PDM + monitoring space, Version 1.0)



Participant List

1. Tajikistan side

	Name	Title	Project role
1	Mr. Shambiev Alisher	First Deputy Director, TAJIKAIRNAVIGATION	Project Manager
2	Mr. Rahmon Usuf Azim	Head of Civil Aviation Department, MOT	JCC Member
3	Mr. Sheraliev Bakhtiyor	Head of the Safety and Quality Department	Project Manager
4	Mr. Davlyatov Davlat	Head of ATS	Taskforce-1 Leader
5	Mr. Khumorov Bakhtiyor	Head of ATFMC	Taskforce-2 Leader
6	Mr. Sheraliev Bakhtiyor	Head of the Safety and Quality Department	Taskforce-3 Leader
7	Mr. Mansuri Makhmad	Chief of ACC Dushanbe	Taskforce-1 Member
8	Mr. Majidov Behruz	ATS controller	Taskforce-2 Member
9	Mr. Toshmatov Ulugbek	Safety and Quality inspector	Taskforce-3 Member
10	Ms. Zarrinai Mirzo	English Teacher	Interpreter

2. Japan side

	Name	Title
1	Mr. Yu Ishikawa	Second Secretary, Embassy of Japan
2	Mr. Takashi Okimoto	Third Secretary, Embassy of Japan
3	Mr. Kiyoshi Ishii	Resident Representative, JICA Tajikistan office
4	Ms. Makiko Konohara	Program Formulation Office, JICA Tajikistan office
5	Mr. Najmedinov Tojiddin	Program Officer, JICA Tajikistan office
6	Mr. Hiroyuki Ueda	Senior Advisor, JICA Headquarters
7	Mr. Toshio Yoshida	Project Chief Advisor / ATC Expert, ATCA-Japan
8	Mr. Hideo Watanabe	Project Sub Advisor / ATC Expert, ATCA-Japan
9	Mr. Tomonori Orita	Project Coordinator, JICA

Project Design Matrix

Version 1.0
26 April 2016

Project Title: The Project for Capacity Development in Air Traffic Services
Implementing agency: SUE "TAJKAIRNAVIGATION" (TAN), Project term: 33 months from 28 March 2016, Project site: TAN in Dushanbe

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal To improve Air Traffic Services (ATS) in Tajikistan		<p>Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program</p> <p>Indicator 2: The contingency plan and SMS for ATC have been kept in operation.</p> <p>Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.</p>	<ul style="list-style-type: none"> - Rating record - Survey 	
Project Purpose To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)		<p>Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers.</p> <p>Indicator 2: The contingency plan and SMS for ATC have been implemented.</p> <p>Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.</p>	<ul style="list-style-type: none"> - Project Monitoring Sheet 	<ul style="list-style-type: none"> - CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN
Outputs Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards		<p>Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully.</p> <p>Indicator 1-2: Operation Manual has been reviewed and improved if necessary</p> <p>Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.</p> <p>Indicator 1-4: Aerodrome simulator has been operational.</p> <p>Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.</p>	<ul style="list-style-type: none"> - Project Monitoring Sheet 	<ul style="list-style-type: none"> - Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN
Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations		<p>Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully.</p> <p>Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully.</p> <p>Indicator 2-1-3: The contingency plans have been approved by CAA for implementation.</p> <p>Indicator 2-2-1: 2 ATC officers have completed courses on SMS successful.</p> <p>Indicator 2-2-2: SMS Manual has been developed and updated</p> <p>Indicator 2-2-3: Risk management process has been established</p> <p>Indicator 2-2-4: Safety risk management and safety assurance have been implemented</p> <p>Indicator 2-2-5: SMS training and education for all ATC officers have been conducted</p>		
Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations		<p>Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS.</p> <p>Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts.</p> <p>Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed</p> <p>Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS.</p> <p>Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design.</p> <p>Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.</p>		

Activities	Inputs		Important Assumption
	Japanese side	Tajikistan side	
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary Training in the third countries: - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: - Aerodrome Simulator	Counterparts: - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary - Project Offices (with desks/chairs and internet connection): - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: - Class rooms - Aerodrome simulator room Running Cost: - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and Information related to the Project	Pre-conditions - TAN ensures the budget for input by Tajikistan side - TAN assigns AIS personnel
2-1: To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on the contingency plans for implementation 2-2: To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers			
3-1: To conduct basic training on AIS 3-2: To conduct basic training on aeronautical charts 3-3: To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4: To conduct basic training on flight procedure design 3-5: To conduct OJT of flight procedure designers for a model airport 3-6: To produce draft of AIP of the model airport			

AWP-2016 (Annual Work Plan for 2016)

Version 1.0
26 April 2016

Project Title: The Project for Capacity Development in Air Traffic Services

OUTPUT															
To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards															
To enhance capacity of ATC officers with regard to ICAO recommendations															
To enhance capacity of Aeronautical Information Service(AIS) officers with regards to ICAO recommendations															
Activities	2016												2017		
	4	5	6	7	8	9	10	11	12	1	2	3			
Task Force - 1	Δ T/F Meeting			Δ T/F Meeting						Δ T/F Meeting					
1-1 ATC Training															
Third country training															
Select candidates	↔														
Aerodrome					26/Jul-30/Sep			18/Oct-23/Dec							
Approach Procedural					26/Jul-23/Sep			16/Nov-18/Jan							
Approach Surveillance					26/Jul-30/Sep			18/Oct-23/Dec							
Area Procedural					26/Jul-21/Sep										
Area Surveillance					26/Jul-30/Sep			18/Oct-23/Dec							
1-2 Instructor Training															
Third country training															
Select candidates	↔									↔		Not Fixed			
OJT Instructor												↔			
Simulator Trainer												↔			
1-3 Operation Manual															
Translation documents (Rus.-Eng.)					↔										
Develop and update												↔			
* Simulator Procurement												+			
JICA Simulator Training Expert	↔														
Task Force - 2	Δ T/F Meeting			Δ T/F Meeting						Δ T/F Meeting					
2-1 ATM Contingency plan															
Translation documents (Rus.-Eng.)	↔														
Develop Contingency Plan					8-11/Aug										
Conduct basic training												↔			
Make Exercise Plan												↔			
2-2 Safety Management System															
Third country training															
Select candidates	↔														
SAF/SA 1					12-16/Sep			17-21/Oct			12-15/Dec				
SAF/SA 2															
SAF/INV															
Translation documents (Rus.-Eng.)	↔														
Develop SMS Manual					↔										
Make SMS Training Plan												↔			
Task Force - 3	Δ T/F Meeting			Δ T/F Meeting						Δ T/F Meeting					
3-1 Aeronautical Information Service															
Third country training															
Select candidates	↔														
AIS/General					Jun/Jul										
AIS/Cartography					4-17/Jul										
JICA AIS Expert												↔			

3rd Country Training Summary / 20160426

Taskforce	Project Assumed Training Title (#ICAO)	Max #	Name of Potential Candidates as of 19 Apr 2016	Restriction and condition for training course	Potential Training Course Title/Contents	Organization / Country	term
Taskforce-1 Leader: Mr. Davlyatov Davlat Member: Mr. Mansuri Makhmad Expert: Mr. Toshio Yoshida	Aerodrome Control #052	4	1. Sharipov Sino /*a (ku)	2 trainee x 2 groups English	ICAO 052 Aerodrome Control	MAVA/ Malaysia 6.871USD	26 July-23 Sep (10wks)
			2. Gafarov Bahridin /*b (qt)		ICAO 052 Aerodrome Control		18 Oct-23 Dec (10wks)
			3. Ikromov Qayum /*c (kh)		ICAO 053 Approach Procedural		26 July-30 Sep (10wks)
			4. Rakhimov Fayzal /*d		ATCNIR25 Approach Procedural		16 Nov-16 Jan (9wks)
Taskforce-2 Leader: Mr. Sheralliev Bakhtiyor Member: Mr. Toshmatov Ulugbek Expert: Mr. Hideo Watanabe	Approach Control (Procedural) #053	3	1. Khusenov Payrav /*e	1 and 2 trainee x 2 groups English	ICAO 054 Approach Surveillance	MAVA/ Malaysia 7.167USD	26 July-30 Sep (10)
			2. Kaimov Akbar /*f		ICAO 054 Approach Surveillance		18 Oct-23 Dec (10wks)
			3. Karomatov Asadullo		ICAO 055 Area Procedural		26 July-21 Oct (13wks)
			4. Ergashev A.A.		?		2017 Feb-Mar? (13wks)
Taskforce-3 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	Approach Control (Surveillance) #054	4	1. Nadirov Umed	2 trainee x 2 groups English	ICAO 054 Area Surveillance	MAVA/ Malaysia 7.651USD	26 Jul-30 Sep (10wks)
			2. Ochilboev Valijon (kh)		ICAO 054 Area Surveillance		18 Oct-23 Dec (10wks)
			3. Saifulloev Shukhrat		ICAO 055 Area Procedural		26 July-21 Oct (13wks)
			4. Rashidov Firdavs /*g (kh)		?		2017 Feb-Mar? (13wks)
Taskforce-4 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	Area Control (Procedural) #055/procedural	4	1. Tajibaev Akbar	2 trainee x 2 groups English	ICAO 054 Area Surveillance	MAVA/ Malaysia 7.651USD	26 Jul-30 Sep (10wks)
			2. Saifulloev Shukhrat		ICAO 054 Area Surveillance		18 Oct-23 Dec (10wks)
			3. Satibaldiev Sergey		ICAO 055 Area Procedural		26 July-21 Oct (13wks)
			4. Rashidov Firdavs /*g (kh)		?		2017 Feb-Mar? (13wks)
Taskforce-5 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	Area Control (Surveillance) #054/surveillance	3	1. Rakhimov Khotam	1 and 2 trainee x 2 groups English	ICAO 054 Area Surveillance	MAVA/ Malaysia 7.651USD	26 Jul-30 Sep (10wks)
			2. Nishonov A.A.		ICAO 054 Area Surveillance		18 Oct-23 Dec (10wks)
			3. Kurbonov Yusuf /*h		ICAO 055 Area Procedural		26 July-21 Oct (13wks)
			4. Avezov Mulojon		?		2017 Feb-Mar? (13wks)
Taskforce-6 Leader: Mr. Sheralliev Bakhtiyor Member: Mr. Toshmatov Ulugbek Expert: Mr. Hideo Watanabe	OJT Instructor Training #219	6	1. Avezov Mulojon	3 trainee x 2 groups English/ Russian	ICAO 054 Area Surveillance	RAI/ Riga (under investigation)	2017/middle? (2wks)
			2. Sharipov Sino /*a (ku)		ICAO 054 Area Surveillance		2017/middle? (2wks)
			3. Gafarov Bahridin /*b (qt)		ICAO 055 Area Procedural		2017/middle? (2wks)
			4. Khusenov Payrav /*e		?		2017/middle? (2wks)
Taskforce-7 Leader: Mr. Sheralliev Bakhtiyor Member: Mr. Toshmatov Ulugbek Expert: Mr. Hideo Watanabe	General Instructor Training #210	8	5. Rakhimov Fayzal /*d	4 trainee x 2 groups English/ Russian	ICAO 054 Area Surveillance	RAI/ Riga (under investigation)	2017/middle? (2wks)
			6. Kurbonov Yusuf /*h		ICAO 054 Area Surveillance		2017/middle? (2wks)
			7. Kurbonov Sarvar		ICAO 055 Area Procedural		2017/middle? (2wks)
			8. Gulov Firdavs		?		2017/middle? (2wks)
Taskforce-8 Leader: Mr. Sheralliev Bakhtiyor Member: Mr. Toshmatov Ulugbek Expert: Mr. Hideo Watanabe	Safety Assessment (Theoretical) #210	2	1. Sheralliev Bakhtiyor	2 trainee x 1 group English	ICAO 054 Area Surveillance	EUROCONTROL /Luxemburg	17-21 Oct 2016 (1wk)
			2. Toshmatov Ulugbek		ICAO 054 Area Surveillance		12-16 Dec 2016 (1wk)
			3. Satibaldiev Sergey		ICAO 055 Area Procedural		12-16 Dec 2016 (1wk)
			4. Tajibaev Akbar /*f		?		12-16 Sep 2016 (1wk)
Taskforce-9 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	Safety Assessment (Practical) #210	1	5. Kairumov Gulom	1 trainee x 1 group English	ICAO 054 Area Surveillance	EUROCONTROL /Luxemburg	17-21 Oct 2016 (1wk)
			6. Odinaev Rustam		ICAO 054 Area Surveillance		12-16 Dec 2016 (1wk)
			7. Rashidov Firdavs /*g (kh)		ICAO 055 Area Procedural		12-16 Sep 2016 (1wk)
			8. Kairumov Ikrum /*c (kh)		?		12-16 Sep 2016 (1wk)
Taskforce-10 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	ATM Occurrence Investigation & Analysis #210	2	1. Sheralliev Bakhtiyor	2 trainee x 1 group English	ICAO 054 Area Surveillance	EUROCONTROL /Luxemburg	17-21 Oct 2016 (1wk)
			2. Toshmatov Ulugbek		ICAO 054 Area Surveillance		12-16 Dec 2016 (1wk)
			3. Satibaldiev Sergey		ICAO 055 Area Procedural		12-16 Sep 2016 (1wk)
			4. Tajibaev Akbar /*f		?		12-16 Sep 2016 (1wk)
Taskforce-11 Leader: Mr. Khumorov Bakhtiyor Member: Mr. Majidov Behruz Expert: Mr. Toshio Yoshida (Mr. Atsushi Yamane)	AIS (+Aeronautical Carts) #022	2	1. Majidov Behruz	2 trainee x 1 group before Feb 2017 English	ICAO 054 Area Surveillance	CATC/ Thailand 77.200THB	June? 2016 (8wks)
			2. Kuliev Ilkhom		ICAO 054 Area Surveillance		June? 2016 (8wks)
			3. Safarov Rustam		ICAO 054 Area Surveillance		June? 2016 (8wks)
			4. Asrorov Faruh		ICAO 054 Area Surveillance		June? 2016 (8wks)

The nominees, grouping and training courses are subject to change by the Taskforces.

3rd Country Training Rule and Allowance table / 20160426

Category	Destination	Training term		Rule of the logistics arrangement
		Short (<3 weeks)	Long (>3 weeks)	
1 Tuition fee	CATC (Thailand)	Actual		Principally, the Project remits training institute the payment to bank account in USD. There is possibility that the participants or Project Coordinator take USD cash for in case of short term courses.
	EUROCONTROLE (Luxembourg)			
	MAA (Malaysia)			
	RAI, LGS (Latvia)			
	SAA (Singapore)			
2 Travel allowance	Aviation Institute? (Moscow)	40USD/day	30USD/day	The Project provides USD cash to the trainees one week before the departure. A transportation cost between home to/from Dushanbe airport, an airport in the destination country to/from a hotel, the hotel to/from a training venue and other small expenditures are including this allowance. The Project provides USD cash to the trainees one week before the departure for short term course. The project pays the actual accommodation fee to the training center for long term courses or equivalent arrangement will be provided by the Project. If lunch and dinner are including accommodation cost, it will be deducted from Travel allowance.
	Thailand, Malaysia, Latvia	50USD/day	40USD/day	
	Luxemburg, Russia (except Moscow)	60USD/day	50USD/day	
	Singapore, Moscow	100USD/night	Actual	
3 Hotel	Thailand, Malaysia, Latvia	130USD/night	Actual	The Project provides appropriate air-ticket to the trainees one week before the departure. Trainees should submit boarding pass stab to the Project after return to Tajikistan.
	Luxemburg, Russia (except Moscow)	160USD/night	Actual	
	Singapore, Moscow	Actual	Actual	
4 Air fare	-	Restricted Economy Class		Principally, the trainee or TAN should arrange appropriate VISA by their own responsibility. The Project supports to get the invitation letter from training institute if it is required. The Project only bears VISA fees for the consular missions and arrangement charges for travel agency upon the official receipts.
5 VISA fee	Thailand	Visa fee +		The Project provides participants with an essential travel insurance.
	Malaysia	Arrangement charges by travel agency (Actual)		
	Singapore	Visa fee for EOG in Dushanbe (Actual)		
	Schengen regions	N/A		
6 Travel Insurance	Russia	Max. 5USD/day (Actual)	Max. 5USD/day (Actual)	This table is subject to change by the update of JICA regulations.
	All			

Appendix F

Monitoring Sheet I

Version 1.0
26 April 2016

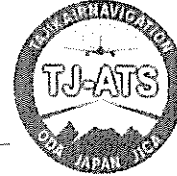
Project Title: The Project for Capacity Development in Air Traffic Services
Version 1.0 Implementing agency: SUE "TAJIKAIRNAVIGATION" (TAN), Project term: 33 months from 25 March 2016, Project site: TAN in Dushanbe

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
<p>Overall Goal To improve Air Traffic Services (ATS) in Tajikistan</p>	<p>Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.</p>	<p>- Rating record - Survey</p>			
<p>Project Purpose To enhance capacity of Tajik air navigation (TAN) in Air Traffic Services (ATS)</p>	<p>Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.</p>	<p>- Project Monitoring Sheet</p>	<p>- CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN</p>		
<p>Outputs Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards</p>	<p>Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.</p>	<p>- Project Monitoring Sheet</p>	<p>- Trained ATC officers continue to work in TAN - Trained instructors/trainers, AIS officers and flight procedure designers continue to work in TAN</p>		
<p>Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations</p>	<p>Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC officers have completed courses on SMS successfully. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted</p>				
<p>Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations</p>	<p>Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.</p>				

Activities	Inputs		Important Assumption	Issues	Countermeasures
	Japanese side	Tajikistan side			
<p>1-1: To conduct training of ATC officers on aerodrome, approach and area control services</p> <p>1-2: To conduct OJT instructor training for selected ATC officers</p> <p>1-3: To conduct instructor training for simulator trainers</p> <p>1-4: To review and if necessary improve Operation Manuals</p> <p>1-5: To conduct OJT on aerodrome, approach and area control services</p> <p>1-6: To procure aerodrome simulator</p> <p>1-7: To conduct simulator trainings</p> <p>2-1: To develop ATC contingency plan</p> <p>2-1-1: To conduct basic training on contingency plan</p> <p>2-1-2: To improve the draft contingency plans</p> <p>2-1-3: To conduct exercise of contingency procedures</p> <p>2-1-4: To request approval of CAA on the contingency plans for implementation</p> <p>2-2: To improve Safety Management System (SMS)</p> <p>2-2-1: To obtain necessary knowledge of SMS</p> <p>2-2-2: To develop and update SMS Manual</p> <p>2-2-3: To establish risk management process</p> <p>2-2-4: To implement safety risk management and safety assurance</p> <p>2-2-5: To conduct SMS training and education for ATC officers</p> <p>3-1: To conduct basic training on AIS</p> <p>3-2: To conduct basic training on aeronautical charts</p> <p>3-3: To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP)</p> <p>3-4: To conduct basic training on flight procedure design</p> <p>3-5: To conduct OJT of flight procedure designers for a model airport</p> <p>3-6: To produce draft of AIP of the model airport</p>	<p>Experts:</p> <ul style="list-style-type: none"> - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary <p>Training in the third countries:</p> <ul style="list-style-type: none"> - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary <p>Equipment:</p> <ul style="list-style-type: none"> - Aerodrome Simulator 	<p>Counterparts:</p> <ul style="list-style-type: none"> - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary <p>Project Offices (with desks/chairs and internet connection):</p> <ul style="list-style-type: none"> - In TAN Headquarters - In TAN Training Center <p>Facilities of TAN Training Center:</p> <ul style="list-style-type: none"> - Class rooms - Aerodrome simulator room <p>Running Cost:</p> <ul style="list-style-type: none"> - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel <p>Date and Information related to the Project</p>			

ANNEX4-3

Minutes of JCC2



**Minutes of the Second Meeting of Joint Coordinating Committee (JCC/2) for
“The Project for Capacity Development in Air Traffic Services” in Tajikistan
Dushanbe, 26 May 2017**

1. The Second Meeting of Joint Coordinating Committee (JCC/2) of “The Project for Capacity Development in Air Traffic Services” (hereinafter “the Project”) was held in the Ministry of Transportation in Dushanbe, Tajikistan on 26 May 2017.
2. Mr. Shambiev Alisher, First Deputy Director on behalf of Mr. Ashurov Loik Begidzhonovich Director General of TAJIKAIRNAVIGATION (hereinafter TAN), opened the meeting as the chairman with the presence of the participants listed at Appendix-A to this Minutes.
3. Mr. Shambiev Alisher opened the Committee and welcome the representatives of JICA HQ, Tajikistan office and Civil Aviation Authority in Tajikistan as welcome address, then Mr. Hideki Tanabe, Chief Representative of JICA Tajikistan office expressed his sincere appreciation for Project team for implementing activities smoothly in the first Project year as opening remarks.
4. Mr. Tomonori Orita, the Project Coordinator JICA, provided the presentation on result of trainings abroad and Expert’s outcomes activities from April 2016 to March 2017.
5. Mr. Hiroyuki Ueda, the senior advisor JICA HQ explained completed Taskforce-1 activities and outcomes in 2016 and activity plan for 2017 based on AWP-2017, on behalf of TF-1 Experts. He informed that ATC-1 Expert would be replaced, and TAN side understood it.
6. Taskforce-2 Leader Mr. Sheraliev Bakhtiyor and Taskforce-3 Experts Mr. Atsushi Yamane explained completed Taskforce-2 and -3 activities and outcomes in 2016 and activity plan for 2017 based on AWP-2017.
7. Mr. Orita explained the schedule and procedure for installing new aerodrome simulator system, configuration, user / maintenance trainings and possibility for diverting radar control trainings.
8. Chairman provided the Committee for discussing further request and Q&A opportunities.
 - a) TAN expressed their appreciation to JICA for approving budget for implementing “Taskforce-1 Management Training in Malaysia”, “Inviting Malaysian Simulator Training instructors” for the Radar Approach Simulator Training in Output-1 for complementing activities of Simulator Expert.
 - b) Mr. Sheraliev as a leader of Taskforce-2 requested additional trainings abroad as listed below for supplementing outcome of SMS by ATC-2 Expert. Responding this, Mr. Ueda replied to the request that JICA recognized the need for additional trainings abroad for SMS staffs who are weak in English as well as for specialized courses that cannot be provided by Japanese expert, and will take this need into consideration within the limited budget of the Project.
 - Incidental Investigation Course in Russian for two SMS officer
 - Trainer Course for trainers for SMS trainer in Russian for two SMS officer
 - Human Factors Course for optimizing ANSP in English for one SMS officer
 - Risk Management Implementation Course in English for one SMS officer



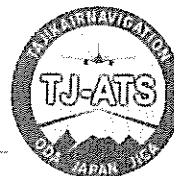
- c) Mr. Davlatov as TF-1 Leader expressed appreciation for inviting 18 ATCs to Malaysia, since thorough training Malaysia, professional attitude, ICAO knowledge and quality of ANSP service have been substantially improved, therefore TAN requests additional 20 ATC training. Mr. Ueda replied that it is difficult, and returned trainees are expected to expand the knowledge and experience learned in Malaysia to the colleagues.
- d) Mr. Sheraliev as a Project Manager requested additional training opportunities for limited number of Taskforce-3 staff on SAR (Search and Rescue) in Malaysia since TAN plans to allocate the responsibility on SAR into AIS team. Mr. Ueda mentioned that SAR coordination is an essential activity, as required by ICAO, to be undertaken by AIS officers, but it is missing in current TAN's services and Project activities. Both sides agreed that capacity development in SAR should be included as sub-activities of Output 3. Mr. Ueda also mentioned that SAR training in Malaysia should be associated with development of SAR coordination manual and implementation of SAR coordination exercise, of which detailed plan should be discussed within the Project members.
- e) Mr. Sheraliev as a Project Manager explained that the PBN implementation plan was signed by MOT in May, and for proceeding this national strategy, WGS-84 survey is essentially required for four airports. Responding this, Mr. Ueda mentioned that JICA has allocated minimum budget for introducing WGS-84 into TF3 activities in this Project, because TF3 should conduct an obstacle survey and procuring maps for model airports (UTDD) in conventional FPD OJT activities.
- f) Mr. Shambiev as a DDG on TAN informed JICA that TAN has requested support to donor community through the MOE for PBN implementation Project, New ATC tower in Khojend airport and ATM / CNS equipment in 5th May 2017. He emphasized that the National PBN implementation plan was signed by MOT in 3rd May 2017.
9. The committee consented to Monitoring (Sheet Summary, -1 and -2 (ver3.0)), and adopted the AWP-2017 (ver1.0), revised PO (ver2.0) and PDM (ver1.0) as it is as in Appendix to this Minutes. Committee noted that nevertheless AWP-2017 provides plan for Expert assignment terms, the actual working terms of Experts will be determined by a coordination of Expert and each Taskforces leader 6 weeks before based on the Sub-Activity List.
10. Mr. Tanabe, Chief Representative of JICA Tajikistan Office, commented that further cooperation by JICA on the introduction of PBN in Tajikistan can be discussed between TAN and JICA.
11. Mr. Rahmon Usuf as a head of Civil Aviation Authority in Ministry of Transportation (MOT) made a closing address. He hoped for continuous efforts, ownership and commitment to all participants, TAN officials as well as continuous hard work of JICA Experts, for the success of the Project.
12. The chairman requested to adopt the Minutes of the Meeting (M/M) by TAN, MOT and JICA after reflecting the result of discussion taking Mr. Tanabe's advice.
13. The chairman made closing, then took group photo.

Dushanbe, 26 May 2017

Ashurov Loik Begidzhonovich
Director General
State Unitary Enterprise "TAJIKAIRNAVIGATION"

Rahmon Usuf Azim
Head of Civil Aviation Department
Ministry of Transportation

Hideki Tanabe
Chief Representative
JICA Tajikistan Office



List of Appendix

- Appendix-A: JCC/2 general, Agenda, Program, List of document and Participant list
- Appendix-B: PDM, Project Design Matrix (ver.1.0) / no changed
- Appendix-C: PO, Plan of Operations (ver.2.0)
- Appendix-D: AWP-2017, Annual Working Plan for 2017 (ver.-1.0)
- Appendix-E: Monitoring Sheet Summary (Ver.3.0 / English)
- Appendix-F: Monitoring Sheet-1 (Ver.3.0)
- Appendix-G: Monitoring Sheet-2 (Ver.3.0)
- Appendix-H: Monitoring Sheet Summary (Ver.3.0 / Russian)
- Appendix-I: Summary of Sub-activities (English)
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- Appendix-K: Presentation on Training abroad and Monitoring (Mr. Orita)
- Appendix-L: Presentation on Taskforce-1 (Mr. Ueda)
- Appendix-M: Presentation on Taskforce-2 (Mr. Sheraliev)
- Appendix-N: Presentation on Taskforce-3 (Mr. Yamane)
- Appendix-O: Presentation on New aerodrome simulator (Mr. Orita)



**The Second Meeting of Joint Coordinating Committee (JCC/2) for
“The Project for Capacity Development in Air Traffic Services” in Tajikistan
Dushanbe, 26 May 2017**

General:

1. Date: Friday, 26 May 2017
2. Venue: Meeting Room in Ministry of Transportation in Dushanbe
3. Working language: English (with TAN's Russian interpreter in case of necessary)
4. Chairman: Mr. Shambiev Alisher, First Deputy Director TAN “TAJIKAIRNAVIGATION (TAN)”

Agenda:

1. Explanation of Project outcome from April 2016 to Mar 2017 by Monitoring Sheet Summary, -1 and -2.
2. Explanation of the completed activities, outcome in 2016 and plan in 2017 by three Taskforces
3. Explanation of Grant Equipment “Aerodrome ATC Simulator”
4. Discussion and Q&A about further activities
5. Consent on Monitoring (ver3.0), approval for AWP-2017 and revised PO (ver.2.0) by the committee

Program:

- 09:30 Opening by the Chairman
09:35 Welcome Address by Mr. Shambiev Alisher
09:40 Opening Remarks by Mr. Hideki Tanabe, Chief Representative of JICA Tajikistan
09:45 Introduce participants (Tajik side by Mr. Sherariev, Japan side by Mr. Ueda)
09:50 Explanation of the Monitoring Sheets Summary (Ver.3.0) and training abroad by PC Mr. Orita
10:05 Presentation of Output-1 (Outcome in 2016, Plan in 2017) JICA HQ Mr. Ueda
10:15 Presentation of Output-2 (Outcome in 2016, Plan in 2017) TF-2 Leader Mr. Sheraliev
10:25 Presentation of Output-3 (Outcome in 2016, Plan in 2017) TF-3 Expert Mr. Yamane
10:35 Presentation of details and progress of the Aerodrome ATC Simulator by PC Mr. Orita
10:45 Discussion and Q&A about further activities
10:55 Approval of AWP-2017 and revised PO (ver. 2.0) by committee
11:00 Closing Address by Representative of Civil Aviation Authority in Ministry of Transportation
11:05 Sign the Minutes of the Meeting (M/M) by TAN, MOT and JICA
11:10 Closing by the Chairman
11:15 Group Photo
11:30 (Lunch? hosted by TAN)

List of Documents

1. JCC/2 General, Agenda, Program, List of Documents and Participant List (this)
2. Monitoring Sheet Summary, -1 and -2 covered from April 2016 to March 2017 (Version 3.0)
3. AWP-2017, Annual Working Plan for JPFY 2017 (Version 1.0)
4. The Summary List of Sub-activities in AWP-2017 (English/Russian)
5. PDM (Version 1.0) / No changed
6. PO (Version 2.0)
7. Presentation on Monitoring and Training abroad
8. Presentation on Taskforce-1, -2 and -3
9. Presentation on Aerodrome Simulator



Participant List

1. Tajikistan side

	Name	Title	Project role
1	Mr. Shambiev Alisher	First Deputy Director, TAJIKAIRNAVIGATION	Deputy Project Director
2	Mr. Rahmon Usuf	Head of Civil Aviation Department, MOT	JCC Member
3	Mr. Sheraliev Bakhtiyor	Head of the Safety & Quality Department, TAN	Project Manager /TF-2L
4	Mr. Davlyatov Davlat	Head of ATS, TAN	Taskforce-1 Leader
5	Mr. Khumorov Bakhtiyor	Head of ATFM Center, TAN	Taskforce-3 Leader
6	Mr. Mansuri Makhmad	Senior ATC, TAN	Taskforce-1 Sub-leader
7	Mr. Rajabov Davron	Chief of ACC Dushanbe, TAN	Taskforce-1 Sub-leader
8	Mr. Toshmatov Ulugbek	Safety and Quality inspector, TAN	Taskforce-2 Sub-leader
9	Mr. Kuliev Ilhom	ATFM Center, TAN	Taskforce-3 Sub-leader

2. Japan side

	Name	Title
1	Mr. Hiroyuki Ueda	Senior Advisor JICA HQ
2	Mr. Hideki Tanabe	Chief Representative, JICA Tajikistan office
3	Ms. Naoko Nishikawa	Project Formulation Advisor, JICA Tajikistan office
4	Mr. Shokirjon Mahmudov	Program Officer, JICA Tajikistan office
5	Mr. Atsushi Yamane	Project TF-3 FPD Expert, ATCA-Japan
6	Mr. Tomonori Orita	Project Coordinator, JICA
7	Mr. Jabalov Safovudin	Project Assistant, JICA

ANNEX4-4

Minutes of JCC3



Minutes of the Third Meeting of Joint Coordinating Committee (JCC/3) for “The Project for Capacity Development in Air Traffic Services” in Tajikistan Dushanbe, 3 May 2018

1. The Third Meeting of Joint Coordinating Committee (JCC/3) of “The Project for Capacity Development in Air Traffic Services” (hereinafter “the Project”) was held in the Ministry of Transport in Dushanbe, Tajikistan at 9:30-12:00 on 3 May 2018.
2. Mr. Shambiev Alisher, First Deputy Director of TAJIKAIRNAVIGATION (hereinafter TAN) opened the meeting as the chairman. It was due to Mr. Ashurov Loik Begidzhonovich, Director General of TAN has had unavoidable and urgent business trip to Russia.
3. The chairman opened the Committee and welcomed the representatives of JICA in Tajikistan office and Civil Aviation Agency (hereinafter “CAA”) in Tajikistan as welcome address. He noted the establishment of new aviation authority - CAA, which was established by government decree in end of the last year. He apologized again for the absence of Director of CAA in the beginning, because of the meeting with Ministry, with possibility of joining in the last part of the meeting.
4. Mr. Hideki Tanabe, Chief Representative of JICA Tajikistan office expressed his sincere appreciation for Project team for implementing activities smoothly in the last year and noted the importance of the contribution of the Project for the future aviation industry development of Tajikistan as opening remarks.

He mentioned that JICA hopes the 3rd and final year’s work will also go well together during remaining Project term which is about seven months.

He informed committee that all three candidates of TF3CP were accepted to PBN training in Japan. He pointed out that not only CP’s skill and knowledge but also their motivation for ensuring aviation safety are important. Project outcome is not individual activity, TAN’s management and Government authority should be involved for utilize trained CP.

He expressed his appreciation for the participation of representative of the new CAA, because TAN cannot achieve the Project goal without Government’s support. JICA hopes that the representative member of the authority shall be officially appointed and will continue to be engaged in remaining Project activities functioning as the coordinating organization in Aviation sector, and believes that TAN will move forward by using the Project outcomes.

5. Mr. Shambiev appreciated JICA for acceptance of additionally requested activities in the last year. It means that he brought new stream to the Project. He mentioned that the results of the Project are remarkable after 2-year activities.
6. Mr. Tomonori Orita, the Project Coordinator JICA, provided the presentation on the result of the latest Monitoring, trainings abroad, TF-1 activity 1-6 and others from April 2017 to March 2018. He has reported that the verifiable indicators for the “Overall Goal” and “Project Purpose” were set properly by taskforces and briefly informed “Final Evaluation” in October 2018. Also, he explained the additional activities of Taskforces which were surpassed by the Project.

To the question from Mr. Shambiev about the activities 1-4 and 1-5, of which achieved percentage is 40-50 % at this moment, if the Project will finish them by the end of the year, Mr. Orita answered that we are trying to obtain the outcomes.



7. Mr. Hideo Watanabe, the Chief Advisor on ATCA-J Consultant / TF-1 Expert, provided the presentation on input and outcomes of all TF-1 activities (except 1-6 and trainings abroad), and further activities in May 2018.

8. Mr. Bakhtiyor Sheraliev, the Project Manager / TF-2 Leader, provided the presentation on input and outcomes of all TF-2 activities, and further activities by TAN in remaining Project terms.

Mr. Nabizoda Aziz asked, if TF-2 provided trainings to TAN personnel in previous or not.

Mr. Sheraliev replied that the Safety trainings were provided from 2015 as a part of periodically trainings, without plan and experienced instructors, but at this moment, Safety team have annual training plan and training material. Mr. Shambiev noted that the TF-2 activities involve almost all TAN and sometimes they invite guests from other aviation organizations (airports, operators), and they will continue their active tasks.

9. Mr. Atsushi Yamane, the TF-3 FPD Expert, provided the presentation on input and outcomes of all TF3 activities, and further activities on SAR/RCC and FPD-QA in 2018.

10. Chairman provided the Committee for discussing further request and Q&A opportunities.

Mr. Shambiev expressed the appreciation to JICA for successful activities which were additionally approved in the last year as WGS-84, SAR/RCC, four training opportunities in TF-2 and other support for whole aviation sector in Tajikistan.

Mr. Shambiev expressed an expectation of new PBN Technical Cooperation Project which was officially requested to JICA last year for making use the outcomes of this Project.

Mr. Tanabe explained that decisions by Japanese government on the adoption of requests of new JICA Technical Cooperation are not officially announced yet. We think that solving the issue on lack of Flight Procedures for ILS 27 (equipment which was provided under the JICA Grant Aid project but is not in use) could promote new PBN project.

Mr. Shambiev explained that the lack of coordination between the Dushanbe International Airport (hereinafter "DIA") and TAN is one of reason for ILS issue. However, DIA is going to make a contract for designing Flight Procedure with Saint-Petersburg institute under the technical support by the Project. The Ground validation for the Flight Procedure will be done by TAN's designer.

Mr. Bakhtiyor Sheraliev complemented that the Saint-Petersburg institute can design the Flight Procedure for ILS no later than 30 days after signing the contract and that TAN will hurry in publishing it after June.

Mr. Tanabe advised to expedite this process by June, and asked CAA to assist it.

He informed about a visit of JICA President to Tajikistan in the late June, it will be good that DIA shall start using "ILS system" before visit of JICA President.

Responding this, Mr. Shambiev expressed that TAN will notify DIA about JICA President visit and try to accelerate this issue.

11. The committee consented the Monitoring (Sheet Summary, -1 and -2 (ver. 5.0)), and approved the AWP-2018 (ver. 1.0), revised PO (ver. 3.0) and PDM (ver. 1.1/ No changed) as it is as in Appendix to this Minutes.

12. The deputy director of CAA, Mr. Nabizoda made a closing address.

On behalf of CAA, he acknowledged that Project bring lot of outcomes not only to the TAN but also to the safety of Tajikistan aviation sectors. He hopes to continue cooperation.

13. The chairman made closing, then took group photo.



Dushanbe, 3 May 2018

Ashurov Loik Begidzhonovich
Director General
State Unitary Enterprise "TAJKAIRNAVIGATION"

Nabizoda Aziz
Deputy Director
Agency of Civil Aviation Authority

Hideki Tanabe
Chief Representative
JICA Tajikistan Office

List of Appendix

- Appendix-A: JCC/3 general, Agenda, Program, List of document and Participant list (actual)
- Appendix-B: PDM, Project Design Matrix (ver.1.1) / No changed
- Appendix-C: PO, Plan of Operations (ver.3.0)
- Appendix-D: AWP-2018, Annual Working Plan for 2018 (ver.-1.0)
- Appendix-E: Monitoring Sheet Summary (Ver.5.0 / English)
- Appendix-F: Monitoring Sheet-1 (Ver.5.0)
- Appendix-G: Monitoring Sheet-2 (Ver.5.0)
- Appendix-H: The latest Sub-activities Plan (English)
- Appendix-I: Presentation on Monitoring and others (Mr. Orita)
- Appendix-J: Presentation on Taskforce-1 (Mr. Watanabe)
- Appendix-K: Presentation on Taskforce-2 (Mr. Sheraliev)
- Appendix-L: Presentation on Taskforce-3 (Mr. Yamane)

ANNEX4-5

Minutes of JCC4

Minutes of the Fourth Meeting of Joint Coordinating Committee (JCC/4) for “The Project for Capacity Development in Air Traffic Services” in Tajikistan Dushanbe, 5 December 2018

1. The Fourth Meeting of Joint Coordinating Committee (JCC/4) of “The Project for Capacity Development in Air Traffic Services” (hereinafter “the Project”) was held in the Ministry of Transport in Dushanbe, Tajikistan at 9:40-11:45 on 5th December 2018.
2. Mr. Shambiev Alisher, the Deputy Director General of TAJIKAIRNAVIGATION (hereinafter TAN) opened the meeting as a chairman instead of Mr. Ashurov Loik Begidzhonovich, the Director General TAN, who could not attend this meeting due to another unavoidable mission.
3. The chairman welcomed the representatives of JICA in Tajikistan and Deputy Director General of Civil Aviation Agency (hereinafter “CAA”) in his opening address.
4. Mr. Hideki Tanabe, Chief Representative of JICA Tajikistan Office expressed his congratulation on successful implementation, coming completion of this project to all participants.

He explained that this was the first technical cooperation project by JICA in Tajikistan’s aviation sector which is a key part in the transport field for promoting logistics and tourism. He mentioned that the Project was successful in capacity development on TAN’s human resources by various activities, especially trainings abroad or in Japan, and he expected TAN to keep their efforts to utilize the Project’s outcomes on human resource development and maintain the equipment provided during the Project in order to ensure the safe flights in Tajikistan after the completion of the Project.

He mentioned that a coordination meeting in the aviation sector which was organized by CAA on 25th September 2018 with participation of TAN and other organizations was good start for moving toward, and he explained that JICA would continuously make effort to coordinate matters between related organizations in the aviation sector in the transport field.

He also mentioned that he would like to introduce and share the achievement of the Project in the next DCC Transport Working Group meeting which he co-chairs with the First Deputy Minister of Transport and that JICA would seek next opportunity of the further cooperation in the aviation field in Tajikistan, would have another discussion with related organization.

Lastly, he expressed appreciation to all related staffs in CAA, TAN and JICA expert team for smooth and successful implementation of the Project.

5. Mr. Nabizoda Aziz, Deputy Director General of CAA expressed his appreciation to the JICA’s cooperation in the aviation sector, especially to this Project and Dushanbe International Airport cargo terminal construction project. He said that now we see the outcomes of the Project activities which prolonged for 33 months. He mentioned about only remaining issue of WGS-84 introduction to the airport in Kurgan Tyube due to the lack of fund. He also mentioned about ILS equipment provided to Dushanbe International Airport of which cargo terminal was handed over by JICA in Jun 2018. He promised that CAA and TAN will continue effort to ensure outcome of Project contribution.

6. Mr. Hideo Watanabe, the Chief Advisor on ATCA-J Consultant / TF-1 Expert, provided explanation on the draft of the Project Completion Report according to the result of final evaluation conducted during the period from 15 to 25 October by the evaluation consultant and to the contents of the Joint Monitoring Reports version 6.

a) Summary of Achievement on the Project Purpose:

The Project Purpose “To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)” was almost achieved based on the assessment of objectively verifiable indicators of the PDM. The Project Purpose is expected to achieve 100% in 2019.

b) Prospects for the Overall Goal:

Possibility of TAN to achieve the overall goal is high. Because training systems in TAN has been established during the Project and they are making effects. This is partly because the overall goal and project purpose are very similar with each other, which means achievement of the Project purpose is nearly equal to accomplishment of the overall goal.

c) Review on Output-1:

Output 1 has been almost achieved since two of five indicators attained 100% achievement, and the remaining three indicators reached to 60% to 85% rates based on the assessment of objectively verifiable indicators of the PDM. It is estimated that two unfinished indicators will reach 100% by the end of 2018, and the remaining one indicator in 2019.

d) Review on Output-2:

Output 2 has been almost achieved since seven of eight indicators attained 100%, and remaining one indicator reached 70%.

e) Review on Output-3:

Output 3 also fully achieved with 100% achievement of all of 11 indicators.

f) Remaining tasks:

It is estimated that 1-3 and 1-5 unfinished indicators will reach 100% in 2019, and the remaining 1-2 indicator in 2019.

It is estimated that 2-2-4 indicator will reach 100% in 2019

7. Project Manager had presentation on remaining tasks that TAN should perform in 2019 for ensuring sustainability on Project’s outcomes as Appendix-D.

TF-1: He mentioned about progress of new ATC tower in UTDD, construction might be completed by early 2019, but procurement of new ATC system is still under the financial consideration.

TT-2: He explained that the Project had additional SMS training for two TF2CPs in Almaty in October for filling the gap of a Safety officer trained under the Project who had left TAN in summer 2018.

TF-3: He explained that FPD automation software “PHX” would be mandatory for ensuring Project trained FP Designers that need it for implementing PBN Project in 2020.

8. Discussion

Mr. Tanabe commented that Project was completed successfully, but JICA needs a monitoring still lots of remaining tasks need to be completed. Responding to this request, Mr. Shambiev Alisher promised to make every effort to get the results and report it to JICA.



9. The JCC members approved the contents of the Project Completion Report.
10. Mr. Nabizoda Aziz made a closing speech of the JCC meeting.
He expressed appreciation to all participants for attending the meeting again on behalf of CAA and hopes of keeping cooperation with JICA in aviation sector in the future.
11. Project Manager, Mr. Sheraliev Bakhtiyor expressed his appreciation to JICA Tajikistan office and Experts.

Dushanbe, 5 December 2018

Ashurov Loik Begidzhonovich
Director General
State Unitary Enterprise "TAJKAIRNAVIGATION"

Nabizoda Aziz
Deputy Director
Agency of Civil Aviation Authority

Hideki Tanabe
Chief Representative
JICA Tajikistan Office

List of Appendix

- Appendix-A: JCC/4 General, Agenda, Program, List of document and Participant list (actual)
- Appendix-B: Project Completion Report (without Annexes)
- Appendix-C: Presentation ppt by Mr. Watanabe
- Appendix-D: Presentation ppt by Project Manager

The Fourth Meeting of Joint Coordinating Committee (JCC/4) for “The Project for Capacity Development in Air Traffic Services” in Tajikistan Dushanbe, 5 December 2018

General:

1. Date: Wednesday, 5 December 2018
2. Venue: Meeting Room in Ministry of Transportation in Dushanbe
3. Working language: Russian (with TAN’s English interpreter in case of necessary)
4. Chairman: Mr. Ashurov Loik Begidzhonovich, Director General “TAJKAIRNAVIGATION (TAN)”

Agenda:

1. Explanation of Project Completion Report by Expert.

Program:

- 09:30 Opening by the Chairman
- 09:35 Welcome Address by TAN
- 09:40 Opening Remarks by JICA Tajikistan Office
- 09:45 Introduce participants (Tajik side by Mr. Sheraliev, Japan side by Mr. Watanabe)
- 09:50 Presentation of draft of Project Completion Report (DPCR) by Mr. Watanabe.
- 10:50 Presentation on remaining things in 2019 by Project Manager
- 11:00 Discussion
- 11:15 Approval on DPCR by JCC
- 11:20 Closing Address by Representative of Civil Aviation Authority Tajikistan
- 11:25 Closing by the Chairman

List of Documents:

1. JCC/4 General, Agenda, Program, List of Documents and Participant List (this)
2. Project Completion Report (without Annexes)

Participant List (Actual)

1. Tajikistan side

	Name	Title	Project role
1	Mr. Nabizoda Aziz	Deputy Director Civil Aviation Agency	JCC Member
2	Mr. Shambiev Alisher	First Deputy Director, TAN	Deputy Project Director
3	Mr. Sheraliev Bakhtiyor	Head of Development Department, TAN	Project Manager /TF-2L
4	Mr. Rajabov Davron	Head of ATS, TAN	Taskforce-1 Leader
5	Mr. Mukhamadaminshoev Firuz	Head of AIS, TAN	Taskforce-3 Leader
6	Mr. Khumorov Bakhtiyor	Head of ATFM in AIS, TAN	Taskforce-3 Sub-leader
7	Mr. Khusenov Payrav	Chief of ACC Dushanbe, TAN	Taskforce-1 Sub-leader
8	Mr. Kashirov Anvar	Leader of Safety team in Dev.Dep., TAN	Taskforce-2 Sub-leader
9	Mr. Tadzhibaev Akbar	Flight Procedure Designer, TAN	Taskforce-3 Member

2. Japan side

	Name	Title
1	Mr. Hideki Tanabe	Chief Representative, JICA Tajikistan Office
2	Ms. Naoko Nishikawa	Project Formulation Advisor, JICA Tajikistan Office
3	Mr. Mahmudov Shokirjon	Senior Program Officer, JICA Tajikistan Office
4	Mr. Hideo Watanabe	Chief Advisor / ATC-1/2 Expert, ATCA-Japan
5	Mr. Tomonori Orita	Project Coordinator, JICA

ANNEX5-1

Monitoring Sheet I Version 1

Monitoring Sheet I

Project Title: The Project for Capacity Development in Air Traffic Services

Implementing Agency: Tajikairnavigation (TAN)

Target Group: Tajikairnavigation ATS Officers

Period of the Project: 33 months

Project Site: TAN and TAN Training Center, Dushanbe

Version 1.0

Dated 26 April 2016

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal	Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	- Rating record - Survey			
To improve Air Traffic Services (ATS) in Tajikistan					
Project Purpose	Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.	- Project Monitoring Sheet	- CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN	-	-
To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)					
Outputs	Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.	- Project Monitoring Sheet	- Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN	-	-
Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards					
Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations	Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC offices have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted				
Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations	Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.				

Activities	Inputs		Important Assumption	Issues	Countermeasures
	Japanese side	Tajikistan side			
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: <ul style="list-style-type: none"> - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary 	Counterparts: <ul style="list-style-type: none"> - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary 			
2-1. To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on the contingency plans for implementation 2-2. To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers	Training in the third countries: <ul style="list-style-type: none"> - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: <ul style="list-style-type: none"> - Aerodrome Simulator 	Project Offices (with desks/chairs and internet connection): <ul style="list-style-type: none"> - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: <ul style="list-style-type: none"> - Class rooms - Aerodrome simulator room Running Cost: <ul style="list-style-type: none"> - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and Information related to the Project	Pre-conditions	-	-
3-1. To conduct basic training on AIS 3-2. To conduct basic training on aeronautical charts 3-3. To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4. To conduct basic training on flight procedure design 3-5. To conduct OJT of flight procedure designers for a model airport 3-6. To produce draft of AIP of the model airport			<Issues and countermeasures >		

ANNEX5-2

Monitoring Sheet II Version 1

ANNEX5-3

Monitoring Sheet I Version 2

Monitoring Sheet I

Version 2.0
27 October 2016

Project Title: The Project for Capacity Development in Air Traffic Services
Implementing agency: SUE "TAJIKAIRNAV IGATIONT" (TAN), Project term: 33 months from 28 March 2016, Project site: TAN in Dushanbe

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
To improve Air Traffic Services (ATS) in Tajikistan	Indicator 1: All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program Indicator 2: The contingency plan and SMS for ATC have been kept in operation. Indicator 3: Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	- Rating record - Survey		-	
Project Purpose					
To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicator 1: All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and simulator trainers. Indicator 2: The contingency plan and SMS for ATC have been implemented. Indicator 3: The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Expert.	- Project Monitoring Sheet	- CNS/ATM systems are properly maintained - Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN	-	-
Outputs					
Output 1: To enhance capacity of training for Air Traffic Control (ATC) officers in line with ICAO standards	Indicator 1-1: At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully. Indicator 1-2: Operation Manual has been reviewed and improved if necessary Indicator 1-3: Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times. Indicator 1-4: Aerodrome simulator has been operational. Indicator 1-5: Each of the simulator trainers has been conducting simulator training at least 3 times per month.	- Project Monitoring Sheet	- Trained ATC officers continue to work in TAN - Trained instructors/ trainers, AIS officers and flight procedure designers continue to work in TAN	10 ATCs attended 5 ATC course and 100% completed.	-
Output 2: To enhance capacity of ATC officers with regard to ICAO recommendations	Indicator 2-1-1: 2 ATC officers have completed basic course on contingency plan successfully. Indicator 2-1-2: Exercise of contingency procedures has been conducted successfully. Indicator 2-1-3: The contingency plans have been approved by CAA for implementation. Indicator 2-2-1: 2 ATC officers have completed courses on SMS successful. Indicator 2-2-2: SMS Manual has been developed and updated Indicator 2-2-3: Risk management process has been established Indicator 2-2-4: Safety risk management and safety assurance have been implemented Indicator 2-2-5: SMS training and education for all ATC officers have been conducted			2 ATCs attended basic Contingency course and completed.	
Output 3: To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations	Indicator 3-1: 2 AIS officers have successfully completed basic course on AIS. Indicator 3-2: 2 AIS officers have successfully completed basic course on aeronautical charts. Indicator 3-3: Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed Indicator 3-4: 2 flight procedure designers have successfully completed basic course on PANS-OPS. Indicator 3-5: 2 flight procedure designers have successfully completed OJT on conventional flight procedure design. Indicator 3-6: Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.			4 AIS officers attended Basic course of AIS/aeronautical charts and completed.	AIS Expert will catch up Aeronautical Chart.

Activities	Inputs		Important Assumption	Issues	Countermeasures
	Japanese side	Tajikistan side			
1-1: To conduct training of ATC officers on aerodrome, approach and area control services 1-2: To conduct OJT instructor training for selected ATC officers 1-3: To conduct instructor training for simulator trainers 1-4: To review and if necessary improve Operation Manuals 1-5: To conduct OJT on aerodrome, approach and area control services 1-6: To procure aerodrome simulator 1-7: To conduct simulator trainings	Experts: - Chief Advisor/ATC Expert (1) - ATC Expert (2) - Simulator Training Expert - AIS Expert - Flight Procedure Design Expert - Project Coordinator/Training Planner - Others as necessary	Counterparts: - Project Director (Director General, TAN) - Deputy Project Director (First Deputy DG, TAN) - Project Manager (Head of Safety and Quality Department, TAN) - ATC Training Task Force - Contingency Plan/SMS Task Force - AIS/Flight Procedure Design Task Force - Interpreter as necessary		None	
2-1. To develop ATC contingency plan 2-1-1: To conduct basic training on contingency plan 2-1-2: To improve the draft contingency plans 2-1-3: To conduct exercise of contingency procedures 2-1-4: To request approval of CAA on ㄗㄨ contingency plans for implementation 2-2. To improve Safety Management System (SMS) 2-2-1: To obtain necessary knowledge of SMS 2-2-2: To develop and update SMS Manual 2-2-3: To establish risk management process 2-2-4: To implement safety risk management and safety assurance 2-2-5: To conduct SMS training and education for ATC officers	Training in the third countries: - Training of ATC officers on ATC services - OJT Instructor Training for selected ATC officers - Instructor Training for simulator trainers - SMS Training - AIS Training - Others as necessary Equipment: - Aerodrome Simulator	Project Offices (with desks/chairs and internet connection): - In TAN Headquarters - In TAN Training Center Facilities of TAN Training Center: - Class rooms - Aerodrome simulator room Running Cost: - Operation and maintenance of Aerodrome Simulator - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses of TAN counterpart personnel Data and Information related to the Project	Pre-conditions	-	-
3-1. To conduct basic training on AIS 3-2. To conduct basic training on aeronautical charts 3-3. To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) 3-4. To conduct basic training on flight procedure design 3-5. To conduct OJT of flight procedure designers for a model airport 3-6. To produce draft of AIP of the model airport					

ANNEX5-4

Monitoring Sheet II Version 2

Monitoring Sheet II

Version 2.0

Project Title: The Project for Capacity Development in Air Traffic Services

Dated 27 October 2016

																	Monitoring																		
Inputs		Plan	2016				2017				2018				2019		Remarks	Issue	Solution																
Expert			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6			
Chief Advisor/ATC Expert (1)		Plan																																Consideration of CP's summer vacation was requested.	Expert session was shifted adequately.
ATC Expert (2)		Actual																																	
Simulator Training Expert		Plan																																	
AIS Expert		Actual																																	
Flight Procedure Design Expert		Plan																																	
Project Coordinator/ Training Planner		Actual																																	
Equipment		Plan																															Delay of instalation is expected.		
Aerodrome Simulator		Actual																																	
Training in the third country		Plan																															Schedules were affected by receiving facility.	Schedules were coordinated and set up in acceptable term. Some course was moved forward in first fiscal year.	
Training of ATC officers on ATC services		Actual																																	
OJT instructor training for selected ATC officers		Plan																																	
Instructor Training for simulator trainers		Actual																																	
SMS Training		Plan																																	
AIS Training		Actual																																	
Activities		Plan	2016				2017				2018				2019		Responsible Organization		Achievements	Issue & Countermeasures															
Sub-Activities		Actual	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	Japan	Tajikistan																	
Output 1: To enhance capacity of Air Traffic Control (ATC) officers in line with ICAO standards																																			
1-1: To conduct training of ATC officers on aerodrome, approach and area control services		Plan																													JICA	TAN	All 10 participants were certified.		
		Actual																																	
1-2: To conduct OJT instructor training for selected ATC officers		Plan																													JICA	TAN			
		Actual																																	
1-3: To conduct instructor training for simulator trainers		Plan																													JICA	TAN			
		Actual																																	
1-4: To review and if necessary improve Operation Manuals		Plan																													JICA	TAN			
		Actual																																	
1-5: To conduct OJT on aerodrome, approach and area control services		Plan																													JICA	TAN			
		Actual																																	
1-6: To procure aerodrome simulator		Plan																													JICA	TAN			
		Actual																																	
1-7: To conduct simulator trainings		Plan																													JICA	TAN			
		Actual																																	

Output 2: To improve ATC services with regard to ICAO recommendations														
2-1-1: To conduct basic training on contingency plan	Plan										JICA	TAN	Basic Contingency training was conducted, 2 ATCs were certified.	
	Actual													
2-1-2: To improve the draft contingency plans	Plan										JICA	TAN		
	Actual													
2-1-3: To conduct exercise of contingency procedures	Plan										JICA	TAN		
	Actual													
2-1-4: To request approval of CAA on the contingency plans for implementation	Plan										JICA	TAN		
	Actual													
2-2-1: To obtain necessary knowledge of SMS	Plan										JICA	TAN		
	Actual													
2-2-2: To develop and update SMS Manual	Plan										JICA	TAN		
	Actual													
2-2-3: To establish risk management process	Plan										JICA	TAN		
	Actual													
2-2-4: To implement safety risk management and safety assurance	Plan										JICA	TAN		
	Actual													
2-2-5: To conduct SMS training and education for ATC officers	Plan										JICA	TAN		
	Actual													

Output 3: To improve Aeronautical Information Services (AIS) with regard to ICAO recommendations														
3-1. To conduct basic training on AIS	Plan										JICA	TAN	All 4 participants were certified.	
	Actual													
3-2. To conduct basic training on aeronautical charts	Plan										JICA	TAN		
	Actual													
3-3. To develop operation manuals for NOTAM, AIC and AIP	Plan										JICA	TAN		
	Actual													
3-4. To conduct basic training on flight procedure design	Plan										JICA	TAN		
	Actual													
3-5. To conduct OJT of flight procedure designers for a model airport	Plan										JICA	TAN		
	Actual													
3-6. To produce draft of AIP of the model airport	Plan										JICA	TAN		
	Actual													

Duration / Phasing	Plan	[Red bars indicating duration]															
	Actual	[Red bars indicating duration]															

Monitoring Plan	Plan	2016												2017												2018												2019						Remarks	Issue	Solution
Monitoring		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6			
Joint Coordination Committee	Plan																																													
Joint Monitoring (Project Monitoring Sheet)	Plan																																													
Post Monitoring (End of Year 2021)	Plan																																													
Reports/Documents																																														
Minutes of Meeting (JCC)	Plan																																													
Completion Report	Plan																																													

ANNEX5-5

Monitoring Sheet Summary Version 2

TO RR of JICA Tajikistan OFFICE

PROJECT MONITORING SHEET

Project Title: The Project for Capacity Development in Air Traffic Services in Tajikistan

Version of the Sheet: Ver.2 (Term: March, 2016 - September, 2016)

Name: Toshio YOSHIDA

Title: Chief Advisor

Submission Date: 31, October, 2016

I. Summary

1 Progress

This project started at 28 March and few works in March were included in this Term.

1-1 Progress of Inputs

(1) Japan side

Chief Advisor and Project Coordinator/Training Planner were assigned.

PC/TP is permanently stationed.

ATC Expert (1) and ATC Expert (2) were dispatched in March-April and June-July session.

(2) Tajikistan side

Counterparts (Project Director, Deputy PD, and Project Manager) were assigned.

Three Task Force (ATC Training, Contingency Plan/SMS, and AIS/Flight Procedure Design) were organized.

Project Office in TAN Headquarter was opened.

Documents requested by JICA Expert were shared.

1-2 Progress of Activities

(1) To conduct training of ATC officers.

Five courses (Aerodrome Control, Approach Control/Procedural, Approach Control/Surveillance, Area Control/Procedural, and Area Control/Surveillance) for TF-1 in the third country (Malaysia) were planned, executed and completed by ten ATCs.

One course (SMS) in Luxemburg for TF-2 was planned and ready for October.

One course (AIS) in Germany for TF-3 was planned, executed and completed by four ATCs.

(2) To procure aerodrome simulator.

Data survey mission was taken by JICA HQ person at TAN in July.

(3) To develop ATC Contingency Plan.

ATC Expert (2) conducted basic training on contingency plan in Aug.
Expert started to improve Draft Contingency Plan and Safety Management System Manual.

1-3 Achievement of Output

(1) All outputs depend on the result of the third country training.

Every participant has returned to TAN with the Course Certification. (100%)

JICA experts expect participants to take adequate roles to expand their knowledge and experience through the third country training into TAN.

(2) TF-2 started their works as planned.

1-4 Achievement of the Project Purpose

Project is moving on schedule.

1-5 Changes of Risks and Actions for Mitigation

None

1-6 Progress of Actions undertaken by JICA

No relevant items

1-7 Progress of Actions undertaken by TAN

No relevant items

1-8 Progress of Environmental and Social Considerations (if applicable)

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

Several of mainly used transit airport have been restricted due to safety issues.

2 Delay of Work Schedule and/or Problems (if any)

None

2-1 Detail

2-2 Cause

2-3 Action to be taken

2-4 Roles of Responsible Persons/Organization (JICA, TAN)

3 Modification of the Project Implementation Plan

None

3-1 PO

3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

4 Preparation of TAN toward after completion of the Project

II. Project Monitoring Sheet I & II *as Attached*

ANNEX5-6

Monitoring Sheet I Version 3

Monitoring Sheet-1 (Ver.3.0)

	Project Goal, Purpose and Taskforces Activities		Verifiable Indicators for three outputs	Base line by CP's activities as of April, 2016	Sub-activities (Bold is done)	Percentage of Achievement (%)						Progress
					CP side / 3rd Country Training by Project	Progress calculation basis						Problem
					Expert Team side activities	16/1	16/2	17/1	17/2	18/1	Final	Remarks
Overall Goal	To improve Air Traffic Services (ATS) in Tajikistan	Indicador:1	All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.			0						
		Indicador:2	The contingency plan and SMS for ATC have been kept in operation.			0						
		Indicador:3	Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.			0						
Project Purpose	To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicador:1	All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.			0						
		Indicador:2	The contingency plan and SMS for ATC have been implemented.			0						
		Indicador:3	The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Experts.			0						
Op-1	To enhance capacity of training for Air Traffic Control (ATC) offices in line with ICAO standard											
1-1	To conduct training of ATC officers on aerodrome, approach and area control services	At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully.	No. of ATCs D: 75 H: 37 K: 13 Q: 11	10 ATC to MAva (2.5-3M) / Jul 06 8 ATC to MAva (2.5 M) / Oct 06 F/U Training on Aerodrome (4days) F/U Training on Approach (4days) F/U Training on En-route (4days)	55.6 100 - - - - Certificates 18/18: 100%							Completed.
1-2	To conduct OJT instructor training for selected ATC officers		No. of Instructors D: 16 +1 OJT-I H: 9 K: 1 Q: 2	6 OJT-I to MAva (2wks) / Jan 2017 (TF-1 Management Training in MAva)	0 83.3 Certificates 6/6: 100%							Partially Completed. One candidate canceled on 2017/1. Replaced to 2017/5 (Mr. Ikromov Qayum)
1-3	To conduct instructor training for simulator trainers			8 GIT to MAva (1wk) / Feb 2017 (3 rd Country Experts Rader Sim Approach) (3 rd Country Experts Radar Sim En-route)	0 100 - - - - Certificates 8/8: 100%							Completed.
1-4	To review and if necessary improve Operation Manuals	Operation Manual has been reviewed and improved if necessary	No. of Manuals Common: 4 D: 14 H: 10 K: 7 Q: 6	Mr. Gafarov reviewed few Manuals O/M Review W/G/Sharing Tech-Find mtg WS on O/M Review (1day x 3) Seminar on Result P/M Review (1day) Study Seminar on Shearing (1day) New Technical Task Training (1wk x3?) (F/U Trainings x3 from Activity 1-1)	0 20.0 3W/Gs formulated / Shearing-M: 10% Implemented W/S: 10% x3 Implemented Seminar: 15% x1 Implemented Study Seminar 15% x1 Implemented Trainings: 0% F/U Training from 1-1: 10% x3						Mr. Gafarov (KQT) reviewed few Operation Manuals and presented it on 22 Oct 2016. Two meetings were conducted on 8 Feb. First review result WS on AD-C on 2017/3/30 F/U Training on Aerodrome completed.	
1-5	To conduct OJT on aerodrome, approach and area control services	Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.	No. of OJT-I D:3 +1(May) H:1 K:0 Q:1	- OJT-I Training (1wk) W/S OJT-I Material & Tr Plan Dev. (1wk) Observation of OJT by CP (1day x6)	D0 0 H0 0 K0 0 Q0 0 Implemented OJT-I training: 20% Implemented W/S: 20% Observation + lecture: 5% x6 All CPs conducted OJT 2 times: 30%						There is no trained OJT instructor in Klyab.	
1-6	To procure aerodrome simulator	Aerodrome simulator has been operational.	Approach and En-route Radar Simulator are available in DYU and LBD	Provided all necessary data by CP Prepared training room and UPS Planning Simulator Installation User Training on Simulator by ND Maintenance and Operation Training by ND	10 40.0 Provided Necessary Data: 5% x 4 Prepared Room and UPS: 10% x 2 Completed Installation: 20% Conducted User Training: 20% Conducted M&O Training: 20%							Room with desk and chair ready in 2017/2/13 Delivery date was postponed from 2017/3 to 8 55" monitors will be procured by Coordinator.
1-7	To conduct simulator trainings	Each of the simulator trainers has been conducting simulator training at least 3 times per month.	No. of GIT D:4 H:2 K:1 Q:1	- Aerodrome Sim-ToT (1wk x3) W/S on Sim Tr's Material & Plan (1wk) Observation of Sim Training (1d x8 x2)	D0 0 Conducted Sim-ToT: 10% x3 Implemented W/S: 20% Observation + lecture: 1.25% x8 x2 CP's conducted 3times/M: 30%							Expert will cover the Aerodrome Control with using new aerodrome simulator in DYU

Op-2 To enhance capacity of ATC officers with regard to ICAO recommendations						
2-1-1	To conduct basic training on contingency plan	2 ATC officers have completed basic course on contingency plan successfully.	0	-	70.0 70.0	Two CP obtained certificate Basic CP in 2016/7
				Basic Training on CP (0.5day) / Jul 2016	Implemented basic training: 70% Training material reused by CP: 30%	
2-1-2	To improve the draft contingency plans	Exercise of contingency procedures has been conducted successfully.	Draft was completed 100% in 2016/4	Initial Draft completed W/S on CP Improvement (3days) Seminar CP Completion (1day)	0 0	
					Implemented W/S: 50% Implemented Seminar: 50%	
2-1-3	To conduct exercise of contingency procedures		0	-	0 25.0	
				Instruction/Advise on CP exercise (1wk x2)	Scenario designed by CP: 25% x2 Conducted exercise by CP: 25% x2	
2-1-4	To request approval of CAA on the contingency plans for implementation	The contingency plans have been approved by CAA for implementation.	0	-	0 0	Approval procedure is TAN's internal matter
				Instruction of Approval for CP (1wk)	TAN DG/DDG approval: 25% CAA approval: 50%	
2-2-1	To obtain necessary knowledge of SMS	2 ATC officers have completed courses on SMS successful.	0	SAF-SA1:2, -SA2:1, -INV:2 (1wk each) F/U Training on SMS (1day x2)	0 80.0	2 CP participated SAF-SMS by TAN in 2015/2 Completed SAF-SA1 and SAF-INV
					Certificates: 100%	
2-2-2	To develop and update SMS Manual	SMS Manual has been developed and updated	Draft was completed 100% w/o attachment in 2016/4	Initial Draft completed Study on SMS Implementation (3days) (F/U Trainings x2 from Activity 2-2-1) W/S on Developing SMS Manual (3days) Seminar on completion SMS-M (1day)	0 0	
					Conducted F/U trainings: 10% x2 Implemented W/S: 40% Implemented Seminar: 40%	
2-2-3	To establish risk management process	Risk management process has been established	0	-	0 0	5 procedures are 1. Voluntary Hazard Report, 2. Risk Management, 3. Incident Report, 4. Analysis and 5. Changes
				W/S on Dev. Risk/M Process (3days) Seminar on Voluntary Reporting Sys (1day)	Implemented W/S: 30% Implemented Seminar: 20% Developed 5 Procedures: 10% x5	
2-2-4	To implement safety risk management and safety assurance	Safety risk management and safety assurance have been implemented	0	-	0 0	
				W/S on Safety R/M and S/A (3days) Training on Human Factors (3days)	Implemented W/S: 25% Implemented Seminar: 25% Procedure & Audit plan developed:30% Audit was conducted by TAN: 25%	
2-2-5	To conduct SMS training and education for ATC officers	SMS training and education for all ATC officers have been conducted	D: 75 H: 37 K: 13 Q: 11 Mod.1-5 finished in D and H	Conducted training Mod. 1-5 in D&H W/S on SMS training (3days) W/S on Runway Safety Program (3days) Instruction on SMS Training Imple.(3ds x4) Seminar on CP and SMS Imple.(1day)	10.0 10.0	Module 1-5 by TAN for KQT and TJU: 2017/6 Module 6-10 by TAN for DYU: 2017/12 for LBD: 2017/7
					Implemented SMS ToT W/S: 20% Implemented Runway Safety W/S:20% Conducted Tr. Mod.1-5: 5% x4 airports Conducted Tr. Mod.6-9: 5% x4 airports	
Op-3 To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations						
3-1	To conduct basic training on AIS	2 AIS officers have successfully completed basic course on AIS.	0	4 AIS to GroupEAD (3wks) / Jul 16	100 100	Completed.
					Certificate: 100% / Comp.	
3-2	To conduct basic training on aeronautical charts	2 AIS officers have successfully completed basic course on aeronautical charts.	0	4 AIS to GroupEAD (3wks) / Jul 16	20.0 60.0	Exercise drawing-1 completed.
				Catch-up exercise drawing-1 (5days x1) Catch-up exercise drawing-2 (5days x1)	Certificates: 20% Conducted exercise drawing-1:40% Conducted exercise drawing-2:40%	For lack of Chart drawing exercise in the training by GroupEAD, AIS Expert provides catch-up trainings.
3-3	To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP)	Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed	0	-	0 20.0	AIS seminar and one Dev. W/S completed.
				AIS Seminar (1day) NOTAM / AIP Procedure Dev W/S (4dx3)	Implemented Seminar:10% Implemented W/S: 10% x3 Developed NOTAM Procedure: 20% Developed AIC Procedure: 20% Developed AIP Procedure: 20%	AIS Expert requests TF-3 to make presentation about current situation of NOTAM/AIC/AIP, and present it as country report in AIS seminar. AIS Expert explains pamphlet of AIS center.
3-4	To conduct basic training on flight procedure design	2 flight procedure designers have successfully completed basic course on PANS-OPS.	0	-	0 0	Simulator room will be diverted training venue before arriving Equipment. (TF1 agreed)
				Training on Basic PANS-OPS FPD (6wks)	Conducted Training:100%	
3-5	To conduct OJT of flight procedure designers for a model airport	2 flight procedure designers have successfully completed OJT on conventional flight procedure design.	0	FPD in DYU	0 0	
				OJT on FPD (6wks) Observation for FPD in DYU (2wks) (PBN introduction Seminar 0.5day x1)	Conducted OJT:70% Conducted Observation: 30%	
3-6	To produce draft of AIP of the model airport	Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.	0	AIP design work	0 0	Completion target date is 2018/4
				AIP design exercise on DYU Seminar on AIP development completion	implemented exercise: 50% implemented seminar: 50%	

ANNEX5-7

Monitoring Sheet II Version 3

ANNEX5-8

Monitoring Sheet Summary Version 3



**The Joint Monitoring, for
“The Project for Capacity Development in Air Traffic Services”
in Tajikistan**

Ver. 3.0

Dushanbe, 1st April, 2017



ГОСУДАРСТВЕННОЕ
УНИТАРНОЕ ПРЕДПРИЯТИЕ
«ТАДЖИКАЭРОНАВИГАЦИЯ»



Sheraliev Bakhtyor
Project Manager / TF-2 Leader
SUE “TAJKAIRNAVIGATION”

Toshio Yoshida
Project Chief Advisor / TF-1/3 Expert
JICA / ATCA-Japan

Monitoring Sheet Summary (Ver. 3.0)

1. Introduction

The Monitoring (Ver.3.0) covered from 1st April 2016 to 31st March 2017 was jointly conducted by TAN and JICA with the following objectives:

- (1) To monitor a progress and operational efficiency of the Project in accordance with AWP-2016 (Ver.1.0) and AWP-2016 (Ver. 2.0), indicating the percentage of progress in each activity at the timing of the end of March 2017 for reporting on it at the 2nd Joint Coordination Committee (JCC/2) in 17th April 2017.
- (2) To provide an actual situation and future prospective of the Project to stakeholders for designing detail sub-activities as AWP-2017 (Ver. 1.0) which is going to be approved at the JCC/2.
- (3) To judge propriety of existing PDM, PO and line up of sub-activities for operating the Project properly for the rest term.

2. Outline of Project Activities

There are 22 various activities related to 3 Outputs in the PDM of this Project structure. All activities could be categorized (A), (B) and (C) from an objective point of view in the outcomes, and each Outputs also could be resolved into several technical subjects as given Table-1 below.

Table-1

Op	Technical subjects	Category	Trainings abroad	Training by Japanese Expert		Procurement Support for Aerodrome Sim.
				Training of Trainers / Capacity Development	Improving Procedures, Manuals & Regulations	
			(A)	(B)	(C)	
1	Improving ATC Operation		1-1 ATCs (18)		1-4 review manuals	
	OJT Instructor's Training		1-2 OJT-Instructor (6)	1-5 OJT-I ToT		
	Aerodrome Simulator Trainer's Training		1-3 GIT (8)	1-7 Sim trainers ToT		1-6 Simulator
2	Contingency Plan (CP)			2-1-1 Basic Training 2-1-3 Exercise	2-1-2 draft improve 2-1-4 CAA approval	
	Safety Management System (SMS)		2-2-1 SAF-# (2+1+2)	2-2-5 SMS trainer	2-2-2 SMS Manual 2-2-3 Risk Management 2-2-4 Improve R/M&S/A	
3	Aeronautical Information Services (AIS)		3-1 AIS basic (2)		3-3 Procedure Dev. AIP	
	Flight Procedure Design (FPD)		3-2 Aero Chart (2)	3-4 Basic Training 3-5 OJT of FPD	3-6 Develop draft AIP	

The category (B), "Training by Japanese Expert" activities which will be implemented by Japanese Expert team are primary components of this Japanese ODA Project. However, providing opportunity of ICAO authorized trainings abroad as the category (A) is not less significant than others, because an essential knowledge in line with ICAO standard and regulations is a precondition of receiving Japanese Expert's trainings in accordance with structure of the Project. In general, at an early phase in the Project, all activities in the PDM and PO ought to be resolved into specific sub-activities on an Inception Report by the Expert team, and accurately indicate terms and schedules of each sub-activities into the Annual Working Plan (AWP).

Due to a unique structure of the Project mentioned above, it was premature to determine the detail of sub-activities under the (B) as "Training by Japanese Expert" at the moment of JCC/1 in 27 April 2016 before finalizing the activities of the (A) as "Trainings abroad". This is the reason why many activities in the category (B) have not been activated before December 2016.

As this report clarifies the progress of activities from April to December in 2016 in accordance with AWP-2016 (ver.1.0), Project has been making good progress on the (A) as "Trainings abroad" activities in each Outputs, but the rest part of the Output-1 and -3 have slow or no progress thus far. Regarding the Output-2, the progress of several activities in the category (B) could be seen.

Since almost of all sub-activities under the category (A) as "Trainings abroad" in three Outputs could be completed by the end of March 2017, the Expert team precisely determined the sub-activities for February and March as AWP-2016 (ver.2.0) in January 2017 for incorporating those outcomes into this monitoring, and for designing precise AWP-2017(ver.1.0) which become effective by JCC/2. This measures produce accurate result of this monitoring especially for the category (B) activates of Output-1 and -3 in February 2017.

3. Progress of Inputs

All inputs by TAN and JICA were successfully done in accordance with PDM as tables below.

(A) Training abroad

Op1: MAVa			TAN side input	Project Input (USD/EUR)			Completion Date of Checkpoints (from April 2016 to March 2017)						
Op2: EUROCONTROL				Tuition Fee	Air Ticket Insurance	Others wo/VISA	Selection by TFs	Eng-CHK by Expert	Paid Tuition-F	VISA Obtained	Dept. Briefing	Training Start	Report Session
Op3: GroupEAD													
1	1-1	ATC Jul	10 ATC	\$74,394	\$11,313	\$23,828	26 Apr	25 Apr	7 Jun	29 Jun	14 Jul	27 Jul	7 Oct
		ATC Oct	8 ATC	\$60,750	\$12,671	\$16,000	17 Jun	17 Jun	19 Aug	21 Jun	7 Oct	18 Oct	13 Jan
	1-2	OJT-I	6 ATC	\$10,600	\$7,500	\$13,260	28 Oct	29 Oct	29 Nov	N/A	22 Dec	9 Jan	27 Jan
	1-3	GIT	8 ATC	\$7,359	\$10,000	\$9,840	28 Oct	29 Oct	19 Nov	N/A	22 Dec	13 Feb	24 Feb
2	2-2-1	SAF-SA1	2 Safe	€3,000	\$2,093	\$2,854	26 Apr	N/A	5 Aug	31 Aug	7 Oct	17 Oct	13 Jan
		SAF-INV	2 Safe	€3,000	\$1,992	\$2,846	26 Apr	N/A	7 Jan	27 Feb	30 Jan	20 Mar	31 Mar
		SAF-SA2	1 Safe	€1,500	TBD	TBD	26 Apr	N/A	TBD	TBD	TBD	TBD	3 Jul
3	3-1/2	AIS Basic	4 AIS	€22,680	\$3,251	\$15,784	8 May	N/A	7 Oct	11 Aug	9 Aug	15 Aug	7 Oct

*Project Coordinator has reported more detail of administrative issue on "Training abroad" by "Project Progress Report" in Japanese.

(B) Training by Japanese Expert

Op	TAN side input	JICA side input by Expert Team in JPFY2016 (Number of implemented Sub-activities)
1	Taskforce-1 Leader, Sub-leader and CPs	Chief Advisor / ATC-1 Expert: Total 5 Months in 4 times assignments
2	Taskforce-2 Leader, Sub-leader and CPs	ATC-2 Expert: Total 3 Months in 3 times assignments
3	Taskforce-3 Leader, Sub-leader and CPs	AIS Expert: total 34 days in 1 time assignment

*All sub-activities and actual assignment terms are mentioned in Monitoring Sheet-2.

(C) Procurement Support Aerodrome Simulator

	TAN side input (planned in 2017)	JICA side input (planned in 2017)
Equipment	(UPS and air conditioner till July 2017)	Aerodrome Simulator System / 340,000USD, contact with NTT-Data done in Jan 2017
Facilities	Simulator Room with furniture in ACC	N/A
Input data	AIP, Photo for 4 airports and drawings	N/A
On-site Trainings	N/A	("User Training on Aerodrome Simulator" x 2times in Aug 2017?) ("Maintenance and Operation Training on Aerodrome Simulator" in Aug 2017?)

*1USD=115.00JPY.

(D) Others

	TAN side input	JICA side input, under the JICA direct control
Human Recourses	Project Director (DG) Project Deputy Director (1 st DDG) Project Manager (TF-2 Leader) Interpreters / English Teacher	Project Coordinator / Training Planning Expert: Total 359 days Contract Assistant: Total 350 days (- approximately 100 days no-paid leave) Contract Driver with Rent-a-car: Total 350 days
Facility	Project office in TAN and utility Expert desk in the simulator room Meeting Venue for JCC/1	Projector, Safe box, Scanner, Printers, 2 set of digital camera and 2 set of laptop-PC Project Web site (www.tj-ats.com)
Local Budget	N/A	371,600USD (Under control of Project Coordinator) Including all expenditure for Training abroad

4. Progress Measuring Method

The result of this monitoring requires to indicate the progress of each activities in "%".

If verifiable indicators are exactly equal to an outcome of single sub-activity, it is easy to show the progress in "%". However, several verifiable indicators are difficult to measure by only progress of outcomes, and taking completion of sub-activities into account is appropriate method for some activities which is consisted several sub-activities. This monitoring provides that several activities are evaluated by verifiable indicators in outcome, several ones are evaluated by completion of each sub-activities and the rest by combination of these methods in the Monitoring Sheet-1 as Table-2. For avoiding over quality measures, all activities have "%" indicators, but progress of each sub-activities was indicated "completed or blank" instead of "%" indicators in the Monitoring Sheet-2.

Table-2

Op	"%" = Verifiable indicator in outcome	"%" = Completion of consisted sub-activities	"%" = Combination of two methods
1	1-1, 1-2, 1-3	1-4, 1-6	1-5, 1-7
2	2-2-1	2-1-2, 2-1-4, 2-2-2, 2-2-3, 2-2-4	2-1-1, 2-1-3, 2-2-5
3	3-1, 3-4	3-6	3-2, 3-3, 3-5

5. Achievement of the Project Purpose

It is premature to evaluate the achievement of the Project Purpose at this stage, but all sub-activities which was determined by Expert team as AWP-2016 (ver.2.0) are harmonized reciprocally and aligned with three Project purposes accordingly by the Taskforces. Therefore, “%” progress indicators for achievement of the three Project purpose in Monitoring Sheet-1 is blank until reasonable verifiable indicators will be determined by Taskforces at JCC/3 in 2018.

6. Progress of Activities and Achievement of Output

This chapter are divided into three categories in dedicated tables. All activities in the tables have description of “Progress of Activities”, “Achievement of Output”, “Progress of Actions undertaken by JICA”, “Changes of risks and actions for mitigation”, and “Delay of work schedule and/or Problems” in highlighted red. The “Progress of Actions undertaken by TAN” is described above it as **TAN**, and a baseline as of April, 2016 is mentioned under it as **BL** for aiding reader’s comprehensions.


(A) Trainings abroad

The activities in this category have been making good progress in 2016.

Regarding the level of achievements, both the Output-1 and -2 are considered to be completion except several inevitable postponements, thanks to the JICA headquarters to bring budget forward for implementing it as much as possible within the first Project year, and also thanks to TAN’s management for appropriate selection of 37 candidates for such 1 week to 3 months long trainings.

However, with regard to the Output-3, several sub-activities by the AIS Expert are required for complementing an Aeronautical Cartography part, due to the lack of contents in AIS basic training by GroupEAD as a reason in a Table-3 below.

Table-3

	Trainings abroad	%	TAN Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any. BL Baseline by TAN as of April 2016, if any.
1	1-1 ATCs (18)	100	<p>Eighteen (18) ATC officers successfully completed ICAO authorized #052-055 trainings in Malaysia Aviation Academy (MAVA) until December 2016.</p> <p>It is worthy of special mention that Mr. Ikromov Qayum from Khujand airport in October group was awarded “The Best Student” by MAVa as a photo on the left.</p> <p>Project was reported by MAVa that the July group had taken a makeup exam in theoretical achievement test due to their English writing ability, in addition to that, July group reported Project that it took one or two weeks for accustoming to hearing Malaysian Instructor’s Malay-English pronunciation. Immediately responding to this urgent issue, TAN and Project jointly provided a supplementary English writing training for two months to the October group in Dushanbe and Khujand then, consequently, the October group didn’t face same difficulty.</p>
			
	1-2 OJT-Instructor (6)	83.3	<p>Five (5) instructors successfully completed ICAO authorized #219 training in MAVa in January 2017.</p> <p>One candidate canceled his participation, but MAVa kindly re-allocated one seat in May 2017, and TF-1 selected Mr. Ikromov Qayum as a new participant.</p> <p>Project provided them the #219 textbook and a video clip of final presentation test before their departure for enabling familiarization of Malay-English pronunciation quickly.</p>
	1-3 GIT (8)	100	<p>Eight (8) instructors successfully completed ICAO authorized #211 training in MAVa in February 2017.</p> <p>Project provided them the #211 textbook and a video clip of final presentation test before their departure for enabling familiarization of Malay-English pronunciation quickly.</p>
2	2-2-1 SAF-# (2+1+2)	80.0	<p>Two (2) Safety officers successfully completed SAF-SA1 in October 2016 and SAF-INV in March 2017 by EUROCONTROLE Luxemburg. SAF-SA2 in December 2016 was postponed until July 2017 because of health reason of a candidate.</p> <p>BL Two (2) Safety officer had completed SAF-SMS training in 2015</p>
3	3-1 AIS basic (2)	100	<p>4 AIS officers successfully completed “AIS Basic” training provided by GroupEAD in Frankfurt in August 2016. Due to the cartography part in this course was not enough for implementing project objective, especially making draft AIP by staff of ATFM center independently, Project provides catch-up trainings of aeronautical chart drawing exercise as Sub-activities by AIS Expert from February 2017.</p> <p>If series of these catch-up trainings will be successfully implemented until July 2017, the progress indicator for the activity 3-2 may become 100%.</p>
	3-2 Aero Chart (2)	60.0	

(B) Training by Japanese Expert

It is because the situation which was accounted for in Chapter-2 that the activities of this category have been making slow in the first Project year. Regarding the level of achievements, both the Output-1 and -3 are considered to be null, but ATC-1 and AIS Experts have recovered from a delay within February 2017. With regarding to the Output-2, several activities were relatively making progress by both side of TAN and ATC-2 Expert beyond the baseline until November 2016.

It is premature to evaluate the level of achievements in this category at this moment, because precise sub-activities as AWP-2016 (ver.2.0) was finalized by the Expert team in January 2017.

Table-4

	Trainings by Japanese Experts	%	TAN	Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any.
			BL	Baseline by TAN as of April 2016, if any.
1	1-4 review manuals Including Follow-up trainings in activity 1-1	20.0	TAN	Mr. Gafarov Bakhiddin (KQT) has started to improve two manuals (1Q and 6Q in the list) from November 2016 before starting ATC-1 Expert activities. His contribution was reported at study meeting in 22 December 2016, and recorded as video clips for sharing TF-1 via Website. TF1 confirmed that 4 regulations and 37 manuals (DYU:14, LBD:10, KQT:7 and TJU:6) are mainly being used by ATCs in four airports at TF1M/2 in December 2016. ATC-1 Expert organized "Manual Review Working Group Formulation Meeting" and "Shearing technical findings of MAVa among July, October groups and Expert Meeting" in 8 February 2017 for launching out on this activity with trained 18 ATC officers. 8 officers attended these meetings and a M/M was made by ATC-1 Expert. ATC-1 Expert conducted 4days theoretical lecture of "Follow-up Training on Aerodrome Control" from 21 to 24 February 2017 for teaching his experience, technique, trend technology in Japan and others for carrying the manual review forward by working groups. nn participants obtained Project certified.
	1-5 OJT-I ToT	0		No progress thus far.
	1-7 Sim trainers ToT	0		No progress thus far.
2 CP	2-1-1 Basic Training	70.0		ATC-2 Expert conducted half day lecture of "Contingency Plan (CP) Basic" in 21 July 2016. 2 Safety officers successfully obtained Project certificate, and other 4 ATC officers observed. Project expects that TAN will re-use the developed training materials for penetrating CP knowledge into TAN.
	2-1-2 draft improve	0	BL	Draft CP (TAN) was 100% completed referred to the Annex11, Asia Pacific version by ICAO Bangkok, guideline of EUROCONTROL, India, Pakistan and Russian CPs at Project started timing. Due to the no SSP and nationwide CP in Tajikistan, TAN's management is facing difficulty to clarify how much portions which exceeded the ANSP layer should take in.
	2-1-3 Exercise	25.0		TF-2 made one scenario (earthquake) for implementing exercise on April 2017.
	2-1-4 CAA approval	0	TAN	TF-2 counterpart recognized that after approved draft by TAN's management, CAA approval will be Government side internal process. No Progress thus far.
2 SMS	2-2-2 SMS Manual	0	BL	Draft SMS Manual was 100% completed without attachment referred to Annex19, the Doc9859 (Chapter-5) and Russian SMS at Project started timing.
	2-2-3 Risk Management	0		No Progress thus far.
	2-2-4 Improve R/M & S/A	0		No Progress thus far.
	2-2-5 SMS trainer	0	TAN	Module 1-5 for remaining two airports will be completed until July 2017. Module 6-9 will be convened one package to provide all airports within 2017 by safety staffs. No Progress thus far.
			BL	Module1-5 training by safety staffs completed in DYU and LBD within 2016.
3	(3-2 Aero Chart)	60.0		AIS Expert conducted 5 days training of "Catchup exercise on Aeronautical Chart drawing -1" from 13 February 2017. 3 AIS officers successfully obtained Project certificate.
	3-3 Procedure Dev. AIP	20.0		AIS Expert conducted one day "AIS seminar" in 9 February 2017 for clarifying the procedure of NOTAM, AIC and AIP in accordance with country report by Mr. Ilhom (TF-3 sub-leader), then AIS Expert explained pamphlet or AIS center in Japan. 21 audiences participated in this seminar. AIS Expert conducted 4 days "NOTAM and AIP Procedure Manual Development Workshop 1/3" from 27 February. 4 AIS officers successfully obtained Project certificate.
	3-4 Basic Training	0		No Progress thus far. TF1/3 confirmed availability of participants for 8 weeks long training in April to May, 2017.
	3-5 OJT of FPD	0		No Progress thus far. TF1/3 confirmed availability of participants for 8 weeks long OJT in November to December, 2017.
	3-6 Develop draft AIP	0		No Progress thus far.

(C) Procurement Support for the Aerodrome Simulator

In order to evaluate the progress properly in this category, it is need to be considered in terms of roles and responsibilities by each stakeholder such as JICA Headquarters, JICA Regional Office, System Integrator (NTT-Data Corp.), Software Vender (TechnoBrain Corp.) and Project which could be divided into TAN, Taskforce-1, Expert team and Coordinator.

A delay in a delivery of the system and confirming tax-free customs formalities were uncontrollable factors by the Project. Project anticipates receiving the equipment up to July 2017.

The room renovation with installing desks and chairs was ready in the 2 February, 2017 and the room was diverted AIS / FPD trainings by Taskforce-3 from February to June 2017. The rest necessary actions are proceeding accordingly by Taskforce-1 and Coordinator as Table-5 below. The ATC-1 and Simulator Training Experts will arrange the operation and maintenance trainings which will be conducted by NTT-Data in July 2017.

Table-5

Procurement Support for the Aerodrome Sim		%	TAN
			Progress of Actions undertaken by TAN, if any.
			Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any.
			BL Baseline by TAN as of April 2016, if any.
1	1-6 Simulator	40.0	<p>TAN TAN provided all necessary data and photos for developing software till the end of December 2016. TAN provided a room in ACC with essential renovation, desks and chairs until 2 February 2017, and they are going to procure the appropriate UPSs before arriving equipment before July 2017.</p> <p>The delivery date of the grant equipment of an Aerodrome Simulator was postponed from March to July 2017, due to a delay of procurement process in JICA Headquarters.</p> <p>Coordinator has completed local market survey for procuring 3 sets of 55" displays and stands. As for the simulated viewpoints in DYU and LBD were placed at new ATC towers which are planning to construct by TAN till the end of 2018. Project is paying attention to the progress of those new tower projects for avoiding obstructs of Project outcomes.</p> <p>BL TAN has had the Radar Approach and En-route simulator in DYU and LBD. Project activities 1-3 (Trainings abroad) covers simulator instructors those who are using the existing equipment above, however 1-7 (Training by Japanese Expert) covers only Aerodrome Control with using newly installing system. Filling this gap is one of expected sub-activities by TF-1.</p>

7. Findings on Joint Monitoring

This monitoring opportunity made it possible for the Project to grasp further necessity of sub-activities and hidden expectations in TAN side for attaining closely Project outcomes during the rest of Project term.

Taskforce-1 counterparts regard the result of trainings in Malaysia highly valued, and they are hoping that the Project will continue to provide the further training opportunities in Malaysia, especially for management staffs for enabling proper evaluation for the proposal of improvement by 32 ATCs based on their acquired new knowledge such as a FPS, an Aldis Lamp in MAVA. They are also seeking measures for filling the gap of capacity development between an Aerodrome Control and Radar Approach / En-route Control, because technical assistance for simulator instructors by Simulator Expert will be limited to the Aerodrome Control only with using new simulator system, despite several trainers those who are using existing simulator system in DYU and LBD are trained by MAVA.

A progression of new ATC towers in DYU (Grant aid by French Gov.) and LBD (Seeking loan from EBRD, IFC or grant opportunity by donor community) are an urgent issue for securing quality of outcomes by the Project, because Project set the simulated viewpoints in the software into new ATC towers in both airports.

Taskforce-2 counterparts has recognized that the baselines of several activities were relatively ascended by their own activities as of Project started in April 2016, and SMS/QMS department staffs have had an essential skill for implementing several Project activities by themselves, because TRACECA provided Georgian Safety Expert in 2015 and TAN is frequently inviting Russian QMS Expert for improving capacity of safety officers. They expect that Project tackles further definite safety issues like introducing the Runway Safety Program, improving transparency of minor incident reporting system, trainers of training



for SMS instructors in Russian language, Human factor issues, further opportunities of trainings abroad, and improving comprehension of no SSP and nationwide-CP in Tajikistan by regulator and ANSP's management for smoothly approving CP and SMS by TAN and CAA.

Taskforce-3 counterparts are contended with the line-up of sub-activities by AIS and FPD Experts for the present, excluding burden of binding 1AIS and 3ATC officers for several 6 weeks long trainings.

Project is planning to provide the PBN training opportunity in Japan from middle of June 2017 for two certified participants of PANS-OPS FPD training mentioned above. In this regard, TAN requested further training opportunity in Japan for remaining two participants in 2018.

8. Modification of the Project Implementation Plan

The PDM will probably not be changed by JCC/2.

The Expert team is going to modify accordingly the PO in accordance with AWP-2017.

9. Preparation of TAN toward after completion of the Project

There is no particular measure at this phase.

- End -

ANNEX5-9

Monitoring Sheet I Version 4

Monitoring Sheet-1 (Ver.4.0)

	Project Goal, Purpose and Taskforces Activities		Verifiable Indicators for three outputs	Base line by CP's activities as of April, 2016	Sub-activities (Bold is done)		Percentage of Achievement (%)						Progress Problem Remarks
					CP side / 3rd Country Training by Project	Japanese Expert Team side activities	Progress calculation basis						
							16/1	16/2	17/1	17/2	18/1	Final	
Overall Goal	To improve Air Traffic Services (ATS) in Tajikistan	Indicaror:1	All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.				0						
		Indicaror:2	The contingency plan and SMS for ATC have been kept in operation.				0						
		Indicaror:3	Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.				0						
Project Purpose	To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicaror:1	All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.				0						
		Indicaror:2	The contingency plan and SMS for ATC have been implemented.				0						
		Indicaror:3	The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Experts.				0						
Op-1	To enhance capacity of training for Air Traffic Control (ATC) offices in line with ICAO standard												
1-1	To conduct training of ATC officers on aerodrome, approach and area control services	At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully.	No. of ATCs D: 75 H: 37 K: 13 Q: 11	10 ATC to MAva (2.5-3M) / Jul 2016 8 ATC to MAva (2.5M) / Oct 2016 F/U Training on AD (4days) F/U Training on Approach (4days) F/U Training on En-route (4days)	55.6	100	-	-	-	-	-	-	Completed. (AD F/U training was changed to a seminar.) (Other F/U trainings were canceled at JCC/2.)
1-2	To conduct OJT instructor training for selected ATC officers		No. of Instructors D: 16 +1 OJT-I H: 9 K: 1 Q: 2	6 OJT-I to MAva (2wks) / Jan 2017 (TF-1 Management Training in MAva)	0	83.3	100						Completed.
1-3	To conduct instructor training for simulator trainers			8 GIT to MAva (1wk) / Feb 2017 (3rd Country Experts MAva Rader Sim)	0	100	-	-	-	-	-	-	Completed.
1-4	To review and if necessary improve Operation Manuals	Operation Manual has been reviewed and improved if necessary	No. of Manuals Common: 4 D: 14 H:10 K: 7 Q: 6	Mr. Gafarov reviewed few Manuals O/M Review W/G meeting (1day) Expert Reporting Session (2days): 0.5d WS on O/M Review (2days x 2) Seminar on Result O/M Review (1day) (F/U Trainings x3 from Activity 1-1)	0	20.0	40.0						Expert Reporting Session was conducted by new ATC-1 Expert for 0.5days on 8/14. PM follow-up on 8/16-17. ATC-1 Expert catch-up on 9/25-29.
1-5	To conduct OJT on aerodrome, approach and area control services	Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.	No. of OJT-I D:4 H:1 K:0 Q:1	- OJT-I Training (1wk) W/S OJT-I Material & Tr Plan Dev. (1wk) Observation of OJT by CP (1wk)	D0	0	20.0						Used JCAB OJT-I handbook (En)
1-6	To procure aerodrome simulator	Aerodrome simulator has been operational.	Approach and En-route Radar Simulator are available in DYU and LBD	Provided all necessary data by CP Prepared training room and UPS Planning Simulator Installation (3days) User Training on Simulator (2days): x1 Maintenance & Operation Training (2d)	10	40.0	100	-	-	-	-	-	Completed Hand-over ceremony on 9/8 One user training was merged M/T training
1-7	To conduct simulator trainings	Each of the simulator trainers has been conducting simulator training at least 3 times per month.	No. of GIT D:4 H:2 K:1 Q:1	- Aerodrome Sim-ToT (1wk x4) W/S on Sim Tr's Material & Plan (1wk) Observation of Sim Training (1wk)	0	0	40%						One training was convert to "basic training" for 4days in Sep.

Op-2 To enhance capacity of ATC officers with regard to ICAO recommendations						
2-1-1	To conduct basic training on contingency plan	2 ATC officers have completed basic course on contingency plan successfully.	0	-	70.0 70.0 70.0	Implemented basic training: 70% Training material reused by CP: 30%
2-1-2	To improve the draft contingency plans	Exercise of contingency procedures has been conducted successfully.	Draft was completed 100% in 2016/4	Initial Draft completed by TAN W/S on CP Improvement (3days) :0.5d Seminar CP Completion (1day) :0.5day	0 0 100 - - -	Implemented W/S: 50% Implemented Seminar: 50%
2-1-3	To conduct exercise of contingency procedures		0	-	0 25.0 50.0	Conducted exercise by Expert: 50% Conducted exercise by CP: 50%
2-1-4	To request approval of CAA on the contingency plans for implementation	The contingency plans have been approved by CAA for implementation.	0	-	0 0 100 - - -	TAN finalization: 25% MOT approval: 50%
2-2-1	To obtain necessary knowledge of SMS	2 ATC officers have completed courses on SMS successful.	0	SAF-SA1:2, -SA2:1, -INV:2 (1wk each) F/U Training on SMS (1day x2)	0 80.0 100 - - -	Certificates: 100%
2-2-2	To develop and update SMS Manual	SMS Manual has been developed and updated	Draft was completed 100% w/o attachment in 2016/4	Initial Draft completed by TAN Study on SMS Implementation(1day):0.5 (F/U Trainings x2 from 2-2-1) :1hr x2time W/S on Dev. SMS Manual (3days) :0.5d Seminar on completion SMS(1day) :0.5d	0 0 100 - - -	Conducted F/U trainings: 10% x2 Implemented W/S: 40% Implemented Seminar: 40%
2-2-3	To establish risk management process	Risk management process has been established	0	TAN is developing Reporting System R/M training abroad (add at JCC/2) Incidental-INV training abroad (at JCC/2) (No ATC-2 Expert activities)	0 0 0	TAN's reporting system working:50% RM training abroad:25% Incidental training abroad: 25%
2-2-4	To implement safety risk management and safety assurance	Safety risk management and safety assurance have been implemented		HF training in abroad (add at JCC/2) Training on Basic Human Factors (5d) W/S on Runway Safety (2day x4)	0 0 25.0	Implemented Basic HF Training: 25% HF training abroad Certificate: 25% Implemented RWY Safety WS: 25% Audit was conducted by TAN: 25%
2-2-5	To conduct SMS training and education for ATC officers	SMS training and education for all ATC officers have been conducted	D: 75, H: 37 K: 13, Q: 11 Mod.1-5 finished in D and H	Conducted training Mod. 1-5 in D&H SMS ToT in Almaty (1wk / add at JCC/2) (No ATC-2 Expert activities)	10.0 10.0 70.0	SMS ToT abroad :60% Conducted Tr. Mod.1-5: 5% x4 airports Conducted Tr. Mod.6-9: 5% x4 airports
Op-3 To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations						
3-1	To conduct basic training on AIS	2 AIS officers have successfully completed basic course on AIS.		4 AIS to GroupEAD (3wks) /Jul 2016 4 AIS to SAR in MAVa (2wks) /Sep 2017 SAR W/S, Exercise and Seminar	100 100 140	AIS Basic Certificate: 100% SAR: 100% (C/40, W/20, E/20 S/20%)
3-2	To conduct basic training on aeronautical charts	2 AIS officers have successfully completed basic course on aeronautical charts.		4 AIS to GroupEAD (3wks) / Jul 2016 Catch-up exercise drawing-1 (5ds) Catch-up exercise drawing-2 (5ds):2wks	20.0 60.0 100 - - -	Certificates: 20% Conducted exercise drawing-1:40% Conducted exercise drawing-2:40%
3-3	To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP)	Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Aeronautical Information Publication (AIP) have been developed		- AIS Seminar (1day) NOTAM/AIP Pro. Dev W/S-1 (4day) NOTAM/AIP Pro. Dev W/S-2 (5day):2wks NOTAM/AIP Pro. Dev W/S-3 (2wk)	0 20.0 50.0 - - -	Implemented Seminar:10% Implemented W/S: 10% x3 Developed NOTAM Procedure: 20% Developed AIC Procedure: 20% Developed AIP Procedure: 20%
3-4	To conduct basic training on flight procedure design	2 flight procedure designers have successfully completed basic course on PANS-OPS.		FPO with 1PC +2VISIO by TAN in 2017/8 Training on Basic PANS-OPS FPD (6wk)	0 0 100 - - -	Conducted Training:100%
3-5	To conduct OJT of flight procedure designers for a model airport	2 flight procedure designers have successfully completed OJT on conventional flight procedure design.		WGS-84 in 3 regional airports by TAN WGS-84 survey DYU (add at April 2017) OJT on FPD (7wks) Observation for FPD in DYU (2wks) PBN introduction Seminar (0.5dayx1)	0 0 30	WGS-84 in DYU:30% Conducted OJT:40% Conducted Observation: 20% PBN Seminar: 10%
3-6	To produce draft of AIP of the model airport	Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.		- AIP design exercise on DYU (5 days) Seminar on AIP dev. completion (0.5days)	0 0 0	implemented exercise: 50% implemented seminar: 50%

ANNEX5-10

Monitoring Sheet II Version 4

		JPFY2017		Apr				May				Jun				Jul				Aug				Sep				Oct				Nov				Dec				2018 Jan				Feb				Mar				after	Remarks
Project	Meeting	Ex	P/A	before	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	after	Remarks											
Project Meeting	JCC/n	A1	Plan		▽ 4/17(JCC/2)																																																
	Joint Coordination Committee	PC	Actual						▼ 5/26 (Postponed due to delay on TF1 activity)																																												
	PCM/n	PC	Plan						▽ 5/19 (PCM/4)																																												
	Project Coordination Meeting	Actual						▼ 5/19 (PCM/4) ▼ 6/20 (PCM/5)								▼ 9/25 (PCM/6)																																					
	TF1M/n	A1	Plan		▽																																																
	Taskforce-1 Meeting	SE	Actual										▼ 7/24 (TF1M/4) ▼ ▼ ▼ (TF1M/5,6 and 7)																																								
	TF2M/n	A2	Plan		▽								▽																																								
	Taskforce-2 Meeting	Actual		▼ 4/21(TF2M/4)								▼ 7/24 (TF2M/5) ▼ 8/17 (TF2M/6)																																									
	TF3M/n	IS	Plan		▽												▽												▽																								
	Taskforce-3 Meeting	FP	Actual		▼ 4/17(TF3M/3)				▼ 6/8 (TF3M/4)				▼ 8/23 (TF3M/5)																																								
Other Meetings	PC	Plan																																																			
		Actual																																																			
Monitor	Joint Monitoring	A1	Plan																																																		
		PC	Actual										▼ 9/11-22																																								
Reporting	Expert team	Monitoring Report (Summary_Sheat-1/2)	A1	Plan										▽																																							
			Actual		▼ 5/19 (2016/2H)								▼ 9/25 (2017/1H)																																								
	PC	Project Progress Report (Administrative part only)	A1	Plan														▽																																			
			Actual		▼ 4/4								▼ 9/29																																								
			PC	Plan		▽				▽								▽																																			
Quatary Accounting Report	Actual		▼ 3/31												▼ 10/2																																						
Business Trip Report	PC	Plan						▽																																													
		Actual										▼ 7/19 (MAvA)																																									
Expert team	TF-1	Cheif Advisor / ATC-1 Exp. Mr.Watanabe	A1	Plan	3/27-----4/28								2 weeks								2 weeks									changed																							
			Actual										7/22-----8/19				9/24-----10/10				(11/20----12/1)				(1/14-----2/12)																												
	TF-2	ATC-2 Expert Mr. Watanabe	SE	Plan													9/3-----10/30				(11/20----12/1)																																
			Actual		4/5-----4/22				7/10-----21				7/22-----8/19				9/24-----10/10																																				
	TF-3	AIS Expert Mr.Sukegawa	IS	Plan									8/1----15								2weeks									new																							
			Actual										8/5-----8/25								(11/20--12/1)																																
FPD Expert Mr.Yamane	FP	Plan		4/3-----5/26								8/21-----9/30				10/30-----12/21								2/2-----3/2					6wks																								
	Actual		4/11-----6/10								8/20-----9/29																																										
JICA PC	PC	Project Coordinator Mr.Ornta	PC	Plan	/-----one year----->																																																
			Actual						6/25-7/2 (leave)								10/6-29 (home leave)																																				
Mission	JICA HQ mission	Plan						5/23--27																																													
		Actual						5/24-27																																													

ANNEX5-11

Monitoring Sheet Summary Version 4



**The Joint Monitoring, for
“The Project for Capacity Development in Air Traffic Services”
in Tajikistan**

Ver. 4.0

Dushanbe, 29 September 2017



ГОСУДАРСТВЕННОЕ
УНИТАРНОЕ ПРЕДПРИЯТИЕ
«ТАДЖИКАЭРОНАВИГАЦИЯ»



Sheraliev Bakhtyor
Project Manager / TF-2 Leader
SUE “TAJKAIRNAVIGATION”

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ATCA-Japan

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JICA

Monitoring Sheet Summary (Ver. 4.0)

1. Introduction

The Monitoring (Ver.4.0) from 1st April 2017 to 30th September 2017 was jointly conducted by TAN and JICA with the following objectives:

- (1) To monitor a progress and operational efficiency of the Project in accordance with AWP-2017(V.1.0) indicating the percentage of progress in each activity at the timing of the end of September 2017.
- (2) To provide an actual situation and future prospective of the Project to stakeholders.
- (3) To judge propriety of existing PDM, PO and line up of sub-activities for remaining Project term.

2. Outline of Project Activities

There are 22 various activities related to 3 Outputs in the PDM of this Project structure. All activities could be categorized (A), (B) and (C) from an objective point of view in the outcomes, and each Outputs also could be resolved into several technical subjects as given Table-1 below. The **Blue Highlighted activities** in the table were newly added at JCC/2.

Table-1

Op	Technical subjects	Category	Trainings abroad (A)	Activities by Japanese Expert		Procurement Support for Aerodrome Sim. (C)
				Training of Trainers / Capacity Development	Improving Procedures, Manuals & Regulations	
1	Improving ATC Operation		1-1 ATCs (18)		1-4 review manuals	
	OJT Instructor's Training		1-2 OJT-Instructor (6) 1-2 TF1-Mangment (6)	1-5 OJT-I ToT		
	Aerodrome Simulator Trainer's Training		1-3 GIT (8)	1-7 Sim trainers ToT (1-3 MAvA Experts)		1-6 Simulator
2	Contingency Plan (CP)			2-1-1 Basic Training 2-1-3 Exercise	2-1-2 draft improve 2-1-4 CAA approval	
	Safety Management System (SMS)		2-2-1 SAF-# (2+1+2) 2-2-3 R/M, I-INV (1+2) 2-2-4 HF training (1) 2-2-5 SMS ToT (2)	2-2-5 SMS trainer	2-2-2 SMS Manual 2-2-3 Risk Management 2-2-4 Improve R/M&S/A	
3	Aeronautical Information Services (AIS)		3-1 AIS basic (2) 3-1 SAR training (4)	3-1 SAR	3-3 Procedure Dev. AIP 3-6 Develop draft AIP	
	Flight Procedure Design (FPD)		3-2 Aero Chart (2)	3-4 Basic Training 3-5 OJT FPD/ WGS84		

The category (B), "Training by Japanese Expert" activities which will be implemented by Japanese Expert team are primary components of this Japanese ODA Project. However, providing opportunity of ICAO authorized trainings abroad as the category (A) is not less significant than others, because an essential knowledge in line with ICAO standard and regulations is a precondition of receiving Japanese Expert's trainings in accordance with structure of the Project. In general, at an early phase in the Project, all activities in the PDM and PO ought to be resolved into specific sub-activities on an Inception Report by the Expert team, and accurately indicate terms and schedules of each sub-activities into the Annual Working Plan (AWP).

Due to a unique structure of the Project mentioned above, it was premature to determine the detail of sub-activities under the (B) as "Training by Japanese Expert" at the moment of JCC/1 in 27 April 2016 before finalizing the activities of the (A) as "Trainings abroad". This is the reason why many activities in the category (B) have not been activated before December 2016.

As this report clarifies the progress of activities from April to September in 2017 in accordance with AWP-2017 (ver.1.0) and Sub-Activity Plan (agreed on JCC/2), Project has been making good progress on the (A) as "Trainings abroad" activities in each Outputs same as last monitoring period. Remaining activities in this category are several additional trainings abroad which were newly approved at JCC/2.

The 1-6 "AD simulator procurements" in category (C) was successfully completed in September 2017.

The various progress of category (B) as "Activities by Japanese Expert" for three Outputs are reported by the paragraph 6 in this report.

3. Progress of Inputs

All inputs by TAN and JICA were successfully done in accordance with PDM as tables below.

(A) Training abroad

			TAN side input	Project Input (USD/EUR)			Completion Date of Checkpoints (from Apr 2016 to Sep 2017)						
				Tuition Fee	Air Ticket Insurance	Others wo/VISA	Selection by TFs	Eng-CHK by Expert	Paid Tuition-F	VISA Obtained	Dept. Briefing	Training Start	Report Session
1	1-1	ATC Jul	10 ATC	\$74,394	\$11,313	\$23,828	26 Apr	25 Apr	7 Jun	29 Jun	14 Jul	27 Jul	7 Oct
		ATC Oct	8 ATC	\$60,750	\$12,671	\$16,000	17 Jun	17 Jun	19 Aug	21 Jun	7 Oct	18 Oct	13 Jan
	1-2	OJT-Inst	6 ATC	\$10,600	\$7,500	\$13,260	28 Oct	29 Oct	29 Nov	N/A	22 Dec	9 Jan	27 Jan
	1-3	GIT/BIT	8 ATC	\$7,359	\$10,000	\$9,840	28 Oct	29 Oct	19 Nov	N/A	22 Dec	13 Feb	24 Feb
	1-3	TF1-Mgr	6 ATC	\$3,900	\$9,100	\$10,631	10 Apr	N/A	18 Apr	20 Apr	25 Apr	8 May	19 May
2	2-2-1	SAF-SA1	2 Safe	€3,000	\$2,093	\$2,854	26 Apr	N/A	5 Aug	31 Aug	7 Oct	17 Oct	13 Jan
		SAF-INV	2 Safe	€3,000	\$1,992	\$2,846	26 Apr	N/A	7 Jan	27 Feb	30 Jan	20 Mar	31 Mar
		SAF-SA2	1 Safe	€1,500	\$1,236	\$1,375	26 Apr	N/A	18 May	21 Jun	31 May	3 Jul	26 Jul
	2-2-5	SMS-ToT	2 Safe	\$908	\$722	\$2065	21 Jul	N/A	31 Jul	N/A	24 Jul	31 Jul	11 Aug
3	3-1/2	AIS Basic	4 AIS	€22,680	\$3,251	\$15,784	8 May	N/A	7 Oct	11 Aug	9 Aug	15 Aug	7 Oct
	3-1	SAR Adm	4 AIS	\$6,812	\$6147	\$9,869	27 Jul	28 Jul	4 Aug	23 Aug	7 Sep	25 Sep	T.B.D.

*Project Coordinator has reported more detail of administrative issue on "Training abroad" by "Project Progress Report" in Japanese.

(B) Training by Japanese Expert

Op	TAN side input	JICA side input by Expert Team in JPFY2017 (from April 1 st , 2017)
1	Taskforce-1 Leader, Sub-leader and CPs	Chief Advisor / New ATC-1 Expert, AD Simulator Training Expert
2	Taskforce-2 Leader, Sub-leader and CPs	ATC-2 Expert (same as New ATC-1 Expert)
3	Taskforce-3 Leader, Sub-leader and CPs	New AIS Expert, FPD Expert

*All sub-activities and actual assignment terms are mentioned in Monitoring Sheet-2.

(C) Procurement Support Aerodrome Simulator

	TAN side input	JICA side input
Equipment	(UPS and air conditioner till July 2017)	Aerodrome Simulator System / 340,000USD was installed in August 2017 3 set of 55" 4k UHD TV and stand were procured Project Coordinator in July 2017
Facilities	Simulator Room with furniture in ACC	1 UPS for TV, HDD, backup note-PC, power cables, cable rack by Project Coordinator
Input data	AIP, Photo for 4 airports and drawings	Detail of "Master" display configurations
On-site Trainings	N/A	"User Training on Aerodrome Simulator" 4-5 Sep. 2017 "Maintenance and Operation Training on Aerodrome Simulator" 6-7 Sep. 2017
Others	N/A	Handover ceremony on 8th September 2017 (photos below)

*1USD=115.00JPY.



Photo of AD Simulator System Handover Ceremony

(D) Others

	TAN side input	JICA side input, under the JICA direct control
Human Recourses	New Project Director (DG) Project Deputy Director (1 st DDG) Project Manager (+TF-2 Leader) Interpreters	Project Coordinator / Training Planning Expert: Total 182 days Contract Assistant: Total 182 days (till 23 September 2017) Contract Driver with Rent-a-car: Total 182 days
Facility	Project office in TAN and utility charge Expert desk in the simulator room Meeting Venue for JCC/2	Project Web site (www.tj-ats.com)
Local Budget	N/A	138,804USD (Under control of Project Coordinator) from April to Sep 2017. Including all expenditure for Training abroad.

4. Progress Measuring Method

This was explained by Monitoring Report Summary (Ver3.0)

5. Achievement of the Project Purpose

It is premature to evaluate the achievement of the Project Purpose at this stage, but all sub-activities which was determined by Expert team as AWP-2017 (ver.1.0) and the latest version of Sub-Activity Plan at JCC/2 are harmonized reciprocally and aligned with three Project purposes accordingly by the Taskforces. Therefore, “%” progress indicators for achievement of the three Project purpose in Monitoring Sheet-1 is blank until reasonable verifiable indicators will be determined by Taskforces at JCC/3 in 2018 April.

6. Progress of Activities and Achievement of Output

This chapter are divided into three categories in dedicated tables. All activities in the tables have description of “Progress of Activities”, “Achievement of Output”, “Progress of Actions undertaken by JICA”, “Changes of risks and actions for mitigation”, and “Delay of work schedule and/or Problems” in highlighted red. The “Progress of Actions undertaken by TAN” is described above it as **TAN**, and a baseline as of April 2016 is mentioned under it as **BL** for aiding reader’s comprehensions.

(A) Trainings abroad

The activities in this category had almost completed by the end of March 2017. In this monitoring term, several remaining trainings and TF1 management training in MAVa were done successfully. An additional five trainings abroad which was newly added in TF-2 and SAR training in TF-3 are explained at paragraph (B) as light blue highlighted.

Table-3

	Trainings abroad	%	TAN Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any. BL Baseline by TAN as of April 2016, if any.
1	1-1 ATCs (18)	100	Completed.
	1-2 OJT-Instructor (6)	100	Completed.
	1-2 Management (6)		(Project invited 4 Malaysian instructors and taken advice for existing radar simulator trainings.)
	1-3 GIT (8)	100	Completed
2	2-2-1 SAF-# (2+1+2)	100	Completed BL Two (2) Safety officer had completed SAF-SMS training in 2015
	2-2-3 R/M	(B)	R/M and Incidental investigation trainings (add at JCC/2)
	2-2-4 Improve RM,SA	(B)	HF training (add at JCC/2)
	2-2-5 SMS ToT (2)	(B)	SMS trainer’s training in Almaty (add at JCC/2) was completed successfully.
	3	3-1 AIS basic (2)	100
	3-1 SAR Admin.(2)	(B)	SAR Admin (ICAO #057A) was added at JCC/2 and completed training by MAVa in Sep-Oct 2017.
	3-2 Aero Chart (2)	100	



Photo of ATC Management Training in Malaysia

(B) Training by Japanese Expert

It is because the situation which was accounted for in Chapter-2 that the activities of this category have been making slow in the first Project year. However, several activities were progressed newly assigned experts within this monitoring term.

Table-4

	Trainings by Japanese Experts	%	TAN
			Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any. BL Baseline by TAN as of April 2016, if any.
1	1-4 review manuals Including Follow-up trainings in activity 1-1	40.0	TAN Follow-up trainings (Technical transfer by Japanese Expert for 18 MAvA trainees) for aerodrome, approach and ACC were canceled by ATC-1 Expert in April 2017. Expert input session (report findings by observation in 2016 and analyzing all manuals in four airports) in 14th Aug didn't fully cover the description on 1-4 in Sub-activity plan. PM and new ATC-1 Expert recovered it in 17-18 Aug and 25-29 Sep.
	1-5 OJT-I ToT	20.0	OJT-I trainers training with using JCAB OJT instructor handbook was completed by new ATC1 Expert.
	1-7 Sim trainers ToT	40.0	Basic AD Sim training (4days) and 3 times of AD Sim training (5days) were completed by Sim Expert.
2	2-1-1 Basic Training	70.0	If developed training material on CP will be used by TAN, remaining 30% will be completed.
CP	2-1-2 draft improve	100	W/S CP improvement (0.5day) and Seminar on CP completion (0.5day) were done by ATC-2 Expert. BL Draft CP (TAN) was 100% completed referred to the Annex11, Asia Pacific version by ICAO Bangkok, guideline of EUROCONTROL, India, Pakistan and Russian CPs at Project started timing.
	2-1-3 Exercise	50.0	CP exercise (0.5day) were done by ATC-2 Expert. If TAN conducts CP exercise in 2018, remaining 50% will be completed.
	2-1-4 CAA approval	100	TAN MOT approved CP on 25 th July 2017 ATC-2 Expert monitored this progress for one day in July 2017.
2	2-2-2 SMS Manual	100	Study on SMS Implementation (0.5day), W/S on Development of SMS manual (0.5day) and Seminar on SMS manual completion (0.5 day) were completed by ATC-2 Expert. BL Draft SMS Manual was 100% completed without attachment referred to Annex19, the Doc9859 (Chapter-5) and Russian SMS at Project started timing.
SMS	2-2-3 Risk Management	0	TAN Reporting System is developed by TAN Additional two trainings abroad were approved by JICA at JCC/2. (No activity was planned in "AWP-2017" and "Sub-Activity Plan" by ATC-2 Expert)
	2-2-4 Improve R/M & S/A	25.0	Basic HF training was conducted by ATC-2 Expert, but the contents didn't meet TAN's needs. TAN requested JICA to add HF training abroad for optimizing ANSP. Several activities for a runway safety were planned in 2018.
	2-2-5 SMS trainer	70	TAN Module 1-5 for remaining two airports will be completed until July 2017. Module 6-9 will be convened one package to provide all airports within 2017 by safety staffs. Additional SMS Trainer's Training in Almaty (Swan aviation academy) is completed. (No activity was planned in "AWP-2017" and "Sub-Activity Plan" by ATC-2 Expert) BL Module1-5 training by safety staffs completed in DYU and LBD within 2017.
3	(3-1 AIS): 100% +SAR: 100%	140	Completed basic AIS training (100%) On top of above, SAR activities were added in this sub-activity at JCC/2. SAR Admin (ICAO #057A) was added at JCC/2 and completed training by MAvA in Sep-Oct 2017.
	(3-2 Aero Chart)	100	FPD Expert conducted 2 weeks training for SID/STAR by VISIO using WGS-84 DYU map in Aug.2017.
	3-3 Procedure Dev. NOTAM/AIP	50.0	New AIS Expert conducted NOTAM/AIP Procedure development WS-2nd for 2 weeks in Aug 2017. NOTAM procedure was developed and started AIP part.
	3-4 Basic Training	100	FPD Expert conducted PANS-OPS FPD training in April to May 2017. 4 AIS/ATC participants successfully obtained certification.
	3-5 OJT of FPD	30.0	WGS-84 survey (newly included Project activity in May 2017) was completed in DYU.
	3-6 Develop draft AIP	0	No Progress thus far.



(C) Procurement Support for the Aerodrome Simulator

The grant equipment of AD Simulator system was successfully handed over to TAN on 8th September. TAN is planning to divert this system to Radar Simulator Training in 2018.

Table-5

	Procurement Support for the Aerodrome Sim	%	TAN
			Progress of Actions undertaken by TAN, if any.
			Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any.
			BL Baseline by TAN as of April 2016, if any.
1	1-6 Simulator	100	TAN TAN side fulfilled their responsibility for receiving AD simulator system. Project procured 3 sets of 55" 4k UHD TV and stand in July and coordinate tax waiver custom clearance for importing equipment in August 2017. NTT-data Cooperation installed AD simulator system, then conducted "user training" and "maintenance training" successfully from August to September 2017. Project conducted hand-over ceremony in 8 th September 2017.
			BL TAN has "Master" radar simulator

7. Findings on Joint Monitoring

TF-1:

In responding TAN's additional training needs, Project had conducted TF-1 management training in MAVa for six managements with Ru/En interpreter, then Project invited 4 Malaysian MAVa Managements and radar simulator instructors to Tajikistan for accelerating TF-1 activities especially 1-4 and 1-7. Project expects that TAN and MAVa will have continually further cooperation in accordance with the MoU which was signed on further cooperation through this opportunity.

Monitoring found that an outcome 1-4 of 18 ATCs those who were trained by MAVa are still below expectation. Project is expecting that visible outcomes for improving ATC operation in four airports will be available within next monitoring period from three working groups on manual review.

The other activities, especially 1-6 and 1-7 were making steady progress during this monitoring period.

TF-2:

The "Contingency Plan" which was supported by Project was approved by CAA/MOT on 25th July 2017.

In accordance with TAN's requirement, JICA replaced several TF-2 Expert activities with additional trainings abroad at JCC/2 as listed below. Only SMS trainer's training was provided to two Safety officers at "Swan Aviation Academy" by Russian language in Almaty Kazakhstan during this monitoring period.

- 1) Incidental Investigation Course in Russian for two SMS officer
- 2) Trainer Course for trainers for SMS trainer in Russian for two SMS officer
- 3) Human Factors Course for optimizing ANSP in English for one SMS officer
- 4) Risk Management Implementation Course in English for one SMS officer

TF-3:

New AIS Expert successfully had recovered an activity 3-3 which was stuck from February 2017.

FPD Expert also recovered an activity 3-2 "catch-up exercise drawing-2" with using VISIO for teaching SID/STAR charts in Dushanbe aerodrome WGS-84 maps for adapting on expected outcome of TF-3 AIS/FPD activities. In this regard, JICA HQ allocated budget for implementing WGS-84 survey and map procurement in UTDD for obtaining appropriate outcomes from 3-3 to -6activities. Project is expecting that TF-3 will officially publish the actual AIP for the flight procedures of newly installed ILS system in RWY27 within next monitoring period.



JICA approved SAR activities in accordance with TAN's requirement at JCC/2.
Project coordinated to conduct ICAO #057A (SAR Admin.) training in MAVA for 1AIS and 3ATC officers from 25th September 2017. After completing this training, new AIS Expert will have remaining three activities for four officials on SAR in 2018.

8. Modification of the Project Implementation Plan

The indicator for newly added SAR in PDM was changed in accordance of discussion at JCC/2.
TFs and Expert team slightly modifies the AWP-2017 (ver.1.0) and Sub-Activities Plan at PCM/6 on 25th September for harmonizing actual progress.

9. Preparation of TAN toward after completion of the Project

TAN is considering diverting this AD Simulator system to Radar training in 2018.
TAN had started to implement WGS-84 survey for three regional airports from September 2017.
Ministry of Transportation requested PBN-implementation Project to JICA on 31st August 2017.
TAN was planning to make an official request of the grant aid for UTDL new ATC tower construction.

- End -

ANNEX5-12

Monitoring Sheet I Version 5

Monitoring Sheet-1 (Ver. 5.0)

	Project Goal, Purpose and Taskforces Activities		Verifiable Indicators for three outputs	Base line by CP's activities as of April, 2016	Sub-activities (Bold is done)	Percentage of Achievement (%)						Progress Problem Remarks
					CP side / 3rd Country Training by Project	Progress calculation basis						
					Japanese Expert Team side activities							
					16/1	16/2	17/1	17/2	18/1	Final		
Overall Goal	To improve Air Traffic Services (ATS) in Tajikistan	Indicador:1	All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.	100% ATCs will be trained by AD Simulator instructors or OJT trainers by Project developed ICAO standard materials.	-	-	-	-				
		Indicador:2	The contingency plan and SMS for ATC have been kept in operation.	TAN will conduct CP exercise once per two years, CAA will conduct annual Safety audit by using Checklist in SMS manual.	-	-	-	-				
		Indicador:3	Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	All Tajikistan AIPs (GEN/ AD/ ENR) will be reformed and separated from Russian AIPs as independent in caiga.ru Web site.	-	-	-	-				
Project Purpose	To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicador:1	All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.	ICAO standard training materials (operation manuals) and AD simulator scenarios will be developed.	-	-	-	-				
		Indicador:2	The contingency plan and SMS for ATC have been implemented.	CP and SMS Manual will be approved by CAA.	-	-	-	-				
		Indicador:3	The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Experts.	4 (FPs) and 1(WGS-84) AIP(AD) in UTDD will be drafted by VISIO, and Expert confirmed it as ICAO standard quality.	-	-	-	-				
Op-1	To enhance capacity of training for Air Traffic Control (ATC) offices in line with ICAO standard											
1-1	To conduct training of ATC officers on aerodrome, approach and area control services	At least 80% of ATC officers/ OJT instructors/Simulator trainers who attended training courses have completed trainings successfully.	No. of ATCs D: 75 H: 37 K: 13 Q: 11	10 ATC to MAvA (2.5-3M) / Jul 2016 8 ATC to MAvA (2.5M) / Oct 2016 <u>F/U Training on AD (4days)</u> <u>F/U Training on Approach (4days)</u> <u>F/U Training on En-route (4days)</u>	55.6	100	-	-	-	-	Completed. (AD F/U training was changed to a seminar.) (Other F/U trainings were canceled at JCC/2.)	
1-2	To conduct OJT instructor training for selected ATC officers	Operation Manual has been reviewed and improved if necessary	No. of Instructors D: 16 +1 OJT-I H: 9 K: 1 Q: 2	6 OJT-I to MAvA (2wks) / Jan 2017 (TF-1 Management Training in MAvA)	0	83.3	100	-	-	-	Completed.	
1-3	To conduct instructor training for simulator trainers		8 GIT to MAvA (1wk) / Feb 2017 (3rd Country Experts MAvA Rader Sim)	0	100	-	-	-	-	Completed.		
1-4	To review and if necessary improve Operation Manuals	Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.	No. of Manuals Common: 4 D: 14 H:10 K: 7 Q: 6	Mr. Gafarov reviewed few Manuals O/M Review W/G meeting (1day) Expert Reporting Session (2days): 0.5d WS on O/M Review (2 days x 2): 0.5d Seminar on Result O/M Review (1day) <u>(F/U Trainings x3 from Activity 1-1)</u>	0	20.0	40.0	50.0			Expert Reporting Session was conducted by new ATC-1 Expert for 0.5days on 8/14. Input catch-up on 9/27 (TWR/ACC observation) W/S (catch-up Input): 2018/1/23 Add ATS Capacity Survey (Not Complete) Completion Seminar: change to 0.5 day W/S	
1-5	To conduct OJT on aerodrome, approach and area control services		No. of OJT-I D:4 H:1 K:0 Q:1	- OJT-I Training (1wk) W/S OJT-I Material & Tr Plan Dev. (1wk) Observation of OJT by CP (1wk)->short	D0 0 H0 0 K0 0 Q0 0	20.0 20.0 0 20.0	40.0 40.0 0 40.0				Used JCAB OJT-I handbook (En) Reduced Observation date by TF1 Request (5 days for 6 to 1 day for 3 only UTDD) Catch-up W/S for improving Examination (2 days in 2018/5)	
1-6	To procure aerodrome simulator	Aerodrome simulator has been operational.	Approach and En-route Radar Simulator are available in DYU and LBD	Provided all necessary data by CP Prepared training room and UPS Planning Simulator Installation (3days) User Training on Simulator (2days): x1 Maintenance & Operation Training (2d)	10	40.0	100	-	-	-	Completed Hand-over ceremony on 9/8 Certificate by CAA on 12/21 One user training was merged M/T training 5 Problem Reports in 2018/2	
1-7	To conduct simulator trainings	Each of the simulator trainers has been conducting simulator training at least 3 times per month.	No. of GIT D:4 H:2 K:1 Q:1	- Aerodrome Sim-ToT (1wk x4) W/S on Sim Tr's Material & Plan (1wk) Observation of Sim Training (1wk)	0	0	40.0	70.0			Completed Expert Activity One training was convert to "basic training" for 4 days in Sep.	

Op-2 To enhance capacity of ATC officers with regard to ICAO recommendations											
2-1-1	To conduct basic training on contingency plan	2 ATC officers have completed basic course on contingency plan successfully.	0	-	70.0	70.0	70.0	70.0			
				Basic Training on CP (0.5 day)	Implemented basic training: 70% Training material reused by CP: 30%						
2-1-2	To improve the draft contingency plans	Exercise of contingency procedures has been conducted successfully.	Draft was completed 100% in 2016/4	Initial Draft completed by TAN W/S on CP Improvement (3 days) :0.5 d Seminar CP Completion (1 day) :0.5 day	0	0	100	-	-	Completed	
2-1-3	To conduct exercise of contingency procedures		0	-	0	25.0	50.0	50.0		TAN is planning to have 2 nd CP Exercise in 2018/5/4	
				W/S on CP exercise (1 day x2) :0.5 day	Conducted exercise by Expert: 50% Conducted exercise by CP: 50%						
2-1-4	To request approval of CAA on the contingency plans for implementation	The contingency plans have been approved by CAA for implementation.	0	-	0	0	100	-	-	Completed MOT approved CP on 7/25	
				Monitoring on approval process (1d) 0.5	TAN finalization: 25% MOT approval: 50%						
2-2-1	To obtain necessary knowledge of SMS	2 ATC officers have completed courses on SMS successful.	0	SAF-SA1:2, -SA2:1, -INV:2 (1wk each) F/U Training on SMS (1day x2)	0	80.0	100	-	-	Completed	
					Certificates: 100%						
2-2-2	To develop and update SMS Manual	SMS Manual has been developed and updated	Draft was completed 100% w/o attachment in 2016/4	Initial Draft completed by TAN Study on SMS Implementation(1day):0.5 (F/U Trainings x2 from 2-2-1) :1hr x2time W/S on Dev. SMS Manual (3days) :0.5d Seminar on completion SMS(1day) :0.5d	0	0	100	-	-	Completed	
					Conducted F/U trainings: 10% x2 Implemented W/S: 40% Implemented Seminar: 40%						
2-2-3	To establish risk management process	Risk management process has been established	0	TAN is developing Reporting System R/M training abroad (CHG visit Ru) Incidental-INV training abroad (in Ru) (No ATC-2 Expert activities)	0	0	0	50.0		Two trainings abroad were approved at JCC/2 (VOICE seminar (No AWP) done 2017/10) RM Training: Replaced by Visit Rus ANSP Incidental-INV Training: Done	
				HF training in abroad (add at JCC/2)	0	0	25.0	50.0		Due to the contents of basic HF training, TAN requested additional training abroad in IANS at JCC/2. JICA approved additional budget for it. SAF-HFA in IANS: June 2018 RST Meeting by CAA: done	
2-2-4	To implement safety risk management and safety assurance	Safety risk management and safety assurance have been implemented		Training on Basic Human Factors (5d) W/S on Runway Safety (2day x4): 0.5dx2	Implemented Basic HF Training: 25% HF training abroad Certificate: 25% Implemented RWY Safety WS: 25% Audit was conducted by TAN: 25%						
2-2-5	To conduct SMS training and education for ATC officers	SMS training and education for all ATC officers have been conducted	D: 75, H: 37 K: 13, Q: 11 Mod.1-5 finished in D and H	Conducted training Mod. 1-5 in D&H SMS ToT in Almaty (1wk / add at JCC/2) (No ATC-2 Expert activities)	10.0	10.0	70.0	70.0		Additional SMS ToT in Ru was done Module 1-5 by TAN for KQT and TJU: 2017/6 Module 6-10 by TAN for DYU: 17/12, LBD:17/7	
					SMS ToT abroad :60% Conducted Tr. Mod.1-5: 5% x4 airports Conducted Tr. Mod.6-9: 5% x4 airports						
Op-3 To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations											
3-1	To conduct basic training on AIS	2 AIS officers have successfully completed basic course on AIS.		4 AIS to GroupEAD (3wks) /Jul 2016 4 AIS to SAR in MAVa (2wks) /Sep 2017 SAR W/S, Exercise and Seminar	100	100	140			Completed (AIS part) / Total 200% Additional SAR Admin in MAVa was done Additional SAR activity were added by JCC/2	
					AIS Basic Certificate: 100% SAR: 100% (C/40, W/20, E/20 S/20%)						
3-2	To conduct basic training on aeronautical charts	2 AIS officers have successfully completed basic course on aeronautical charts.		4 AIS to GroupEAD (3wks) / Jul 2016 Catch-up exercise drawing-1 (5ds) Catch-up exercise drawing-2 (5ds):2wks	20.0	60.0	100	-	-	Completed SID/STAR, WGS-84 (DYU), VISIO in drawing-2 was done by FPD Expert on August	
					Certificates: 20% Conducted exercise drawing-1:40% Conducted exercise drawing-2:40%						
3-3	To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Publication (AIP)	Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Publication (AIP) have been developed		AIS Seminar (1day) NOTAM/AIP Pro. Dev W/S-1 (4day) NOTAM/AIP Pro. Dev W/S-2 (5day):2wks NOTAM/AIP Pro. Dev W/S-3 (2wk): 3wks	0	20.0	50.0	100	-	Completed NOTAM-P was developed by new AIS Expert AIP(AIC) procedure was started Need 2 days for AIS road map in April 2018	
					Implemented Seminar: 10% Implemented W/S: 10% x3 Developed NOTAM Procedure: 20% Developed AIP(AIC) Procedure: 40%						
3-4	To conduct basic training on flight procedure design	2 flight procedure designers have successfully completed basic course on PANS-OPS.		FPO with 1PC +2VISIO by TAN in 2017/8 Training on Basic PANS-OPS FPD (6wk)	0	0	100	-	-	Completed 5 FP Designers were certified. 2 attended PBN(I-FPD) in TIC on 2017/6	
					Conducted Training: 100%						
3-5	To conduct OJT of flight procedure designers for a model airport	2 flight procedure designers have successfully completed OJT on conventional flight procedure design.		WGS-84 in 3 regional airports by TAN WGS-84 survey DYU (add at April 2017) OJT on FPD (7wks) Observation for FPD (2wks): 4wks PBN introduction Seminar (0.5dayx1) FPD-QA, GV/FV, ICAO Training in China	0	0	30	140		Completed (OJT part) / Total 200% Pre-survey UTDT/K/L by TAN : Done Supplementary OJT for 2 weeks in 2018/2 Visit Russia Contractors, Kyrgyz: Done 2018/3 Expert FPD-QA Training: 2018/8? ICAO FPD-QA Training 2018/7?	
					WGS-84 in DYU:30% Conducted OJT:40% Conducted Observation: 20% PBN Seminar: 10% QA, GV/FV (Visit 40, TR40, ICAO20)						
3-6	To produce draft of AIP of the model airport	Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.		- AIP design exercise on DYU (5 days) Seminar on AIP dev. completion (0.5days)	0	0	0	0		4 FPD + 1 WGS-84 in 2018/4	
					implemented exercise: 50% implemented seminar: 50%						

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Monitoring Sheet II Version 5

		JPFY2017		Apr				May				Jun				Jul				Aug				Sep				Oct				Nov				Dec				2018 Jan				Feb				Mar				after	Remarks
Project	Meeting	Ex	P/A	before	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	1wk	2wk	3wk	4wk	after	Remarks											
Project Meeting	JCC/n	A1	Plan		▽ 4/17(JCC/2)																																					4/16?											
	Joint Coordination Committee	PC	Actual						▼ 5/26 (Postponed due to delay on TF1 activity)																																												
	PCM/n	PC	Plan						▽ 5/19 (PCM/4)												▽																																
	Project Coordination Meeting	Actual						▼ 5/19 (PCM/4)				▼ 6/20 (PCM/5)								▼ 9/25 (PCM/6)																	▼ 3/9 (PCM/7)																
	TF1M/n	A1	Plan		▽																																																
	Taskforce-1 Meeting	SE	Actual										▼ 7/24 (TF1M/4)				▼ ▼ ▼ (TF1M/5,6 and 7)				▼ 10/9 (TF1M/8)				▼ 13 (9) ▼ ▼ (10-11) ▼ (TF1M/12)				▼ ▼ ▼ (TF1M13-15)																								
	TF2M/n	A2	Plan		▽																																																
	Taskforce-2 Meeting	Actual		▼ 4/21(TF2M/4)								▼ 7/24 (TF2M/5)				▼ 8/17 (TF2M/6)				▼ 10/9 (TF2M/7)												▼ 2/2 (TF2M/8)																					
	TF3M/n	IS	Plan		▽												▽																																				
	Taskforce-3 Meeting	FP	Actual		▼ 4/17(TF3M/3)				▼ 6/8 (TF3M/4)				▼ 8/23 (TF3M/5)				▼ 9/27 (TF3M/6)				▼ 11/21				▼ 12/11 ▼ 20 (TF3M/7-9 ▼(10 & 11)) ▼				▼ 2/1(TF3M/12)				▼ 3/6(TF3M/13)																				
Other Meetings	PC	Plan																																																			
		Actual																																																			
Monitor	Joint Monitoring	A1	Plan																																																		
		PC	Actual														▼ 9/11-22																▼ 2/26-3/6																				
Reporting	Expert team	A1	Plan																																																		
	Monitoring Report (Summary, Sheat-1/2)	PC	Actual		▼ 5/19 (2016/2H)																▼ 9/25 (2017/1H)													▼ 4/3(2H)																			
	Inception Report	A1	Plan																																																		
		Actual																																																			
	PC	Project Progress Report (Administrative part only)	PC	Plan		▽												▽																	▼ 3/28																		
		Actual		▼ 4/4												▼ 9/27																																					
	Quatary Accounting Report	PC	Plan		▽				▽								▽																	▼ 3/27																			
	Actual		▼ 3/31																▼ 10/2								▼ 1/4																										
	Business Trip Report	PC	Plan						▽																																												
	Actual										▼ 7/19 (MAvA)								▼ 10/12 (JICA HQ)																																		
Expert team	TF-1	Cheif Advisor / ATC-1 Exp. Mr.Watanabe	A1	Plan	3/27-----4/28								2 weeks								2 weeks				2 weeks				2 weeks					2wks																			
		Actual										7/22-----8/19				9/23-----10/10 (additional)				11/18----12/3				1/20-----2/4																													
		Simulator Expert Mr. Sakae	SE	Plan													9/3-----10/30				10/30-----12/1				12/1-----31																												
		Actual														9/2-----10/10				11/12-----26 (-2wks, pre-loaded)				2/4-----18 (+2wks, additional)																													
	TF-2	ATC-2 Expert Mr. Watanabe	A2	Plan	3/27-----4/28								7/10-----21																																								
		Actual		4/5-----4/22								7/22-----8/19 (marged New ATC-1 Expert)																																									
TF-3	AIS Expert Mr.Sukegawa	IS	Plan									8/1-----15								2weeks									2wks																								
		Actual										8/5-----8/25 (+1wk)												1/7-----28 (+1wk, postponed)																													
	FPD Expert Mr.Yamane	FP	Plan	4/3-----5/26								8/21-----9/30				10/30-----12/21								2/2-----3/2					6wks																								
	Actual		4/11-----6/10								8/20-----9/29				10/31-----12/22								1/31-----3/9 (+1wk)																														
JICA PC	PC	Project Coordinator Mr.Orita	PC	Plan	/-----one year----->																																																
	Actual						6/25-7/2 (leave)								10/6-29 (home leave)								12-24-1/7 (leave)																														
Mission	JICA HQ mission		Plan					5/23-27																					4/?																								
		Actual						5/24-27																																													

ANNEX5-14

Monitoring Sheet Summary Version 5



**The Joint Monitoring, for
“The Project for Capacity Development in Air Traffic Services”
in Tajikistan**

Ver. 5.0

Dushanbe, 1 April 2018



ГОСУДАРСТВЕННОЕ
УНИТАРНОЕ ПРЕДПРИЯТИЕ
«ТАДЖИКАЭРОНАВИГАЦИЯ»



Sheraliev Bakhtyor
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Monitoring Sheet Summary (Ver. 5.0)

1. Introduction

The Monitoring (Ver. 5.0) from 1st October 2017 to 31th March 2018 was jointly conducted by TAN and JICA with the following objectives:

- (1) To monitor a progress and operational efficiency of the Project in accordance with AWP-2017(Ver. 1.0) indicating the percentage of progress in each activity at the timing of the end of March 2018.
- (2) To provide an actual situation and future prospective of the Project to stakeholders.
- (3) To judge propriety of existing PDM, PO and line up of sub-activities for remaining Project term.

2. Outline of Project Activities

There are 22 various activities related to 3 Outputs in the PDM of this Project structure. All activities could be categorized (A), (B) and (C) from an objective point of view in the outcomes, and each Outputs also could be resolved into several technical subjects as given Table-1 below. The **Blue Highlighted activities** in the table were newly added during this monitoring period.

Table-1

Op	Technical subjects	Category	Trainings abroad	Activities by Japanese Expert		Procurement Support for Aerodrome Sim.
				Training of Trainers / Capacity Development	Improving Procedures, Manuals & Regulations	
		(A)		(B)	(C)	
1	Improving ATC Operation		1-1 ATCs (18)		1-4 review manuals 1-4 ATS(ATC+AD) Capacity Assessment Methodology	
	OJT Instructor's Training		1-2 OJT-Instructor (6) 1-2 TF1-Mangment (6)	1-5 OJT-I ToT		
	Aerodrome Simulator Trainer's Training		1-3 GIT (8)	1-7 Sim trainers ToT (1-3 MAvA Experts)		1-6 Simulator
2	Contingency Plan (CP)			2-1-1 Basic Training 2-1-3 Exercise	2-1-2 draft improve 2-1-4 CAA approval	
	Safety Management System (SMS)		2-2-1 SAF-# (2+1+2) 2-2-3 R/M, I-INV (1+2) 2-2-4 HF training (1) 2-2-5 SMS ToT (2)	2-2-5 SMS trainer	2-2-2 SMS Manual 2-2-3 Risk Management 2-2-4 Improve R/M&S/A	
	Aeronautical Information Services (AIS)		3-1 AIS basic (2) 3-1 SAR training (4)	3-1 SAR	3-3 Procedure Dev. AIP 3-6 Develop draft AIP	
	Flight Procedure Design (FPD)		3-2 Aero Chart (2)	3-4 Basic Training 3-5 OJT FPD/ WGS84 3-5 FPD-QA, GV/FV		

The category (B), "Training by Japanese Expert" activities which will be implemented by Japanese Expert team are primary components of this Japanese ODA Project. However, providing opportunity of ICAO authorized trainings abroad as the category (A) is not less significant than others, because an essential knowledge in line with ICAO standard and regulations is a precondition of receiving Japanese Expert's trainings in accordance with structure of the Project. In general, at an early phase in the Project, all activities in the PDM and PO ought to be resolved into specific sub-activities on an Inception Report by the Expert team, and accurately indicate terms and schedules of each sub-activities into the Annual Working Plan (AWP).

Due to a unique structure of the Project mentioned above, it was premature to determine the detail of sub-activities under the (B) as "Training by Japanese Expert" at the moment of JCC/1 in 27 April 2016 before finalizing the activities of the (A) as "Trainings abroad". This is the reason why many activities in the category (B) have not been activated before December 2016, but Project caught up it in AWP-2017.

As this report clarifies the progress of activities from October 2017 to March 2018 in accordance with AWP-2017 (ver.1.0) and related Sub-Activity Plan, Project has been making good progress on the (A) as "Trainings abroad" activities in each Outputs same as last monitoring period including additional trainings abroad in TF2 and TF3 which were additionally approved at JCC/2.

The various progress of category (B) as "Activities by Japanese Expert" for three Outputs are reported by the paragraph 6 in this report.

3. Progress of Inputs

All inputs by TAN and JICA were successfully done in accordance with PDM as tables below.
 Only two trainings abroad as “SAF-HFA” in IANS and “FPD-QA” in ICAO China are remaining at this moment.

(A) Training abroad

Op	TAN side input	Project Input (USD/EUR)			Completion Date of Checkpoints (from Apr 2016 to Mar 2018)								
		Tuition Fee	Air Ticket Insurance	Others wo/VISA	Selection by TFs	Eng-CHK by Expert	Paid Tuition-F	VISA Obtained	Dept. Briefing	Training Start	Report Session		
1	1-1	ATC Jul	10 ATC	\$74,394	\$11,313	\$23,828	26 Apr	25 Apr	7 Jun	29 Jun	14 Jul	27 Jul	7 Oct
		ATC Oct	8 ATC	\$60,750	\$12,671	\$16,000	17 Jun	17 Jun	19 Aug	21 Jun	7 Oct	18 Oct	13 Jan
	1-2	OJT-Inst	6 ATC	\$10,600	\$7,500	\$13,260	28 Oct	29 Oct	29 Nov	N/A	22 Dec	9 Jan	27 Jan
	1-3	GIT/BIT	8 ATC	\$7,359	\$10,000	\$9,840	28 Oct	29 Oct	19 Nov	N/A	22 Dec	13 Feb	24 Feb
	1-3	TF1-Mgr	6 ATC	\$3,900	\$9,100	\$10,631	10 Apr	N/A	18 Apr	20 Apr	25 Apr	8 May	19 May
2	2-2-1	SAF-SA1	2 Safe	€3,000	\$2,093	\$2,854	26 Apr	N/A	5 Aug	31 Aug	7 Oct	17 Oct	13 Jan
		SAF-INV	2 Safe	€3,000	\$1,992	\$2,846	26 Apr	N/A	7 Jan	27 Feb	30 Jan	20 Mar	31 Mar
		SAF-SA2	1 Safe	€1,500	\$1,236	\$1,375	26 Apr	N/A	18 May	21 Jun	31 May	3 Jul	26 Jul
	2-2-5	Incident-I	2 Safe	\$1,180	\$1,078	\$5,160	22 Jan	N/A	26 Jan	N/A	29 Jan	14 Feb	9 Mar
3	3-1/2	SMS-ToT	2 Safe	\$908	\$722	\$2,065	21 Jul	N/A	31 Jul	N/A	24 Jul	31 Jul	11 Aug
3	3-1	AIS Basic	4 AIS	€22,680	\$3,251	\$15,784	8 May	N/A	7 Oct	11 Aug	9 Aug	15 Aug	7 Oct
		SAR Adm	4 AIS	\$6,812	\$6,147	\$9,869	27 Jul	28 Jul	4 Aug	23 Aug	7 Sep	25 Sep	18 Jan
	3-5	Visit Ru*	1 PM	\$0	\$315	\$2,400	21 Feb	N/A	N/A	N/A	27 Feb	12 Mar	28 Mar
		Visit Kg*	1 AIS	\$0	\$286	\$520	21 Feb	N/A	N/A	N/A	27 Feb	12 Mar	28 Mar

*) Substituted Visiting Russian ANSP for Risk Management Training, and remaining budget was used for TF3 FPD (ILS 27) issue.

(B) Trainings by Japanese Experts

Op	TAN side input	JICA side input by Expert Team in JPFY2017 (from Oct 1 st , 2017)
1	Taskforce-1 Leader, Sub-leader and CPs	Chief Advisor / New ATC-1 Expert, AD Simulator Training Expert
2	Taskforce-2 Leader, Sub-leader and CPs	ATC-2 Expert (same as New ATC-1 Expert)
3	Taskforce-3 Leader, Sub-leader and CPs	New AIS Expert, FPD Expert

*All sub-activities and actual assignment terms are mentioned in Monitoring Sheet-2.

(C) Procurement Support Aerodrome Simulator

This part is not applicable in this monitoring period.

(D) Others

	TAN side input	JICA side input, under the JICA direct control (from Oct 1 st 2017)
Human Recourses	New Project Director (DG) Project Deputy Director (1 st DDG) Project Manager (+TF-2 Leader) Interpreters	Project Coordinator / Training Planning Expert: Total 182 days Two Technical Assistants from 25 September 2017 Contract Driver with Rent-a-car
Facility	Project office in TAN and utility charge Expert desk in the simulator room Meeting Venue for JCC/2	Project Web site (www.tj-ats.com)
Local Budget	N/A	138,804USD (Under control of Project Coordinator) from Oct to Mar 2018. Including all expenditure for Training abroad.

4. Progress Measuring Method

This was explained by Monitoring Report Summary (Ver3.0)

5. Achievement of the Project Purpose

Project set the measuring parameter for verifiable indicators in “Overall goal” and “Project purpose” for the final evaluations (planned in Oct 2018) as Table below and it will be approved by JCC/3 in 3rd May 2018.

Overall Goal	To improve Air Traffic Services (ATS) in Tajikistan	Indicador:1	All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.	100% ATCs will be trained by AD Simulator instructors or OJT trainers by Project developed ICAO standard materials.
		Indicador:2	The contingency plan and SMS for ATC have been kept in operation.	TAN will conduct CP exercise once per two years, CAA will conduct annual Safety audit by using Checklist in SMS manual.
Indicador:3	Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	All Tajikistan AIPs (GEN/ AD/ ENR) will be reformed and separated from Russian AIPs as independent in caiga.ru Web site.		
Project Purpose	To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicador:1	All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.	ICAO standard training materials (operation manuals) and AD simulator scenarios will be developed.
		Indicador:2	The contingency plan and SMS for ATC have been implemented.	CP and SMS Manual will be approved by CAA.
		Indicador:3	The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Experts.	4 (FPs) and 1(WGS-84) AIP(AD) in UTDD will be drafted by VISIO, and Expert confirmed it as ICAO standard quality.

6. Progress of Activities and Achievement of Output

This chapter are divided into three categories in dedicated tables. All activities in the tables have description of “Progress of Activities”, “Achievement of Output”, “Progress of Actions undertaken by JICA”, “Changes of risks and actions for mitigation”, and “Delay of work schedule and/or Problems” in highlighted red. The “Progress of Actions undertaken by TAN” is described above it as **TAN**, and a baseline as of April 2016 is mentioned under it as **BL** for aiding reader’s comprehensions.

(A) Trainings abroad

The activities in this category had almost completed by the end of March 2017. In this monitoring term, several remaining trainings and TF1 management training in MAVa were done successfully. An additional five trainings abroad which was newly added in TF-2 and SAR training in TF-3 are explained at paragraph (B).

Table-3

	Trainings abroad	%	TAN	Progress of Actions undertaken by TAN, if any.
			BL	Baseline by TAN as of April 2016, if any.
1	1-1 ATCs (18)	100	Completed.	Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any.
	1-2 OJT-Instructor (6)	100	Completed.	
	1-2 Management (6)		(Project invited 4 Malaysian instructors and taken advice for existing radar simulator trainings.)	
	1-3 GIT (8)	100	Completed	
2	2-2-1 SAF-# (2+1+2)	100	Completed	BL Two (2) Safety officer had completed SAF-SMS training in 2015
	2-2-3 R/M	100	Incidental-INV trainings completed successfully in Moscow, and R/M was replaced visit Russian ANSP	
	2-2-4 Improve RM,SA	0	SAF-HFA training (add at JCC/2) by IANS in June 2018	
	2-2-5 SMS ToT (2)	100	SMS trainer's training in Almaty was completed successfully.	
3	3-1 AIS basic (2)	100	An exercise part Aero Chart training (SID/STAR by VISIO) was filled by FPD expert in August 2017.	
	3-1 SAR Admin.(2)	100	SAR Admin (ICAO #057A) was added at JCC/2 and completed training by MAVa in Sep-Oct 2017.	
	3-2 Aero Chart (2)	100		
	3-4 FPD-QA (1+1)	100	Visit Russia (szrcal, gnii, GV/FV SP and Russian ANSP) Visit Kyrgyz (ANSP FI/FV SP) and Kazakhstan (FI/FV SP)	

(B) Training by Japanese Expert

It is because the situation which was accounted for in Chapter-2 that the activities of this category have been making slow in the first Project year. However, several activities were progressed newly assigned experts within this monitoring term.

Table-4

	Trainings by Japanese Experts	%	TAN Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any. BL Baseline by TAN as of April 2016, if any.
1	1-4 review manuals Including Follow-up trainings in activity 1-1	50.0	<p>TAN Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any. BL Baseline by TAN as of April 2016, if any.</p> <p>TAN (Manual Review) / original Follow-up trainings by Japanese Expert to 18 MAVA trainees on AD, APP and ACC (Original plan was 4 days each) were canceled by ATC-1 Expert in April 2017. No technical lectures were conducted by New ATC-1 Expert. The Expert input session (for catch-up of Aug & Nov activities) was done in 23 Jan 2018, TAN (TF1) decided to cancel the "1-4 O/M Review Completion Seminar" in April 2018, because of new technologies or procedures weren't introduced for improving TAN's operation except ALDS lamp. Also, this activity didn't find any differentials from ICAO standard in almost of all Operation Manuals of three regional airports. TAN accepted the New ATC-1 Expert's recommendations, then TF1 verify a necessity of revising documents by May and will revise it by themselves if necessary.</p> <p>(ATS Capacity Assessment) / additional Project had added "ATS Capacity Assessment Methodology" which was requested from TF1 to New ATC-1 Expert in Nov 2017 into one of 1-4 activity's outcome, then New ATC-1 Expert had provided the survey form and conducted Workshops in 22, 28-29 Jan 2018. ATC capacity assessment was partially done in 28 Jan, but AD capacity was uncompleted by the end of Jan 2018. After TAN's verification of the result of figures in ATC part, new ATC-1 Expert recommended to conduct data survey again with using changed new survey form and index as follows. TF1 had requested a technical transfer of Japanese methodologies by written procedure for 2 days in May 2018. Capacity WG should consider the following (by New ATC-1 Expert in February 2018); 1 Review of control events, 2 Change of survey form, 3 Review of difficulty index, 4 To conduct survey for capacity using recorded data, and 5 To calculate the capacity based on the survey</p> <p>TAN TF1 OM Review W/G is assessing Expert's recommendations by May 2018. TF1 studied Uzbekistan's assessment methodology in March 2018.</p>
	1-5 OJT-I ToT	40.0	OJT-I training material / periodical plan development W/S was done by new ATC1 Expert. The examination system will be improved as ICAO standard in May 2018.
	1-7 Sim trainers ToT	70.0	AD Sim training materials /periodical plan development W/S and observation were done by Sim Expert.
2	2-1-1 Basic Training	70.0	If developed training material on CP will be used by TAN, remaining 30% will be completed.
CP	2-1-2 draft improve	100	W/S CP improvement (0.5day) and Seminar on CP completion (0.5day) were done by ATC-2 Expert. BL Draft CP (TAN) was 100% completed referred to the Annex11, Asia Pacific version by ICAO Bangkok, guideline of EUROCONTROL, India, Pakistan and Russian CPs at Project started timing.
	2-1-3 Exercise	50.0	CP exercise (0.5day) were done by ATC-2 Expert. If TAN conducts CP exercise in 2018, remaining 50% will be completed.
	2-1-4 CAA approval	100	TAN MOT approved CP on 25 th July 2017 ATC-2 Expert monitored this progress for one day in July 2017.
2	2-2-2 SMS Manual	100	Study on SMS Implementation (0.5day), W/S on Development of SMS manual (0.5day) and Seminar on SMS manual completion (0.5 day) were completed by ATC-2 Expert. BL Draft SMS Manual was 100% completed without attachment referred to Annex19, the Doc9859 (Chapter-5) and Russian SMS at Project started timing.
SMS	2-2-3 Risk Management	50.0	TAN Web based reporting system was developed but need to improve for safety purpose. Additional "Incidental Investigation Training" in Moscow (AeroNav Institute) was completed. Risk Management Training was replaced by visiting Russian ANSP in March 2018, because of Project didn't find appropriate training on RM..
	2-2-4 Improve R/M & S/A	50.0	Basic HF training was conducted by ATC-2 Expert, but the contents didn't meet ANSP's needs. TAN requested JICA to add HF training abroad for optimizing ANSP. RST was formulated in January 2018, and RST had Hazard Map making activity in 19 March 2018.
	2-2-5 SMS trainer	70.0	TAN Module 1-5 for remaining two airports will be completed until July 2017. Module 6-9 will be convened one package to provide all airports within 2017 by safety staffs. Additional "SMS Trainer's Training" in Almaty (Swan aviation academy) was completed. BL Module 1-5 training by safety staffs completed in DYU and LBD within 2017.

3	(3-1 AIS): 100% +SAR: 100%	140	Completed basic AIS training (100%) On top of above, SAR activities were added in this sub-activity at JCC/2. SAR Admin (ICAO #057A) was added at JCC/2 and completed training by MAVa in Sep-Oct 2017. AIS Expert is planning to have WS in April and Exercise/Completion Seminar in July 2018.
	(3-2 Aero Chart)	100	FPD Expert conducted 2 weeks training for SID/STAR by VISIO using WGS-84 DYU map in Aug.2017.
	3-3 Procedure Dev. NOTAM/AIP	100	New AIS Expert conducted NOTAM/AIP Procedure development WS-2nd for 2 weeks in Aug 2017. NOTAM and AIP procedures were developed.
	3-4 Basic Training	100	FPD Expert conducted PANS-OPS FPD training in April to May 2017. 4 AIS/ATC participants successfully obtained certification.
	3-5 OJT of FPD +WGS-84: 100%	140	WGS-84 survey (newly included Project activity in May 2017) was completed in DYU. FPD Expert is planning to have training on FPD-QA (GV) in September 2018.
	3-6 Develop draft AIP	0	No Progress thus far. AIS/FPD had decided to create 5 AIPs (4 FPD+WGS-84) by VISIO during AIP W/S in April, then they will have draft-AIP completion seminar in 30 th April 2018.

(C) Procurement Support for the Aerodrome Simulator

The grant equipment of AD Simulator system was successfully handed over to TAN on 8th September. Project suspended consideration of diverting this system to Radar Simulator Training. TF1 had reported five problems to NTT-data in February 2018. In accordance with reply by NTT-data, IT specialist, instructors and PC will conduct trouble shooting in April 2018.

Table-5

		%	
	Procurement Support for the Aerodrome Sim		TAN Progress of Actions undertaken by TAN, if any. Progress of Activities, Achievement of Output, Progress of Actions undertaken by JICA, Changes of risks and actions for mitigation, and Delay of work schedule and/or Problems, if any.
			BL Baseline by TAN as of April 2016, if any.
1	1-6 Simulator	100	TAN TAN side fulfilled their responsibility for receiving AD simulator system. Project procured 3 sets of 55" 4k UHD TV and stand in July and coordinate tax waiver custom clearance for importing equipment in August 2017. NTT-data Cooperation installed AD simulator system, then conducted "user training" and "maintenance training" successfully from August to September 2017. Project conducted hand-over ceremony in 8 th September 2017.
			BL TAN has "Master" radar simulator

7. Findings on Joint Monitoring

TF-1:

Monitoring found that the outcomes of activity 1-4 (Manual Review) are still below an expectation.

The Manual Review WG should carefully verify the Expert's recommendations, then consider revising operation manuals and higher regulations will be necessary or not.

The ATS Capacity Assessment WG need to obtain the procedures of Japanese methodologies first, then compare other methodology for conducting actual assessment.

The activity 1-5 (OJT-I) is required catch-up on an examination system improvement and need to replace the training materials by the outcomes of activity 1-4 for improving OJT to be in line with ICAO standard.

The Aerodrome Simulator related activities, 1-6 and 1-7 were making steady progress during this monitoring period, but all reported problems in the hardware and software should be solved during warranty period by September 2018.



TF-2:

Newly organized CAA (Civil Aviation Authority) is going to create the SSP (State Safety Program) by UK consultant under EASA (European Aviation Safety Agency) Programs. Project is carefully watching the progress of this mission for keeping consistency between TF2 outcomes and ANSP part of newly developing SSP.

TF-3:

Monitoring found that TF3 activities lacked documentation by CAA, FPD-QA, GV/FV and “QMS in AIS” for implementing actual Flight Procedure Design works. For designers will come to have more confidence in actual design work, Project allocated additional FPD Expert activity in September 2018.

New AIS Expert is going to make an AIS Road Map during his next mission in April 2018. The modernization of AIS Database, FPD automation tool and QMS in AIS should be taken into consideration.

Project is providing technical support to the outsourcing activity on ILS27-approach FPD by DIA (Dushanbe International Airport).

8. Modification of the Project Implementation Plan

TF1 and New ATC-1 Expert slightly modified the AWP-2018 and Sub-Activities Plan in 2nd April 2018.

Project temporarily sets the final evaluation in late October for two weeks by Evaluation Consultant and conducting JCC/4 in 30th November 2018.

9. Preparation of TAN toward after completion of the Project

TAN is planning to complete WGS-84 survey for all airports within 2018, then waiting the Project design of new PBN implementation Project.

- End -

ANNEX5-15

Monitoring Sheet I Version 6

Monitoring Sheet-1 (Ver. 6.0)

	Project Goal, Purpose and Taskforces Activities		Verifiable Indicators for three outputs	Base line by CP's activities as of April, 2016	Sub-activities (Bold is done)		Percentage of Achievement (%)					Progress
					CP side / 3rd Country Training by Project	Japanese Expert Team side activities	Progress calculation basis					Problem
							16/1	16/2	17/1	17/2	18/1 + Final	Remarks
Overall Goal	To improve Air Traffic Services (ATS) in Tajikistan	Indicador:1	All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.	100% ATCs will be trained by AD Simulator instructors or OJT trainers by Project developed ICAO standard materials.	-	-	-	-	-	-	-	ICAO standard material (Operation Manual) didn't develop. OJT / AD Sim Trainings are on-going, but not 100% yet.
		Indicador:2	The contingency plan and SMS for ATC have been kept in operation.	TAN will conduct CP exercise once per two years, CAA will conduct annual Safety audit by using Checklist in SMS manual.	-	-	-	-	-	-	-	The 2nd Contingency Plan Exercise was done by TF2CPs. Internal Safety Audit is under plan by SMS plan.
		Indicador:3	Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.	All Tajikistan AIPs (GEN/ AD/ ENR) will be reformed and separated from Russian AIPs as independent in caiga.ru Web site.	-	-	-	-	-	-	-	-
Project Purpose	To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicador:1	All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.	ICAO standard training materials (operation manuals) and AD simulator scenarios will be developed.	-	-	-	-	-	-	-	O/Ms (4 airports) were not improved to be ICAO standard. AD simulator scenarios (4 airports) were developed.
		Indicador:2	The contingency plan and SMS for ATC have been implemented.	CP and SMS Manual will be approved by CAA.	-	-	-	-	-	-	-	CP was approved by CAA. SMS Manual was approved by TAN. (SSP was developed)
		Indicador:3	The draft AIP of the model airport has been accepted as confirming to ICAO standards by JICA Experts.	4 (FPs) and 1(WGS-84) AIP(AD) in UTDD will be drafted by VISIO, and Expert confirmed it as ICAO standard quality.	-	-	-	-	-	-	-	-
Op-1	To enhance capacity of training for Air Traffic Control (ATC) offices in line with ICAO standard											
1-1	To conduct training of ATC officers on aerodrome, approach and area control services	At least 80% of ATC officers/OJT instructors/Simulator trainers who attended training courses have completed trainings successfully.	No. of ATCs D: 75 H: 37 K: 13 Q: 11	10 ATC to MAva (2.5-3M) / Jul 2016 8 ATC to MAva (2.5M) / Oct 2016 <i>F/U Training on AD (4days)</i> <i>F/U Training on Approach (4days)</i> <i>F/U Training on En-route (4days)</i>	55.6	100	-	-	-	-	-	Completed. <i>(AD F/U training was changed to a seminar.)</i> <i>(Other F/U trainings were canceled at JCC/2.)</i>
1-2	To conduct OJT instructor training for selected ATC officers	Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.	No. of Instructors D: 16 +1 OJT-I H: 9 K: 1 Q: 2	6 OJT-I to MAva (2wks) / Jan 2017 (TF-1 Management Training in MAva)	0	83.3	100	-	-	-	-	Completed. Certificates 6/6: 100% TF1 Management Training: 100%
1-3	To conduct instructor training for simulator trainers		8 GIT to MAva (1wk) / Feb 2017 (3rd Country Experts MAva Rader Sim)	0	100	-	-	-	-	-	-	Completed. Certificates 8/8: 100% MAva Expert: 100%
1-4	To review and if necessary improve Operation Manuals	Operation Manual has been reviewed and improved if necessary	No. of Manuals Common: 4 D: 14 H:10 K: 7 Q: 6	Mr. Gafarov reviewed few Manuals O/M Review W/G meeting (1day) Expert Reporting Session (2days): 0.5d WS on O/M Review (2 days x 2): 0.5d Seminar on Result O/M Review: W/S? <i>(F/U Trainings x3 from Activity 1-1)</i>	0	20.0	40.0	50.0	60.0			<i>MVA map was completed by TF3 in 2018/9</i> 35 documents were reviewed, 29 findings were recommended at catch-up W/S in 2018/1/23 Inputted Jp method of Capacity Assessment. <i>Seminar: Changed 0.5d W/S for one in 2018/5</i> <i>Capacity Assessment: Not completed by 18/9</i> <i>Other recommendations: Not completed 18/9</i>
1-5	To conduct OJT on aerodrome, approach and area control services	Each of the OJT instructors has conducted OJT on aerodrome, approach and/or area control services at least 2 times.	No. of OJT-I D:4 H:1 K:0 Q:1	-	D0	0	20.0	40.0	70.0			Completed Expert's Activity Inputted JCAB OJT-I handbook (En) <i>Reduced OBSERVATION date by TF1 Request</i> <i>(5 days for 6 to 1 day for 3 only UTDD)</i>
			OJT-I Training (1wk) W/S OJT-I Material & Tr Plan Dev. (1wk) Observation of OJT (1wk)->1d (3OJT-I)	Implemented OJT-I training: 20% Implemented W/S: 20% Observation + lecture: 10% x3 in UTDD All CPs conducted OJT 2 times: 30%	Catch-up W/S (2ds) for improving Examination Add articles to OJT-I handbook (Ru) by OJT-I <i>(not completed by 2018/9)</i>							
1-6	To procure aerodrome simulator	Aerodrome simulator has been operational.	Approach and En-route Radar Simulator are available in DYU and LBD	Provided all necessary data by CP Prepared training room and UPS Planning Simulator Installation (3days) User Training on Simulator (2days): x1 Maintenance & Operation Training (2d)	10	40.0	100	-	-	-	-	Completed Hand-over ceremony on 9/8 Certificate by CAA on 12/21 One user training was merged M/T training 5 Problem Reports in 2018/2 (solved)
1-7	To conduct simulator trainings	Each of the simulator trainers has been conducting simulator training at least 3 times per month.	No. of GIT D:4 H:2 K:1 Q:1	-	0	0	40.0	70.0	85.0			Completed Expert's Activity One training was convert to "basic training" for 4 days in 2017 Sep. 4 UTDD trainers conducted trainings in accordance of annual training plan,
				Aerodrome Sim-ToT (1wk x4) W/S on Sim Tr's Material & Plan (1wk) Observation of Sim Training (1wk)	Conducted Sim-ToT: 10% x4 Implemented W/S: 20% Observation + lecture: 10% CP's conducted 3 times/M: 30%							

Op-2 To enhance capacity of ATC officers with regard to ICAO recommendations											
2-1-1	To conduct basic training on contingency plan	2 ATC officers have completed basic course on contingency plan successfully.	0	-	70.0	70.0	70.0	70.0	70.0		Completed Expert's activity JICA is waiting submission of training materials. New SMS training material contains CP part
				Basic Training on CP (0.5 day)	Implemented basic training: 70% Training material reused by CP: 30%						Completed
2-1-2	To improve the draft contingency plans	Exercise of contingency procedures has been conducted successfully.	Draft was completed 100% in 2016/4	Initial Draft completed by TAN W/S on CP Improvement (3 days) :0.5 d Seminar CP Completion (1 day) :0.5 day	0	0	100	-	-	-	Completed Implemented W/S: 50% Implemented Seminar: 50%
2-1-3	To conduct exercise of contingency procedures		0	-	0	25.0	50.0	50.0	100	-	Completed TAN had 2 nd 0.5d CP Exercise in 2018/5/4
				W/S on CP exercise (1 day x2) :0.5 day	Conducted exercise by Expert: 50% Conducted exercise by CP: 50%						Completed
2-1-4	To request approval of CAA on the contingency plans for implementation	The contingency plans have been approved by CAA for implementation.	0	-	0	0	100	-	-	-	Completed MOT approved CP on 7/25
				Monitoring on approval process (1d) 0.5	TAN finalization: 25% MOT approval: 50%						Completed
2-2-1	To obtain necessary knowledge of SMS	2 ATC officers have completed courses on SMS successful.	0	SAF-SA1:2, -SA2:1, -INV:2 (1wk each) F/U Training on SMS (1day x2)	0	80.0	100	-	-	-	Completed Certificates: 100%
2-2-2	To develop and update SMS Manual	SMS Manual has been developed and updated	Draft was completed 100% w/o attachment in 2016/4	Initial Draft completed by TAN Study on SMS Implementation(1day):0.5 (F/U Trainings x2 from 2-2-1) :1hr x2time W/S on Dev. SMS Manual (3days) :0.5d Seminar on completion SMS(1day) :0.5d	0	0	100	-	-	-	Completed Conducted F/U trainings: 10% x2 Implemented W/S: 40% Implemented Seminar: 40%
2-2-3	To establish risk management process	Risk management process has been established	0	TAN is developing Reporting System R/M training abroad (CHG visit Ru) Incidental-INV training abroad (in Ru) (No ATC-2 Expert activities)	0	0	0	50.0	100	-	Completed RM Training: Replaced by Visit Rus ANSP Incidental-INV Training: Done (VOICE seminar (No AWP) done 2017/10)
				HF training in abroad (add at JCC/2)	0	0	25.0	50.0	75.0		Completed Expert's activity SAF-HFA in IANS: June 2018: done RST WSs / hazard map for 3 / review: done SMS (SA/RM) audits are under preparation.
				Training on Basic Human Factors (5d) W/S on Runway Safety (2day x4): 0.5dx2	Implemented Basic HF Training: 25% HF training abroad Certificate: 25% Implemented RWY Safety WS: 25% Audit SMS was conducted: 25%						Completed
2-2-5	To conduct SMS training and education for ATC officers	SMS training and education for all ATC officers have been conducted	D: 75, H: 37 K: 13, Q: 11 Mod.1-5 finished in D and H	Conducted training Mod. 1-5 in D&H SMS ToT in Almaty (1wk / add at JCC/2) (No ATC-2 Expert activities)	10.0	10.0	70.0	70.0	100	-	Completed Expert's activity Additional SMS ToT in Ru: done Module 1-5 by TAN for KQT and TJU: 2017/6 Module 6-10 by TAN for DYU: 17/12, LBD:17/7
				SMS ToT abroad :60%	Conducted Tr. Mod.1-5: 5% x4 airports Conducted Tr. Mod.6-9: 5% x4 airports						Completed
Op-3 To enhance capacity of Aeronautical Information Services (AIS) officers with regard to ICAO recommendations											
3-1	To conduct basic training on AIS	2 AIS officers have successfully completed basic course on AIS.		4 AIS to GroupEAD (3wks) /Jul 2016 4 AIS to SAR in MAVa (2wks) /Sep 2017 SAR W/S, Exercise and Seminar	100	100	140	160	200	-	Completed (AIS part only) / Total 200% Additional SAR Admin training in MAVa: done Exercise (10/4) and Seminar (10/5): done
3-2	To conduct basic training on aeronautical charts	2 AIS officers have successfully completed basic course on aeronautical charts.		4 AIS to GroupEAD (3wks) / Jul 2016 Catch-up exercise drawing-1 (5ds) Catch-up exercise drawing-2 (5ds):2wks	20.0	60.0	100	-	-	-	Completed Certificates: 20% Conducted exercise drawing-1:40% Conducted exercise drawing-2:40%
3-3	To develop operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Publication (AIP)	Operation manuals for Notice to Airman (NOTAM), Aeronautical Information Circulars (AIC) and Publication (AIP) have been developed		AIS Seminar (1day) NOTAM/AIP Pro. Dev W/S-1 (4day) NOTAM/AIP Pro. Dev W/S-2 (5day):2wks NOTAM/AIP Pro. Dev W/S-3 (2wk): 3wks	0	20.0	50.0	100	-	-	Completed NOTAM-P was developed by new AIS Expert AIP(AIC) procedure was started AIS road map done
3-4	To conduct basic training on flight procedure design	2 flight procedure designers have successfully completed basic course on PANS-OPS.		FPO with 1PC +2VISIO by TAN in 2017/8 Training on Basic PANS-OPS FPD (6wk)	0	0	100	-	-	-	Completed 5 FP Designers were certified. 2 attended PBN(I-FPD) in TIC on 2017/6
3-5	To conduct OJT of flight procedure designers for a model airport	2 flight procedure designers have successfully completed OJT on conventional flight procedure design.		WGS-84 in 3 regional airports by TAN WGS-84 survey DYU (add at April 2017) OJT on FPD (7wks) Observation for FPD (2wks): 4wks PBN introduction Seminar (0.5dayx1) FPD-QA, GV/FV, ICAO Training in China	0	0	30	140	200	-	Completed / Total 200% Pre-survey UTDT/K/L by TAN : Done Supplementary OJT for 2 weeks in 2018/2 Visit Russia Contractors, Kyrgyz: Done 2018/3 FPD Expert QA Training: 2018/9: Done (This was instead of ICAO training in China)
3-6	To produce draft of AIP of the model airport	Draft of Aeronautical Information Publication (AIP) of the model airport has been produced.		AIP design exercise on DYU (5 days) Seminar on AIP dev. completion (0.5days)	0	0	0	0	100	-	Completed 4 FPD + 1 WGS-84 in 2018/4 AIS/FPD Exercise / Comp Seminar: done
				implemented exercise: 50% implemented seminar: 50%							Completed

ANNEX5-16

Monitoring Sheet II Version 6

ANNEX5-17

Monitoring Sheet Summary Version 6



**The Joint Monitoring, for
“The Project for Capacity Development in Air Traffic Services”
in Tajikistan**

Ver. 6.0

Dushanbe, 5 October 2018



ГОСУДАРСТВЕННОЕ
УНИТАРНОЕ ПРЕДПРИЯТИЕ
«ТАДЖИКАЭРОНАВИГАЦИЯ»



Sheraliev Bakhtyor
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Monitoring Sheet Summary (Ver. 6.0)

1. Introduction

The latest Monitoring (Ver. 6.0) from 1st April 2018 to 31th September 2018 was jointly conducted by TAN and JICA with the following objectives:

- (1) To monitor a progress and operational efficiency of the Project operation in accordance with AWP-2018 (Ver. 1.0) by indicating the percentage of progress in each activity.
- (2) To provide a summary and details of inputs and outcomes with objective evaluation by counterparts for preparing the Project Completion Report by Expert team.

2. Outline of Project Activities

There were 33 various activities related to 3 Outputs in the PDM of this Project.

All activities could be categorized (A), (B) and (C) from an objective point of view in the outcomes, and each output also could be resolved into several technical subjects as given Table-1 below. The **highlighted blue** activities were additionally implemented in this monitoring terms.

Table-1

Op	Technical subjects	Category	Trainings abroad (A)	Activities by Japanese Expert		Procurement Support for Aerodrome Sim. (C)
				Training of Trainers / Capacity Development	Improving Procedures, Manuals & Regulations	
1	Improving ATC Operation		1-1 ATCs (18)		1-4 Review manuals 1-4 Capacity Asses Method	
	OJT Instructor's Training		1-2 OJT-Instructor (6) 1-2 TF1-Magmnt (6)	1-5 OJT-I ToT 1-5 Exam. Sys Dev		
	Aerodrome Simulator Trainer's Training		1-3 GIT (8)	1-7 Sim trainers ToT (1-3 by MAVA Experts)		1-6 Simulator
2	Contingency Plan (CP)			2-1-1 Basic Training 2-1-3 Exercise	2-1-2 Draft improve 2-1-4 CAA approval	
	Safety Management System (SMS)		2-2-1 SAF-# (2+1+2) 2-2-3 R/M, I-INV (1+2) 2-2-4 HF training (1) 2-2-5 SMS ToT (2) 2-2-5 SMS B/A Tr (2)	2-2-5 SMS trainer	2-2-2 SMS Manual 2-2-3 Risk Management 2-2-4 Improve R/M&S/A	
3	Aeronautical Information Services (AIS)		3-1 AIS basic (2) 3-1 SAR training (4)	3-1 SAR / RCC O/M	3-3 Procedure Dev. AIP 3-6 Develop draft AIP	
	Flight Procedure Design (FPD)		3-2 Aero Chart (2)	3-4 Basic Training 3-5 OJT FPD/ WGS84 3-5 FPD-QA, GV		

Needless to say, the category (B) "Training by Japanese Expert" activities are primary components of this Project. However, the opportunities of trainings abroad as the category (A) are not less significant than others, because an essential knowledge for changing legacy Soviet-style rule to ICAO standard was a precondition of receiving Japanese Expert's trainings in particular structure of the Project. This was the reason that Project had preceded the trainings abroad in the early phase.

3. Summary of evaluation by the Monitoring (New)

In general, the required function of Project's activities is how to generate the sustainable "Outcomes" by cost-effective "Inputs" which were consisted Expert's activities, counterpart assignment and budget. The "Outcomes" will be evaluated by DAC's standard as "relevance", "effectiveness", "impact", "efficiency" and "sustainability". However, the last three times monitoring found that the base-line in each task as of April 2016, quality and quantity of the Expert's inputs and a capability of counterpart for receiving technical assistance are also should be evaluated objectively by an effectiveness view point for making Project Completion Report by the consultant.

For comprehending overall result of various outcomes, this last monitoring newly provides summary table for each sub-activity including, CPs (PM, Taskforces leader and sub-leaders) and Project Coordinator side evaluations on Outcomes, the baseline, actual figures of "inputs" and positioning of certificates before discussing outcomes in detail.



TF	Activity / Sub-Activity	Moni- -toring	AWP / Sub-activity Plan		Internal Eva.			base -line	Inputs (Day, USD, #)			Outcomes or remarks (Certificate value)	
			Training abroad	Another Expert	PM	TF-L	PC		Expert	budget	CP		
1	1-1 ATC training abroad	100%	ICAO ATC trainings in MAVa	5	5	5	Low	5.5	208,462	18	ICAO TP #052-56 certificates		
			F/U Trainings on AD, APP, ACC	1	1	2	Low	0.5x4	0	?	CHG AD to "seminar" in Feb 2017		
	1-2 OJT-Instructor training abroad	100%	ICAO OJT-I trainings in MAVa	5	5	5	Low	1.5	33,799	6	ICAO TP #211 certificate		
			TF1 Management training	5	5	4	Low	0.0	24,338	7	visited DCA and Suban ACC		
	1-3 Instructor training abroad	100%	ICAO GIT trainings in MAVa	5	5	5	Low	1.5	30,463	8	ICAO TP #219 certificate		
			Radar Sim by MAVa Experts	5	5	4	Low	0.0	14,670	(4)	Made LoA for cooperation		
	1-4 Operation Manual Review	60%	F/U Trainings (from 1-1)	N/A	N/A	N/A	Low	-			-	MVA chart: Created in Oct 2018	
			O/M WG/ findings study meeting	2	2	2	Low		0	?		Light-gun: Not ready by Nov	
			WS on O/M Review	2	2	2	Low	38.5		?		Follow-me-car: Rejected in Jul	
			Comp Seminar (CHG 0.5d W/S)	2	2	1	Low			1		Others: To change with Topsyky	
			(new) ATS Capacity Assessment	2	1	2	Low	12.0	0	5		Certificate of attendance/ Give-up	
	1-5 OJT-I training by ATC-1 Expert	70%	OJT-I Training by Expert	2	2	4	Low				5	Certificate of attendance	
			WS Material / Annual Plan Dev.	3	2	3	Low	17.0	0	3		M: Not improved, AP: made	
			Observation OJT	2	2	3	Low			3		OJT checklist was translated	
(new) Examination System Dev.			2	2	2	Low	2.0	0	3?		Exam Sys (Not developed)		
1-6 AD Simulator Procurement	100%	Procurement Support	5	5	5	Low	1.0	5,107	-		Adapted UTDL TWR change.		
		Installation Planning	5	5	5	Low	0.0		-		Handover to TAN in Sep 2017.		
		User training by NTT-D for Inst.	5	5	5	Low	0.0	0	3		CAA certified in Dec 2017		
		M/T training by NTT-D for IT	5	5	5	Hi	0.0		3		Start using from Jan 2018		
1-7 AD-Sim training by Sim Expert	85%	AD-Sim training by Expert	5	4	4	Low				6	Certificate of Completion (?)		
		WS Material / Annual Plan Dev.	5	4	4	Low	41.0	0	3+3		Certificate of attendance		
		Observation Sim-training	5	4	4	Low			3		Scenario: developed, AP: made		
2	2-1-1 CP Training	70%	CP Basic Training by Expert	3	3	3	Hi	1.0	0	2	Certificate (?)		
	2-1-2 Improve draft CP	100%	WS CP Improvement	4	4	4	Hi	1.0	0	?			
			Seminar on CP Completion	4	4	4	Hi			-			
	2-1-3 CP Exercise	100%	WS on CP Exercise	3	4	5	Hi	1.5	0	?	CP done 2 nd Exe in May 2018		
	2-1-4 CP Approval	100%	Monitoring on CP approval	1	1	1	Hi	0.0	0	-	CAA approved CP in Jul 2017		
	2-2-1 SMS Knowledge	100%	SAF-SA1/2 in IANS+ (new) SMS	5	5	5	Low	0.0	21,001	5	EUROCONTROL Certificate +Kz		
			F/U trainings on SMS	1	1	2	Hi	1.5	0	?			
	2-2-2 SMS Manual Development	100%	Study SMS implementation	3	3	4	Hi			?			
			WS on SMS Manual	3	3	4	Hi	11.0	0	?			
			Completion Seminar SMS	4	4	4	Hi			-		TAN approved SMS in Apr 2018	
	2-2-3 Establish RM Process	100%	Investigation training in Rus	5	5	4	Low	0.0	7,472	2	Russian Institute Certificate		
(Seminar Voluntary Repot Sys)			4	4	3	Hi	0.5	0	-		(This was canceled in AWP2017)		
2-2-4 Implement Safety RM/SA	75%	SAF-HFA in IANS	5	4	5	Low	0.0	4,586	1	EUROCONTROL Certificate			
		Training on HF Basic by Expert	3	4	3	Hi	5.0	0	3		Certificate of attendance		
		W/S on Runway Safety	3	4	4	Low	2.0	(B trip)	-		3 Airports got RSP/T, H-Map		
2-2-5 SMS Training	100%	SMS ToT in Kazakhstan	5	5	5	Low	0.0	8,660	2	Kazakhstan Academy Certificate			
3	3-1 AIS Training	200%	AIS Training in Group EAD	5	5	5	Low	0.0	44,655	4	GroupEAD Certificate		
			SAR Admin Training in MAVa	5	5	4	Low		23,125	4	ICAO TP #057A Certificate		
			WS on SAR Manual Dev	4	4.5	3	Low	44.5		3		Changed MC/ACC O/M by Sep	
			SAR/RCC Exercise	4	4	3	Low			4		4 Oct 2018 (w/ MTS, Military)	
			Completion Seminar on SAR	4	4	4	Low			-		5 Oct 2018 (w/ MTS, Military)	
	3-2 Aeronautical chart training	100%	Chart drawing-1 (ERC /Hand/w)	2	3	2	Hi	10.0	0	3		Certificate (No evaluation)	
			Chart drawing-2 (STAR /VISIO)	4	3	5	Low	8.0	2,166	4		Certificate (with evaluation)	
	3-3 Develop AIP/ NOTAM O/M	100%	AIS Seminar	3	4	2	Low	8.0	0	-		(No report)	
			NOTAM(1/2), AIP O/M Dev WS	4	2-4	3	Low	25.0		5		Certificate of attendance	
	3-4 FPD Training	100%	Training on PANS-OPS FPD	3	4	5	Low	29.0	0	4		Certificate (with evaluation)	
	3-5 OJT for FPD	200%	WGS-84 survey (step-1)	5	4	5	Low				20,560	-	3 PACSs were made in UTDD
			WGS 84 survey (step-2a/b)	5	4	5	Low			2		Certificate of attendance	
			WGS-84 survey oversight	5	4	5	Low			-		FPD Expert visited UTDL & DK	
			OJT on FPD	3	3.5	5	Low		0	4		Certificates (with evaluation)	
Observation for FPD			4	3.5	5	Low			4		CP made SID/STAR in UTDD		
PBN I-FPD Design in TIC			5	4	5	Low	96.0	N/A	2+2		JICA TIC Certificate		
PBN introduction seminar			5	4.5	5	Low		0	-				
Business trip to Ru/Kg/Kz			4	4	5	Low		5,111	3		szrcal, RuKg/Kz ANSP, FVSP		
		(new) FPD-QA training and WS	3	4	4	Low		0	4		Certificate of attendance		
3-6 AIP for model airport (UTDD)	100%	AIP Design Exercise	5	3.5	5	Low	13.0	0	3		Certificate of attendance		
		Seminar AIP Dev Comp	5	4	5	Low			-		CP expressed 4 Draft AIPs		

4. Progress of Inputs

All inputs by TAN and JICA were successfully done in accordance with PDM as tables below.
 The training "SMS Basic / Advance" at Aviator in Kazakhstan for two TF-2 CPs was newly implemented in October 2018 for compensating two CP in Safety Department left from TAN.

(A) Training abroad

Op	TAN side input	Project Input (USD/EUR)			Completion Date of Checkpoints (from Apr 2016 to Oct 2018)								
		Tuition Fee	Air Ticket Insurance	Others wo/VISA	Selection by TFs	Eng-CHK by Expert	Paid Tuition-F	VISA Obtained	Dept. Briefing	Training Start	Report Session		
1	1-1	ATC /Jul	10 ATC	\$74,394	\$11,313	\$23,828	26 Apr	25 Apr	7 Jun	29 Jun	14 Jul	27 Jul	7 Oct
		ATC /Oct	8 ATC	\$60,750	\$12,671	\$16,000	17 Jun	17 Jun	19 Aug	21 Jun	7 Oct	18 Oct	13 Jan
	1-2	OJT-Inst	6 ATC	\$10,600	\$7,500	\$13,260	28 Oct	29 Oct	29 Nov	N/A	22 Dec	9 Jan	27 Jan
	1-3	GIT	8 ATC	\$7,359	\$10,000	\$9,840	28 Oct	29 Oct	19 Nov	N/A	22 Dec	13 Feb	24 Feb
	1-3	Manager	6 ATC	\$3,900	\$9,100	\$10,631	10 Apr	N/A	18 Apr	20 Apr	25 Apr	8 May	19 May
2	2-2-1	SAF-SA1	2 Safe	€3,000	\$2,093	\$2,854	26 Apr	N/A	5 Aug	31 Aug	7 Oct	17 Oct	13 Jan
		SAF-INV	2 Safe	€3,000	\$1,992	\$2,846	26 Apr	N/A	7 Jan	27 Feb	30 Jan	20 Mar	31 Mar
		SAF-SA2	1 Safe	€1,500	\$1,236	\$1,375	26 Apr	N/A	18 May	21 Jun	31 May	3 Jul	26 Jul
		SMS B/A	2 Safe	\$2,300	\$600	\$2,065	Sep	N/A	25 Sep	N/A	25 Sep	22 Oct	31 Oct
	2-2-3	Incident-I	2 Safe	\$1,180	\$1,078	\$5,160	22 Jan	N/A	26 Jan	N/A	29 Jan	14 Feb	9 Mar
	2-2-4	SAF-HFA	1 Safe	€1,600	\$1,210	\$1,374	Apr	N/A	Apr	N/A	6 Jun	18 Jun	29 Jun
2-2-5	SMS-ToT	2 Safe	\$908	\$722	\$2,065	21 Jul	N/A	31 Jul	N/A	24 Jul	31 Jul	11 Aug	
3	3-1/2	AIS Basic	4 AIS	€22,680	\$3,251	\$15,784	8 May	N/A	7 Oct	11 Aug	9 Aug	15 Aug	7 Oct
	3-1	SAR Adm	4 AIS	\$6,812	\$6,147	\$9,869	27 Jul	28 Jul	4 Aug	23 Aug	7 Sep	25 Sep	18 Jan
	3-5	Visit Ru*	1 PM	\$0	\$315	\$2,400	21 Feb	N/A	N/A	N/A	27 Feb	12 Mar	28 Mar
		Visit Kg*	1 AIS	\$0	\$286	\$520	21 Feb	N/A	N/A	N/A	27 Feb	12 Mar	28 Mar
	Visit St.P	1 FPD	\$0	\$506	\$1,504	May	N/A	N/A	N/A	14 Jun	24 Jun	6 Jul	

* Substituted Visiting Russian ANSP for Risk Management Training, and remaining budget was used for TF3 FPD (ILS 27) issue.

(B) Trainings by Japanese Experts

Op	TAN side input	JICA side input by Expert Team in JPFY2018 (from April 1 st , 2018)
1	Taskforce-1 Leader, Sub-leader and CPs	Chief Advisor / New ATC-1 Expert
2	Taskforce-2 Leader, Sub-leader and CPs	Included above
3	Taskforce-3 Leader, Sub-leader and CPs	New AIS Expert, FPD Expert

*All sub-activities and actual assignment terms are mentioned in Monitoring Sheet-2.

(C) Procurement Support Aerodrome Simulator

This part is not applicable in this monitoring period.

(D) Others

	TAN side input	JICA side input, under the JICA direct control (from April 1 st 2019)
Human Recourses	Project Director (DG) Project Deputy Director (1 st DDG) Project Manager (+TF-2 Leader)	Project Coordinator / Training Planning Expert: Total 182 days Two Technical Assistants (Mr. Ulugbeck was resigned in July 2018) Contract Driver with Rent-a-car
Facility	Project office in TAN and utility charge Expert desk in the simulator room Meeting Venue for JCC/3 Flight Procedure Office in ACC	Project Web site (www.tj-ats.com)
Local Budget	N/A	25,040USD: Project Coordinator requested from April to September 2018.

5. Progress Measuring Method

This was explained by Monitoring Report Summary (Ver3.0)

6. Achievement of the Project Purpose and Overall Goal

Project set the measuring parameter for verifiable indicators in “Overall goal” and “Project Purpose” for the final evaluations (planned in Oct 2018) as Table below and it will be approved by JCC/3 in 3rd May 2018.

The last monitoring evaluated the achievement of verifiable indicators in accordance with objectively assessment by the Monitoring Sheet-1 and 2 as table below.

Project Goal, Purpose and Taskforces Activities	Verifiable Indicators for three outputs	Base line by CP's activities as of April, 2016	Sub-activities (Bold is done) CP side / 3rd Country Training by Project Japanese Expert Team side activities	
Overall Goal To improve Air Traffic Services (ATS) in Tajikistan	Indicator:1 All ATC officers working at ATC units maintain ATC ratings in line with ICAO standards through TAN's continuing training program.		100% ATCs will be trained by AD Simulator instructors or OJT trainers by Project developed ICAO standard materials.	ICAO standard material (Operation Manual) didn't develop. OJT / AD Sim Trainings are on-going, but not 100% yet.
	Indicator:2 The contingency plan and SMS for ATC have been kept in operation.		TAN will conduct CP exercise once per two years, CAA will conduct annual Safety audit by using Checklist in SMS manual.	The 2nd Contingency Plan Exercise was done by TF2CPs. Internal Safety Audit is under plan by SMS plan.
	Indicator:3 Aeronautical Information Publication (AIP) has been updated in line with ICAO standards.		All Tajikistan AIPs (GEN, AD/ ENR) will be reformed and separated from Russian AIPs as independent in caaga.ru Web site.	Not achieved yet. All existing SID/STAR FPD will be updated by TF3CPs by 2019.
Project Purpose To enhance capacity of Tajikairnavigation (TAN) in Air Traffic Services (ATS)	Indicator:1 All ATC officers working at ATC units have passed training in line with ICAO standards conducted by OJT instructors and Simulator trainers.		ICAO standard training materials (operation manuals) and AD simulator scenarios will be developed.	OIMs (4 airports) were not improved to be ICAO standard. AD simulator scenarios (4 airports) were developed.
	Indicator:2 The contingency plan and SMS for ATC have been implemented.		CP and SMS Manual will be approved by CAA.	Contingency Plan was approved by CAA. SMS Manual was approved by TAN. (SSP was developed by CAA)
	Indicator:3 The draft AIP of the model airport has been accepted as conforming to ICAO standards by JICA Experts.		4 ITPs and 1(MOS-34) AIP(AD) in UTDD will be drafted by VISIO, and Expert confirmed it as ICAO standard quality.	Draft AIPs (SID/STAR) in UTDD were made by TF3CPs. Expert provided FPD trainings in accordance with Doc9906 vol2.

7. Progress of Activities and Achievement of Output

This chapter are divided into three categories in dedicated tables.

All activities in the tables have description of “Progress of Activities”, “Achievement of Output”, “Progress of Actions undertaken by JICA”, “Changes of risks and actions for mitigation”, and “Delay of work schedule and/or Problems” in highlighted red.

The “Progress of Actions undertaken by TAN” is described above it as **TAN**, and a baseline as of April 2016 is mentioned under it as **BL**.

(A) Trainings abroad

Table-3

	Trainings abroad	%	
1	1-1 ATCs (18)	100	Completed.
	1-2 OJT-Instructor (6)	100	Completed.
	1-2 Management (6)	+	(Project invited 4 Malaysian instructors and taken advice for existing radar simulator trainings.)
	1-3 GIT (8)	100	Completed
2	2-2-1 SAF-# (2+1+2)	100	Completed, (Additional SMS basic/Advance training for two will be done in October in Kazakhstan)
	SMS in Kz (2)	+	BL Two (2) Safety officer had completed SAF-SMS training in 2015
	2-2-3 R/M	100	Incidental-INV trainings completed successfully in Moscow, and R/M was replaced visit Russian ANSP
	2-2-4 Improve RM,SA	100	Completed (SAF-HFA in June 2018)
	2-2-5 SMS ToT (2)	100	SMS trainer's training in Almaty was completed successfully.
3	3-1 AIS basic (2)	100	An exercise part Aero Chart training (SID/STAR by VISIO) was filled by FPD expert in August 2017.
	3-1 SAR Admin.(2)	100	SAR Admin (ICAO #057A) was added at JCC/2 and completed training by MAVa in Sep-Oct 2017.
	3-2 Aero Chart (2)	100	
	3-4 FPD-QA (1+1)	100	Visit Russia (szrcal, gnii, GV/FV SP and Russian ANSP) Visit Kyrgyz (ANSP FI/FV SP) and Kazakhstan (FI/FV SP)

(B) Trainings by Japanese Expert

Table-4

	Trainings by Japanese Experts	%	
1	1-4 review manuals Including Follow-up trainings in activity 1-1	60.0	<p>Operation Manual Review</p> <p>The Expert had a “Confirmation Workshop” in 4th May 2018 for finalizing the result of this activity instead of “completion seminar” as listed below.</p> <ol style="list-style-type: none"> 1) Improve the Follow-me Car Operation: Rejected in July 2018. 2) MVA Chart: TF-3 will create the draft (local rule) by 12 Oct 2018. 3) Light-Guns (Procurements, O/M change and training): failed by the deadline in September 2018. 4) Other Recommendations: Re-consider with “Topsky” in 2019 <p>No operation manuals or job descriptions were improved by this activity during Project term. Monitoring concluded that the series of this activities were failure.</p> <p>ATS (ACC/AD) Capacity Assessment</p> <p>This was additional requests from TF1 Leader to ATC-1 Expert in November 2017</p> <p>The Expert provided Catch-up Trainings for “Japanese Assessment Methodology for ACC (DORA/MMBB) and AD (only theoretical runway throughput)” and modification it into TAN’s situation in 7 to 10 May 2018. Unfortunately, TF1 management decided to abandon this activity at TF1M/21 in 14 September 2018, because W/G couldn’t make any outcomes before deadline in July. Monitoring concluded that the series of this activities were total failure.</p>
	1-5 OJT-I ToT	70.0	<p>OJT-I Training</p> <p>“OJT-I Handbook” (JCAB) was not approved.</p> <p>“Annual training plan” was developed and updated, but “Training materials” (same as Operation Manuals) were not improved to be ICAO standard by activity 1-4.</p> <p>“OJT checklist” was translated into Russian and ready to use.</p> <p>Monitoring couldn’t confirm that all OJT instructors have conducted two times of ICAO quality training. Monitoring concluded that this activity was partial success.</p> <p>Examination System Development</p> <p>This was additional offer by ATC-1 Expert in March 2018.</p> <p>Expert recommended “Daily work instructor” assignment and set the examination criteria in regulation, however it is difficult to say that the “Examination System” was developed. Monitoring concluded that this activity was failure.</p>
	1-7 Sim trainers ToT	85.0	<p>“Annual training plan” and scenarios were developed.</p> <p>Monitoring couldn’t confirm that 3 instructors in Dushanbe have conducted three times per month, but it depends on actual training needs. Monitoring concluded that this activity was success.</p>
2 CP	2-1-1 Basic Training	70.0	<p>TF2 is waiting the “Teaching Material on CP” which was developed ATC-2 Expert for conducting CP training to all ATCs. Monitoring concluded that this activity was partial success.</p>
	2-1-2 draft improve	100	<p>The draft CP was completed using Asia Pacific version by ICAO Bangkok, CP guideline of EUROCONTROL, India, Pakistan and Russian CPs at Project started timing in 2016.</p> <p>ATC-2 Expert contributed to improve this draft. Monitoring concluded that this activity was success.</p>
	2-1-3 Exercise	100	<p>2nd CP exercise was done by CP in May 2018.</p> <p>Monitoring concluded that this activity was success.</p>
	2-1-4 CAA approval	100	<p>MOT approved CP on 25th July 2017</p> <p>Monitoring concluded that this activity was success.</p>
2 SMS	2-2-2 SMS Manual	100	<p>The draft SMS Manual was 100% completed without attachment referred to Annex19, the Doc9859 (Chapter-5) and Russian SMS at Project started timing in 2016.</p> <p>ATC-2 Expert contributed to improve this draft. Monitoring concluded that this activity was success.</p>
	2-2-3 Establish R/M Process	100	<p>TAN Web based reporting system was developed.</p> <p>“Incidental Investigation Training” in Moscow (AeroNav Institute) was completed.</p> <p>Monitoring concluded that this activity was success.</p>
	2-2-4 Improve R/M & S/A	75.0	<p>“SAF-HFA Training” in Luxemburg (IANS) was completed.</p> <p>3 Runway Safety Teams were formulated, and Hazard maps were made in UTDD, DL and DK.</p> <p>Safety department is preparing internal Safety Audit.</p> <p>Monitoring concluded that this activity was success.</p>
	2-2-5 SMS trainer	100	<p>TAN Project trained Safety officer started new SMS training program to all ATC.</p> <p>“SMS Trainer’s Training” in Almaty (Swan aviation academy) was completed.</p> <p>Monitoring concluded that this activity was success.</p>
			BL

3	(3-1 AIS): 100% +SAR: 100%	200	AIS Training (100%) See Table-3, Monitoring concluded that this activity was success. SAR (100%) RCC Operation Manual couldn't finalize by the end of August by SAR W/G. TAN decided to revise ACC and MC manuals instead of developing the dedicated aviation RCC manual. Project had the RCC exercise on 4 th October and O/M Completion Seminar on 5 th October. Monitoring concluded that this activity was total success.
	(3-2 Aero Chart)	100	FPD Expert conducted 2 weeks training for SID/STAR by VISIO using WGS-84 DYU map in Aug 2017. Monitoring concluded that this activity was success.
	3-3 Procedure Dev. NOTAM/AIP	100	New AIS Expert conducted NOTAM/AIP Procedure development WS-2nd for 2 weeks in Aug 2017. Draft of NOTAM and AIP(AIC) procedures were developed. Monitoring concluded that this activity was partial success, because developed manuals were not translated into Russian and TAN will use it as a reference.
	3-4 Basic Training	100	3 trained FP designers conducted G/V for ILS-approach (outsourced) and designed STAR. TAN is trying to get CAA authorization for FP designers. Monitoring concluded that this activity was success.
	3-5 OJT of FPD +WGS-84: 100%	200	OJT FPD (100%) OJT for trained FP designers were conducted by FPD Expert. WGS-84 and others (100%) WGS-84 survey, Map procurements, G/V, F/V, FPD-QA (QMS), DIA's 27ILS support, technical support for FPD outsourcing and PBN Project formulation were add in this activity. Monitoring concluded those activities were total success.
	3-6 Develop draft AIP	100	4 draft AIPs in UTDD were made by FP designers. Monitoring concluded that this activity was success.

(C) Procurement Support for the Aerodrome Simulator

Table-5

	Procurement Support for the Aerodrome Sim	%	
1	1-6 Simulator	100	TAN TAN side fulfilled their responsibility for receiving AD simulator system. Procurement support and installation were done by Project. NTT-data provided user and maintenance trainings. Project conducted hand-over ceremony in 8 th September 2017. Monitoring concluded that this activity was total success.

8. Summary on Evaluation

The monitoring concluded that the activity of "Trainings Abroad" and "Procurement Support for the Aerodrome Simulator" were total success. Regarding the activities in Taskforce-1, "Trainings by Japanese Experts" didn't reach the expected outcomes except AD Simulator related activities.

The Taskforce-2 achieved initial outcomes since the baseline and CP's potential had been enough high. The Taskforce-3 was total success, because SAR and WGS-84 / ILS27FPD beyond an expectation.

8. Modification of the Project Implementation Plan

Project was implemented properly in accordance with AWP's and Sub-Activity Plans.

The additional activities necessary for achieving "Project Purpose" and "Overall Goal" were supplemented timely as "TF1 Management Training", "Inviting MAVa radar instructors", "Additional trainings abroad in TF2", "SAR/RCC", "WGS-84 and Map procurements", "FPD-QA and G/V" and "PBN Project formulation".

9. Preparation of TAN toward after completion of the Project

TAN organized "Development Department" including FPD team in August 2018 for proceeding "Topsyky" Project and solving "m" to "ft" issue. CAA is planning to complete WGS-84 survey for all airports within 2019, then waiting the Project design mission of new PBN implementation Project.

