

Completion Report

Afghanistan Reconstruction Trust Fund II

SUPERVISORY AGENT: Management Systems International

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Management Systems International (MSI), a Tetra Tech company, staff prepared this paper to contribute to the discussion and understanding of the important development challenges facing policymakers and practitioners.



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Abbreviations

AAIP	Afghanistan Agricultural Inputs Project	MOED	Ministry of Education	
AGE	Anti-Government Elements	MOEW	Ministry of Energy and Water	
APSDP	Afghanistan Power System Development Project	MOPW	Ministry of Public Works	
ARAP	Afghanistan Rural Access Project	МОТ	Ministry of Transport	
ARTF	Afghanistan Reconstruction Trust Fund	MRRD	Ministry of Rural Rehabilitation and Development	
BDO	Binder Dijker Otte	Dijker Otte MSI		
BOQ	Bill of Quantity	NHLP	National Horticulture and Livestock Project	
CCAP	itizens' Charter Afghanistan Project NSP		National Solidarity Program	
CDC	Community Development Council	OFWMP	On-Farm Water Management Project	
СМ	Citizen Monitor	O&M	Operations and Maintenance	
ESMP	Environmental and Social Management Plan	PMU	Provincial Management Unit	
EQUIP	Education Quality Improvement Program	PPE	Personal Protective Equipment	
EZ-KAR	Eshteghal Zaiee - Karmondena	SA	Supervisory Agent	
FE	Female Enumerator	SD	Secure Digital	
GOA	Government of Afghanistan	SHG	Self-Help Group	
GOIRA	Government of the Islamic Republic of	SMS	Short Messaging Service	
	Atgnanistan	SVR	Site Visit Report	
	Realth Management mornation System	THRCP	Trans Hindukush Connectivity Project	
IDLG	Independent Directorate of Local Governance	ТРМ	Third Party Monitoring	
IRDP	Irrigation Restoration and Development Project	UΔS	Unmanned Aerial System	
MA	Monitoring Agent			
MAIL	Ministry of Agriculture, Irrigation, and Livestock			
MIS	Management Information System	WEE-RDP	Women's Economic Empowerment-Rural Development Program	

Executive Summary

Executive Summary

The World Bank contracted Management Systems International (MSI) as the supervisory agent of the second phase of the Afghanistan Reconstruction Trust Fund (ARTF II) third-party monitoring program from November 1, 2015, through December 31, 2019. During the contract period, MSI provided ongoing monitoring, ad-hoc reporting and special studies for approximately 20 projects funded by ARTF II and implemented by Government of Afghanistan line ministries. The initial project portfolio evolved from infrastructure-focused monitoring of five key projects from 2015 through 2017 to a more expansive portfolio of infrastructure, service provision, and skills development in 2018 and 2019. To meet the World Bank's third-party monitoring (TPM) needs, MSI employed a diverse group of local engineers and enumerators to conduct site visits in all 34 provinces of Afghanistan.

MSI monitoring teams comprised members with the appropriate skills and geographic association to fit the requirements of the projects they monitored. Female enumerators monitored projects designed to improve women's economic opportunities, while male engineers monitored large construction projects. All teams coordinated with ministry project teams in each province, and provincial or district staff often accompanied the teams to the monitoring site. This collaborative approach enabled MSI teams to access communities despite having an outsider status. Using cloud-based data collection software, field teams uploaded data on construction quality from the field in nearly real time, reducing the time between deviation identification and rectification. Process monitoring occurred through

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basic interviews with male community members in the first two years of ARTF II. In Year III, the first direct-hire female enumerators began beneficiary and community member interviews, gaining access to female beneficiary perceptions and opinions that were unavailable to male enumerators. MSI's diverse and inclusive approach mitigated challenges to help meet the World Bank's changing needs, but numerous challenges remain.

MSI monitoring teams overcame security challenges by constantly modifying monitoring plans to avoid site areas experiencing unstable security conditions. Plans were subject to change up to the last minute to avoid active fighting. Sometimes sites changed in response to threats related to female enumerators seeking to interview female beneficiaries or other stakeholders. Subproject site access challenges were largely mitigated by using local community members hired and trained to provide weekly photographs from construction sites these citizen monitors improved TPM coverage of difficult-to-reach or insecure communities. Ad-hoc requests by World Bank teams required increased coordination between the World Bank task teams, safeguards teams and MSI. Coordination challenges included clarifying changing or unmet data collection and reporting needs from one or multiple parties. The MSI management team in Kabul began revisions of all safeguard modules with World Bank safeguards team inputs beginning in project Year IV, and effort that continued until the end of the contract but remained incomplete at project closeout. This will continue to improve into ARTF III. This completion report discusses MSI's approach to TPM, challenges encountered, lessons learned, and recommendations for improvement. The topics discussed are specific to the Afghanistan context between 2015 and 2019, but the lessons learned can inform future World Bank TPM programming globally.



Third-Party Monitoring Overview

2.1 Supervisory Agent Objectives

The complex operating environment in Afghanistan prevents World Bank staff from performing direct project oversight in the field, except in Kabul and select urban areas. In response to security, geographic, and cultural challenges, the World Bank designed the Afghanistan Reconstruction Trust Fund (ARTF) third-party monitoring (TPM) program to accurately and comprehensively monitor project outputs at select sites across the country. The ARTF II TPM has two monitoring components under separate contracts. The monitoring agent (MA) is responsible for fiduciary monitoring, based in the Ministry of Finance with auditing teams based in provincial management units (PMUs) throughout Afghanistan. The supervisory agent (SA) is responsible for direct project monitoring for select ARTF II projects throughout Afghanistan. This report presents Management Systems International's (MSI's) approach to TPM in Afghanistan as the supervisory agent for the ARTF II portfolio from 2015 to 2019.

MSI implemented a flexible and adaptive TPM program, employing a mixed-gender staff of Afghan engineers and enumerators throughout Afghanistan to access subproject sites in communities and remote villages controlled by anti-government element (AGE) and exposed to extreme weather conditions. MSI monitoring teams traveled to subproject sites in close coordination with Government of Afghanistan (GoA) ministry project teams in all 34 provinces to train ministry engineers at sites and safely access communities. The project identified alternate sites for each monitoring visit to minimize physical risk to monitoring teams when previously identified sites are found to be inaccessible due to active fighting or when communities are threatened by AGEs. This flexible and collaborative approach allowed MSI to continuously meet the World Bank's TPM objectives, as established at the start of the contract in 2015:

- To provide critical data on small-scale infrastructure projects nationwide, including asset verification and quality assurance, as input to the Bank's implementation support and line ministries' own monitoring systems.
- 2. To provide additional evidence to donors that programs are being implemented correctly, infrastructure is constructed properly, and social and environmental safeguards, gender issues, and select financial/fiduciary aspects are all considered.

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3. To provide line ministries with an example of project monitoring and data collection and to showcase how such practices could improve project performance and results. The goal is to strengthen line ministries' own monitoring programs.

2.2 Program Timeline

This completion report reviews the four-year ARTF II TPM program, which began November 1, 2015, and ended October 31, 2018, with two six-month extensions ending December 31, 2019. Over this four-year period, the monitoring portfolio increased in size and scope from five construction-intensive projects in 2015 to a mixed portfolio of 11 projects including construction, service delivery, and beneficiary perceptions in 2019. Figure 1 shows the major monitoring activities throughout the life of the project.



2.3 Supervisory Agent Organization

MSI's organization is structured into five teams responsible for specific tasks:

Data Collection Team: Responsible for all primary data collection at subproject sites, the team includes quality assurance (QA) engineers, female enumerators (FEs), citizen monitors (CMs), and subcontracted enumerators. Monitoring teams are assembled according to subproject requirements, where some projects require only a QA engineer to assess construction guality and other subprojects require both a QA engineer and female enumerator for a construction-quality assessment and to conduct interviews with male and female beneficiaries. The monitoring teams contact provincial GoA ministry offices and project staff prior to monthly site visits to coordinate joint site visits where possible. The teams meet with provincial management units (PMUs), community development councils (CDCs), shuras, female community members, and other members of the community. QA engineers recruit CMs to monitor select World Bank subprojects through weekly photograph submissions after the QA engineer completes the site visit and leaves.

Quality Assurance Team: This team of quality assurance managers is the program's information "hub," responsible for developing monthly subproject site visit mission plans in coordination with the five GoA line ministries. The team reviews subproject deviations reported by the data collection team. They develop corrective action plans with GoA ministry colleagues, track rectification progress, and report to project-specific World Bank task teams. Assigned as the primary point of contact between MSI and the ministry project team, QA managers complete the first review of data that the data collection team submits.

Program Compliance Team: This team ensures the accuracy and quality of all subproject site visit reports (SVRs) and monthly, quarterly and annual summary reports. The compliance team is responsible for overall program data quality and reviews all reports submitted by the quality assurance team.

Program Management Team: The Project Management Team provides program oversight and management at all levels. They liaise with the World Bank project task teams, the Country Management Unit, and other program-related staff in Kabul and Washington, D.C. The team provides the final review of all site visit instruments and monthly, quarterly, annual, and ad hoc reports based on field data and Program Compliance Team drafts.

Program Support Team: This team ensures secure day-to-day logistics and operation of the program and facilities according to MSI and World Bank rules and regulations.

Third Party Monitoring Overview



2.4 Portfolio Evolution

Years I and II

In the first two years of the 2015 to 2019 TPM period, MSI monitored five of the government's most important programs. These programs required construction-quality inspections by a QA engineer, with limited beneficiary interviews at randomly selected subproject sites. The following projects were introduced in Year I of TPM; the number of site visits listed for each project is the total number completed from Year I until the end of TPM or until the project closed (National Solidarity Program [NSP] III closed at the end of Year II).

4. EDUCATION QUALITY IMPROVEMENT PROGRAM II (EQUIP II): MSI visited 1,736 school construction subprojects for this Ministry of Education (MoEd) school construction and rehabilitation project from 2015 to 2018 to monitor: the quality of construction; presence and functionality of an operations and maintenance (O&M) plan; availability and use of school materials and equipment; teacher and student attendance; contractor capability and performance; payroll data verification; and Environmental and Social Management Plan (ESMP) compliance. Each EQUIP II site visit required one QA engineer, with provincial engineers from the EQUIP II team accompanying MSI QA engineers at the subproject site when possible.



FIGURE 2 MSI ARTF II TPM – Organization Structure

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5. AFGHANISTAN RURAL ACCESS PROGRAM (ARAP): MSI completed 431 site visits from 2015 to 2019 for subprojects funded by the joint Ministry of Public Works (MoPW) and Ministry of Rural Rehabilitation and Development (MRRD) road construction and rehabilitation project to check the quality of construction; O&M plan presence and functionality; contractor management efficiency with a focus on larger items in bills of quantity (BoQs); contractor capacity; ESMP compliance; and land tenure issues along road alignments. Each ARAP site visit required one QA engineer, with provincial engineers from the ARAP team accompanying MSI QA engineers at the subproject site when possible.



6. NATIONAL SOLIDARITY PROGRAM (NSP III): MSI monitored 1,105 subproject sites, including 404 infrastructure sites, 392 CDC maturity assessment sites, and 68 PMU sites for system monitoring at 34 PMUs for this Ministry of Rural Rehabilitation and Development (MRRD) small-scale infrastructure construction project from 2015 to 2017. The infrastructure sites included 388 Maintenance Cash Grant sites, 23 NSP administrative building sites, and 30 District School Construction and Rehabilitation Window subprojects. Non-infrastructure sites included interviews with CDC members and PMU staff. Each site visit required a QA engineer and an MRRD provincial engineer accompanied the QA engineer when possible.



7. IRRIGATION RESTORATION AND DEVELOPMENT PROJECT (IRDP): MSI visited 343 IRDP subproject construction sites from 2015 to 2019 for this Ministry of Energy and Water (MoEW) canal construction and rehabilitation project. QA engineers monitored the sustainability of meteorological and hydrological stations; canal construction; O&M quality; and environmental awareness. Each site visit required a QA engineer, and an MoEW provincial engineer accompanied when possible.

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8. ON-FARM WATER MANAGEMENT PROJECT (OFWMP): MSI conducted 525 site visits to OFWMP canals and irrigation schemes for this Ministry of Agriculture, Irrigation, and Livestock (MAIL) water resource project from 2015 to 2019. QA engineers assessed the quality of construction, O&M plans, and ESMP compliance. They interviewed irrigation association members and mirabs (water controllers) to understand water distribution processes for end users and beneficiaries.



Year III

In Year III, MSI monitored four projects from years I and II (EQUIP II, ARAP, IRDP, and OFWMP) and introduced three projects to the TPM portfolio, increasing the number of projects to seven. Year III TPM required a greater understanding of beneficiary perceptions and program input utilization in addition to construction quality. MSI hired and trained a team of female enumerators and engineers to understand Afghan women's perception and levels of participation in the National Horticulture and Livestock Project (NHLP) and the Citizens' Charter Afghanistan Project (CCAP), which have strong social mobilization components. The following projects were introduced to the TPM portfolio in Year III; the number of site visits reported are from Year III of TPM until the end of TPM, unless otherwise specified (APSDP was a one-time assignment).

9. AFGHANISTAN POWER SYSTEM DEVELOPMENT PROJECT (APSDP): MSI monitored eight sites for the Ministry of Mines and Petroleum's urban electricity connection project in 2018. An electrical engineer completed these site visits, accompanied by a ministry engineer. This was a one-time monitoring assignment and all data were presented in a single monthly summary report. 10. CITIZENS' CHARTER AFGHANISTAN PROJECT (CCAP): MSI monitored 2,078 sites in years III and IV for this Ministry of Rural Rehabilitation and Development (MRRD) and Independent Directorate of Local Governance (IDLG) project, which involved minimum-service standard provision through community-driven development. CCAP is the follow-on project to NSP III. Site visits included inspections of 1,366 rural CDCs, 547 urban CDCs, 63 Gozar assemblies, and CDC subproject construction at each site. Staff interviews took place at 64 district and 38 provincial and municipal offices (34 were MRRD PMU offices and four were IDLG municipal offices) to understand ministry project team staffing and performance challenges. A mixed-gender monitoring team comprising one QA engineer and one female enumerator was required to complete each site visit, with an MRRD or IDLG engineer present when possible.



11. NATIONAL HORTICULTURE AND LIVESTOCK PROJECT (NHLP): In years III and IV, MSI monitored 400 sites across five provinces to assess NHLP beneficiary perceptions, subproject utilization, and successes and challenges. In Year III, MSI monitored 200 sites, with 20 percent of site visits to water harvesting structure and raisin-making house beneficiaries, splitting the remaining 80 percent evenly between orchard and 30-layer poultry coup beneficiaries. In Year IV, MSI monitored 200 sites across five provinces. Under the guidance of the World Bank, 60 percent of site visits were to commercial poultry production (100 and 500 commercial coups), with the other 40 percent evenly divided among personal poultry, fish farm, raisin-making, new orchard, and water harvesting structure beneficiaries. Subcontracted enumerators received training on instruments designed by MSI's project management team in Kabul. The project used both male and female enumerators for these site visits, interviewing beneficiaries of the same sex as the enumerator (i.e., women interviewed women).



12.AFGHANISTAN AGRICULTURAL INPUTS PROJECT (AAIP): MSI monitored construction quality and progress at 63 AAIP subproject sites, including for ESMP compliance. In Year III, the project monitored all 33 AAIP research farms and seed quarantine stations while they were under construction. In Year IV, MSI monitored the same subprojects to assess rectification status of construction deviations identified in Year III. All subproject construction was completed in year IV and monitoring targeted outstanding and new deviations to be rectified before the end of the defect liability period and project close. The defect liability period is a specific duration (six to 12 months) after construction completion where the contractor is obligated to go on-site and fix all construction issues. A QA engineer completed each site visit, accompanied by AAIP project engineers where possible.



FIGURE 10 AAIP TPM Coverage

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13. PAYROLL VERIFICATION ASSISTANCE TO BINDER DIJKER OTTE (BDO): In Year III, MSI began supporting BDO, the World Bank's monitoring agent (MA), to verify the physical presence of GoA civil servants in less-secure areas. MSI hired and trained subcontracted enumerators to check the physical presence and verify the existence of civil servants whom BDO's teams could not verify. Ninety-two site visits were calculated as an equivalent for payroll verification in both years III and IV.



FIGURE 11 Payroll Verification

Assistance – TPM Coverage

Year IV

Year IV of TPM included two six-month extension periods. Approximately 70 percent of Year IV site visits finished during the second extension period, including further diversification and expansion of the TPM portfolio. The EQUIP II project closed, replaced by the Education Quality Reform in Afghanistan (EQRA) project. Three projects from years I and II (IRDP, OFWMP, and ARAP) and three projects from Year III (NHLP, AAIP, and CCAP) **Third Party Monitoring Overview**

continued into Year IV, with five projects added to the portfolio in Year IV and nine special studies conducted at the request of task teams. In Year IV, MSI monitored 11 projects, supported BDO payroll verification from Year III, and completed all special studies requested by the World Bank. Below is a list of projects added to the TPM portfolio in Year IV, followed by a summary of all special studies.

14. WOMEN'S ECONOMIC EMPOWERMENT RURAL DEVELOPMENT PROGRAM (WEE-RDP).

Between November 2018 and November 2019, female enumerators interviewed 100 CDCs in Balkh, Herat, Bamyan, Khost, and Kandahar to understand project successes and challenges during implementation. MSI's female enumerators completed interviews with 22 social organizers, 36 female CDC officers, 229 self-help groups (SHGs) (including 13 savings groups established under the Afghanistan Rural Economic Development Program (AREDP), 13 village savings and loan associations, and 13 enterprise groups, as well as 80 group interviews with female community members who are not members of the SHGs. MSI female enumerators completed these monitoring assignments independently and traveled with a mahram (male family member) for security and cultural reasons.



15.TRANS HINDUKUSH CONNECTIVITY PROJECT (THRCP): Quality assurance engineers conducted 11 site visits to monitor road construction quality, labor camp conditions, and ESMP compliance. A QA engineer was assigned to complete this road construction monitoring; a Ministry of Transportation (MoT) engineer accompanied when possible.



16.SEHATMANDI: Between May and December of 2019, MSI enumerators verified clinic locations provided by the Ministry of Public Health (MoPH) and visited approximately 15 clinics to assess the services and capacity of staff (including inpatient recordkeeping)

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in low-performing (negative outlier) facilities. Enumerators conducted spot checks of health facilities in insecure and hard-to-reach geographical areas to assess medicinal supplies, patient services, and accurate recordkeeping. Male and female enumerators, trained by MSI project management staff in coordination with the MoPH, completed these monitoring assignments.

- HIGHER EDUCATION DEVELOPMENT PROJECT (HEDP): MSI monitored 19 subproject sites in the first quarter of Year IV. The monitored facilities included dormitories, lecture and research facilities, and dining halls.
- 18.EDUCATION QUALITY REFORM IN AFGHANISTAN (EQRA): The SA monitored 321 EQRAfunded school construction projects from February through November 2019. An EQRA project engineer accompanied the QA engineer when possible. Monitoring objectives covered the construction quality of schools, including the external structure, roof, boundary walls, and internal classrooms.



Special Studies

Afghanistan Second Skills Development Project (ASDP II)

(96 Site Visits, Four Reports)

MSI sent two-person teams (mixed-gender, engineer, and enumerator) to interview the faculty, staff, and students of four lead vocational institutes. The monitoring objective was to determine what was needed to make these four institutes into lead institutes. Monitoring teams completed infrastructure inspections of all structures at each facility, including class-rooms, bathrooms, dormitories, and office blocks. Faculty, staff, and students were interviewed to understand the unique perspectives of each group as it pertains to the operation of each facility, including the quality of instruction and relationships between administration, faculty, and students. The team produced four reports, one for each of the follow-ing: Kabul Auto Mechanic Institute, Nangahar Agriculture and Veterinary Institute, Herat Technical Institute, and the National Institute of Management and Administration.

Emergency Feed Distribution – (NHLP) (60 Site Visits, One Report)

MSI sent a team of two monitors to Helmand and another to Kandahar to interview district staff responsible for emergency feed distribution and individuals receiving the emergency feed. In Kabul, SA staff interviewed MAIL staff to understand the procurement procedures and review all relevant documentation of the contractor's agreement. A single assessment report was submitted to assess the process of emergency feed distributed by a Kabul contractor to rural farmers in drought-stricken Helmand and Kandahar provinces, for which the World Bank had allocated \$2 million.

Tissue Culture Lab Spot Check (No Additional Site Visits Calculated, One Report)

This was a brief field report and summary on the construction of a tissue culture lab funded by ARTF. A finance team from the World Bank office in Washington, D.C., requested this report.

Jalalabad Park Safeguards Violation Report (CCAP) (20 Site Visits, One Report)

MSI sent three CCAP QA managers from the Kabul office to conduct key informant interviews with administrative authorities of the subproject, including the mayor of Jalalabad city and members of Gozar assemblies #1 and #2 to understand the notification, environmental impact, resettlement, and compensation plans provided to individuals affected by the construction of the Jalalabad recreation park subproject. Project-affected people (residents and shopkeepers) who were displaced by subproject construction participated in interviews to understand the impact of subproject construction on their livelihoods and the project administration's adherence to Citizens' Charter processes for project-affected people. All interviews took place on April 24 and 25, 2019, in Jalalabad city.

Economic Internal Rate of Return and Cost-Effectiveness Study (CCAP) (30 Site Visits, One Report)

The World Bank requested that MSI measure the benefits of CCAP subprojects with the aim of evaluating their returns. Specifically, the World Bank requested an economic internal rate

of return analysis for each subproject type and a comparative cost analysis. This included a comparison of subprojects with similar projects funded by other donors and projection of the internal rate of return for a variety of subproject types.

Training for Business Gozars' Pilot (Eshteghal Zaiee – Karmondena/ EZ-Kar) (No Additional Site Visits Calculated, One Report)

A summative report of the pilot training, participant feedback, and recommendations.

System Enhancement for Health Action in Transition (SEHAT) – Negative Outlier **Facility Assessment** (30 Site Visits, One Report)

From November 2018 through January 2019, MSI was tasked with designing and conducting a pilot study of an innovative approach to assessing service delivery statistics in public health facilities in Afghanistan under its TPM contract with the World Bank. The main purpose of this study is to help the MoPH and the World Bank develop and test methodologies to help rapidly explain the reasons specific facilities perform substantially lower in levels of select service delivery indicators.

The MoPH/World Bank selected a small sample of health facilities (five) of either the same or different types, based on their identification as outliers in terms of their negative performance against one or more service delivery indicators.

SEHAT Clinic Verification.

(30 Site Visits, One Report)

MSI was tasked with verifying the location of clinics funded under the SEHAT program. Verification included physical location of the facility based on recorded coordinates, verification of the current use of the location, and photographic evidence of the facilities' locations or alternate locations. This report provides a summary of findings, with the complete data set provided as an Excel file with corresponding photographs. Three hundred health facilities selected for verification were provided to the SA, including details on facility name and type; location including province, district, and recorded GPS coordinates; and implementing partner.

Sehatmandi Health Facility Spot Check (40 Site Visits, One Report)

MSI conducted a spot check of eight health centers in Baghlan, Urozgan, Nimrooz, and Nuristan provinces. All monitors for this assignment are medical professionals from the mentioned provinces. The survey instrument was collaboratively designed with the SA and World Bank colleagues and all monitors received training after World Bank colleagues approved the final survey instrument. All data were collected during November 2019 with the assistance of the MoPH, providing authorization letters for SA monitors to access the health facilities and complete the spot-check. This report presents the findings and conclusions of the spot-check of the eight health facilities and is not representative of the larger body of health facilities under the Sehatmandi Project. A stratified random sampling approach was used to select eight health facilities in four difficult-to-access provinces. A sample of all health facilities in the four provinces was taken from the MoPH Health Management Information System (HMIS). Selection of facilities was random, taken from the sample list for each province.



Figure 16 shows the geographical coverage of TMP site visits for each project year.

Third Party Monitoring Overview



FIGURE 16 Total Site Visits by Year

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2.5 Stakeholder Relationships

2.5.1 World Bank/ Task Team Leaders

Task team leaders are the World Bank staff members managing each project. They are liaisons between the World Bank and the Government of Afghanistan, including all relevant ministries for their project. MSI's TPM process for each project begins and ends with task team leaders. When a task team leader introduces TPM to their project, the MSI team lead and deputy team lead schedule an introductory planning meeting to understand the project scope and needs of the task team leader(s). This planning meeting results in task team leaders providing all relevant project documentation and a detailed discussion of project-specific points of interest. All monitoring instruments (engineering, environmental, and social science) are submitted to task team leader(s) prior to pilot testing for feedback to ensure coverage of all areas of interest. MSI's field leadership maintains regular communication with task team leaders to adjust monitoring instruments and reporting structures, based on a task team's changing needs. At minimum, MSI has a monthly check-in call with each task team leader to confirm satisfaction with the monthly deliverable and to adjust the data collection process or monitoring instruments.

2.5.2 World Bank/Safeguards and Gender Teams

The World Bank's safeguards and gender teams comprise environmental, social, and gender specialists assigned to multiple projects to ensure implementation of ARTF II projects operates in accordance with the World Bank's Environmental and Social Framework. MSI increased collaboration with these specialists throughout the four years of TPM, culminating in a complete revision of all safeguard modules for each site visit instrument used in MSI's TPM.

Social safeguards specialists help MSI develop site visit instruments to collect data about the safety of labor camps and potential risks to laborers and nearby communities. Instruments were revised with social specialist inputs to collect data on project-affected people or those who could be displaced or lose land from subproject construction.

Environmental safeguards specialists help MSI understand the environmental risks associated with a specific project. Site visit instruments are tailored to the specific risks associated with each project, such as deforestation and soil contamination from construction activities.

Gender specialists worked with MSI's project management team in Kabul to support the work of female enumerators and to identify areas across the TPM portfolio for increasing female enumerator participation to improve reporting on the participation rates of Afghan women.

The combination of social, environmental, and gender specialist input from the World Bank helps improve the TPM data collection process and customize reporting to provide useful insight to task teams. In Year IV, MSI investigated potential safeguard violations in communities implementing ARTF II-funded projects at the request of safeguards teams in Kabul, quickly mobilizing field teams to provide verifiable data that informed the World Bank's next steps to protect community members.

2.5.3 Government of Afghanistan/ Ministry Project Teams

Developing collaborative professional relationships with ministry project teams is necessary for effective TPM. MSI designates a team member from the field office in Kabul as the quality assurance manager for each project. QA managers sit in the ministry project team office four days a week and work with ministry project teams to facilitate MSI monitoring visits across Afghanistan. Daily interactions and a working relationship between the supervisory agent and ministry project teams facilitates improved data collection and site visit accuracy.

Before MSI can visit a site, we must receive a sampling frame or list of all potential subprojects that can be visited. Ministry projects teams grant permissions to their management information systems (MIS) and site selection proceeds once MSI has access to each project MIS. Some projects do not have a digital MIS, and ministry project teams share subproject sampling frames through monthly exports of Microsoft Excel files. The next step of coordination is reviewing the mission plan with each project team.

In the last week of a month, MSI QA managers submit the next month's "mission plan" or site visit plan to the ministry project teams, who verify that all sites on the list are accessible and have ongoing construction so MSI monitoring teams can complete construction inspections. The ministry project teams in Kabul contact provincial team members and request that they accompany MSI monitors to subproject sites.

Provincial and district field staff accompany MSI QA engineers and enumerators to subproject sites when these visits do not prevent them from performing their normal responsibilities. In the four years of MSI-provided TPM, ministry project team staff are consistently willing to support MSI's TPM efforts by accompanying monitors to sites, sharing information and access to project MIS, and informing MSI of potential safety and security risks.

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Adaptive TPM

3.1 Flexible Approach

MSI's role in the first two years focused on an independent inspection of construction quality and operations and maintenance of the government's most important school, road, canal, and water resource projects funded through ARTF. MSI monitored environmental and social safeguards of projects under construction, communicating construction deviations to ministry project teams through monthly spreadsheets.

In Year III, TPM coverage of the CCAP, NHLP, and AAIP marked the onset of TPM diversification to highlight beneficiary perceptions, project impacts, and gendered participation. MSI introduced the Ardea digital deviation tracking platform to replace offline deviation trackers used in years I and II and deployed a team of female enumerators to interview female beneficiaries and community members specifically for the CCAP and NHLP.

In Year IV, all ministry project teams with community or contractor construction activities transitioned to the digital deviation reporting platform (Ardea). Female enumerators led monitoring of the WEE-RDP and special studies focusing on non-infrastructure project components were introduced. Evolution of the TPM portfolio required MSI to be flexible and adapt data collection instruments, systems, and staff to meet the World Bank's TPM needs.

3.2 Monitoring Methods

Performance and Process Monitoring

Quality data are the result of four complementary groups: QA engineers, female enumerators, subcontractor enumerators, and citizen monitors. QA engineers primarily conducted technical inspections of construction subprojects. In Year III, QA engineers were trained in social science data collection methods, including interview administration and bias-mitigation techniques. Their role expanded to include beneficiary and stakeholder interviews at subproject sites after completing construction-quality inspections. Female enumerators are the only members of MSI's monitoring teams who were able to access female community members' opinions and collect data on their experiences. This valuable information provides the World Bank with actionable data to identify gendered implementation challenges, including women's participation in subproject planning.

Subcontracted enumerators provided a surge of data collection for time-sensitive projects and data collection to achieve special study requests. The MSI project management team hired and trained the enumerators, pilot-testing instruments under the supervision of MSI management staff to collect large amounts of primary data in a short time.

MSI used a commercially available mobile and web-based software application, Fulcrum, for data collection and processing. QA engineers used the Fulcrum mobile app on locally purchased smartphones to collect photographic, numeric, and text data at ARTF subproject sites. Enumerators (both female and subcontractor) recorded interview responses by hand and entered all data into Fulcrum at the end of each day. Citizen monitors send daily photographs via WhatsApp to the office in Kabul, where sorting and analysis occurs.

In the post-processing workflow, the QA manager(s) for each project, deputy QA program manager, and QA program manager review each resulting subproject SVR to ensure data accuracy, completeness, and integrity before submission to the World Bank. MSI delivered individual subproject reports to the GoA ministry project teams whose projects were monitored. Raw data in Excel files and a PDF report of each site visit, including geotagged and time-stamped photos, are provided to the World Bank and then to each ministry project team.

Participatory Monitoring

Participatory monitoring is the active participation of project beneficiaries and community members; it increases the voice and ownership of individuals affected by a project and strengthens the relationship between the state and citizens by holding state and service providers accountable. Involving community members familiar with local issues increased the chances of activities' sustainability beyond the duration of the project implementation cycle.

Citizen monitors are members of the communities where QA engineers assess subproject construction quality. Individuals are tested and trained by QA engineers to collect photographic data of previously monitored structures via smartphone. Community buy-in bolstered the value of CMs, who were able to receive subproject site data, and their reliability and trust to undertake that role. Most individuals who participated with ARTF as CMs had other vocations and served as CMs primarily out of a sense of pride and duty to their communities.

Remote Monitoring (RM)

MSI also implemented several remote monitoring pilot projects, including aerial unmanned aerial vehicle (UAV) imagery and low-cost terrestrial sensor-based systems to maximize the number of canals, roads, and other types of infrastructure.

Materials Testing

In years I and II, MSI tested materials at select ARTF subproject sites and at MSI's material testing lab in Kabul. Materials testing was important to determine the quality of materials used in construction and the durability of subprojects, as well the required kinds of operations and maintenance.

ARTF TPM II subcontracted with the Champion Technical Training Center to establish an onsite material testing lab to conduct independent verification material testing of ARTF subproject sites. These tests were performed in accordance with the approved technical specifications for each of the projects and used methodologies prescribed by the American Society for Testing and Materials, the American Association of State Highway and Transportation Officials, and the British Standards Institution. MSI conducted several hundred tests for the 57 subproject sites, including both in-situ and laboratory tests.

Soundness of structural concrete was the most challenging aspect of materials testing for projects where testing occurred. The results of the core compression strength testing revealed structural inadequacies for several subproject sites. The sieve analysis of aggregate stockpiles, consisting of river aggregates used on many canal projects, consistently did not meet the required gradation specifications and angularity. Aggregates repeately had issues with flakiness/elongation and did not provide proper cement wrapping of particles in the concrete mix used for canal lining. These river-sourced aggregates are not suitable for structural concrete applications and care needs to be taken if they are to be used for mass concrete, since the performance of the concrete will be degraded. Such issues shorten the lifespan of the structures and have proportionally higher operations and maintenance costs.

In addition to individual materials testing, the SA also evaluated the efficacy of the Ministry of Public Works' lab used on the National Rural Access Program. While findings evidenced a need for repair of compressive strength, asphalt stability, and core drill machines, the

biggest concern was a lack of calibration certificates for lab equipment. This suggests possible higher incidences of inaccurate readings and results. Over time, results and accuracy tend to "drift," particularly when using certain technologies or measuring particular parameters, such as temperature and humidity; equipment must be appropriately serviced and maintained throughout its lifetime to ensure proper, reliable, and consistent measurement performance.

All ARTF projects engaged in construction activities would benefit from improved contractor quality control and ministry-based quality assurance of construction materials and workmanship. This is especially true for critical or structural construction components. It is often difficult or impossible to observe all important construction material properties on site. Using a material testing lab provides quality information to ensure that materials meet the required specifications, and allows forensic investigation if defects are found during the operational period of the infrastructure. The TPM materials testing program highlighted the value of regular materials testing. However, this element of quality assurance should be part of the contractor and ministry construction-quality management systems rather than a separate monitoring effort. For this reason, the materials testing program was eliminated in project Year III.

3.3 Reporting

MSI used a variety of reporting methods to present information to the World Bank, the donor community, and ministry project teams. Figure 17 shows the basic process of planning, executing, and sharing monitoring information.



Monthly Coordination Meetings

MSI staff conducted 240 monthly coordination meetings with five GoA ministries and one directorate (MAIL, MoEd, MRRD, IDLG, MoPW, and MEW) to help staff better understand project challenges and identify appropriate methods to prevent or mitigate those issues. MSI QA managers embedded in various ministries conducted weekly meetings to:

1) Discuss reported deviations and generate feedback;

2) Follow up with ministries to assign their field engineer to accompany MSI on all site visits; and

3) provide design drawings, environmental and social safeguards, and all other subproject documentation.

Monthly and Quarterly Report

MSI prepared monthly summary reports for each project receiving ongoing TPM for which a monthly reporting cycle was the most appropriate way to report findings. The findings facilitated ministry-supervised deviation rectification, identified challenges, and reported positive outcomes of project implementation. Monthly summaries were aggregated every three months into a quarterly report submitted to the World Bank, then shared by the World Bank with ministry project teams and the donor community.

Special Studies

In response to ad hoc requests by the Bank and, in addition to contractual deliverables, MSI conducted nine special studies on specific project areas beyond the normal TPM coverage to support immediate or expedited action.

Ad-Hoc Presentations

MSI delivered 25 ad-hoc presentations to many of the 34 donor countries at the request of the World Bank. This includes individual presentations to U.K. Department for International Development, the Japanese Embassy, USAID, and the multi-donor Gender Working Group.

Notable Achievements

4.1 Pilots

Given that many projects under inspection span great distances, such as roads and canals that stretch 50 kilometers, field engineers cannot monitor as frequently as desired. At most, QA engineers on foot can monitor canal sections measuring only 4 to 5 km per day, depending on the terrain. To overcome this challenge, MSI field-tested several remote monitoring solutions, including aerial and sensor-based systems, to maximize the number of canals, roads, and other linear infrastructure monitored fully.

Canal Sensor Monitoring and Environmental Probe Monitoring

As part of the remote monitoring pilot initiative, MSI explored unattended sensing of irrigation canals and farm soil moisture. Such sensors aid in collecting data to better gauge water flow improvements in irrigation structures and delivery of irrigation water to cultivated land.

MSI developed two sensors: one for stationary placement at any given point on a canal; and one for mobile use with a soil probe. All materials in the devices are available locally, and testing occurred inside Afghanistan. The canal sensors detect motion—specifically water flow. The environmental probe sensors detect moisture content, relative humidity, air temperature, and solar radiation. MSI designed a low-cost, durable sensor housing to withstand various weather conditions and environments.

Canal Sensors

MSI tested two kinds of ultrasonic flow sensors. One stores data onto a removable Secure Digital (SD) card, which TPMs or CMs collect for data retrieval; it is small and relatively inexpensive to produce. However, this sensor is slightly less precise, has a very small range, is not particularly water resistant, and cannot be automatically calibrated. The other kind of canal sensor sends data via short messaging service (SMS) and is bigger and more expensive. But it has greater precision, greater range, can be automatically calibrated, and is water resistant. 24

Environmental Probe Sensors

After significant prototype development, ARTF finalized three kinds of environmental sensors. All have the same relative data capacity, though they are applicable in different settings. The first is best for standalone use (such as individual farmers); has a liquid crystal display screen; stores data to a removable SD drive; measures only four soil variables; and has no GPS. The second version is good for survey work; uses a GPS to geotag readings (sent to both a removable SD card in the device itself and a server via SMS); and measures four soil variables. The third version is best for project and survey studies; has a GPS and works only with a smartphone via Bluetooth, which displays the data in a mobile app; and measures six soil variables. All materials used in sensor construction are available off the shelf, and testing occurred inside Afghanistan. The sensors were developed in tandem with a system capable of collecting, cataloguing, and visualizing data output on a virtual dashboard, which is free to download and install. Licensing for both sensor and visualization software remains in the open-source domain.

The sensors were installed and operated on IRDP and OFWMP subprojects, and monitored by both TPM engineers and CMs. According to selection criteria, MSI chose two canals (one each for OFWMP and IRDP) for pilot monitoring, and installed sensors on five of nine locations on one IRDP canal, and one location on the OFWMP canal. Vandalism was a significant challenge in the pilot testing of the canal sensors, and four locations' sensors went offline within the first month. The sensor on the OFWMP canal location was also vandalized after four months. Figure 4 illustrates the operation of the sensor system.



MSI implemented a second pilot test of the canal sensors. As a part of the Balkh and Khulm Watershed Project, MSI monitored another 10 OFWMP and five IRDP subproject sites with the canal sensors to track water discharge rates. After a baseline survey to determine canal functionality (such as seepage, inadequate protection walls, or unlined portions), sensors were installed on only eight of the identified canals; the remaining seven were deemed unsuitable for study as they were seasonally dry. SD-style sensors were used in all cases, since the cell service necessary for SMS sensors is not reliable in such remote areas; only two SMS sensors were installed alongside SD sensors. Despite hiring CMs to help sensitize communities to the canal sensors in an effort to reduce vandalism, the majority of these sensors were damaged or removed within a few weeks. Despite this important challenge, results show that the Shaik Hassan and Joy Zwandon canals had comparatively lower discharge rates than the other canals under observation during the sensors' brief operating period.

MSI successfully deployed and utilized the environmental sensors to collect soil moisture data from 13 selected agricultural fields along these canals, at both their intake and outtake points. Results show significant variation in soil health due to varying levels of irrigation. Based on the assumption that better-irrigated fields are healthier, poorly irrigated fields are therefore less healthy. Additional observation is necessary to draw further inferences, but the application is quite promising for farmers who currently have limited knowledge of how to increase crop yields, grow higher value crops, or rotate crops based on soil quality and moisture levels.

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4.2 In-House Applied Research

MSI managed complex research designs in-house beginning in Year III by utilizing field team diverse expertise. In the four years of MSI TPM, only two subcontracted experts were hired to support the field team in Kabul. One public health professional created a monitoring instrument for a health clinic assessment and an economist designed and conducted a study involving internal economic rate of return calculations and cost comparisons for the CCAP. The team in Kabul completed all other studies, assessments, and reporting. The capacity to perform and adjust to World Bank requests in Kabul reduced the turnaround time between instrument design, pre-testing, pilot testing, and final reporting, allowing MSI to produce expedited studies of good quality to meet the urgent needs of World Bank task teams.

4.3 Digital Deviation Reporting

In the first two years of MSI's TPM coverage, all construction deviations were reported monthly to the ministry project teams using Microsoft Excel files with photos manually overlaid. It was a functional means of delivering monthly deviation findings, though not an efficient means of tracking rectifications. In Year III, MSI's client innovation services team tested the Ardea digital platform with the AAIP ministry project team by reporting deviations from the field to the ministry and closing deviations when ministry engineers submitted photographic evidence of the rectified deviation. The pilot test was a significant success and the system was rolled out to all ongoing projects receiving TPM, replacing the Excel spreadsheets and substantially reducing time between deviation identification and rectification.

Project Strengths

5.1 Inclusive Monitoring

The MSI field and office staff working on ARTF II TPM were involved in the project for more than seven years, making them some of the most knowledgeable TPM providers anywhere in the world. However, employing women in technical roles and as field monitors in rural Afghanistan has been an elusive goal for many development teams. With continual effort and urging from World Bank staff, MSI established a robust cohort of female enumerators, managers, and technical staff. MSI's in-house team of 30 female enumerators from provinces throughout Afghanistan allowed monitoring teams to access Afghan women across the country and record their unique perspectives of ARTF II projects designed to improve the livelihoods of women. Senior MSI staff trained the MSI female enumerator team in data collection methods, including conducting semi-structured interviews, moderating, and notetaking for focus group discussions.

Data collected by female enumerators gave women a voice to tell their truth when they were underrepresented in community activities or excluded from decision-making processes. MSI female enumerators found that men regularly reported higher levels of female participation in ARTF II-funded activities than actual participation rates reported by female beneficiaries.

In Year III, MSI mobilized 15 female enumerators to conduct the CCAP site visits alongside engineers in approximately 1,000 subprojects. In Year IV, MSI doubled the number of directhire female enumerators to 30 women across Afghan provinces and increased their scope of work to include the CCAP, WEE-RDP, and NHLP.

5.2 Citizen Monitor Expansion

A commonly held view suggests construction monitoring can be effectively performed only by professional technical staff. Citizen monitors were successfully deployed across multiple infrastructure projects funded by the ARTF, challenging this preconception. The inclusion of project beneficiaries, project-affected people, communities, and other primary stakeholders in monitoring subprojects is intended to increase the voice and ownership of primary 28

stakeholders, improve the relationship between the state and citizens, provide greater monitoring coverage, and reduce overall TPM delivery cost. MSI employed citizen monitors (CMs) to follow up at subproject sites after its TPM visits by technical monitoring staff. CMs were recruited through community development councils (CDCs), shuras, and crowdsourcing techniques.

Qualified men and women hired as CMs are identified through local leadership councils and live and work in subproject communities. They provide a level of local access and regular monitoring that is difficult for outsider monitoring teams to achieve. After QA engineer trainings, CMs provide independent evidence of program implementation and are particularly beneficial in monitoring subproject sites in comparatively remote or insecure areas that ministry engineers cannot easily access. Although paid a nominal fee, most CMs have other vocations and perform their TPM duties primarily out of a sense of pride and duty to their communities. This community commitment demonstrates the long-term viability of the CM process.

CMs were also recruited through radio broadcasts and targeted SMS messages in some provinces. Although it involved a longer recruitment process (one month), CMs identified through this process tended to have more closely aligned skills; CMs identified through CDCs and shura councils sometimes did not possess the background and skill set best suited for particular CM tasks. MSI went to great lengths to make sure communities accepted visiting crowdsourced CMs who were not from those communities.

During the four years of the TPM program, MSI complemented and verified TPM findings with more than 12,000 unique observations from 213 trained and vetted CMs at 314 ARTF subprojects around the country. Five projects used the CM process: ARAP, EQUIP II, EQRA, IRDP, and OFWMP.

5.3 Rectification Rates

Key to the structure of the TPM program are deviation identification and reporting on required construction standards and environmental and social management plans. MSI grouped deviations into four categories: design; material and workmanship quality; compliance with environmental, gender, and social safeguards; and compliance with operations and maintenance procedures. Deviations are also categorized according to whether they:

- Impact beneficiary or worker safety and have potentially serious repercussions if not immediately addressed by the contractor or ministry (life safety);
- · Could significantly affect project sustainability and functionality (major); and
- Could minimally affect project sustainability and functionality (minor).

The most commonly reported deviation type is material and workmanship quality, followed by a lack of compliance with environmental, gender, and social safeguards. MSI reported monthly deviations from ARTF subproject sites to the World Bank and ministry project teams. Monthly coordination meetings took place with each ministry to discuss possible deviation causes and necessary corrective actions.

5.4 Digital Deviation Tracking

Ardea

MSI implemented the Ardea online reporting system in seven ministry project teams to facilitate near real-time reporting and deviation tracking. This system enables ministry project team staff to view, respond to, and upload photographic evidence of rectifications from all Afghan districts and provinces. Each ministry team has a designated point of contact who assigns deviations identified as "open" to provincial or district engineers. These engineers are responsible for submitting photographic evidence with geotags and time stamps on each photo of the rectified deviations. When the ministry project team engineer uploads photographic evidence in Ardea, the status of the deviation changes to "pending." This means the MSI QA manager must review the evidence provided. If the evidence is sufficient to conclude that the deviation is rectified, it is marked "closed" in Ardea. If the photographic evidence is insufficient, a chat communication is opened between the engineer and MSI QA manager to explain why the provided evidence was insufficient and the deviation will remain "pending." The Ardea system allows ministry project teams and MSI QA managers to interact virtually multiple times a day, reducing the traditional back-and-forth over email and the time between deviation identification and rectification.

Figure 19 presents a screen shot of the Ardea system. Each deviation registered in Ardea presents the ministry project ID, province, district, and community name. The example in Figure 19 includes site photos of the deviation and a ministry photo of the rectification.

Project Strengths



Project-specific data can be customized to present the most useful information for each ministry project team. World Bank task team leaders and safeguards team members can follow all deviations across the portfolio as they see fit.

MSI trained ministry project teams to use open camera, a free application for smartphone (digital) cameras to embed geotags and time stamps in each photo file so that provincial and district engineers upload verifiable photographic evidence when deviations are rectified. Table 1 presents the change in the number of days from when a deviation is reported to when it is rectified. The three longest-running construction projects, OFWMP, IRDP, and ARAP, are presented below. Many factors, such as project size and scope, contribute to rectification rates, but Ardea has played a part in reducing the time between deviation identification and rectification.

TABLE 1	Project	Tracker average (days)	Ardea average (days)	Notes
– Tracker vs. Ardea	OFWMP	122	69	Ardea time period 4/19 - 11/19. Tracker 2/16 - 8/18
	IRDP	132	64	Ardea time period 4/19 - 11/19. Tracker 2/16 - 8/18
	ARAP	166	74	Ardea time period 4/19 - 11/19. Tracker 2/16 - 8/18. Ardea value combined w/ other ARAP ministry.

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5.5 Availability to Reporting Audiences

MSI's field team responds to all presentation requests by the World Bank without the need for external support since the team in Kabul designed all instruments in the four years of ARTF II TPM. Senior and middle management presented in person to a variety of donors and working groups at the request of the World Bank and under varying time constraints. Keeping instrument design, analysis, and reporting in Kabul allowed the most knowledge-able members of the MSI team to present to individual donors and working groups in person with as little as one day's notice. Occasionally, the security situation in Kabul city prevented in-person presentations. In such cases, the MSI team pivoted to virtual presentations. These changes were easily implemented since staff members leading data analysis efforts were stationed in Kabul.

Project Challenges

6.1 Task and Safeguard Team Coordination

Varying levels of coordination among task team leaders, safeguards, and gender specialists within the World Bank project teams pose data collection and reporting challenges for TPM. Each of these three entities have different priorities for TPM coverage and, without close coordination, it is difficult for TPM to meet the needs of all three.

Task team leaders review and approve monitoring instruments for most projects. However, that internal process of review does not always formally include safeguards and gender team members. Such exclusion runs the risk of overlooking important project-specific concerns and causing miscommunication between task team members and the TPM provider when a monthly report does not include something that is a priority to one party but not the other.

Careful coordination among task team leaders and safeguards and gender teams is critical to ensuring that all relevant information is reported in the appropriate frequency (monthly, quarterly, etc.). When team members' expectations differ, the effectiveness of TPM reporting decreases because monitoring instruments or reporting cannot meet all team members' needs. This is the case especially when teams are coordinated during site visit instrument design.

6.2 Integration of SA And MA Reporting

In Year IV, MSI was asked to support the MA payroll verification activity and combining the reporting for this and similar tasks proved to be challenging. MSI was unfamiliar with the MA's monthly data collection processes and reporting schedule for when to integrate MSI reporting with the MA, which began in the third quarter of Year IV. The greatest challenge was that the SA completed several hundred site visits each month, which far outstripped the MA's ability to analyze financial information within the SA reporting cycle.

6.3 Increased Insecurity

Insecurity throughout Afghanistan increased during the four years of MSI's work as the supervisory agent. The specific challenges for field teams include direct threats to female staff, including female enumerators and their families. In more than two dozen instances during Year IV, MSI monitoring teams had to visit alternative sites because they received direct threats of violence if female enumerators attempted to talk to female community members about a subproject. Afghanistan is a challenging environment in which to operate and it is important to raise safety concerns for female staff and those traveling with them.

Lessons Learned

This section presents key lessons learned from the four years MSI provided TPM as the supervisory agent. These lessons are derived from field observations as the TPM portfolio evolved and they apply to future TPM efforts in the Afghanistan context and, more broadly, to global World Bank TPM efforts.

7.1 Subcontracted Data Collection

MSI used subcontracted data collection firms in the first two years of ARTF TPM for supplemental data collection and analysis, but limited subcontractor work to only data collection in years III and IV. The lesson learned from working with subcontracted data collection firms is that supplemental data collection services provide useful high-volume, short time frame data collection but do not have the analytical capacity to provide complete reporting. These firms typically have enumerators with some training in all provinces and districts of Afghanistan. However, they often lack the ability to conduct complex statistical analysis, and since they do not have ongoing contact with the client or ministry staff, their role should be limited to data collection only. They serve as a highly valued reserve force of enumerators to be called up when needed for time-sensitive assignments or ad-hoc requests.

Subcontracted data collection enumeration teams should be used in specific roles to collect source data. Instrument design, training, analysis, and reporting are best performed by the primary contract holder utilizing experienced specialists. MSI observed little difference in the quality of data collected by MSI staff and subcontracted enumerators when the instruments and sampling strategy were provided to the data collection firm along with specific subject matter training. One important consideration for data collection is that the primary contract holder should be able to view site visit data as it is collected rather than waiting for batch delivery by subcontractors. Going forward, subcontractors should move toward using the same data management system employed by the prime contractor rather than their own internal platform, as is commonly the case. This means both internal and subcontract data collection should be uploaded to a common system with robust online dashboarding capability so managers can monitor progress and quickly respond to any data collection issues before they compromise the integrity of the monitoring task.

7.2 Female Enumerators

Adding female enumerators to monitoring teams allowed MSI to successfully access female beneficiary populations, a goal that male staff members had not achieved despite many efforts. Contrary to common expectations, it was relatively easy to recruit female enumerators across the country. Female enumerator positions were posted online and with specific work areas, including districts and provinces, mentioned in the title of the job posting. The most valuable lessons from female enumerators are around site visit access and data collection/processing.

For the CCAP site visits, female enumerators traveled to sites with a maharam (male relative or other trusted male community member) and a male MSI engineer. This pairing of culturally acceptable and qualified team members greatly expanded access to women at subproject sites. However, in some Taliban-controlled districts, CDC chairmen were told by local anti-government commanders understood to be Taliban to allow only the male engineers to complete the subproject construction inspection, and not allow female enumerators to speak with female community members. In one example, a female enumerator's father was contacted by phone by an unknown party instructing him to keep his daughter at home and threatening the family if she continued to work. In all such cases, female enumerators were sent home and did not complete site visits. The same was true for female enumerators on the WEE-RDP, NHLP, and Sehatmandi projects. Despite concerted and persistent effort, they were unable to access certain communities. Female enumerator access challenges do not have a distinct pattern, occurring randomly throughout provinces.

When female enumerators can complete site visits, they collect valuable information from female beneficiary and community members that is often inaccessible to male monitors. However, female enumerators are easier targets for violence and exploitation in more conservative parts of Afghanistan or areas controlled by anti-government elements (AGE). MSI, as a matter of company policy, places the safety of staff members above any project priority. To protect our female team members, MSI immediately cancelled site visits at the first sign of potential physical harm. Over time, MSI gained greater insights and continued to evolve the approach to female enumerator site visits. By improved the estimation of project access issues across the country, monthly site selection planning resulted in fewer threats and better overall access to female beneficiaries.

Each female enumerator, depending on her scope of work each month, contacts the subproject points of contact prior to site visits to identify challenges at the site. This approach varies slightly by project; for example, female CDC board members were contacted for CCAP. For NHLP, both female social organizers and SHGs were contacted, and for the WEE-RDP, female participants were contacted. Going forward, informational interviews related to risk factors in communities could be recorded and tracked over time to distinguish areas of shifting or perpetual risk. This information will inform sampling strategies to maximize female enumerator productivity while minimizing risk.

At the end of the contract, MSI proposed expanding the use of female enumerators under IRDP and OFWMP to complete detailed interviews with female community members benefitting from canals. The female enumerators can gain valuable insights into women's consultations in the planning and design phase of canals and to better ascertain if male community members include their suggestions in canal access point locations. The female enumerator teams can and should expand to improve data-driven decision-making that enhances outcomes for all community members.

7.3 Citizen Monitors

The citizen monitor (CM) program was introduced at the beginning of ARTF II and, over the four years of the program, convincingly established the value of CMs in providing ongoing monitoring of construction projects and the potential expansion of their role to include safeguards monitoring.

CMs provide photos of ongoing subproject construction near their community. Selecting CMs centrally located between multiple subprojects enables CMs to monitor more subprojects, increasing their monitoring value and justifying more investment in expanding their skills. The initial role of CMs was to provide photographs that office-based engineers could use to evaluate construction quality. Over time, as the TPM focus shifted, the CM focus was slow to adapt. While this issue has been largely addressed through staff communication and training, the added training burden imparting the right skills to CMs should be included in planning and budgeting processes.

The CMs demonstrated that they can take on more responsibility and can expand their focus to additional elements of the project, including environmental and social safeguards components. The next step to improving the CM program will be to work with the World Bank safeguards teams to identify safeguard components that CMs should photographically verify.

7.4 Remote Monitoring

The remote monitoring innovations piloted in ARTF II were not implemented across projects. Unmanned aerial monitoring (UAM) was not implemented because MSI could not obtain a permit to fly a drone along a canal or road segment. At the time, it was decided to postpone UAM until the security situation in Afghanistan improves. However, it became clear at the end of the contract that local firms had begun using unmanned aerial vehicles for a variety of purposes, chiefly media production. Going forward, the issue should be reconsidered as more local firms successfully gain governmental and community acceptance of small prosumer drones for data collection. However, the close association of drones with military forces is still a cause for concern in using them as a monitoring tool. The potential for psychological harm to community members is likely to continue, so careful experimentation should address this issue before proceeding with systematic implementation.

Soil and canal sensors were both tested and proven to be technically viable. However, after multiple designs, it was determined that only the more costly sensors can withstand harsh conditions. The additional costs of equipping sensors with data communication capabilities are also high. The most promising method employs SMS services via an onboard cellular chip. With additional testing and the reduction in component cost, sensors can be useful by reducing the need for physical visits after the sensor is calibrated and installed. This technology can and should be used on canal and agriculture projects. A current opportunity exists to test soil quality of NHLP orchard beneficiaries to better coordinate appropriate sapling types based on soil quality. Another application for remote sensors is to combine them with citizen monitors on canal subprojects to free up QA engineers, making them available for other more complex construction monitoring.

If CMs are trained to install and calibrate canal sensors, QA engineers will be able to deliver the sensors during the site visit, providing the Kabul team access to regular flow data from the sensors and photographic data from the CM, as well as potentially use the CM to repair the sensor if problems arise. As vandalism and theft are ever-present challenges, vesting a CM with "ownership" of a sensor could reduce loss.

7.5 Time at Site

The long-established time frame for a site visit during ARTF II was between four and six hours. This was an estimate of the time it takes an engineer to complete one subproject construction inspection. As the project portfolio evolved, four to six-hours no longer made

sense as a universal metric. Based on experience, some site visits take less than four hours; if sites are close together, a monitor can complete more than one site visit in a day. This is offset by sites that are harder to reach or more complex. This was evident in the fall of Year IV, when MSI completed 321 unique beneficiary site visits for the NHLP project, but due to the amount of time needed to complete each site visit (less than four hours), a site visit equivalency was calculated to equal only 200 site visits. Site visit equivalencies were calculated for special studies and ad-hoc requests based on the number of hours projected at each site. MSI learned from this experience that an agreed-upon metric or process should exist to determine the time and person value of one site visit for each project. This should be clearly defined and documented for each project and agreed on before the first site visit. For the duration of ARTF II, MSI adopted a policy of maximizing staff utilization in support of the client rather than strictly adhering to the nominal on-site time metric. Consequently, budgeting and prioritization remains obscure and often inconsistent, unnecessarily adding performance risk to both the TMP and the client.

One possible metric is to set a standard amount of time and staff for one site visit across projects, e.g., one site visit equals three monitors on site for five hours. Each task team leader and safeguards team members can work with the TPM provider to determine which data should be collected for each project. The number of site visits is agreed on by adapting the three-monitor and five-hour metric to each project; the proposed number of site visits can be sent by the task team leader to the contract officer for final approval, making an formal record for each project. Regardless of the time and staff resource estimate, a clearly documented understanding of the monitoring cost should be established upfront. Alternately, the TPM contract could be restructured as cost-plus-fixed fee, allowing the level of effort (LOE) to tie directly to various resourcing requirements at any level of services.

7.6 Corruption Allegations

In the second half of ARTF II, MSI increasingly received accusations of corruption and mismanagement from community members and district-level government employees, many of which were likely prompted by anti-government elements. The TPM role does not provide for review of most supporting documents, making substantiation impossible and complicating the process of monitoring. MSI reported all allegations to the World Bank task team, who in turn consulted with the ministry project teams. The TPM can be used to gather factual information from the subproject site when there have been complaints from community members or others regarding project performance. For these assignments, it is best to dispatch QA managers from the Kabul office to complete the fieldwork. QA managers sit with the ministry project teams four days a week and can leverage their relationships to coordinate site visits to evaluate specific allegations. The QA managers objectively observe project implementation and processes, providing unbiased feedback of project challenges and successes to the World Bank. The approach for reporting corruption allegations should be collaboratively determined by the TPM provider and the task team leader(s) with input from the safeguards teams to ensure that all requisite data are collected and monitoring teams are not put in harm's way. Although a useful added service, care must be taken as investigating corruption allegations would likely increase the potential risk to staff members, requiring substantial mitigation measures.

7.7 Rectification Rates

Rectification rates are a valuable metric to assess project-specific performance, but context must be considered, and cross-project comparisons can be misleading. If used to identify within project trends and as an indicator of provincial management unit (PMU) response, changes in rectification rates across geography and over time are one element of a strong supervision plan. Although tempting, evaluating rates across projects or at a single point in time results in misleading conclusions about project management across the portfolio. The diverse project size covered by TPM is one reason why projects should not be compared.

For example, comparing AAIP to CCAP demonstrates the flaw of comparing rectification rates across projects. AAIP has 30 research farms and seed quarantine stations, all of which are included under TPM. Each AAIP site visit takes two to three days to complete because they have multiple structures to inspect. The CCAP has tens of thousands of subprojects across Afghanistan, with 1,000 subprojects covered under TPM. Each site visit for CCAP takes four to six hours to complete since the subprojects are relatively small and often constructed by community members. The volume of rectifications for these projects is substantially different and the complexity of resolution varies. Also, AAIP has a more centralized management structure while CCAP rectifications may require a longer process to resolve if they are related to a larger design or implementation change. The specificity of deviation reporting also varies by the completeness of bill of quantity (BOQ) and design documents, the project operations manual, and other factors unique to each project.

The CCAP produces deviation reporting on more than 100 subprojects each month, while AAIP received reporting on approximately nine subprojects each month. The AAIP subprojects are large scale research farms and seed quarantine stations comprised of multiple large buildings constructed by professional contractors while the CCAP funds small scale, community constructed service provision subprojects such as road paving and bore wells. The number of deviations for the CCAP is higher than AAIP—not necessarily because the construction quality was poorer, but because 10 times the number of subprojects are inspected each month. This means a greater number (and less significant) deviations are identified in a shorter time, leaving ministry project teams with more deviations to rectify each month.

Comparison of annual rectification rates should likewise not be compared simply because each year the number of projects has increased under TPM. Over time, the TPM focus has changed in differing ways for various projects, making such comparisons misleading.

Project-specific rectification rates over time can be compared but, again, context is crucial to understanding what the numbers are saying. The time between deviation reporting and rectification was reduced when MSI introduced the digital reporting system (Ardea) to the ministry project teams. The number of projects covered each year for a given project and the number of district engineers available to provide rectification evidence from the ministry project teams all impact the rectification rates. Although inconclusive, available data indicates that the implementation of Ardea helped ministries track rectification and resulted in reductions in the time required to rectify. It is also likely that the systematization of rectification reporting improved with the deployment of Ardea, further improving rectification rates. Finally, the Ardea system itself makes rectification reporting easier for ministries, indicating that some improvement resulted from improved reporting rather than improved rectification itself.

7.8 Coordination Meetings

Monthly coordination meetings between MSI and the ministry project teams are effective for deviation rectification and project improvement. Over the contract period, MSI consistently observed that coordination meetings are more useful when World Bank Task Team leaders or staff are present, either in-person or virtually. The World Bank's presence at these monthly meetings adds legitimacy to TPM findings and demonstrated task team priorities. It also provides another opportunity for World Bank staff to support the ministry project team's own implementation efforts to monitor facilitating partners. Rectification and project improvement plans discussed in World Bank staff presence provide a common understanding of next steps among the TPM, Task Team and ministry, reducing confusion and later controversy about the agreed-on plan.

Recommendations

8.1 TPM Early Introduction

The earlier TPM is introduced to a project, the more opportunities the World Bank will have to identify challenges and make strategic changes. Ideally, TPM should be introduced immediately following the completion of the operations manual, detailing how the project will be implemented. Engaging TPM during initial project planning can also help ministries plan their internal monitoring and quality assurance processes and identify staffing and resource limitations.

If a pilot phase is proposed for a project, TPM can provide valuable feedback from beneficiaries and facilitating partners, informing project teams of possible challenges during full implementation. MSI provided early intervention TPM for the EZ-Kar business Gozar pilot by sending a team to monitor the pilot training sessions, identify challenges to implementation, and provide recommendations to the World Bank task team leaders, who then shared TPM recommendations with the IDLG project team.

8.2 Increase Safeguards and Gender Inclusion

World Bank environmental, social, and gender specialists should be included in all TPM instrument design and reporting structure conversations for each project. In Year IV, MSI worked closely with environmental, social, and gender specialists to revise site visit instruments. This work is not finished, and each specialist has unique insights into how TPM can improve to help the World Bank protect Afghan communities and minimize the potential for project-related harm.

Referring to the Environmental Social Framework is not sufficient to understand how safeguards risks can arise during project implementation because these documents alone cannot explain how the project will be implemented. Again, as soon as the operations manual is completed, the task team leaders and safeguards teams should meet with the TPM provider to make sure all areas of interest are clearly defined and included in site visit instruments.

8.3 Monthly Safety And Insecurity Reporting

A standardized reporting requirement for security challenges should be introduced to TPM. Anytime a TPM monitoring team uses an alternate site instead of the site they planned to visit, the name of the province district and village of the original site, and the alternate site, including the reason for using it, should be recorded and reported monthly. This will help the World Bank, donor community, and ministry project teams identify patterns of insecurity and is valuable information for project implementation.

8.4 Use Open Camera for Safeguards Verification by Ministries

Facilitating partners and ministry project teams who directly implement ARTF III projects should be required to use the open camera application or similar software to provide photographic evidence with geotagged and time-stamped photos of labor camps and construction when monitoring teams observe active construction. Although it's a simple and inexpensive tool, the evidence produced can fundamentally improve the quality of all field reporting. Health and safety issues such as laborers not wearing personal protective equipment (PPE) or the absence of first aid kits on a work site can be easily identified by the ministries if the World Bank were to require this or similar measures prior to any construction effort. Any TPM provider should be able to train all relevant ministries to use this or similar free software.

8.5 Ardea for World Bank Staff

Ardea is available to all World Bank staff and many field and HQ staff have access to the system, but few use it. Examining reasons for low usage among task teams requires open dialog and effort, but has the potential to reduce staff workloads and improve project supervision. For ARTF III, Ardea or a similar dashboarding tool should be implemented with the goal of increasing use by project teams as a routine part of their business processes. This also means Task Team leaders should initiate discussions of the overall project needs with the environmental, social, and gender specialists so they can then provide clear instructions to the TPM provider for high-value data presentation. A more functional dashboard will allow World Bank staff to access project-specific data anytime and quickly respond to donor inquiries with minimal effort.

8.6 Deep Dives and Special Study Resources

In Year IV, requests for special studies around areas of concern identified during routine TPM increased noticeably. While it was possible to respond to most of these requests, some studies, such as the structural assessment of TVET facilities, were not possible with the resources and time available. Additional resources could be set aside for deep dives and special studies to explain and identify the causes of issues identified in routine TPM or of special interest to ARTF task teams. Under the current contracting mechanism, staffing levels are set by the site visit metric. While it's an important deliverable, this metric can often lead to equivalency estimation that cannot account for special skills or equipment needed for special studies. During ARTF II, the good faith of all parties allowed the maximum possible flexibility, but it did complicate cost estimation. By setting aside financial resources each year of ARTF III for special studies, the World Bank and the TPM provider will improve agility and potentially reduce cost uncertainty with an attendant reduction in overall cost.

Annex 1 – Infrastructure Site Listing

Submitted as a separate spreadsheet file (named ARTF II Final Site Listing.xlsx).

Annex 2 – Non-Infrastructure Site Listing

Submitted as a separate spreadsheet file (named ARTF II Final Site Listing.xlsx).

Annex 3 – Complete List Of Deliverables And Final Accounting Of Contract Costs

Contract 8005414

Afghan Reconstruction Trust Fund

Final Accounting of Contract Costs - SUMMARY

	Contract Amount	Paid Amount	Pending Payment (as of writing)	Balance Not Required
Fixed Price Deliverables	\$29,084,199.04	\$26,457,128.10	\$2,627,070.90	\$0.00
BRT Reimbursable	\$1,209,500.24	\$846,668.05	\$316,699.91	\$46,132.28
Expatriate Tax Reimbursable	\$288,572.00	\$210,631.80	\$77,940.20	\$0.00
Total Contract Amount	\$30,582,271.24	\$27,514,427.95	\$3,021,711.01	\$46,132.28

Final Accounting of Contract Costs Fixed Price Deliverables

Billing Number	Invoice Number	Invoice Date	Description	Contract Amount	Actual Amount Reimbursed	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)	Contract Reference
Inv 001	36948	11/19/15	Contract Signing	\$1,045,141.00	\$1,045,141.00			Contract
Inv 002	37128	12/21/15	Inception Report	\$3,135,423.00	\$3,135,423.00			Contract
Inv 003	37316	2/5/16	2015 December Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 004	37595	3/18/16	2016 January Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 005	37791	4/25/16	2016 February Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 006	37794	5/4/16	2016 1st Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 007	37794	5/17/16	2016 March Monthly Report	\$325,155.00	\$325,155.00			Contract

Billing Number	Invoice Number	Invoice Date	Description	Contract Amount	Actual Amount Reimbursed	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)	Contract Reference
Inv 008	37922	6/17/16	2016 April Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 010	38196	7/12/16	2016 May Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 011	38202	7/15/16	2016 2nd Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 012	38346	8/23/16	2016 June Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 013	38519	9/27/16	2016 July Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 014	38615	10/17/16	2016 August Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 015	38695	11/8/16	2016 3rd Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 016	38846	11/18/16	2016 September Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 017	39220	2/10/17	2016 October Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 018	39224	2/10/17	2016 November Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 019	39225	2/10/17	2016 December Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 021	39399	3/17/17	2017 January Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 022	39537	4/18/17	2016 4th Quarterly Report + 1st Annual	\$325,155.00	\$325,155.00			Contract
Inv 023	39546	4/25/17	2017 February Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 024	39665	5/31/17	2017 1st Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 025	39734	6/7/17	2017 March Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 026	39782	6/22/17	2017 April Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 027	39894	7/18/17	2017 2nd Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 028	39910	7/25/17	2017 May Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 029	40009	8/23/17	2017 June Monthly Report	\$325,155.00	\$325,155.00			Contract

Billing Number	Invoice Number	Invoice Date	Description	Contract Amount	Actual Amount Reimbursed	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)	Contract Reference
Inv 031	40566	12/20/17	2017 July Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 032	40569	12/20/17	2017 August Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 033	40571	12/20/17	2017 September Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 034	40572	12/20/17	2017 October Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 035	41533	3/22/18	2017 November Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 036	41578	3/22/18	2017 December Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 037	41579	3/22/18	2018 January Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 038	41964	4/26/18	2017 3rd Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 039	41974	4/26/18	2017 4th Quarterly Report + 2nd Annual	\$325,155.00	\$325,155.00			Contract
Inv 040	41979	4/26/18	2018 February Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 041	41980	4/26/18	2018 March Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 042	42970	8/31/18	April 2018 Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 043	42973	8/31/18	May 2018 Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 044	42974	8/31/18	June 2018 Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 045	43417	9/17/18	2018 July Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 046	43534	10/5/18	2018 August Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 047	51372915	11/8/18	2018 1st Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 048	51375317	11/8/18	2018 2nd Quarterly Report	\$325,155.00	\$325,155.00			Contract
Inv 049	51375722	11/9/18	2018 September Monthly Report	\$325,155.00	\$325,155.00			Contract
Inv 051	51375922	11/9/18	2018 Quarter III Report	\$325,155.00	\$325,155.00			Contract

Billing Number	Invoice Number	Invoice Date	Description	Contract Amount	Actual Amount Reimbursed	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)	Contract Reference
Inv 052	51407100	11/9/18	November 2018 Report	\$506,429.64	\$506,429.64			Mod 3
Inv 053	51407100	2/8/19	December 2018 Report	\$506,429.64	\$506,429.64			Mod 3
Inv 054	51428188	4/8/19	January 2019 Report	\$506,429.64	\$506,429.64			Mod 3
Inv 055	51437721	5/3/19	February 2019 Report	\$506,429.64	\$506,429.64			Mod 3
Inv 056	51445030	5/22/19	March 2019 Report	\$281,349.80	\$281,349.80			Mod 3
Inv 057	51446371	5/24/19	2019 YR IV QI Report	\$506,429.64	\$506,429.64			Mod 3
Inv 058	51454235	6/17/19	April 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 059	51458272	6/27/19	May 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 061	51484730	9/6/19	Year IV Q2 Report	\$536,787.90	\$536,787.90			Mod 6
Inv 062	51499655	10/3/19	June 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 062	51499655	10/3/19	July 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 063	51537107	12/27/19	August 2019 Report	\$536,787.90	\$536,787.90			Mod 6
Inv 063	51537107	12/27/19	September 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 064	51540034	12/27/19	Year IV Q3 Report	\$536,787.90	\$536,787.90			Mod 6
Inv 065	51561372	2/21/20	October 2019 Monthly Report	\$536,787.90	\$536,787.90			Mod 6
Inv 066		4/20/20	Year IV Q4/ Annual Report	\$536,787.90		\$536,787.90		Mod 6
Inv 066		4/20/20	Completion Report	\$2,090,283.00		\$2,090,283.00		Contract
			TOTAL	\$29,084,199.00	\$26,457,128.10	\$2,627,070.90	\$29,084,199.00	

Contract #	FP Amount
8005414 - Contract	\$20,902,822.00
8005414 - Mod 3	\$2,813,498.04
8005414 - Mod 6	\$5,367,879.00
Totals	\$29,084,199.04

Final Accounting of Contract Costs Reimbursable Business Receipt Tax (BRT)

Billing Number	Invoice Number	Invoice Date	Description	Reporting Period	Invoice Total	BRT Amount (4%)	Actual Amount Reimbursed WB	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)
Inv 009	38076	6/23/16	Business Receipt Tax	Nov 2015- April 2016	\$5,806,339.00	\$232,253.56	\$232,252.85		
Inv 020	39229	2/10/17	Business Receipt Tax	May 2016- Oct 2016	\$2,926,395.00	\$117,055.80	\$128,123.17		
Inv 030	40124	9/15/17	Business Receipt Tax	Nov 2016- April 2017	\$2,601,240.00	\$104,049.60	\$98,837.06		
Inv 050	51375821	11/9/18	Business Receipt Tax	May 2017- April 2018	\$4,552,170.00	\$182,086.80	\$182,086.96		
Inv 060	51466196	7/19/19	Business Receipt Tax	Nov 2018- Jan 2019	\$4,952,113.56	\$198,084.54	\$205,368.01		
Inv 067			Business Receipt Tax	Feb 2019-August 2019	\$4,545,294.74	\$181,811.79	-	\$181,811.79	
Inv 068			Business Receipt Tax	Sep 2020- Mar 2020	\$3,700,646.70	\$148,025.87	-	\$134,888.12	
				TOTALS	\$29,084,199.00	\$1,163,367.96	\$846,668.05	\$316,699.91	\$1,163,367.96

Contract #	Reimbursable BRT Amount NTE	BRT Amount (4%)	Balance Not Required
8005414 - Initial	\$859,570.00	\$836,112.88	\$23,457.12
8005414 - Mod 3	\$114,921.24	\$112,539.92	\$2,381.32
8005414 - Mod 6	\$235,009.00	\$214,715.16	\$20,293.84
Totals	\$1,209,500.24	\$1,163,367.96	\$46,132.28

Final Accounting of Contract Costs Reimbursable Expatriate Income Tax

Billing Number	Invoice Number	Invoice Date	Description	Reporting Period	Actual Amount Reimbursed	Pending Amount (as of writing)	Total Reimbursed (Actual + Pending)
Inv 009	38073	6/23/16	Expat Income Tax	November 2015- April 2016	\$44,405.00		
lnv 020	39229	2/10/17	Expat Income Tax	April 2016-October 2016	\$66,719.00		
Inv 030	40124	9/15/17	Expat Income Tax	November 2016- Feb 2017	\$44,684.00		
Inv 067	TBD	4/20/20	Expat Income Tax	March 2017-October 2018		\$25,567.40	
Inv 060	51466196	7/19/19	Expat Income Tax	November 2018- May 2019	54,823.80		
Inv 067	TBD	4/20/20	Expat Income Tax	June 2019-December 2019		\$52,372.80	
				Total	\$210,631.80	\$77,940.20	\$288,572.00

Contract #	Reimbursable Expat Income Tax NTE
8005414 - Initial	\$156,618.00
8005414 - Mod 3	\$59,533.00
8005414 - Mod 6	\$72,421.00
Totals	\$288,572.00

Annex 4 – Affirmation Of Contractual Compliance

Information Security

MSI took significant measures to ensure Company and project data security was safeguarded. On ARTF II, with significant support from our Client Solutions Team based in Arlington, Virginia, MSI used a variety of applications to manage project files, data, and deliverables.

Ardea is a web-based application used to manage, visualize, and take action on TPM data collected by Fulcrum. Ardea is a custom solution hosted on AWS, a FEDRAMP-compliant cloud hosting service, with weekly network penetration tests provided by a third-party. All information transmitted to and from Ardea is encrypted using 256-bit SSL. Access to Ardea requires an account with strong password authentication.

Fulcrum is a mobile and web-based application used to remotely collect, process, and approve TPM data collected in the field. All information transmitted to and from Fulcrum is encrypted using 256-bit SSL (TLS). Data at rest is encrypted using AES-256, including all media files. All data is backed up nightly and retained for 30 days. Data changes, including edits and deletes, are stored for each record. Access to Fulcrum requires an account with strong password authentication.

Egnyte is used to store project files and deliverables. Access to Egnyte is secured using corporate logins with strong password requirements and rotation. Folder-level permissions and roles limit file read, write, and delete abilities only to staff who require access to complete a work function. All actions in Egnyte are logged and stored, including permission changes. Egnyte uses 256-bit AES file encryption with unique encryption keys for files at rest and uses SSL protocol with 256-bit encryption for all data-transfer sessions. Egnyte data centers are SSAE-16 Type 11 compliant with N+1 redundancy.

Duty of Care and Security

MSI places the safety and security of its staff above all else. MSI issued the final approved version of the ARTF Project Safety and Security Manual (PSSM) on February 5, 2016. The Safety and Security Manual was written specifically to outline our approach, resources, and crisis response capabilities, as well as how individuals can participate effectively to help keep staff, consultants, and visitors safe and secure. While it is our hope that circumstances never warrant the implementation of any part of this plan, we have attempted to address eventualities that may present themselves.

The environment in a majority of the countries where we operate is such that security is the primary consideration in the successful operations of any MSI initiative. We have designed our security platform to provide full-spectrum coverage that protects our staff and physical assets, thus enabling an environment in which we can achieve significant development results and impact.

Our use of a low-key/tactical, small-footprint strategy minimizes attention drawn to the organization and its locations, activities, and personnel. We will never be able to design a one-size-fits-all response appropriate to every security-related situation, but the guidelines herein may prove helpful in minimizing the adverse impact that security incidents may have upon staff and property.

MSI subcontracted the Risk Management Company (RMC), GardaWorld, to provide a project risk manager, team leaders, and drivers in support of the ARTF II Project. GardaWorld provided advisory and travel coordination services as well as any necessary training, intelligence/risk advisory services, PPE, all necessary communications, and operational equipment to deliver against this statement of work and operator-level care and maintenance of MSI-owned equipment already installed in the project offices and accommodations. GardaWorld provides highly experienced and well-trained TCN personnel who were not only proficient in their assigned tasks, but familiar and able to fulfill other roles as a necessity in operational comprehension, sustainment, and congruency.

The Subcontractor maintained detailed administrative files, which included the assigned project risk manager and other staff personnel records, any investigation records, and training records.

The Subcontractor ensured that the assigned project risk manager and staff were able to:

- Provide security advice and expertise to the ARTF Project to maximize the safety and effectiveness of the project in the current Afghan environment, including, but not limited to, maintaining up-to-the-minute security status in all areas where project employees are working or moving, briefings on all activity that can impact the functioning of the project, and advising MSI personnel on risks involved with any given action;
- Subcontractor ensuring that all paperwork, licenses, and visas associated with Subcontractor's staff are current and fully compliant with Afghan law);
- Manage the project drivers, including planning and preparing all movements and assuring the working order and maintenance of the vehicles;
- Provide both static and mobile protection consultancy services;
- Prevent unauthorized access, maintain order, and deter criminal activity in and around the MSI/Kabul location; and
- Assure the safety of ARTF II Project staff in the event of attack.

The Subcontractor's Mobile Security Approach in Afghanistan:

- Close Protection Doctrine and Standard Operating Procedures.
- Security teams adopt a nonthreatening stance to dress, behave, and keep weapons out
 of view unless necessary to the task. They comport themselves in a quiet, professional,
 and ethical manner at all times. If required, however, they have the capability to respond
 with appropriate levels of force.
- Escort personnel who are highly trained and believe strongly in avoiding situations rather than attempting to deter them (deterrence is a secondary tactic).
- Risk analysis-led approach to help MSI staff move throughout the region and conduct daily activities in the most appropriate manner. Prior to any team deployment, a full intelligence study will be conducted. It will cover the task location and route; choke points; incidents based on trends; and favored alternatives from the base location. Routes with potential threats will be physically checked prior to movement. All clients will be fully briefed.
- A flexible PSD configuration using soft-skinned or armored vehicles and armed operators, dependent on circumstances and threat profile. All MSI expatriates will be escorted by trained, unarmed LN escorts, or armed (if Afghan law allows) expat security personnel due to the risk of kidnapping.

All long- and short-term accommodations for expatriate staff were at the Baron Hotel in Kabul. The project office space was also located on the premises of the Baron Hotel compound, ensuring a secure and comfortable workspace for all project staff. MSI's RMC coordinated closely with the Baron Hotel security team, including staff and visitor access to the compound, sharing safety and security information, and holding regular drills to ensure preparedness in case of a serious security incident.

Insurance

MSI took out and maintained insurance required to cover the responsibilities, liabilities, and risks that this assignment entailed. Within 10 days of the contract signing, MSI provided the Certificate of Liability Insurance, including contract number and vendor ID number, with the International Bank of Reconstruction and Development (IBRD) named by the liability insurance provider as an additional insured on the contract. The Certificate of Liability Insurance was renewed on an annual basis. In addition to the corporate liability insurance, MSI procured personal accident insurance, workers' compensation insurance and social insurance, as required by Afghan labor law, for all local and expatriate staff. MSI also secured auto insurance for all project vehicles, including third-party insurance.

Under ARTF, expatriate staff were covered for emergency medical and security evacuation through International SOS.

Tax Compliance

MSI and its subcontractors and all personnel paid all taxes, duties, fees, and other impositions in conjunction with the performance of the services of the contract.

Reimbursable expenses for income and business receipt taxes are being finalized at the time of writing this report.

Local Personnel Compensation

Based on the Government of Afghanistan's Presidential Decree No. 852 (dated July 2015), the Salary Scale and Guidelines were developed to harmonize the salary scales of national staff who work for the Afghan Government out of line positions of the official Tashkeel,

including Externally Funded Staff (EFS) who are funded by international donors. The World Bank is working with the Government of the Islamic Republic of Afghanistan (GIRoA) on initiatives designed to ensure that internationally-funded government personnel are compensated at sustainable standard rates.

The ARTF TPM II program was awarded November 1, 2015. At the time of award, the NTA guidelines were not yet finalized. NTA policies were adopted widely by international donors in Afghanistan with the announcement by USAID on July 29, 2016. However, MSI received written confirmation from the World Bank that we were not required to follow the NTA guidelines for our staff under ARTF TPM II. Therefore, MSI has followed standard hiring practices whereby salaries are paid based on pre-NTA market rates, candidate's experience, education, and salary history.

While the guidelines recognize that existing contracts cannot be immediately adjusted to align with the National Technical Assistance (NTA) salary scale, Management Systems International (MSI), per the World Bank's request has developed an assessment explaining Afghanistan Reconstruction Trust Fund Third Party Monitoring Program II (ARTF TPM II) Local Staff Compensation Plan. This assessment also describes to which NTA job categories the MSI/ARTF TPM II Program positions most closely align and explains any deviation between MSI's compensation and the NTA rates. Refer to Annex 5 of this report for more detailed information on the ARTF II Local Personnel Compensation Plan.

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Annex 5 – ARTF II Local Personnel Compensation Plan

ARTF TPM II Program – Local Personnel Compensation Plan

Objective:

Based on the Government of Afghanistan's Presiden ial Decree No. 852 (dated July 2015), the Salary Scale and Guidelines were developed to harmonize the salary scales of national staff who work for he Afghan Government out of line posi ions of the official Tashkeel¹, including Externally Funded Staff (EFS) who are funded by international donors. The World Bank is working with the Government of the Islamic Republic of Afghanistan (GIRoA) on initiatives designed to ensure that internationally-funded government personnel are compensated at sustainable standard rates.

The ARTF TPM II program was awarded November 1, 2015. At the time of award, the NTA guidelines were not yet finalized. NTA policies were adopted widely by international donors in Afghanistan with the announcement by USAID on July 29, 2016. However, MSI received written confirmation from the World Bank that we were not required to follow the NTA guidelines for our staff under ARTF TPM II. Therefore, MSI has followed standard hiring pracices whereby salaries are paid based on pre-NTA market rates, candidate's experience, education, and salary history.

While the guidelines recognize that existing contracts cannot be immediately adjusted to align with the National Technical Assistance (NTA) salary scale, Management Systems International (MSI), per the World Bank's request has developed an assessment explaining Afghanistan Reconstruction Trust Fund Third Party Monitoring Program II (ARTF TPM II) Local Staff Compensation Plan. This assessment also describes to which NTA job categories the MSI/ARTF TPM II Program positions most closely align and explains any deviation between MSI's compensation and the NTA rates.

Taking into consideration various job descriptions, all MSI/ARTF TPM II labor positions have been listed within he eight NTA categories (grades), based on each job's descrip ion and responsibili ies.

Per the above, the table below summarizes where the MSI/ARTF TPM II positions would be placed in the NTA salary scale if assessed in accordance wi h the NTA guidelines, and where the salaries for the positions currently fall within the NTA scale.

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No.	MSI/ARTF TPM Position	NTA Grade that Meets the Position	NTA Grade Where MSI ARTF TPM II Salaries Fall*
001	Finance & Admin Manager	Grade B, Step 1 - 5	Grade A, Step 5 - 10
002	Compliance Manager	Grade B, Step 1 - 5	Grade B, Step 5 - 10
003	Deputy Compliance Manager	Grade B, Step 1 - 5	Grade B, Step 5 - 10
004	Knowledge Managers	Grade C, Step 1 - 5	Grade B, Step 1 - 10
005	ICT Specialist	Grade C, Step 1 - 5	Grade B, Step 1 - 10
006	GIS & Data Analyst	Grade C, Step 1 - 5	Grade D, Step 5 - 10
007	Citizen Monitors Coordinators	Grade D, Step 1 - 5	Grade D, Step 5 - 10
008	HR and Admin Officer	Grade D, Step 1 - 5	Grade D, Step 5 - 10
009	Procurement & Government Liaison Officer	Grade D, Step 1 - 5	Grade D, Step 1 - 5
010	Logistics, QC and Report Officer	Grade D, Step 1 - 5	Grade D, Step 1 - 5
011	Finance Officer	Grade D, Step 1 - 5	Grade D, Step 1 - 5
010	Field Facility and	Condu E. Chan 1. E	Grade C, 5 - 10 and
012	Field Engineers	Grade E, Step 1 - 5	Grade D, 1 - 5

Detailed explanation of this summary is presented below, organized by NTA Grade Categories.

NTA Scale Category A

Per NTA Guidelines, the Category A description is presented below:

Category (Grade) A						
Purpose	Category Dimensions	General Skills	Remuneration			
Management, assignment and implementation of visions and strategic plans of the organization and having the authority to take decisions on behalf of organizations	Management responsibility of administration, including HR, Financial and others.	Develop overall policies and strategies for the organization identify organizational priorities, and effective management of human, financial and others.	Low 160,000 AFN/ Monthly			
Examples	Develop administrative strategies divisionally and across the organization and approval of various plans.	bility to implement working leadership model in the organization , maximizing the contribution of team.				
Equivalent of Director General or Grade I level positions in Civil Service	Authority for taking final decions on organizational level.	Ability to professionally communicate about the organization and represent the organization/project at national and international levels.	Mid 231,111 AFN/ Monthly			
		Minimum Requirements:				
Director of the Country or Zone Level	Other reconscibilities will be mentioned in the	Doctorate Degree with 3 years of Relevant Experience.				
	contracts of the individual.	Masters Degree with 5 years of Relevant Experience.	High 231,111 AFN/Monthly			
Senior Advisors or Ministers		Bachellors Degree with 10 years of Relevant Experience.				

1. MSI/ARTF TPM II Positions that fall with NTA Category A

MSI currently has no positions that would fall under this NTA category.

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NTA Scale Category B

Per NTA Guidelines, the Category B description is presented below:

NTA Labor Category			
Category (Grade) B			
Purpose	Dimensions	General Skills	Remuneration
Implementation and arrangement of administrative and technical tasks of the organization or project	Manage organization resources as per the contract.	Ability to prepare plan for organization or department and responsibility of managing financial, HR and technical fields.	Low 128,000 AFN/ Monthly
Examples	Contributes to the development of the organization al strategies and implement them across the division or organization/ project	Ability to prepare documents in the technical fields and to represent it in the related meetings.	
Head of Division		Ability of managing and liaison with outside of organization or project.	Mid 184,889 AFN/ Monthly
Senior Technical Specialist		Minimum Requirements:	
Senior Advisor or Specialist		Master's or its equivalent degree with 5 years of working experience or;	
Project Manager			
Deputy project managers National Level	Taking the required Decisions, planning and finding solutions for various problems and challenges.	Bachelor's degree with 7 years of relevant experience	High 256,000 AFN/ Monthly
Project coordinators (national level)			
Equivalent to Grade 2 civil servant			

2. MSI/ARTF TPM II Positions that fall with NTA Category B

2.1. Finance and Admin Manager:

2.1.1. Job Description:

The Finance and Administration Manager (FAM) is responsible for managing the overall accounting and financial control systems for MSI-ARTF TPM and for ensuring that adequate and appropriate internal controls are in place to meet generally recognized accounting standards; MSI's Financial Systems and Procedures. The FAM manages all bookkeeping, bank accounts, and cash flow to ensure sufficient funds are available for effective and efficient project implementation. In addition, the FAM supervises the Human Resources/Administration (HR/A) Officer to ensure all human resources tasks follow MSI's HR Systems and Procedures.

2.1.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Finance and Administration Manager position falls within Grade B of the Salary Scale. The dimensions of this NTA category lists "Manage organization resources as per the contract", the key role of the FAM is to oversee all budgetary and accounting procedures in the field in compliance with the donors as well as MSI's guidelines and regulations.

The FAM position also complies with the NTA Grade's general skills "Ability to prepare plan for organization or department and responsibility of managing financial, HR and technical fields" as the role includes the responsibility to supervise all procurement, financial, human resources, and administrative staff.

2.1.3. Deviation from the NTA

As per the NTA guidelines, the Finance and Administration Manager position salary should be Grade B between Step 1 to 5. However, due to MSI's previous hiring practices and the incumbent's salary history, his wages fall between the mid and high tranches of the NTA Grac A.

2.2. Compliance Manager

2.2.1. Job Description:

The MSI Program Compliance Manager's role is to assist the Knowledge Managers in understanding and effectively utilizing World Bank project data collected by MSI's partners in t field as well as track its use by the line ministries and report on the level of utilization to the Wc Bank.

The Program Compliance Manager also facilitates data collection and utilization training to the Knowledge Managers and the line ministries and documents their monthly accomplishments.

Together with the Team Lead, the Compliance Manager also examines and analyzes data collected within the scope of the ARTF II Monitoring Program. The results of this analytical wo are documented in quarterly reports to the donor.

2.2.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Compliance Manager position falls within Grade B of the Salary Scale. The dimensions of this NTA grade lists "contributes to the development of organizational strategies and implement them across the division or organizat project" The MSI Compliance Manager is respons ble to ensure that the Knowledge Managers understand and effectively use the data being collected by the project is properly explained to line ministries. This position also examines and analysis the data collected within the project's scope.

2.2.3. Deviation from the NTA

None. Per NTA Guidelines, the MSI TPM Compliance Manager's wages are in line with the appropriate NTA Grade and Step.

2.3. Deputy Compliance Manager

2.3.1. Job Description:

Under the direct supervision of the Compliance Manager, the Deputy Compliance Manager provides oversight for the ARTF Participatory Monitoring program, with additional support beir provided to the Program Compliance Manager.

The Deputy Compliance Manager also provides data collection and utilization training to relev ministry teams as needed in order to fully integrate citizen monitors (CMs) into a sustainable oversight program for Afghan government ministries supported by the World Bank's Third-Par Monitoring (TPM) program.

Together with MSI Program Compliance Manager and Team Lead, the Deputy Compliance Manager also examines and analyzes CM and TPM data collected within the scope of the AR II Monitoring Program for patterns not identified by the monitoring and reporting teams.

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2.3.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Deputy Compliance Manager position falls within Category B of the Salary Scale. The Deputy Compliance Manager role is as important as the Compliance Manager, since it includes the respons bility of overseeing the coordination with the line ministries for the transfer of monitoring program information on monthly, quarterly, and annual basis.

It also includes the responsibility to monitor program data and be the focal point to provide timely data, knowledge management support, and feedback when required to MSI Management, World Bank and Government of Afghanistan. These job requirements are in line with the NTA Grade B's dimension "Taking the required decisions, planning and finding solutions for various problems and challenges. Furthermore, the position is also compliant with the NTA Grade's general skills "ability of managing and liaison with outside of organizations and project."

2.3.3. Deviation from the NTA

As per the NTA guidelines, the Deputy Compliance Manager's salary should be at Grade B between step 1 and 5; however, based on the incumbent's education and salary history, his current wages are within the mid and high tranches of the same NTA grade.

NTA Scale Category C

Per NTA Guidelines, the Category C description is presented below:

NTA Labor Category			
Category (Grade) C			
Purpose	Dimensions	General Skills	Remuneration
Development and implementation of certain specialized functions and activities.	Managing/supervising organization resources within defined boundaries. Implementation of operational plans of organization or project.	Management and team leadership ability.	Low: 76,000 AFN/ Monthly
Examples:		Having the required skills in general management	
Advisor	Provision and arrangement of an organization or project internal policies or terms.	Writing and communication	Mid: 104,444 AFN/ Monthly
Technical Specialist		ability in professional and related areas.	
Managers	Providing professional/technical advice to senior managers in the specialized areas.	Minimum Requirements:	
Senior Officers'		Bachelor Degree with 5 years experience in the related field.	High: 140,000 AFN/ Monthly
Equivalent to Grade 3 civil servant	Project management and budgeting for the function or activities being managed.		

3. MSI/ARTF TPM II Positions that fall in NTA Category C

3.1. Knowledge Managers:

3.1.1. Job Description:

The Knowledge Manager assists the line ministry understand and effectively utilize World Bank project data collected by MSI's partners in the field as well as track the line ministry's use of fie data collected by MSI and report on the level of utilization to the World Bank. The Knowledge Manager also provides data collection and utilization training to line Ministry and document thei monthly accomplishments.

Together with MSI Program Compliance Manager and Team Lead, the Knowledge Manager all examines and analyzes data collected within the scope of the ARTF II Monitoring Program for patterns not identified by the monitoring and reporting teams. The results of this analytical work are documented in the quarterly reports to the World Bank.

The KM is also respons ble to review all relevant site visit reports with the relevant line ministry team and address any discrepancies prior to monthly submission to the World Bank. Under direction of the MSI Team Lead and together with specialists at MSI HQ, the KM conducts data driven, utilization-focused analysis of information collected in the field in service of identifying patterns not immediately recognized by MSI, partners and GoA ministries.

3.1.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Knowledge Manager positions fall within Grade C of the Salary Scale. Each ARTF projects being monitored by MSI/ARTF TPM Project has a designated KM who is responsible for examining and analyzing the data being collected I Field Engineers. The role of the KMs is to also review the relevant site visits reports with the relevant line ministry team and address any discrepancies. These responsibilities are complian with the NTA Grade C dimension "providing professional/technical advice to senior managers ir the specialized areas" they are also in line with the Grade's general skills "Writing and communication ability in professional and related area".

3.1.3. Deviation from the NTA

As per NTA guidelines, the Knowledge Manager's salary should be at Grade C between Step 1 5. However, based on the years of experience and salary history, MSI TPM Knowledge Manager's wages varies between the low and high tranches of NTA Grade B.

3.2. Information Communication Technology (ICT) Specialist

3.2.1. Job Description:

This position is respons ble for managing all organization technologies and providing technolog support and training. Primary duties include: analyzing systems and processes; maintaining workstations and networks and maintaining IT polices. All ARTF Third Party Monitoring prograr ICT- related activities, Collection, preparation and management of all data supporting the Fulcru app platform of applications, and Preparing the ICT Equipment, Smart-phones and training material for efficient use of technology.

3.2.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the ICT Specialist position falls within Grade C the Salary Scale. This position is in line with the purpose stated in the guideline "Development and implementation of certain specialized functions and activities" as the role is responsible for the development of all data collection tools through the web-based data collection application used by the field engineers.

3.2.3. Deviation from the NTA

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As per NTA guidelines, The ICT Specialist's salary should fall in Grade C between Step 1 to 5. However, based on the incumbent's years of experience salary history, and MSI's previous hiring practices, his current wages are within the low and mid tranches of the NTA Grade B.

3.3. Geographic Information Systems (GIS) and Data Analyst

3.3.1.Job Description:

This position is respons ble for data management, including Quality Control; Perform GIS data quality control of field data. The process of quality control includes reviewing the data for completeness and accuracy, identifying, correcting errors or omissions in the data and insuring that the data is stored correctly in the project GIS database, including, correct coordinate projection and metadata.

Perform Geospatial analysis as required; which use imagery to analyze objects and environments. Working closely with technical report writers in order to provide required data such as chart, graphs, tables and maps for monthly summery and quarterly and annual report for World Bank.

3.3.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the GIS and Data Analyst position falls within Grade C of the Salary Scale. As per job description, this role is respons ble to perform geospatial analysis for the data collection as required. This is in line with the NTA Grade Purpose "Development and implementation of certain functions and activities". In this case, the GIS and Data Analyst role is also respons ble for the data management, including quality control.

3.3.3.Deviation from the NTA

Per NTA guidelines, The GIS and Data Analyst's salary should be at Grade C between Step 1 to 5. However, based on experience, salary history, and MSI's previous hiring practices, the incumbent's wages are within the mid and high tranches of the NTA Grade D.

NTA Scale Category D

Per NTA Guidelines, the Category D description is presented below

NTA Labor Category			
Category (Grade) D			
Purpose	Dimensions	General Skills	Remuneration
To provide support to and implement technical and managerial activities.	Preparing financial operational , technical and other plans for related field of an organization or project.	Ability to implement operational plans of organization or project.	Low: 38,000 AFN/ Monthly
Examples:		Having required skills in related technical . field.	
Officer	Implementing related part of the organization or project working plan.		Mid: 60,667 AFN/ Monthly
	Support to and implementing the	Minimum Requirements:	
Senior Assistant	organization or project operational plans Supervising and managing related functional units.	Bachelor Degree with 4 years experience in the related field.	High: 89,000 AFN/ Monthly

4. MSI/ARTF TPM II Positions that fall in NTA Category D

4.1. Citizen Monitors (CM) Coordinators:

4.1.1.Job Description:

The Citizen Monitor Coordinators are responsible to collect, review, and categorize observatio submitted by Citizen Monitors (CMs) and accurately describe pertinent information presented photographs submitted by CMs. The CM Coordinators are to communicate with CMs to provide technical directions, receive updates regarding deviation rectification status, and resolve hardware/software related issues. CM Coordinators prepare and maintain an organized databa of CM observations for all ARTF projects. They are also in charge of preparing the Citizen Monitors payment and top up sheet in a monthly basis.

4.1.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the CM Coordinator positions fall within Grade of the Salary Scale. Their role is in line with the purpose of the said NTA category "developme and implementation of certain specific function and activities", their main responsibility is to manage the CMs and ensure that they receive technical directions and updates regarding deviation rectification status. They are also in charge of ensuring that the CMs have the tools required to complete their work.

4.1.3. Deviation from the NTA

The current CM Coordinator personnel wages are within the low and mid tranches of the NTA Grade D; however, based on MSI's previous hiring practices, the incumbents do not have the years of relevant experience required for this grade.

4.2. Human Resources and Administration Officer:

4.2.1. Job Description:

Under direct the supervision of the team lead, the human resources (HR) and admin officer is responsible for the compliance of MSI's HR and administrative policy and coordinates with the home office on human resources activities, such as employment, compensation, labor relation benefits, training, and employee services. He/she is respons ble for the up-to-date maintenanc of HR and personnel files for MSI-ARTF staff.

The HR and Admin Officer is also responsible to keep an up-to-date inventory record for all no IT equipment and furniture to ensure proper documentation of all assets/equipment being issu to or returned by ministries-based offices & ARTF staff. He/she is responsible to bring potentia personnel problems and achievements to the attention of the management.

4.2.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the HR and Admin Officer position falls within Grade D of the Salary Scale. Per NTA Grade's purpose, "To provide support to and implemen technical and managerial activities", we believe that fits perfect with what the role of this MSI's position is. The HR and Admin Officer is tasked with all responsibilities connected with employ and resource management. The role also requires that the donor, MSI policies and regulations are being followed when hiring all project personnel. Furthermore, the NTA lists "officers" as p of this grade's examples.

4.2.3. Deviation from the NTA

As per NTA guidelines, the HR and Administration Officer's salary be at Grade D between Step to 5. However, based MSI's previous hiring practices and the incumbent's salary history, her current wages are within the High tranches of NTA Grade D.

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4.3. Procurement and Government Liaison Officer:

4.3.1. Job Description:

Under the direct supervision of Team Lead, the Procurement and Government Liaison Officer is respons ble for providing support in procurement and government liaison activities in accordance with MSI's policies and procedures, this includes: Obtaining MoFA numbers, visas and work permits for the expatriate staff; procuring goods, services, airfare, food, office, and furnishing refurbishing MSI offices and ministry-embedded staff offices; Liaising with Finance, Transportation, Security, IT and all technical departments on interrelated issues and ensure their requirements are met and issues addressed in due course of time; Visiting ministry-embedded staff on periodic basis to assess/identify administrative and logistical needs and provide the required support in due time.

4.3.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Procurement and Government Liaison Officer position falls within Grade D of the Salary Scale. Per NTA Grade's purpose, "To provide support to and implement technical and managerial activities", we believe that fits perfect with what the role of this MSI's position is. The Procurement and Government Liaison Officer oversees the procurement of all project goods, ensuring that each purchase is in compliance with the dono as well as MSI's policies and regulations.

4.3.3. Deviation from the NTA

None. Per NTA guidelines, the MSI Procurement and Government Liaison Officer's wages are i line with the appropriate NTA Grade and Step.

4.4. Logistics, Quality Control and Report Officer:

4.4.1. Job Description:

The Logistics, QC and Report Officer focuses in three primary activities:

Administration and Logistics: Each month SA field staff must conduct approximately 200 subproject site visits across Afghanistan. The incumbent is responsible for coordinating administrative and logistic activities before and after each sub-project site visit mission.

<u>Program Compliance and Quality Control</u>: The incumbent performs quality control (QC) reviews on data at select steps in the workflow to ensure validity and integrity.

<u>Graphics and Reports:</u> The incumbent creates graphics, including maps, as directed for contracted deliverables, including Site Visit, Monthly, Quarterly and Annual Reports. Each month the incumbent collates the report package for submission to MSI HQ.

4.4.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Logistics, QC and Report Officer position falls within Grade D of the Salary Scale. Per the NTA category's purpose "to provide support to and implement technical and managerial activities", this position is responsible for conducting all quality control reviews on the data being collected in the field.

Deviation from the NTA

None. Per NTA guidelines, the MSI the MSI Logistics, QC and Report Officer's wages are in line with the appropriate NTA Grade and Step.

4.5. Finance Officer:

4.5.1. Job Description:

The Finance Officer is respons ble for managing overall accounting and book keeping for MSI-ARTF program and ensures that adequate and appropriate internal controls are in place to meet generally recognized accounting standards and MSI's policies and procedures. Specific areas of responsibility include financial report preparation, review and submission to MSI HQ, cash flow management. This includes: preparation of vouchers, data entry in QuickBooks accounting software, preparation of daily and monthly cash reconciliations, disbursement of monthly staff salary.

4.5.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Finance Officer position falls within Grade D of the Salary Scale. Per NTA category's dimensions "Preparing financial, operational, technical and other plans for related field of an organization or project" and "Implementing related part of the organization or project work plan" this MSI position is respons ble for managing overall accounting and book keeping for MSI-ARTF program and ensures that adequate and appropriate internal controls are in place to meet generally recognized accounting standards and MSI's policies and procedures.

Deviation from the NTA

None. Per NTA guidelines, the MSI Finance Officer's wages are in line with the appropriate NTA Grade and Step.

NTA Scale Category E

Per NTA Guidelines, the Category E description is presented below

NTA Labor Category					
Category (Grade) E					
Purpose	Dimensions	General Skills	Remuneration		
To perform operational/support, educational, technical and other tasks of the organization	Responsible for resources implementation within defined boundaries or a specialist area.	Ability to prepare various operational plans of the organization or project.	Low 25,000 AFN/Monthly		
Examples	Implement departmental plans to agreed standards of the organization or project.	Having skills in the related technical field			
Community Mobilizer	Liaison and follow up activities with other	Minimum Requirements:	Mid 36,556 AFN/Monthly		
Surveyors	related departments, data collection, and preparation of project documents.	Bachelor degree with 2 years relevant experience			
Field Engineer	Communication with interested persons both internally and externally.	Baccalaureate degree with 4 years relevant experience	High 51,000 AFN/Monthly		

5. MSI/ARTF TPM II Positions that fall in NTA Category E

5.1. Field Engineers:

5.1.1.Job Description:
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The incumbent of this position is responsible for conducting a pre-determined number of detailed monitoring inspections of select ARTF funded projects each month following a data collection protocol and using a World Bank-approved checklist, while complying with MSI security procedures. After each mission the incumbent will diligently review and correct, where necessary, all the collected data and when finished, transfer all the data to the MSI office in Kabul for further processing and reporting. He/she is responsible to thoroughly review all data collected based on MSI Quality Control (QC) standards, discuss remedial measures with relevant ministry staff where appropriate and provide capacity support to relevant ministry personnel to improve the quality of their oversight of contractors, including the development and maintenance of monitoring checklists.

5.1.2. Grade Justification:

Based on the NTA guidelines, MSI believes that the Field Engineer positions fall within Grade E of the Salary Scale. Per NTA category's dimensions "Responsible for resources implementation within defined boundaries or as specialist area" we believe that this MSI/ARTF TPM position meets this requirement, since the Field Engineers conduct a pre-determined number of detailed monitoring inspections of select ARTF funded projects each month following a data collection protocol and using a World Bank-approved checklist. Furthermore, the said NTA Category lists as examples positions like Community Mobilizer, Surveyors, and Field Engineers.

Deviation from the NTA

Per NTA guidelines, the Field Engineers' salaries should be at Grade E between Step 1 to 5. However, based on MSI's previous hiring practices, and the incumbents' salary history, the ARTF TPM Field Engineers' personnel wages vary between the mid tranches of Grade C and the high tranches of Grade D.

NTA Scale Category F

Per NTA Guidelines, the Category F description is presented below

Category (Grade) F					
Purpose	Dimensions	General Skills	Remuneration		
To perform administrative support task for the department.	Delivery of managerial and technical tasks of the organization or project.	Working ability in the field of management or support according to the internal terms of a project.	Low 22,000 AFN/Monthly		
Examples:		Having skills in the related technical field.			
Assistant	Assist in the implementation of working plans and reporting to the organization or project management.		Mid 30,000 AFN/ Monthly		
	Liaison and follow up activities with other related units of the organization or project.	Minimum Requirements:			
Clerk		Bachelor Degree with 2 years relevant experience or a baccalaureate degree with 4 years relevant experience.	High 40,000 AFN/ Monthly		
	Prepare and type documents, manage, the filing of the documents and coding when needed.				

6. MSI/ARTF TPM II Positions that fall with NTA Category F

MSI currently has no positions that would fall under this NTA category.

NTA Scale Category G

Per NTA Guidelines, the Category G description is presented below

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Category (Grade) G				
Purpose	Dimensions	General Skills	Remuneration	
To perform administrative support tasks of	Carrying out daily tasks that are assigned to them	The required skills as per the TOR of the		
the department.	by the organization or project.	position.		
Examples:		Produces work or conduct the assignment with acceptable standard.	Low 18,000 AFN/ Monthly	
Technician		Minimum Requirements:	Mid 25,556 AFN/ Monthly	
Driver		Baccalaureate degree from school/ education institute/ professional institute as per the requirement of the job.	ligh 35,001 AFN/ Monthly	

7. MSI/ARTF TPM II Positions that fall with NTA Category G

MSI currently has no positions that would fall under this NTA category.



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