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Islamic Republic of Afghanistan
Ministry of Rural Rehabilitation & Development

Women Economic Empowerment Rural Development Program (WEE-RDP)

Draft Pest Management Plant (PMP)

Safeguard Implementation Unit (SIU)

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Acronyms

AAIP	Afghanistan Agricultural Inputs Project
AREDP	Afghanistan Rural Enterprise Development Program
ARTF	Afghanistan Reconstruction Trust Fund
AXO	Abandoned Explosive Ordnance
BP	Bank Policy
CC	Citizens' Charter
CCAP	Citizens' Charter Afghanistan Project
CCNPP	Citizens' Charter National Priority Program
CDC	Community Development Council
CITES	Convention on the International Trade in Endangered Species of Wild Flora and Fauna
DAIL	Directorate of Agriculture, Irrigation and Livestock
DRRD	Directorate of Rural Rehabilitation and Development
DDT	Dichlorodiphenyltrichloroethane
DF	District Facilitator
EG	Enterprise Group
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FD	Forest Department
FM	Financial Management
FP	Facilitating Partner
GRC	Grievance Redressal Committee
GRM	Grievance Redressal Mechanism
GoIRA	Government of Islamic Republic of Afghanistan
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HH	Household
HCH	Hexachlorocyclohexane
HR	Human Resource
HED	Home Economy Directorate
IDA	International Development Association
IPM	Integrated Pest Management
IP	Implementing Partners
IPPC	International Plant Protection Council
MAIL	Ministry of Agriculture, Irrigation and Livestock
M & E	Monitoring and Evaluation
MFD	Maximizing Finance for Development
MFI	Microfinance Institution
MOCI	Ministry of Commerce and Industry
MOF	Ministry of Finance
MIS	Management System Information
MOLSAMD	Ministry of Labor, Social Affairs, Martyrs and Disabled
MOWA	Ministry of Women's Affairs
MOPH	Ministry of Public Health

MRRD	Ministry of Rural Rehabilitation and Development
MSME	Micro, Small, and Medium Enterprises
NEPA	National Environment Protection Agency
NEQS	National Environmental Quality Standards
NHLP	National Horticulture and Livestock Project
NGO	Non-Governmental Organization
OP	Operational Policy
OFWMP-AF	On Farm Water Management Project- Additional Financing
PA	Producer Association
PMP	Pest Management Plan
PDO	Project Development Objective
PG	Producer Group
PIU	Project Implementation Unit
PIC	Prior Informed Consent
PPQD	Plant Protection and Quarantine Department
POP	Persistent Organic Pollutants
SDG	Sustainable Development Goal
SG	Savings Group
SCG	Savings and Credit Group
SHG	Self-Help Group
SIU	Safeguard Implementation Unit
SME	Small and Medium Enterprise
SO	Social Organizer
SOP	Standard operating procedure
SPM	suspended particulate matter
ToT	Training of Trainers
VSLA	Village Savings and Loans Association
UNCCD	United Nations Convention to Combat Desertification
UNCBD	Convention on Biological Diversity
UNFCC	Unite Nations Framework Convention on Climate Change
UXO	Unexploded ordnance
WB	World Bank
WEE	Women's Economic Empowerment
WEE-NPP	Women's Economic Empowerment National Priority Program
WEE-RDP	Women's Economic Empowerment Rural Development Project

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Executive Summary

Project Background

WEE-RDP is designed to be a more women centric program and it would be scaled up to 34 provinces with better institutional alignment with WEE-NPP objectives. The new project intends to build on the overall experience of AREDP and would simultaneously leverage the institutional platform of CDCs established & nurtured under ongoing Citizen Charter program of MRRD. Under WEE-RDP, greater emphasis is being given to collaborating with non-governmental institutions, private sector entities, service providers and organizations and civil society organizations (CSOs) in implementation of project activities while fostering partnerships with both the public and private sector to leverage technical resources and access to finance. Synergies will also be built among potential government organizations (e.g. MoWA, MoLSAMD, MoCI, MAIL etc.) and non-government and civil society organizations. The project will follow a demand-driven/market-led approach to establish market linkages at the national, provincial and local levels and special emphasis will be given to identify & support women centric sub-sectors. Women led enterprises and its further aggregation to higher level institutions will be promoted under WEE-RDP.

Project Description

PDO Statement: "To increase social and economic empowerment of poor rural women in selected communities".

The project defines "social empowerment" as participation in community level women's institutions, with an implicit theory of change that such participation leads to social empowerment. These institutions will be provided seed capital, technical assistance, and be linked to formal financial institutions and markets to enable economic empowerment. "Economic empowerment" is defined in this project as having both the resources to advance economically and the power to make and act on economic decisions. Economic empowerment starts with fair and equal access to markets and institutions, but women also need agency and control over resources to ensure they benefit from economic activities. Economic empowerment also encompasses financial inclusion, which increases women's access to products and services to exercise control over money.

Followings are the components of WEE-RDP:

- Component - 1: Community Institution Development.
- Component - 2: Building Access to Finance and Linkages with Financial Institutions.
- Component - 3: Providing Technical Assistance and Improved access to Markets.
- Component - 4: Project Management and Knowledge Management (including implementation arrangements).

Potential Target Areas

WEE-RDP is a national program, it aims to work in 76 districts in total across all 34 provinces. While most provinces have at least 2 districts covered, it was also decided that in seven provinces only one district would be selected for the time being given the security situation. Subject to a more conducive security and enabling situation the second district may be taken up later. It is envisaged that WEE-RDP will create a total of 40,000 SHGs, 5,000 VSLAs, 5,000 EGs and 500 Pas spread over 6250 CDCs, since activities supported under component 3 could lead EGs and PAs to use pesticides for agriculture related works and agribusiness related activities.

Objective of Pest Management Plan

The objective of the PMP is to:

- Promote the use of environmentally friendly practices (hygienic, cultural, biological or natural control mechanisms and the judicious use of chemicals) in pest control;
- Provide awareness raising programs on the implementation of IPM;
- Promote and support safe, effective, socially and environmentally sound pest management.
- Ensure compliance with regional standards, laws and regulations;
- Ensure compliance with World Bank safeguard policy OP 4.09.

Pesticide Usage Patterns in Afghanistan

The current pesticide use pattern in Afghanistan indicates that pesticides are not used in the context of IPM. There is a great need for change in behavior and attitudes towards producers' dependence on pesticides. The IPM concept that is taking place in fruits production through NHLP, it should be adopted and extended to cereals and vegetable production to change producers' attitudes and behavior. The process of change is gradual and needs time to achieve it with success.

In addition, there are some traditional or cultural control methods, which are being used in Afghanistan such as:

- Burning of old crop debris to control stem borer pupae and soil insects.
- Early planting and timely weeding to control weeds and other pest.
- Hand picking and burning blister beetles adults.
- Uprooting weeds before flowering.
- Using repellants and noise devices to scare away village weaver birds.

Legal Framework

- Pesticide Law (2015)
- Environmental Law (2007)
- World Bank Safeguard Policies

- Environmental Assessment (OP/BP 4.01)
- Pest Management (OP 4.09)

Potential Environmental and Health Impacts of Pesticides under WEE-RDP

The potential environmental and health impacts of pesticides under WEE-RDP would be minimal, however, repeated application leads to loss of biodiversity and other environmental and health impacts. Many pesticides are not easily degradable, they persist in soil, leach to groundwater and surface water and contaminate the environment, depending on their chemical properties they can enter the organism, bio-accumulate in food chains and consequently influence also human health. Overall, intensive pesticide application results in several negative effects in the environment that cannot be ignored.

Many alternatives are available to reduce the effects pesticides have on the environment. Alternatives include IPM methods, manual removal, covering weeds with plastic, placing traps, removing pest breeding sites, maintaining healthy soils that breed healthy, more resistant plants, cropping native species that are naturally more resistant to native pests and supporting bio-control agents such as birds and other pest predators.

Capacity Strengthening and Awareness Raising

Safeguard Implementation Unit (SIU) of WEE-RDP has the responsibility of the proposed PMP implementation, although current capacity of SIU regarding the PMP implementation is low, for that reason, specialized study tours for SIU and ToT trainings for relevant regional, Facilitating Partners (FPs) staff and other stakeholders have been considered.

The program will also conduct awareness raising and training programs to the program beneficiaries i.e. VSLAs, EGs, and Pas on safe use of pesticides and adoption of Integrated Pest Management (IPM) practices, through formal and informal training sessions, workshops, flyers, posters and practical demonstration.

Institutional Arrangements

The body responsible for pesticide regulation in Afghanistan is the Plant Protection and Quarantine Department (PPQD) in Ministry of Agriculture, Irrigation and Livestock (MAIL). Though, it is anticipated that the activities under WEE-RDP would lead the some VSLAs and EGs to use some pesticides in order to protect their agri-based business, however, these practices might result negative environmental and health impacts. Therefore, the proposed PMP will address and mitigate issue related to safe use of the pesticide.

With close collaboration of MAIL/PPQD and DAIL offices, the proposed PMP will be implemented by SIU of WEERDP in the target areas of the program. SIU has two officers (male and female) at each regional office of WEE-RDP, they will provide awareness raising trainings and mobilization on improved IPM practices, safe pesticides, storage, handling and application.

In the meantime, there will be close coordination with NEPA during the implementation of PMP. WEE-RDP beneficiaries will participate in public awareness and social mobilization activities. In addition, NGOs and other environmental organizations of the civil society can also participate in informing, educating and sensitizing farmers and the general public on environmental and social aspects associated with the implementation the PMP.

PMP Budget

For comprehensive implementation of the proposed PMP, a budget of 79,000 US $ has been estimated, table-9 presents the cost of those activities that are likely to be covered under WEE-RDP.

1. Introduction

1.1 Project Background

The Mission of the Ministry of Rural Rehabilitation and Development (MRRD) is to ensure the social, economic, and political welfare of rural society, especially poor and vulnerable people, through the provision of basic services, strengthening local governance, and promoting sustainable livelihoods. MRRD accomplishes this mission through donor funded national programs in the areas of governance, infrastructure and economic growth.

Afghanistan Rural Enterprise Development Program (AREDP) over the years while working for overall Enterprise development in five provinces, has consciously involved more women in its program. The program has facilitated women to build on their economic security through participation in Savings groups, Enterprise Development, Village Level Savings Groups (VSLAs), SMEs, etc. The fact that the overall women participation in AREDP program is about 58% on a weighted index, it talks volume on its intervention strategies and approach for women economic empowerment.

With the Government of Afghanistan's step towards strengthening WEE and thereby taking up WEE-NPP (Women Economic Empowerment – National Priority Program), which is much more inclusive and one of its pillar is WEE-RDP (Women Economic Empowerment-Rural Development Program), AREDP with its experiences and successes so far, looking forward to be more systemic in its approach and work in partnership at all levels of its intervention and strengthen the business service providers and institutions in general and those of Women focused in particular. AREDP while transitioning to WEE-RDP, would be more of a facilitating agency and involve Implementing Partners (IPs) & Facilitating Partners (FPs) who have been strengthened by Citizen Charter for overall growth of the rural economy.

WEE-RDP is designed to be a more women centric program and it would be scaled up to 34 provinces with better institutional alignment with WEE-NPP objectives. The new project intends to build on the overall experience of AREDP and would simultaneously leverage the institutional platform of CDCs established & nurtured under ongoing Citizen Charter program of MRRD. Under WEE-RDP, greater emphasis is being given to collaborating with non-governmental institutions, private sector entities, service providers and organizations and civil society organizations (CSOs) in implementation of project activities while fostering partnerships with both the public and private sector to leverage technical resources and access to finance. Synergies will also be built among potential government organizations (e.g. MoWA, MoLSAMD, MoCI, MAIL etc.) and non-government and civil society organizations. The project will follow a demand-driven/market-led approach to establish market linkages at the national, provincial and local levels and special emphasis will be given to identify & support women centric sub-sectors. Women led enterprises and its further aggregation to higher level institutions will be promoted under WEE-RDP.

Based on the rural goals outlined in the WEE-NPP, the WEE-RDP has three core intervention tracks – one around social mobilization to develop community institutions and federating them to higher levels; the second dedicated to providing inclusive access to finance, and the third focusing more on enterprise development and value chain/market linkages. These would be supplemented with program support that would also link back to both the WEE-NPP and the CCNPP. This 'institutional approach' to empowerment of women has proven very successful in rural livelihoods

projects in other South Asian countries, notably in India, since it harnesses the social capital of poor women and uses this to develop both financial and economic capital. Keeping this core design model in mind, each of the project components.

1.2 Project Description

Project Development Objective

PDO Statement: "To increase social and economic empowerment of poor rural women in selected communities".

The project defines "social empowerment" as participation in community level women's institutions, with an implicit theory of change that such participation leads to social empowerment. These institutions will be provided seed capital, technical assistance, and be linked to formal financial institutions and markets to enable economic empowerment. "Economic empowerment" is defined in this project as having both the resources to advance economically and the power to make and act on economic decisions. Economic empowerment starts with fair and equal access to markets and institutions, but women also need agency and control over resources to ensure they benefit from economic activities. Economic empowerment also encompasses financial inclusion, which increases women's access to products and services to exercise control over money.

Project Components

COMPONENT-1: Community Mobilization and Institution Development:

The first part of the project comprises the following:

(a) Providing technical assistance to support community mobilization for establishing: (i) SHGs and federating them into VLSAs; and (ii) EGs and federating them into PAs.

(b) Carrying out a program of activities to strengthen capacity, quality, and financial performance of SHGs, VSLAs, EGs, and PAs, including, inter alia, developing capacity building modules, training aids, common accounting and reporting systems, and grading and rating mechanisms.

This first component of the WEE-RDP aims to build sustainable community institutions through social and economic mobilization of rural women. This is perhaps the most critical component of the project, since it lays the institutional foundation on top of which the rest of the activities will depend. The formation of sustainable institutions would build the social capital of women in the rural areas and serve as the first stage of their economic empowerment. The core community institutional framework envisaged under the project are women's self-help groups (SHGs) which would be federated into VLSAs. From these would emerge community level enterprise groups (EG) which in turn would be aggregated to producer associations (PAs). The project is expected to create a total of 40,000 SHGs, 5,000 VSLAs, 5000 EGs and 500 PAs. Two implementation approaches would be used – one using NGO facilitating partners (FPs), who would build off the work done by similar FPs under CCAP; and a second strategy deploying a network of social organizers (SOs), village facilitators (VFs) and district facilitators (DFs) directly working with MRRD. A 'saturation approach' that aims to mobilize women from all households in the target

communities will be used and given the socio-cultural context in Afghanistan the option of having up to 20% male SHGs has been retained. Financing under the component covers the cost of the different FPs, individual facilitators, field trips, exposure visits, and a series of training modules to build the institutional capacity of the women's groups.

COMPONENT 2: Access to Finance:

The second part of the project comprises the following:

(a) Providing Seed Grants to eligible SHGs and VSLAs to establish long-term revolving funds.
(b) Facilitating access to financial services for rural women through, inter alia: (i) partnerships with micro- finance institutions and commercial banks to promote financial inclusion of women groups; (ii) developing relevant financial products and services with commercial banks and micro-finance institutions; (iii) eliminating institutional constraints on women's access to formal financial services; (iv) exploring feasibility of piloting a system, enabled by information technology, for delivery of financial products; and (v) financial capacity building.

This second component will facilitate empowering of both community institutions i.e. SGs/VSLAs and its members to develop as sustainable financial institutions at the community level and eventually establish direct linkages with financial service providers including MFIs and commercial banks. Evidence from past experiences in Afghanistan as well as other countries demonstrates that this is a long-term process that has to be approached in phases. The key focus of WEE-RDP would be to strengthen the 'demand side' by creating an ecosystem of women savings groups that are built on mutual trust and respect to support their livelihoods and federate to VSLAs for sustainability. This would prepare the women groups to link with MFIs and make them bankable. In this way, there would be three stages in the access to finance:

(a) The first stage is to develop an own savings culture through SHGs and federate them into VLSAs.
(b) In the second stage, the project will inject seed capital, which will support transforming VSLAs to the next level in terms of scale as well as operational and financial sustainability.
(c) Finally, the third stage would be to link the VSLAs to MFIs and Banks.

The component will have a strong focus on ensuring the financial and operational sustainability of VSLAs and will work with MFIs and commercial banks to create an enabling environment for investment in the livelihoods of rural women by increasing their access to sustainable financial services.

Component 3: Enterprise Development and Market Linkages:

The third part of the project comprises the following:

(a) Providing technical assistance and supporting promotional activities to strengthen the capacity of EGs, PAs, and individual women entrepreneurs to access markets and manage their businesses.

(b) Providing Catalytic Funds to eligible EGs and PAs in order to finance, inter alia, quality inputs, post- production equipment, and/or small-scale

infrastructure.

(c) Supporting EGs, PAs, and/or individual women entrepreneurs through facilitating: (i) their partnerships with business enterprises to improve the supply of business development services; and (ii) access to markets.

This component aims to finance common assets of public goods nature based on business needs and assessment of market failures using the 'maximizing finance for development' (MFD) cascade principle. These investments are expected to be catalytic, helping individual level investments reach economies of scale through increased coordination. This will be supplemented with technical assistance, business development support, as well as market exposure and linkages. Any support under this component will be against a robust Business Plan with a ceiling of $2000 per EG, which may also be aggregated for the larger assets /infrastructure at the PA level depending upon specific business case. The project will also contract an independent third party to verify and validate the Business plan in terms of feasibility, fiduciary process and inclusion. It is expected that this build-up process will help women to increase their productivity, competitiveness, which would in turn improve job opportunities for women and contribute to their economic empowerment. The component builds on the existing successful framework of AREDP on enterprise development which has proven effective in developing women enterprises and supporting them on capacity building, business skills and linkage to markets. The focus will be on pro-poor, high value commodities such as vegetables, horticulture, milk, poultry, ship; fish; goat; carpet; honey, handicrafts etc. where women participation tends to be higher. This component will also seek to draw partnerships and synergy with other ARTF, bilateral donor funded, and NGO run programs and projects that work on similar themes. Investments made under this component would be largely/mostly of public in nature and follow MFD principles.

COMPONENT 4: Project Management:

The last part of the project, aims at provision of overall Project implementation support to MRRD, including:

(a) supporting training and technical assistance, acquisition of equipment, and operating costs to improve monitoring and evaluation, management information, financial management, procurement, human resource management, knowledge management and communication systems, and environmental and social safeguards management of the Project;

(b) Providing technical assistance to inform implementation and policy development and strengthening the capacity of's relevant staff; and

(c) Promoting partnership arrangements with similar World Bank-funded projects in other countries for overall technical and implementation guidance.

Under this Component, the project will finance salaries of project staff, consultancies, training programs, office equipment, and incremental operational costs of set up under MRRD and provincial units. The component will also support project coordination, implementation, monitoring and evaluation (M&E) at the national and provincial levels, as well as the running of the grievance redress mechanism. The project will leverage the existing institutional infrastructure available in the CCAP program at the MRRD level for various project management activities including procurement, FM and communications. A detailed M&E plan will be prepared to align

project activities and tasks with the key results and the related PDO level results indicators and the intermediate level indicators at the component level. There will be systematic internal monitoring of activities and results that will be fed into the preparation of Implementation Status report and Annual Progress reports. An M&E/MIS system will be established to collect and process appropriate information that will enable determination of the progress towards the achievement of the PDO, tracking of progress at each phase of the results chain, and if required, adjustments will continuously be made and at Mid-Term. Baseline information will be collected as part of initial project implementation.

Safeguards Implementation Unit (SIU) operates within the WEE-RDP Program Management Office. SIU ensures the proper implementation of Environmental and Social Management Framework (ESMF) and implementation of other relevant national laws and regulation in the program activities.

1.3 Project Coverage and Target Areas

WEE-RDP is a national program, MRRD decided to take this program to all provinces of Afghanistan including the existing provinces where AREDP is working. This is a strategy that is similar to what has been used under the CCAP to roll out the first phase of the CCNPP. The WEE-RDP aims to work in 76 districts in total across all 34 provinces. While most provinces have at least 2 districts covered, it was also decided that in seven provinces only one district would be selected for the time being given the security situation. Subject to a more conducive security and enabling situation the second district may be taken up later. Separately, of the total 76 districts, 24 were those that were under the AREDP coverage. Given the existing capacity and institutional presence in these 24 districts, it was agreed that these should be automatically included in the WEE- RDP coverage since the project could learn, scale-up, and deepen the work done in those districts and these could be used to showcase the impact of the program and serve as a model for other districts and provinces. For more information see annex-4.

It is envisaged that WEE-RDP will create a total of 40,000 SHGs, 5,000 VSLAs, 5,000 EGs and 500 Pas spread over 6250 CDCs, since activities supported under component 3 could lead EGs and PAs to use pesticides for agriculture related works and agribusiness related activities.

Below, figure is the coverage map of WEE-RDP.

Ministry of Rural Rehabilitation and Development (MRRD)
Women Economic Empowerment Rural Development Program (WEERDP)
Coverage Map

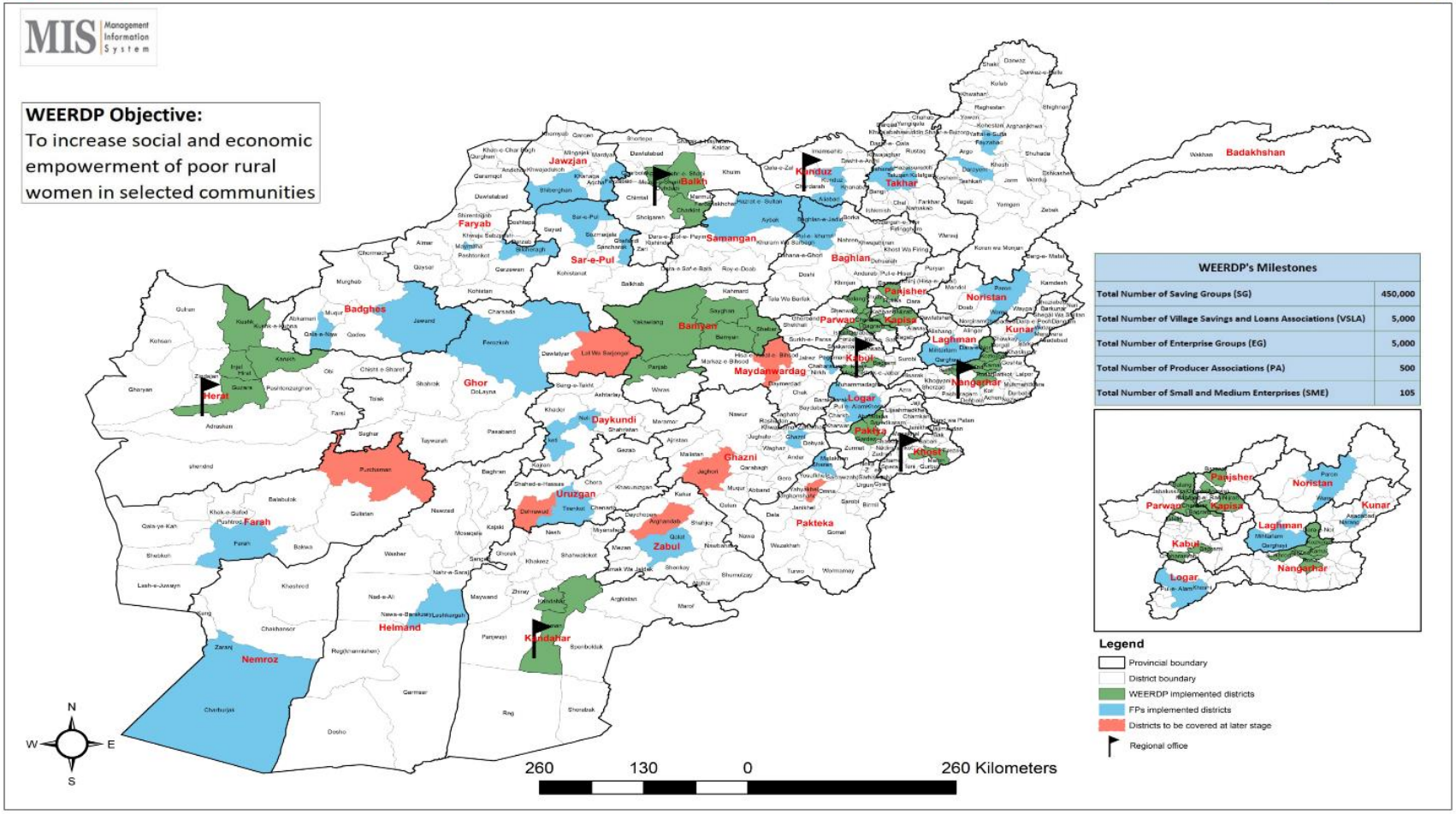

Figure-1: WEE-RDP Coverage Map

Agro-ecological zones and watersheds are the most significant criteria for zoning if the purpose is surveying agriculture. However, the identification and delimitation of agro-ecological zones in Afghanistan is rather difficult. The country has a very varied geography, with literally thousands of microclimates and micro-watersheds, and frequently conditions change from one valley to the next, within a fairly short distance. The main instrument for analyzing agro-ecological zones is the Afghanistan Land Cover Atlas, prepared by Food and Agriculture Organization of the United Nations (FAO), published in 2016. As land use has somewhat changed over the intervening years, and normally varies from one year to the next according to rainfall and climatic conditions, even that very significant work has some drawbacks. FAO is now preparing to update the Land Cover Atlas, using recent satellite imagery and ground data, but no such update is available at the moment on a general basis.

The zones indeed have designations that allude to a broad stretch of territory, such as –Northern Mountains and Foothills. However, given the mountainous geography of Afghanistan, agricultural activity does not occupy a contiguous and homogeneous stretch of the country. Agriculture is possible only in specific patches or strips of land in the numerous mountain valleys and the thousands of micro-watersheds created by large numbers of streams coming down from the mountain ranges. More or less contiguous and relatively extensive agricultural areas only exist in some parts of the territory (such as the Turkistan Plains or the Northern Foothills) where flat or gently undulating land prevails, but even there the actual conditions of the terrain and the capricious nature of water supply impose at the best of times only a patchwork of cultivable and uncultivable land- rather than a continuous pattern of cultivation. In this survey some estimates are given about the actual extent of the cultivable land within some of the land cover types, especially within the rain-fed crop land.

It is possible and convenient to establish finer agro-ecological differences within each broad agro-ecological zone. For instance, within the wide belt of rain-fed land in the Northern Mountains and Foothills there are recognizable differences between conditions in the Western or Eastern parts of that belt, not so much in the soils (that are generally homogeneous, mostly of the Loess type) but in rainfall, slope, and elevation. In the massive Highlands that make much of the Central Mountains Agro-ecological Zone there are also internal differences based on altitude, precipitation or watershed. Thus, the zones may be considered to break down into a number of specific agricultural areas located in different provinces and districts, belonging to different watersheds and existing at different elevations. These local variants of the zones have their own agricultural specificity, and thus conclusions about one of the broad agro-ecological zones are not meant as an exact description of every local variant, but as an average for a certain type of terrain on which certain kinds of agriculture prevail. The following are the agro-ecological zones as described above: (i) Badakhshan mountains in the North-East; (ii) Central and Eastern mountains in the Center; (iii) Southern mountains in the South-East; (iv) Northern mountains in the North; (v) Turkistan plains in the Far/Extreme North, (vi) Herat-Farah lowlands in the West; and (vii) Helmand River valley in the South, as described in the figure below. The corresponding climate types to these agro-ecological regions are also described by the FAO in 2003 as (i) Continental desert climate in the Extreme North; (ii) Continental semi-arid to moist Mediterranean with winter frost in the North East Central; (iii) Alpine in the High mountains, center and NE;

(iv) Warm semi-arid Mediterranean climate in the Lower central & South East; (v) Continental semi-arid Mediterranean climate in the North-West; (vi) Sub-tropical desert climate in the South; and (vii) Dry Steppe climate in the Lower Kabul Valley.

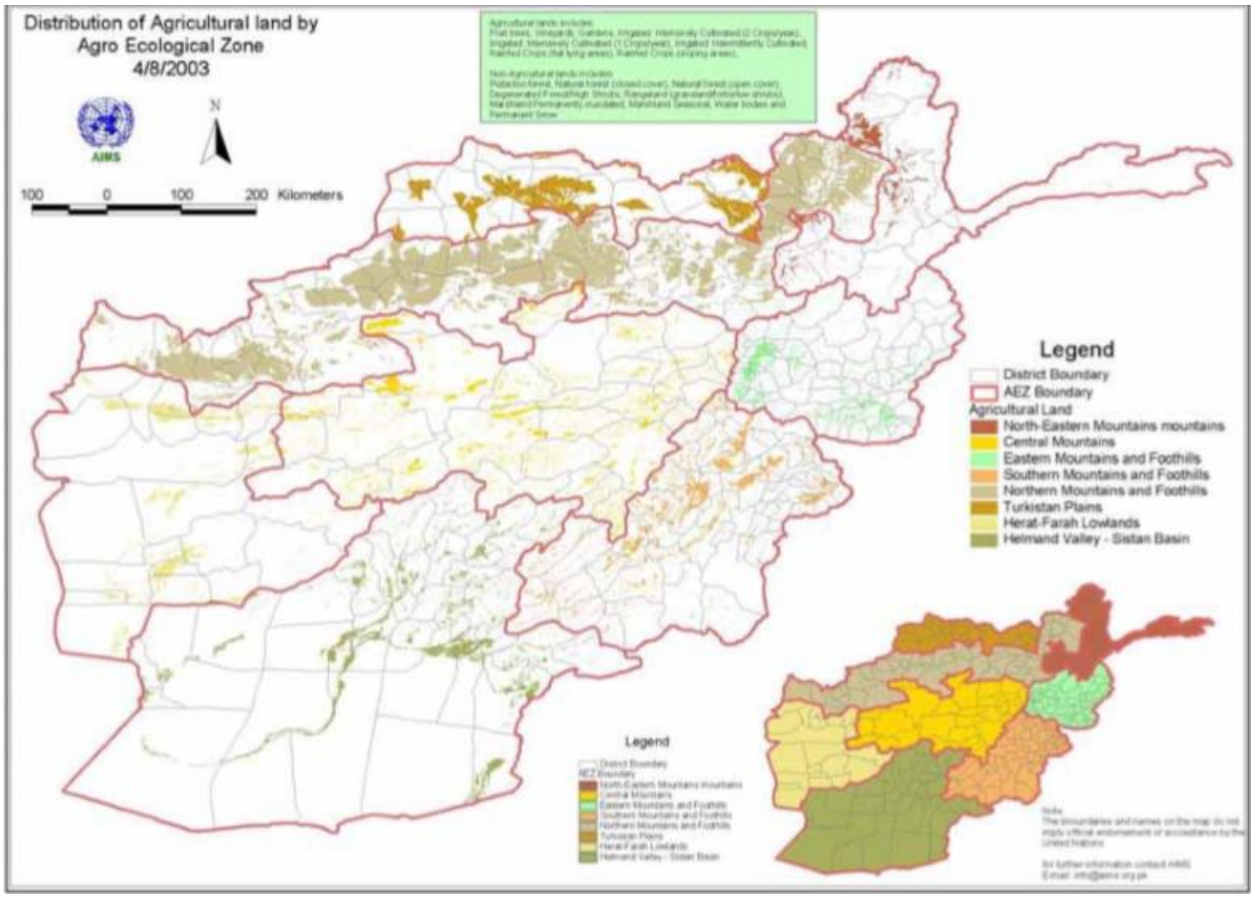

Figure-2: Agro-Ecological Zones in Afghanistan (FAO, Winter Agriculture Survey, 2003).

Total land cover of Afghanistan consists of about 64.4 million hectares, of which more than 7 million ha (11.14 %) is being cultivated under irrigated and rain-fed farming practices; though rangeland covers more than 30 million ha (47%), barren land covers 17.5 million ha (27%), the remaining 15% land covered by sand cover, forest and shrubs, built-up and water bodies.

PROVINCE	Irrigated Ag. Land AGI 3A, 3A1 3B, 3C	Rainfed Ag. Land AGR 4A, 4B	Fruit Trees AGT 2A	Vineyards AGV 2B	Barren Land BRS 8A	Sand Cover BSD 8B, 8C	Forest & Shrubs NFS 6A, 6B 6B1, 6C	Rangeland NHS 7	Permanent Snow SNW 13	Built-up URB 1A, 1B	Water Body & Marshland WAT 9A, 9B, 10A 10B, 11, 12	TOTAL LAND
Badakhshan	55,957	310,786	8,741	0	840,425	79	30,384	2,687,860	324,823	4,961	81,993	**4,346,008**
Badghis	42,470	368,567	907	73	16,535	0	157,052	1,468,428	0	5,909	10,983	**2,070,924**
Baghlan	97,164	177,866	3,945	0	135,419	1,328	64,375	1,202,761	66,034	10,550	20,887	**1,780,331**
Balkh	266,006	271,690	4,222	585	74,062	480.806	6,820	484,356	0	22,838	65,536	**1,676,921**
Bamyan	59,343	15,984	1,946	0	137,354	0	323	1,544,152	17,265	2,208	10,635	**1,789,211**
Daykundi	49,026	10,007	6,291	5	168,852	0	16,402	1,316,777	49	1,762	8,685	**1,577,856**
Farah	241,479	52	420	1,032	3,532,202	7	9,489	876,531	0	8,699	289,165	**4,959,077**
Faryab	112,683	439,651	1,327	7,124	22,541	300.442	6,634	1,148,068	0	13,411	19,968	**2,071,848**
Ghazni	267,357	50,714	8,146	10,173	171,571	0	10,380	1,548,219	0	16,506	83,722	**2,166,787**
Ghor	66,349	98,514	1,280	0	193,797	0	6,204	3,307,506	2,356	4,550	32,593	**3,713,149**
Hilmand	342,172	555	1,957	949	3,436,966	954,091	3,534	1,003,204	0	25,828	231,595	**6,000,851**
Hirat	259,975	559,141	1,717	7,561	2,390,020	2,903	53,595	2,028,430	0	24,808	165,637	**5,493,787**
Jawzjan	186,258	139,448	339	557	12,904	508,624	1,009	217,708	0	9,179	35,970	**1,111,996**
Kabul	66,748	4,340	4,000	10,600	47,998	0	9,244	288,908	0	26,350	7,340	**465,528**
Kandahar	312,465	82,892	8,599	19,840	1,402,853	1,839,000	32,258	1,566,255	0	21,237	131,091	**5,416,490**
Kapisa	22,594	1,323	4,208	930	6,949	0	15,143	131,640	130	2,735	2,500	**188,152**
Khost	54,519	374	203	2	11,453	0	120,088	224,536	0	8,114	9,145	**428,434**
Kunar	29,013	57	308	4	12,775	0	316,258	116,808	0	2,231	7,371	**484,824**
Kunduz	151,136	94,096	1,521	213	65,344	223,210	3,006	191,670	0	11,384	48,775	**790,355**
Laghman	21,876	32	700	4	68,803	0	97,619	183,915	2	2,444	8,156	**383,550**
Logar	46,540	12,153	861	1,053	82,870	0	16,646	270,151	0	5,717	3,509	**439,500**
Nangarhar	106,079	13	4,286	281	244,879	0	70,594	271,049	0	13,576	28,962	**739,720**
Nimroz	95,037	2	13	385	3,157,980	466,487	784	9,792	0	4,339	369,069	**4,103,889**
Nuristan	8,931	405	424	1	55,423	0	231,907	579,163	16,854	169	5,394	**898,671**
Paktika	149,147	9,645	2,022	732	223,281	1,672	305,640	1,173,886	0	8,643	32,032	**1,906,700**
Paktya	70,119	4,651	732	285	18,927	0	107,220	316,615	0	4,666	4,271	**527,486**
Panjsher	9,302	795	1,450	0	8,634	0	3,110	319,797	25,474	465	3,959	**372,987**
Parwan	38,226	8,165	7,121	6,373	63,146	0	991	411,924	12,235	6,075	4,176	**558,971**
Samangan	27,190	284,410	1,459	561	78,593	0	11,906	877,603	0	4,505	5,032	**1,291,259**
Sari Pul	44,245	322,067	2,037	7,398	45,658	0	5,432	1,085,825	0	6,809	7,297	**1,526,768**
Takhar	85,655	418,657	3,815	105	79,416	0	26,953	530,743	23,506	12,319	53,780	**1,231,949**
Uruzgan	51,127	1,647	10,560	23	158,827	0	15,727	826,184	0	4,175	17,931	**1,086,200**
Wardak	67,110	24,402	8,727	72	70,788	0	931	868,185	8,508	4,906	4,357	**1,057,985**
Zabul	99,913	21,392	13,358	5,529	367,294	99	23,385	1,165,336	0	4,790	33,922	**1,735,018**
TOTAL (ha)	**3,600,210**	**3,734,494**	**117,642**	**82,450**	**17,404,540**	**4,778,750**	**1,781,045**	**30,243,985**	**497,236**	**306,855**	**1,845,976**	
TOTAL (%)	**5.6**	**5.8**	**0.2**	**0.1**	**27.0**	**7.4**	**2.8**	**47.0**	**0.8**	**0.5**	**2.9**	

Figure-3: Provincial land cover statistics (source: FAO, Afghanistan Land Cover Atlas, 2016)

1.4 Introduction to Pest and Pest Management

A pest species can be any species that humans consider undesirable. Any organism that reduces the availability, quality, or value of a human resource can be classified as a pest. This designation in no way reflects the organism's role in the natural ecosystem but is more an indicator that they are in conflict with humans.

A pest in one area may not be considered a pest elsewhere. Often organisms rise to pest status because they escape normal control by natural regulating agents. This is achieved through direct or indirect importation to a new region or by human activities which reduce or eliminate the efficiency of their natural enemies. Without controls on population growth, organisms can rapidly achieve levels at which damage is caused thus becoming pests.

Pest management is a means to reduce pest numbers to an acceptable threshold. An acceptable threshold, in most cases, refers to an economically justifiable threshold where application of pest control measures reduces pest numbers to a level below which additional applications would not be profitable (i.e., where additional costs of control exceed additional benefits). Pest eradication (i.e., complete removal) is usually not a viable option. Therefore, pesticide management refers to the regulatory control, proper handling, supply, transport, storage, use and disposal of pesticide-related waste, to minimize adverse environmental effects and human health.

Integrated Pest Management (IPM) is an increasingly popular process for controlling pests. IPM considers the ecosystem as a whole and takes into consideration a balanced mix of the aforementioned control methods to produce the most effective and least damaging plan. All the methods are mutually augmentative with chemical control means as the last resort in the plan. Ideally, an IPM plan would result in a sustainable system without need for much costly follow-up maintenance.

1.5 Pest Management Practices in Afghanistan

Pesticides classified under World Health Organization of group 1A and 1B are extremely hazardous. The permitted category is Class II and III. Afghanistan is not a member of the International Plant Protection Council (IPPC) but has signed the Rotterdam, Stockholm, and Basel conventions. The Pesticides Law of Afghanistan was first formulated and is subsequently signed in 2015. The body responsible for pesticide regulation in Afghanistan is the Plant Protection and Quarantine Department (PPQD) in Ministry of Agriculture, Irrigation and Livestock (MAIL).

Most pesticides found in Afghanistan are imported, sold and distributed by the private sector with networks scattered of over the country. Pesticides that are often banned for use in other countries or internationally, are obsolete or mislabeled, have expired or are even dangerous and classified by WHO as extremely hazardous or highly hazardous (Ia and Ib), are all found in the Afghan pesticide market.

Afghanistan National IPM Program

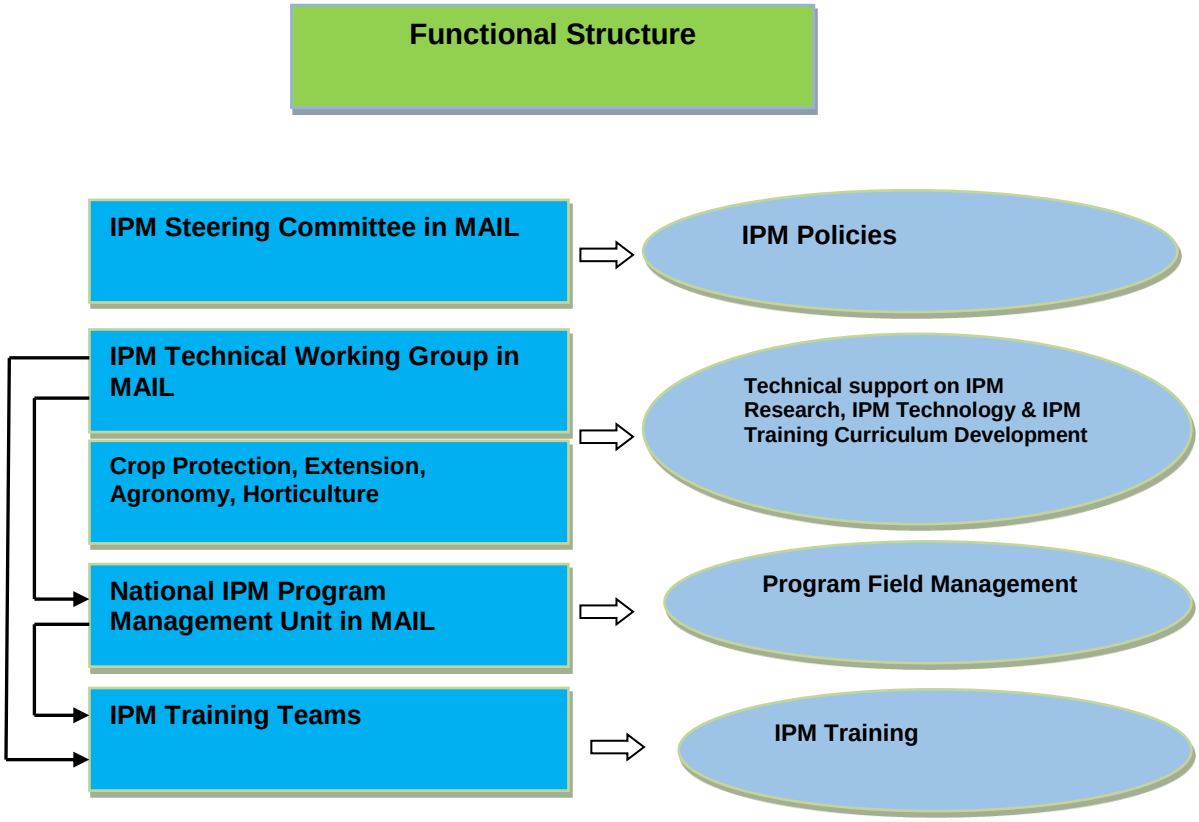

Figure-4: Afghanistan National IPM Program

Currently, Afghan agriculture is faced with four threats that impact to the country's food security.

- *Pests and diseases from outside:* The entry of wheat stem rust (Ug99) and corn rootworm will have adverse impact on their production.
- *Pest and diseases from within:* Wheat yellow rust continues to cause significant production losses. Besides these, measures need to be developed to control against Moroccan locust, Colorado potato beetle, Baluchistan melon fly etc.
- *Entry and use of illegal pesticides*. All agrochemicals used in crop protection in Afghanistan are mainly from China, Iran and Pakistan. The absence of adequate pesticide regulations and enforcement personnel facilitates the entry of illegal pesticides.
- *Absence of international trade related standards.* Wheat is the most important staple crop in Afghanistan, making up 80% of all grain production in Afghanistan. Following wheat the most important crops are barley, corn, rice, potatoes and cotton. Nuts and fruits are among Afghanistan's most important exports. Apart from these crops, grapes, apple, apricots, pomegranate, melon and water melon are also important crops grown.

Problems and constraints of pesticide use in Afghanistan

Key issues are:

- An average farm size in Afghanistan varies from 2 to 5 ha of land. These farmers cannot afford many of the more high-tech and expensive inputs available in the market.
- Afghanistan has had written regulations on pesticide use since 1989, but these are not enforced and are largely ignored due to lack of resources and weak of regulatory body and institutional arrangement. A new pesticides act has been drafted in 2009 but is yet to be officially adopted.
- Illegal products, including both non-registered products and internationally banned products, do enter Afghanistan on a regular basis. Many banned pollutants like DDT, dieldrin, HCH, heptachlor and lindane etc. are easily found in retail shops in smaller towns and border towns, due to weak and porous border and illegal import from neighboring countries.
- Pesticides repackaging by the local traders is not uncommon in Afghanistan. This results in both sellers and farmers coming into contact with concentrated active ingredient. It is also not uncommon for these traders to dilute the active product with water or talc and sell them to illiterate farmers.
- It is common practice with farmers to store their pesticides at home and do not lock them out of reach children. Farmers are also not aware of day-to-day health risks and chronic health risks for pesticides.
- Identification of pests is very important to counter crop diseases. But it is also important to identify beneficial insect pathogens, spiders, predators, and parasites etc.
- Incorrect dosage use of pesticides is a serious issue among farmers. Over and under-dose and use of non-selective pesticides can lead to pesticide resistance.
- There are risks to people eating fruits and vegetables contaminated with pesticide residues. This is especially true with cotton pesticides, which are very often diverted for use on food crops. There is also a likelihood of livestock and domestic animals getting poisoned by accidental exposure to pesticides.
- There is hardly any personal safety protection equipment available in the market. Even if they are available, the farmers feel reluctant to wear them.
- Care is hardly taken by the farmers to dispose of expired pesticides. Many of these pesticides remain active even after the expiry date.

  If we carefully examine the above-mentioned issues related to use and application of pesticides by the farmers, we find that there are enormous risks of error to occur and farm family members may be acutely or slowly poisoned and their environment polluted and damaged.

Major Pests and Diseases Found in Afghanistan Agriculture

Table 1: Major Pests and Diseases of Cereals, Legumes/Oil Seeds, Root and Tubers

Cereals	Pest	Diseases
Barley	1. Aphids 2. Grasshoppers 3. Armyworms 4. Cutworms	1. Foliar diseases brown rust, Yellow rust and Powdery mildew, Barley stripe rust (*Hordeivirus*), Ear diseases and mycotoxins barley Scald Ergot Sclerotia 2. Stem-based diseases eyespot, stem rust 3. Virus diseases barley yellow dwarf virus, soil-borne mosaic viruses 4. Fungal diseases covered Smut, Loose Smut 5. Bacterial Diseases blight (*Xanthomonas campestris pv. Translucens);* powdery mildew, and nematode
Maize	1. Corn worms- cutworms, earworm, wireworms, armyworms 2. Stem borers- European corn borer, chilo spp. 3. Aphids 4. Beetles- Cucumber beetles & Flea beetles, Blister beetles 5. Hoppers- grasshoppers, corn leafhopper 6. Miners- Corn leafminers 7. Maggots- seed corn maggots, 8. Mites- spider mites, 10.Thrips, 11. Jassids 12. white grubs 13. Whiteflies	1. Viral diseases Maize streak virus, *Aflatoxicosis;* maize dwarf mosaic, common rust, corn stunt *2.* Bacterial diseases corn stunt, root rot, fusarium (ear rot and stalk rot), head smut, seed rots and damping-off, charcoal rot, soft rot. 3. Fungal diseases Smut (*Ustilago nuda*, *Tilletia* spp.), Pythium, and common Smut (boil smut).
Millet	1. Hairy Caterpillars 2. Armyworms 3. Blister Beetle, up to 50% damage observed, 4. Grasshoppers	1.Downey mildew 2.Smut 3.Ergot 4. Village Weaver Birds

Rice and Pulse	1. Grasshoppers 2. Stink bugs 3. Aphids 4. Stem borers 5. Midge, 6. Leafhoppers & Planthoppers, 7. Grain sucking insects, and Nematodes 8. Rice leaf roller	1. Paddy blast , 2. Leaf spots 3. Sheath blight 4. Bacterial panicle blight 5. Straighthead, rust
Sorghum	1.Earworm and Stem borer 2.Aphids	1. Smut 2. *Claviceps sorghi,* *3. Tolyposporium ehrenbergii*
Wheat	1. Sunn pest (*Eurygaster integriceps*) 2. Wheat curl mite (WCM) 3. Aphids 4. Wheat blossom Midge*)* *5.* Grasshoppers *6.* Armyworms*)* *7.* Cutworms-Noctuidae *8.* Wireworms (Coleoptera: Elateridae), *9.* Cereal Leaf Beetle, *10.* Hessian Fly 11. Wheat Stem Maggots (borers) 12. Wheat Stem Sawfly	1. Rust diseases Leaf rust (*Puccinia tritici)*, Stem rust (*P. graminis);* Stripe Rust (*P. striiformis)* 2. Leaf Spotting Diseases Tan spot (*Pyrenophora tritici-repentis);* Septoria leaf disease complex (*Septoria tritici, S. avenae, S. nodorum);* Spot blotch (*Helminthosporium sativum)* 3. Other Fungal Diseases Powdery mildew (*Erysiphe graminis* f. sp. *Tritici)* *Fusarium* head blight or scab (*Gibberella zeae* / *Fusarium graminearum)* 4. Smut Diseases Loose smut (*Ustilago tritici*); covered smut and common bunt (*Tilletia caries, T. foetida*) 5. Root Diseases Common Root Rot (*Cochliobolus sativus*/ *Bipolaris* sativus); Take-All (Gaeumannomyces graminis-tritici)
Legumes /Oil Seeds		
Beans (soy bean, Mung bean, chick- pea, green bean, cowpea)	*1. Ootheca mutabilis,* 2. Aphids 3. Armyworms, 4. Coleoptera- *Coryna spp., Anoplognemis curvipes, Callosobruchus maculates* 5. White-flies - *Bemissia tabaci*	1. Pythium spp. 2. Mosaic Virus, 3. Rhizotonia solani, 4. Fusarium (*F. oxysporium, and F. solani*), 5. Phuelus vulgaris, and 6. *Ascochyta* blight

Cotton	1.Aphids (*Aphis cracccivora, A. gossypii*), 2. Cotton Strainers (*Dysdercus spp.*), 3.White flies (*Bemisia tabaci),* *4.*Cotton armyworms 5. Cotton bollworm 6. Jassids 7. Trhips *8. Mites*	1. Fusarium wilt, 2. Soil-borne fungi (*Rhizoctonia solani* and *Pythium* spp.) 3. Root-rot (*Rhizoctonia, Phythium, Thielaviopsis spp*) 4. Verticillium wilt (*Verticillium albo-atrum*)
Groundnuts	1. Aphids 2. Millipedes, *3. Ootheca mutabilis, Epicauta spp.* *4. Odontotermes spp.* *5. Aphanus sordidus,* *6. Cryeadon serratus*	1.Groundnut Rosette Virus, *2. Aspergillus Niger and A. flavus*
Olive	Facilia (producing white stuff around stem)	
Sesame seeds	Armyworms (Defoliators)	Green flowering

Table 2: Major Pest and Diseases of Vegetables

Crops	**Pest**	**Diseases**
Cabbage	*1.* Worms *(armyworms, cutworms, fruit worms, etc.),* *2.* Aphids *3.* Grasshopper *4.* Whitefly *(Bemisia tabaci),* *5.* Leaf cutworm *(Barathra brassicae),*	1. Root Knot Nematode *(Meloidogyne spp.)* 2. Black mildews (*Peronospora parasitica)* Cabbage black rot (*Xanthomonas campestris),* 3. blossom end rot, 4. bacterial diseases
Eggplant	1. Red Spider Mites (*Tetranychus spp.),* 2. Moths *(Heliothis armigera)* and 3. Whitefly *(Bemisia tabaci),* 4. Aphids (*Aphis gossypii, (Daraba spp.)*	*1. Fusarium solani,* *2. Leveillula taurica,* *3. Rhizotonia solani,* *4.* blossom end rot
Lettuce	Leaf beteles *(Nisotra spp.),* Grasshopper *(Zonocerus variegatu)s,* Aphids (green peach aphid, potato aphid, foxglove aphid, lettuce aphid, root aphid), Lettuce armyworm, beet armyworm, Bulb mites, cutworms, Darkling beteles, Field crickets, garden symphylans, Leaf minners, lettuce hoppers, Saltmarsh Caterpillar, silverleaf, Whitefly *(Bemisia tabaci),* and Springtails.	Alfalfa mosaic, anthracnose, aster yellow, bacterial leaf spot, beet western yellows, beet yellow stunt, big vein, corky mildew, fusarium wilt, chlorosia and lettuce infectious, yellow, lettuce dieback, lettuce mosaic, phoma basal rot, powdery mildew, verticillium wilt, Root Knot Nematode *(Meloidogyne spp.)*

Onions/garlic	1. Thrips *(Thrips tabaco)* 2. Sliver stripe Onion maggots 3. Termites	1. Bulb rot **(***Fusarium oxysporium*) 2. The Pink Roots (*P. Terrestris),* *3.* Neckrot, 4. Powdery mildew, 5. Ring rot
Pepper	1. Leaf beetle *(Nisotra spp.),* *2.* Grasshoppers *(Zonocerus variegates),* **3.** Beet armyworm, 4. Flea beetles, 5. Green peach aphid, 6. Leafminer, 7. Thrips, 8. Tomato (potato) 9. Psyllid, 10. Twospotted spider mite, 11. Western yellowstriped armyworm, and 12. Whiteflies (Bemisia tabaci).	1.Alfalfa mosaic virus, 2.Bacterial spot, 3.Cucumovirus, 4.Curly top, 5. Pepper potyvirus & tobamovirus diseases 6.Mosaic diseases, 7.Root and crown rot (phytophthora), 8.Powdery mildew, 9.Tomato spotted wilt virus, 10.Verticillum wilt,
Potato	1. Aphids (Aphis gossypii, A. Oxycarinus spp.), 2. Potato tuberworm (Phthorimaea operculella), 3. Flea beetles, 4. Colorado potato beetles (Leptinotarsa decemlineata), 5. Grasshoppers (Zonocerus variegates), 6. Whiteflies(Bemisia tabacci) 7. Cut worm, 8. Jassid, 8. Stink bug	1. Early & Late blight (Phytophthora infestans), 2. Bacterial ring rot (Clavibacter sepedonicus), 3. Curly top, 4. Bacterial soft rot & blackleg (Erwinia carotovora), 5. Bacterial wilt (Ralstonia solanacearum), 6. Common scab (Streptomyces scabies).
Sweet & Hot Pepper	1. Fruit flies (Ceratitis capitata, Bractocera invadens, C. cozyra and Cryptophlebia leucotreta), 2. Whitefly (Bemisia tabacci), 3. Blister beetles, 4. Cutworm caterpillar (Agrotis ipsolon), 5. Tomato hornworms (Manduca sexta), 6. Pepper weevils (Anthonomus eugenii),	1. Bacterial spot (Xanthomonas vesicatoria), 2. Blossom-end rot, 3. Southern blight (Sclerotium rolfsii), 4. Phytophtora blight (Phytophthora capsici), 5. Bacterial soft rot (Erwinia spp)

Tomato	1. Red spider mites (Tetranychus spp.), 2. Hornworms (Heliothis armigera), 3. Whitefly (Bemisia tabaci), 4. Beet leafhopper, 5. Cutworms (Agrotis spp), 6. Grasshoppers (Zonocerus variegates), 7. Leaf miners (Liriomyza trifolii), 8. Fruit borers (Helicoverpa zea), 9. Flea beetles, 10. Root knot nematode (Meloidogyne spp.),	1.Anthracnose, 2.Ttomato mosaic virus, 3. Fusarium wilt, 4. Pythium spp. 5. Early blight (A. solani, Stemphylium solani), 6. Downy mildew (Phytophthora infestans), 7. Tomato bacterial spot (Xanthomonas vesicatoria. Verticillium Wilt) 8. Tobacco Mosaic Virus, 9. Blossom end rot, 10. Take-all root rot (Gaeumannomyces graminis var. tritici), 11. Powdery mildew (Oidium neolycopersici),
Water melon/ cucumber/ squash/ pumpkin	1. Fruit flies (Ceratitis spp.), 2. Leaf beetle (Nisotra spp.), 3. Grasshoppers (Zonocerus variegatus), 4. Leafminers (Liriomyza trifolii), 5. Darkling beetles, 6. Melon fly (Bactrocera cucurbitae), 7. Cutworms (Agrotis, Amathes, Peridroma, Prodenia spp.), 8. Melon aphids.	1. Powdery mildew (Leveillula taurica), 2. Anthracnose, 3. Fusarium crown and foot rot, 4. Fusarium wilt.

Table 3: Common insects and plant pathogens of the Afghan Orchards

Fruit Trees	**Pest**	**Diseases**

Almond	1. Western tent caterpillar(*Malacosoma indica*) 2. Aphids, 3. Black veined white butterfly (*Aporia crataegi*) 4. Brown tail moth (*Eurproctis chrysorrhae*); 5. Scales Eggar/Lackey Moth (*Eriogaster amygdale*) 6. Brown Peach aphid (*Pterochloroides persicae*) 7. Scale insects 8. Mites 9. Longhorned Beetle (*Aeolesthis sarta*) 10. Semi lopper (leafroller), 11. Soft scale 12. San Jose Scale 13. Lecanium scale 14. Thrips 15. Oriental Fruit moth 16. Bark beetle 17. June beetle	1. Gummosis (*Pseudomonas sp*) 2. ―Shot hole‖ disease (*Stigmina carpophila)* *3*. Leaf spot (*Cercospora circumscissa*); 4. Wilt diseases 4. Red Leaf blotch (*Polystigma ochraceum*) 5. Brown rot and blight 6. Bacterial wilt, Bacterial Canker, Foamy Canker and Band Canker, Bacterial blast 8. Root and crown rot (*Phytophthora* spp.) 9. Crown Gall 10. Bark split (Trunk and Branch Canker) 11. Anthracnose 12. Alternaria leaf spot 13. Almond leaf rust 14. Almond Scab, Hull rot 15. Downy mildew, and 16. Bud mosaic
Apples	1. Woolly aphid (*Eriosoma lanugerum*); 2. San Jose scale; 3. Codling moth (*Cydia pomonella*); 4. Apple aphids & maggot (*Rhagoletis pomonella*); 5. European red mite (*Tetranychus urticae* Koch), 6. Green fruit worms, 7. Tent caterpillars, 8. Apple two spoted spider mites, 9. Apple leaf roller, 10 .Fruit borer, 11. Heliothis spp, 12. Cicada spp, 13. Jassid, 14. Thrips, 15. Nematods	1. Powdery mildew (*Podosphaera leucotricha*), 2. Fire blight (*Erwinia amylovora*), 3. Apple scab (*Venturia inaequalis*), 4. Leaf curling (*Taphrina deformans*) 5. Root and crown rot (Phytophthora spp,) 6. Crown Gall, 8. Bark split (Trunk and Branch Canker) 9. Bacterial Canker, 10. Foamy Canker and Band Canker 11. Bacterial blast, 12. Anthrocnose , 13. Alternaria leaf spot, 14. Downy mildew, 15. Scab 16. Apple mosaic virus

Apricot	1. Western Tent Caterpillar (*Malacosoma indica*), 2. Browntail moth (*Eurproctis chrysorrhae*); 3. Black veined white butterfly (*Aporia crataegi*); 4. Eggar/Lackey Moth (*Eriogaster amygdale*); 5. Bark Beetle –Shothole‖; 6. Wood boring beetles; 7. Aphids; 8. White Grub (nurseries) (*Polyphylla sp*); 9. Green fruit worm (*Orthosia hibisci*) 10. Mites, 11. Hairy caterpillar, 12. Lecanium scale (soft scale) and 13. Hard scale	1. Bacterial canker Gummosis (*Pseudomonas syringae*); 2. –Shot hole‖ disease 3. Stigmina blight (*Stigmina carpophila* AKA; *Wilsonomyces carpophilus*); 4. Verticilum wilt (Verticillium dahliae); 5. Brown rot blossom and 6. Twig blight, 7. Ripe fruit rot.
Citrus	1. Aphids, 2. Leaf worm and Leaf miner 3. lemon butterfly, 4. Citrupsylla , 5. cotton cushion scale, 6. citrus white fly	1. Canker 2. Downy Mildew 3. Citrus dieback 4. Tristeza virus
Grapes	1. Berry Moth (*Endopiza viteana*); 2. Cicada; 3. Leafroller (*Archips subsidiaria*); 4. Mealybug (*Pseudococcus sp*.) 5. Scale insects; 6. Fruit flies (*Ceratitis capitata, Bractocera invadens);* 7. Termites; and	1. Gummosis and Citrus canker; 2. Powdery mildew (*Uncinula nector*); 3. Downy Mildew (*Plasmopora viticola*); 4. Anthracnose (*Elsinae ampelina*); 5. Crown Gall 6. Fruit Rots 7. White rot of vine (*Coniella diplodiella*)
Peach	1. Aphids, 2. Borers, 3. Mites, 4. Peach midge, 5. Soft scale,	1. Leaf curl (*Taphrina deformans*), 2. Fire blight (*Erwinia amylovora*), 3. Anthracnose, 4. Powdery mildew, 5. Downy mildew, 6. Brown rot, 7. Shothole,
Pear	1. Mealybug, 2. Aphids, 3. Sucking pest, 4. Pear maggots,	Powdery mildew

Plums	1. Aphids, 2. Leaf rollers, 3. cutworms, 4. twig borer and 5. Peach tree borer.	1. Silver leaf, 2. Bacterial canker, 3. Blossom blast and brown rot, 4. Bacterial spot and 5. Plum leaf scab, Plum pox virus, dwarf virus, Necrotic ringspot virus
Pomegranate	1. White Grub (nurseries) (*Polyphylla sp*); 2. Fruit borer –carop mothǁ (*Ectomyelois ceratoniae*); 3. Aphids	Leaf Spot (*Alternaria sp*)

The above-mentioned pests and diseases are not limited to one region or province, though more virulent and damaging in some provinces than in others, depending on the specificity of the agro- ecological region or the province. They have been reported affecting cultivated plant species in all agro-ecological zones, and their damaging effects are dependent on the weather conditions and the importance of the outbreaks.

1.6 Rational for Pest Management Plan

To comply with Afghanistan Pesticide Law (2015) and WB's safeguard policy and as well based on WEE-RDP's ESMF where OP/BP 4.09 Pest Management is triggered as agriculture activities supported under component 3 may lead EGs and PAs to use pesticides for agriculture related works and agribusiness related activities. Therefore, this Pest Management Plan (PMP) be implemented under the WEE-RDP and thus it is required to ensure that the program avoids, minimizes, and/or offset adverse environmental and health impacts resulting from the use of pesticides. The program activities under WEE-RDP would lead the VSLAs, EGs to use some pesticides in order to protect their agri-based business. However, these practices may have adverse and long-lasting residual environmental and health implications. Therefore, the program prepared this PMP to address/mitigate issue related to safe use of the pesticide. The PMP attempts to rationalize the use of pesticides and promote improved pest management practices including IPM through dissemination of the approved laws, institutional arrangements, capacity building, producers and input suppliers in the target areas. Specific activities include but not limited to, dissemination of pesticides and plant protection and quarantine laws and related guidelines, transfer of knowledge and information to the key stakeholders on improved IPM practices, safe pesticides, storage, handling and application. The PMP will be implemented by SIU and regional program staff in the target areas.

1.7 Objective of Pest Management Plan

The objective of the PMP is to promote the use of a combination of environmentally and socially friendly practices (hygienic, cultural, biological or natural control mechanisms and the judicious use of chemicals) and reduce reliance on synthetic chemical pesticides and ensure that health, social and environmental hazards associated with pesticides are minimized under WEE-RDP and within acceptable limit requirements of program's beneficiaries.

The specific objective of the PMP is to:

- Promote the use of environmentally friendly practices (hygienic, cultural, biological or natural control mechanisms and the judicious use of chemicals) in pest control;
- Provide awareness raising programs on the implementation of IPM;
- Promote and support safe, effective, socially and environmentally sound pest management.
- Ensure compliance with regional standards, laws and regulations;
- Ensure compliance with World Bank safeguard policy OP 4.09

2. Legal and Regulatory Framework

The legal framework that has a direct and/or indirect relation with pest and pesticide management, calls for several legislative and regulatory texts at the national level as well as international agreements, treaties and conventions ratified by the countries.

- Pesticide Law (2015)
- Environmental Law (2007)

GIRoA with a view to harmonize and fulfil its national, regional and international obligations relative to Environmental Management, has signed and/or ratified the following conventions:

- United Nations Convention to Combat Desertification (UNCCD) in those Countries Experiencing Serious Drought and/or Desertification
- Vienna Convention for the protection of ozone layers
- The Montreal Protocol on Ozone Depleting Substance
- Basel Convention for Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal (Basel Convention)
- International Treaty on Plant Genetic Resources for Food and Agriculture
- Convention on Biological Diversity (UNCBD)
- United Nations Convention on the Law of the Sea
- Unite Nations Framework Convention on Climate Change (UNFCCC)
- Male Declaration on Control and Prevention of Air Pollution and its Likely Trans-boundary Effects for South Asia
- London Convention on the Prevention of Marine Pollution by Dumping wastes and Other Matter (London Convention)
- Convention on the Protection of World Cultural and Natural Heritage
- Convention on Fishing and Conservation of Living Resources of the High Seas
- Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES)

GIRoA is not party or signatory to the following important international agreements, conventions and treaties:

- Rotterdam Convention on the International Code of Conduct on the Distribution and Use of Pesticides on Prior Informed Consent (PIC);
- Stockholm Convention on Persistent Organic Pollutants (POPs);
- International Plant Protection Convention (IPPC);
- Convention on the Conservation of Migratory Species of Wild Animals
- Kyoto Protocol Convention on Climate Change;
- Agenda-21 Global Program of Action for Sustainable Development

(Environmentally sound management of toxic chemicals and prevention of illegal international traffic in toxic and dangerous products);

- The Rio Declaration on Environment and Development, which addresses the sustainable use of natural resources and its development.

2.1 Afghanistan Pesticide Law (2015)

Afghanistan has had written regulations on pesticide use since 1989, but these are not enforced and are largely ignored due to lack of resources. Leaky Afghan border crossings are a likely source of unregistered, internationally banned, substandard, obsolete pesticides. The current Pesticides Law (2015), published by the ministry of Justice of GIRoA, is a legal binding instrument enhanced by both PPQD /MAIL and the National Environment Protection Agency (NEPA), which established the institutional framework required for the management of hazardous chemicals and pesticides, for more details see annex-3.

Pesticides Law provides for the control and management, manufacture, distribution and use of hazardous chemicals and pesticides, and to make provisions for the matters connected therewith. The Act is divided into 6 Chapters with 30 Articles as follows:

Chapter 1: General Provisions (Article 1 - 4).

Chapter 2: Duties and Authorities (Article 5 - 9).

Chapter 3: Permits/Licenses (Article 10 - 15).

Chapter 4: Registration of Pesticides (Article 16 -22).

Chapter 5: Protective Measures (Article 23 - 24)

Chapter 6: Miscellaneous Provision (Article 25 - 30)

In accordance with the provisions of the Act, MAIL is the responsible for the implementation of this Act, and should ensure, with the assistance of the Pesticide Division of the PPQD of the Ministry all the functions thereof as indicated by this Act. Therefore, in order to better implementation of provisions of this Act, the Pesticide Committee shall consist of the following members:

a. The Deputy Minister (Technical) of the Ministry of Agriculture, Irrigation and Livestock, who shall act as Chairman;
b. The Head of the Plant Protection and Quarantine Department of the Ministry of Agriculture, Irrigation and Livestock, as deputy chairman;
c. An authoritative representative of the Ministry of Commerce and Industry, as member.
d. An authoritative representative of the Ministry of Public Health (MOPH), as member.
e. Head of Agricultural Research Institute, as member.
f. Director General of Livestock and Animal Health, as member
g. An authoritative representative of the National Environment Protection

Agency (NEPA), as member.

h. An authoritative representative of the Afghan National Standards Authority (ANSA), as member.
i. A professor from the Agriculture Faculty of Kabul University, as member.
j. A professor from the Veterinary Faculty of Kabul University, as member.
k. Head of Agricultural Chemistry Division of the Plant Protection Department, as secretary.
l. A professor from the Environment Faculty of Kabul University, as member.

As discussed above, that the registration of pesticides is the responsibility of MAIL, with the assistance of the Pesticides Division of PPQD as to maintain the registry of pesticides, receive registration applications, prepare the applications and submit them to the approval of the Board of pesticides. The post-registration of pesticides is the responsibility of the MAIL through PPQD, in coordination of the MoPH and NEPA, in their respective areas. The rationale of post registration activities provides a means of measuring the validity of predictions based on registration data, regarding efficacy, safety and environmental effects of a particular pesticide.

2.2 Afghanistan Environmental Law (2007)

NEPA is the lead government authority, responsible for Environmental conservation and sustainable, based on Afghanistan Environmental Law, NEPA has the following functions and responsibilities:

- Maintain environmental integrity and promote the sustainable use of natural resources;
- Promote conservation and rehabilitation of the environment;
- Coordinate environmental affairs at the local, national and international levels;
- Develop and implement national environmental policies and strategies in order to integrate environmental issues and sustainable development approaches into the legal and regulatory frameworks;
- Provide environmental management services in the areas of environmental impact assessment, air and water quality management, waste management, pollution control, and permitting of related activities;
- Establish communication and outreach for environmental information to ensure improved awareness of environmental issues;
- Implement bilateral or multilateral environmental agreements to which Afghanistan is a Party;
- Implement the Convention on the International Trade in Endangered Species of Fauna and Flora (CITES);
- Sign on behalf of the government agreements regarding the protection and rehabilitation of the environment;
- Promote and manage the Islamic Republic of Afghanistan's accession to and ratification of bilateral and multilateral environmental agreements;
- Coordinate the preparation and implementation of a national program for environmental monitoring and effectively utilize the data provided by that program;

- Prepare every two years in relation to urban areas and every five years in relation to rural areas a State of the Environment report for the Islamic Republic of Afghanistan for submission to the President's Office;
- Prepare an interim State of the Environment report on emerging issues relevant to the environment in Afghanistan not less than every two years;
- Within a period of three years of promulgation of this Act, develop a national environmental action plan, which assesses the urgency and importance of actions that should be taken in the short, medium and long-term in order to prevent, eliminate and reduce adverse effects as described in the most recent State of the Environment report, and, in consultation with relevant ministries and institutions, determines a coordinated strategy and schedule for the implementation of those actions;
- Periodically compile and publish reports on significant environmental indicators;
- On an annual basis, compile and publish a report that details the authorizations granted and activities undertaken by the National Environmental Protection Agency;
- Assess the effectiveness of the implementation of the Act and any regulations made under it in improving the sustainability of the use and management of natural resources and conservation and rehabilitation of the environment;
- Develop and implement plans for environmental training, environmental education and environmental awareness-raising in cooperation with relevant ministries and public bodies;
- Actively coordinate and cooperate with ministries, Provincial Councils and District and Village Councils, public bodies and the private sector on all issues related to sustainable use of natural resources and conservation and rehabilitation of the environment;
- Monitor the implementation of the objectives and provisions of this law;
- Fulfill any other functions that may be assigned by the Council of Ministers.

2.3 World Bank Safeguard Policies

WEE-RDP with consideration of ESMF development, the following World Bank Operation Policies triggered.

Table-4: World Bank Safeguard Policies.

World Bank Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓

Projects on International Waterways OP/BP 7.50	✓
Projects in Disputed Areas OP/BP 7.60	✓

WEE-RDP will not cause large scale impacts that would place the project into category "A", however, while the expected actions will be small, consideration of the diversity and nature of Program sub-projects that might be supported (see the Table of Rural Sectors and Enterprises on page 13) and the most severe impact that might be anticipated from say, a leather tannery, or perhaps un-cautious use of agricultural biocides, places the program in category "B".

The WB safeguards are areas of intervention around which policies have been developed to ensure that development initiatives do not adversely affect the social and environmental conditions of the people and landscapes where projects are implemented. The WEE-RDP is not expected to have significant adverse environmental impacts and is classified as Category B according to the WB safeguards policy requirements. OP/BP 4.01 on Environment Assessment and OP/BP 4.09 on Pest Management are triggered by the proposed activities under component 1 and component 3 of the WEE-RDP which may have potential impacts, though reversible, on the environment.

Environmental Assessment (OP/BP 4.01)

Environmental Assessment (OP/BP 4.01), is triggered for WEE-RDP project. Under component 1.1, 2.1 and 3.1, the project is intended to develop WSGs/VSLAs/EGs and PAs who would be provided with access to funds by multiple agencies. The funding would lead to village/community level businesses in various selected provinces. Although, the scope and nature of these businesses are not known at appraisal stage, however it is predicted that, such businesses may have minor health and safety issues. The environmental safeguards risk rating for WEE-RDP is thus moderate: due to insignificant negative impact on health, safety and environmental aspect from the project related operations – and hence the project is an Environmental Safeguards Category-B.

Pest Management (OP 4.09)

Pest Management (OP 4.09), is triggered as agricultural activities supported under Component 3 could lead EGs and PAs to use pesticides for agriculture related works and agribusiness related activities. The productivity increase component of the WEE-RDP depends partly on the ability to adequately control pest populations. This triggers OP 4.09 on Pest Management and sound application of an integrated pest management plan (PMP) is required. Pest management should be seen as a way of improving the sustainability of agriculture base sectors enterprises in WEE-RDP, by adopting appropriate cultural practices (such as the planting of alfalfa cover crop and efficient on-farm water management), biological control (involving the use of natural pest enemies, bio-pesticides and botanical pesticides) and, when necessary, chemical control (involving the use of chemical pesticides). WEE-RDP project would mainstream the integrated pest management (IPM) approach as a decision-making process for the selection, implementation, and evaluation of pest management

practices.

PMP Adoption under WEE-RDP

Since WEE-RDP is not procuring inputs and pesticides, hence the potential environmental and health impacts of pesticides under WEE-RDP would be minimal, therefore the proposed PMP addresses the WEE-RDP's concerns relative to the risks associated with the use of pesticides in its scope of work, the proposed PMP will enable program's beneficiaries to mitigate negative environmental and health impacts arising from the use of pesticides, by promoting IPM practices and safe application of pesticides. In addition, the PMP also addresses the need to comply with the World Bank Safeguard Policies on Pest Management (OP 4.09) and in line with the current Pesticide Law and IPM practices being implemented by MAIL.

3. Pest Management Approaches

Pest management is a means to reduce pest numbers to an acceptable threshold. An acceptable threshold, in most cases, refers to an economically justifiable threshold where application of pest control measures reduces pest numbers to a level below which additional applications would not be profitable (i.e., where additional costs of control exceed additional benefits). Pest eradication (i.e., complete removal) is usually not a viable option. Therefore, pesticide management refers to the regulatory control, proper handling, supply, transport, storage, use and disposal of pesticide-related waste, to minimize adverse environmental effects and human health.

In general, for small crop producers there are various methods and techniques, including IPM to control and manage the pest and diseases of field crops. On the other hand, larger commercial crop growers use mostly conventional control methods that involve intensive use of pesticides to protect their crop against pest and disease outbreaks to achieve instant results, notwithstanding the damage caused on the beneficial insects as well as on the environment.

Methods of control can be categorized as chemical, biological, cultural, physical/mechanical, or genetic, and are discussed in further detail below (Begon et all, 1996).

3.1 Chemical Approach

Chemicals (e.g., insecticides, herbicides, rodenticides) can be broad-spectrum (non-selective) or narrow-spectrum (selective) and can be organic or inorganic. Chemicals used to regulate pest abundance can act as nerve toxins (for insects and mammals) and growth regulators/inhibitors. Chemical pesticides are often toxic to non-target organisms including the pest's natural enemies, can persist in the environment affecting water supply, soil productivity, and air quality, and can be biomagnified in the food chain. Inappropriate use of pesticides can result in target pest resurgence from killing off natural enemies, secondary pest outbreaks by removing natural enemies of other organisms and allowing them to rise to pest status, and evolved resistance to the pesticide.

3.2 Biological Approach

Biological control involves the use of a pest's natural enemies (e.g., predators, pathogens, parasites and parasitoids), to control pest abundance. Measures to conserve or enhance the impact of natural enemies should be attempted first. Perhaps biological control is most known for importation of natural enemies, often from the pest's area of origin, to control non-native pests.

3.3 Physical/mechanical Approach

Manual or mechanical removal, or installation of physical barriers can be used to exclude pest species. Removal methods include use of animal traps, sticky cards for insects, manual removal of insects from plants (e.g., hand picking or spraying with a hose), removing diseased or infected materials (e.g., pruning branches or removing infected litter). Physical barriers such as fences, nets, mulch, and tree trunk guards can exclude pests and reduce the damage they inflict.

3.4 Genetic Approach

Genetic alteration to reduce pest impacts is not as widely known or publicly available as other control options. Autocide is one type of genetic control and involves using the pest itself to induce increased mortality rates. Sterile males are introduced into the population, which, after mating with females, creates infertile eggs. This is an expensive option with many limitations including potential for reduced competitive viability of the introduced sterile males versus naturally occurring fertile males. Straightforward genetic manipulation to create pest resistant plant strains is another form of controlling pest impacts. However, genetic manipulation research and development is costly, and introduces a whole other series of ethical and environmental issues that are not easily addressed. Genetic manipulation is not a viable control option for the general public.

3.5 Examples of Available Tools in the IPM Toolbox

There is a wide variety of techniques that can be applied under IPM approaches. Applicability of individual techniques depends on various factors, including: the crop, the cropping system, the pest problems, the climate, the agro-ecological conditions, etc. Generally, IPM involves a combination of techniques. Some examples of such techniques:

Cultural practices that can help prevent buildup of pests:

- Crop rotation
- Inter-cropping
- Field sanitation and seed bed sanitation
- Use of pest-resistant crop varieties
- Managing sowing, planting or harvesting dates
- Water/irrigation management,
- Soil and nutrient management
- Practices to enhance the buildup of naturally existing predator and parasite populations
- Weed management within and in the field borders or other hand-weeding
- Cover crops and grass species
- Use of traps or trap crops in borders or strips within the field
- Flowering plants along the borders
- Trap crops for insect pest, also used as reservoir for beneficial predators and parasites
- Planting and harvesting dates for pre-and post-harvest loss preventions

Mechanical control practices

- Hand-picking of pests and sweeping
- Soil tillage to destroy insects and expose them to birds and other predators
- Complete decomposition of organic mattered in a field before planting
- Longer fallow periods between crops or more frequent grass rotations
- Vacuuming and destroying insect pests
- Floating row cover and plastic tunnels reduce access to many pest species
- Use of reflecting mulch in early aphid infestations
- Sticky trap barriers and attractants as monitoring devices

- Water pressure sprays
- Use of Diatomaceous or clay sprays against soft body insect pests
- Insecticidal Soaps

Biological inputs

- Biological control through release of predators, parasites, or pathogens (*B. thurigiensis, B. bassiana*, etc.)
- Biological control through fish, ducks, geese, goats, etc.
- Release of sterile male insects
- Bio-pesticides
- Biological preparations (e.g. Neem extract, rotenone, etc.)
- *Chemical inputs*
- Chemicals that disrupt insect behavior (e.g.: pheromones, repellents, etc.)
- Growth-regulators
- Conventional pesticides

3.6 Pesticide Usage Patterns in Afghanistan

Pesticides vary greatly in their level of toxicity, there are no quick and easy answers to concerns about pesticide use. When pesticides are properly used according to the label, risks are minimized.

Cereals, horticulture and vegetable crops, as well as legumes are attacked by a wide variety of pests and diseases which cause economic damage and crop losses. Despite the availability of other pest control methods, producers in Afghanistan heavily depend on chemical pesticides to control pests whenever outbreaks occur.

The types of pesticides used in cereals and vegetable production are variable and are mostly purchased from local dealers in Kabul or local pesticides stores in different provincial cities and districts without proper labels, outdated and/or banned for sales in other countries. They are typically used without proper protective gears/clothing, thereby poisoning farmers, manipulators, non-targets species (beneficial insects, wildlife) and negatively affecting the already polluted environment.

For the control of migratory and invasive pests (desert locusts, caterpillars), pesticides are mainly used as the main effective control method. Fruit producers use different pesticides in large quantities because of the need to spray more than one time during the crop cycle. Producers purchase pesticides from pesticide dealers in their respective regions, and use them inappropriately without protective gear/clothes, and inappropriate dosages. Heavy dependence on pesticides as the most reliable option for pest and disease control and their improper use undermines national economic growth through producers non-compliance with trade barriers on pesticides residue standards on export crops, as well as in domestic markets for local production. Through National Horticulture and Livestock Project (NHLP) and FAO, MAIL has been promoting the implementation of IPM practices.

A reduction in pesticide use can only be achieved with a greater understanding of plant selection, placement and care. Farmers can do a great deal to reduce and, in many cases, eliminate the use of pesticides. There may be a cultural, mechanical, physical, biological and/or chemical approach that effectively controls the problem with minimal impact on humans and the environment, and integrated pest management considers all those approaches. Whatever the situation, it is always important to first identify the problem, monitor its severity and spread, and know at what time or stage control is necessary.

As indicated above, the current pesticide use pattern in Afghanistan indicates that pesticides are not used in the context of IPM. There is a great need for change in behavior and attitudes towards producers' dependence on pesticides. The IPM concept that is taking place in fruits production through NHLP, it should be adopted and extended to cereals and vegetable production to change producers' attitudes and behavior. The process of change is gradual and needs time to achieve it with success.

3.7 Cultural Approaches for Pest Management in Afghanistan

In addition, there are some traditional or cultural control methods, which are being used in Afghanistan such as:

- Burning of old crop debris to control stem borer pupae and soil insects.
- Early planting and timely weeding to control weeds and other pests.
- Hand picking and burning blister beetles adults.
- Uprooting weeds before flowering.
- Using repellants and noise devices to scare away village weaver birds.

3.8 Safe Use of Pesticides

Since water resources (surface and groundwater) are a limited resource in many parts of Afghanistan, however, all attempts should be made to reduce contamination.

- Avoid using pesticides in or near the national parks and where endangered species are known to exist.
- Apply pesticides early in the morning before bees forage.
- Apply pesticides at least 35 meters from drinking water sources and open water.
- Use pesticides with low ground water contamination potential where water tables are high or easy to reach.
- Investigate and promote the use of biological pesticides to replace synthetic pesticides.
- Promote safe pesticide handling, storage and application.

3.9 Anticipated Pest Management for WEE-RDP

As discussed in previous sections, that the activities under WEE-RDP would lead the VSLAs and EGs to use some pesticides in order to protect their agri-based business. In the meantime, WEE-RDP is not procuring inputs and pesticides, hence the potential environmental and health impacts of pesticides under WEE-RDP would be minimal, therefore the proposed PMP addresses the WEE-RDP's concerns relative to the risks associated with the use of pesticides in its scope of work, the proposed PMP will enable program's beneficiaries to mitigate negative environmental and health impacts arising from the use of pesticides, by promoting IPM practices and safe application of pesticides. Below table is the typical matrix for PMP under WEE-RDP:

Typical PMP Matrix

Impact issue	Mitigation Measures	Expected result	Monitoring indicators	Institutional Responsibility	
				Implementation	Supervision
Pre-Implementation Stage					
Water, Soil and food contamination due to accidental discharge or mix-up during transportation of inputs	Training on safe transportation of inputs to the WEE-RDP beneficiaries.	WEE-RDP beneficiaries trained on safe transportation of inputs.	Number or groups of WEE-RDP beneficiaries trained on safe transportation of inputs.	WEE-RDP	NEPA & MAIL
Water, Soil and food contamination due to improper storage of inputs	Training on proper storage of inputs to the WEE-RDP beneficiaries.	WEE-RDP beneficiaries trained on proper storage of Inputs.	Number or groups of WEE-RDP beneficiaries trained on proper storage of inputs.	WEE-RDP	NEPA & MAIL
General health, safety and environmental hazards	Educate WEE-RDP beneficiaries to obtain or purchase quantities of pesticides required at a given time and to avoid long-term storage of pesticides.	Only pesticides needed are purchased; long term storage of pesticides by farmers avoided.	Relationship between pesticide supply and usage.	WEE-RDP	NEPA & MAIL

	Facilitate provision of PPEs or educated EGs, VSLAs and other groups on the usage of PPEs during pesticide use in the field.	EGs, VSLAs, other groups and their accompanying dependents (children) protected against pesticide exposure in the Fields.	a. Number or groups of WEE-RDP beneficiaries trained on proper use of PPEs during pesticides use. b. Quantities and types of PPEs supplied or made available under WEE-RDP.	WEE-RDP	NEPA & MAIL
Implementation Stage					
Water and land contamination due to improper application of pesticides	Training on proper disposal of pesticide containers to EGs, VSLAs or other groups	Proper disposal of pesticide containers by EGs, VSLAs or other groups	Number of EGs, VSLAs or other groups aware of pesticide container disposal	WEE-RDP	NEPA & MAIL
Poisoning from improper use of pesticides by EGs, VSLAs or other groups	Educate EGs, VSLAs or other groups on proper use of pesticides and pesticide use hazards	Proper use of pesticides by EGs, VSLAs or other groups	Number of cases of pesticide poisoning occurred under WEE-RDP	WEE-RDP	MoPH, NEPA & MAIL

Post-Implementation Stage					
Poisoning from improper disposal and use of pesticide containers	1. Educate EGs, VSLAs or other groups on health hazards associated with use of pesticide containers 2. Properly dispose pesticide containers.	EGs, VSLAs or other groups educated on pesticide health hazards Pesticide container cleaning and proper disposal.	1. Number of cases of pesticide poisoning through use of pesticide containers; 2. Number of EGs, VSLAs or other groups trained in proper cleaning of pesticide containers.	WEE-RDP	MoPH, NEPA & MAIL

3.10 Risks Related to Implementation Failure

The potential environmental and health impacts of pesticides under WEE-RDP would be minimal, however, repeated application, improper use or overuse of pesticides can cause acute and chronic environmental and health effects and these effects may manifest as local or systemic effects. They include skin irritations, eye irritation, slowing of heart beat or rapid heartbeat, weakness including muscles for breathing, cancer, loss of biodiversity and other environmental and health impacts. Many pesticides are not easily degradable, they persist in soil, leach to groundwater and surface water and contaminate the environment, depending on their chemical properties they can enter the organism, bio-accumulate in food chains and consequently influence also human health. Overall, intensive pesticide application results in several negative effects in the environment that cannot be ignored.

Below table provides a summary of risks related to implementation failure of PMP matrix under WEE-RDP.

Table-5: risks related to implementation failure of PMP matrix under WEE-RDP

Health Hazards	Environmental Hazard
• Acute health problems, Symptoms of acute health problems include severe headaches, nausea, depression vomiting, diarrhea, eye irritation, severe fatigue and skin rashes. • Chronic health problems, can affect women and men, girls and boys exposed to pesticides, whether because of their occupation or because they live near areas of use. Such problems can include neurological disorders, cancers, infertility and birth defects and other reproductive disorders.	• Contamination of surface and ground water bodies. • Soil contamination. • Wildlife and domestic animals can be killed by spray drift or drinking contaminated water. • Persistence in the environment and accumulation in the food chain leads to diverse environmental impacts. • Loss of biodiversity in natural and agricultural environments.

3.11 Pest Management Action Plan

Under the WEE-RDP, a PMP Action Plan has been developed to facilitate effective implementation of the PMP. The PMP Action Plan will be implemented by Safeguard Implementation Unit (SIU) of WEE-RDP, the Action Plan will also facilitate effective coordination with MAIL, NEPA and some WB funded projects active at MAIL.

Table-6: PMP Action plan

#	Activities	Stakeholders	Objective	Responsible agency
1	Mobilization	WEE-RDP beneficiaries (i.e. EGs),	To reduce the use and hazards of pesticides through, awareness	WEERDP and DAIL

		WEE-RDP, DRRD, DAIL and NEPA	raising and training to program beneficiaries, regional staff and other stakeholders on IPM practices and safe use of pesticides, through formal and informal training sessions, workshops and visual aids such as posters, flyers etc.	
2	Diagnosis of impact	WEE-RDP beneficiaries.	To proactively plan pest management measures.	WEERDP and DAIL
3	Formulation of Action plan	WEE-RDP	To facilitate effective implementation of the PMP	WEERDP
4	Implementation of Action plan	WEE-RDP beneficiaries (i.e. EGs), WEE-RDP, DRRD, DAIL and NEPA	To effectively implement the PMP	WEE-RDP, DRRD, DAIL, and NEPA
5	Capacity building	WEE-RDP beneficiaries (i.e. EGs), WEE-RDP, DRRD, DAIL and NEPA		

4. Environmental and Social Management Plan

Environmental and Social Management Plan (ESMP) consists of management programs, data requirements, and site-specific mitigation measures. This plan will be implemented during all phases of the Project including design, construction and operation. An ESMP is an efficient way of integrating environmental and social considerations and requirements into development activities. It promotes self-regulation and integration of environmental and social issues into planning and operations. It may address all relevant environmental and social issues in a consultative manner and may incorporate regulatory requirements.

4.1 ESMP Objectives

The main objective of an ESMP is to avoid, reduce, mitigate or offset any adverse social, environmental, and occupational safety-related impacts, other specific objectives of the ESMP are followings:

- Facilitate the implementation of the mitigation measures of adverse environmental and social impacts identified during screening process.
- Define responsibilities of the project proponents, Contractor, and other members of the project team.
- Define a monitoring mechanism and identify monitoring parameters in order to ensure complete implementation of all mitigation measures and ensure effectiveness of the mitigation measures.
- Provide awareness/training on environmental and social safeguards to the staff involved in the execution of the project.

4.2 Potential Environmental and Social Impact, and Mitigation Measures

Potential Environmental Impacts

Subproject activities envisaged under WEE-RDP are expected to have minor significant environmental impacts. The identified potential adverse impacts due to enterprise activities on environment, used for enterprises development on small-scale infrastructure would be localized in spatial extent where it would be manageable by implementing proper mitigation measures. The project activities are expected to contribute to improved environmental and social conditions in rural Afghanistan. The project is national in scope, with a focus on equitable development and a safe environment especially in rural areas, and this will equally enable different ethnic groups including minorities to benefit from the project. The project involves mainly on socio-economic activities of rural communities and enterprises development on different sectors. Some of the potential minor environmental impacts are as follows, but not limited to:

- Health and hygiene;
- Soil and land degradation;

- Air, water and soil contaminations;
- Waste collection and disposal

In compliance with World Bank's Safeguards policies, Afghanistan Environmental Law and Evaluating Environmental Impact regulation, sub-projects with significant adverse impact should go for Environmental Clearance by NEPA. WEE-RDP sub-projects are multiple small scale, community based and expected to have very limited adverse impacts.

Potential Social Impacts

Sub-projects activities under component 1 and 2 of the WEE-RDP for rural areas will not have major adverse social impacts, while under component 3 of the project miner social impact projected. The WEE-RDP by applying several check lists, policies and strategies as social mitigation plan minimize the negative impact the social impact. Systematic involvement of local people throughout the planning and implementation of sub projects will underpin the identification and implementation of any mitigation measures to be included in ESMPs. The sub-project activities are expected to contribute to improve living standards, including social services, access to markets, employment opportunities and rising incomes. The WEE-RDP aims to be as inclusive as possible, allowing citizens to have a voice in the development process.

Mitigation Measures

Mitigation measures include avoidance, mitigate, minimization and compensation by alternative sites/alignment, actions during implementation and last resort negotiation with impacted people. The objectives of mitigation are as follows:

- Enhancing the environmental and social benefits of WEE-RDP
- Avoiding, minimizing or remedying adverse impacts; and
- Ensuring that residual adverse impacts are kept within an acceptable level.

Below table-8 provides a generic ESMP matrix, (adopted from WEE-RDP's ESMF).

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
I. PHYSICAL AND BIOLOGICAL ENVIRONMENT							
Location & Design Issues							
Location of SME or community-based Enterprise	– Conflict with the interests of local population due to cultural norms, resource sharing or others. – Source of pollution for locals due to toxic emissions or chemical effluents. – SME locations to be well away from hospitals, schools & mosques, graveyards, joint communal lands, public property, etc. – No SME to be planned & located in areas of indicated negative lists, or areas of similar nature. – SME location must not make any barriers, bottlenecks or impediments for mechanized & pedestrians' traffic. - Wind direction consideration in case of SMEs generating dust & emissions. - Must have adequate space any potential for expansion. - A local level information gathering survey will be recommendable about archaeological & heritage aspects. – Local information about any past land-mines, AXOs, UXOs or any other incidents. – In case if the findings are affirmative, then an alternative site should be sought out. – Or, the site be surveyed & reconnoitred by appropriate agency dealing with the matter. – SME site must not be in the general vicinity of old Soviet or *Mujahidin* camps, or on the trails leading to it.	To be part of design specifications.	At the site of respective SME.	At design stage.	Being part of design costs.	WEE-RDP, Design Consultants, Enterprise Owners	WEE-RDP, Safeguards Implementation Unit

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Water Contamination & Usage, Proximity of Water Bodies & Sources	- Only processed water, as per agriculture standards, is allowed to be disposed in water channels / streams. - Regular soil / water testing against particular contaminants as per NEQS. - Education & awareness for related disease vectors. - No tapping of ground water through tube-wells. - Water recycling system for maximum conservation. - Safe water sedimentation basins before disposal in channels, well away from springs & water storage areas. - Deliberations for installation of rain-water harvesting systems. – Advance measures to prevent any damage to water bodies at all costs. – Immediate rehabilitation & compensation of damaged or impacted water sources. – Any community water source like wells & springs etc if lost will be replaced with alternate sources. – Chemicals, fuels & other contaminants stored well away from water sources. – Construction work close to water channels may be avoided. – Adequate precautions will be taken to construct temporary devices for preventing water pollution due to increased siltation & turbidity. – Suitable measures will be taken to prevent earthworks & stone works from impeding rivers, streams, water canals, or drainage system.	To be part of design specifications.	At the site of respective SME.	At design stage.	Being part of design costs.	WEE-RDP, Design Consultants, Enterprise Owners	WEE-RDP, Safeguards Implementation Unit

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	− Wastes materials must be collected, stored, & disposed at approved sites. − To avoid contamination, all equipment will be properly maintained & refueled. − Traps will be provided at fueling points to prevent water contamination. − Side drains will discharge through a primary settling tank. − Waste chemicals & petroleum products will be collected, stored, & disposed of at the approved sites. − Water quality will regularly be monitored at critical locations.						
Spoil Disposal	- Spoil disposal plans. - Least quantities of waste spoil. Maximum efforts for spoil usage for fill through haulage. - Strict prohibition for free rolling down of spoil. - Identification of spoil disposal areas in consultation with locals, preferably in waste lands. - Landscaping & vegetation restoration plans.	To be part of design specifications.	At the site of respective SME.	At design stage.	Being part of design costs.	WEE-RDP, Design Consultants, Enterprise Owners	WEE-RDP, Safeguards Implementation Unit
Removal of Trees	- Design adjustments for saving maximum trees. - Plan for tree plantations & landscaping. - Soil erosion treatment with bio-engineering techniques.	To be part of design specifications.	At the site of respective SME.	At design stage.	Being part of design costs.	WEE-RDP, Design Consultants, Enterprise Owners	WEE-RDP, Safeguards Implementation Unit, FD

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Processed & Unprocessed Waste.	- Waste recycling plans. - Safe disposal, as per recommended norms or NEQS. - Preventive & precautionary measures against disease spread. - Invocation of penalty clause against aesthetic & visual hazards.	To be part of design specifications.	At the site of respective SME.	At design stage.	Being part of design costs.	WEE-RDP, Design Consultants, Enterprise Owners	WEE-RDP, Safeguards Implementation Unit
Construction Stage							
Loss of Top Soil	− Cultivable lands will not be used for SMEs, unless specifically requested by the landowner. − Careful stacking of top soil & its re-application after work completion.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Borrow Soils	− No earth will be borrowed from cultivable lands. − Borrowing may be done from barren, wastelands, & riverbeds. − In case of new borrow areas, all measures will be taken so that there will be no loss of productive soil, and all environmental considerations are to be met with. − Precautionary measures like tarpaulin vehicle coverings will be used to avoid any spilling of borrow materials during transportation. − All borrow areas will be refilled, re-vegetated & landscaped. In case if it is not done, then such areas will be cordoned with barbed wire fence, with warning signs.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Quarry Areas	− All quarry materials will be obtained from previously operating sites with proper licenses & environmental clearances. − New quarries will only be opened with prior permission from respective authorities.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Contamination of Soils	− All mechanized equipment will be maintained & refuelled ensuring no spillage soil contaminations. − Fuel storage & refuelling will be kept away from water channels. − All chemicals will be stored in safe warehouses, allowing no spills on soils. − All spoils & wastes will be disposed of as per approved disposal plans in wastelands, in consultation with communities. − Chemical wastes will be disposed of at approved sites with impervious linings. − Storage of chemicals, oils, fuels, lubricants will be done on hard standings in warehouse, with sumps to cater for leakages. − No leakage wastes will be allowed for free disposal leading to soil contamination. − Such wastes will be disposed as per safe environmental practices. − Periodic monitoring of soil quality for Pb, Hg, Cr, & Cd. − Suitable remedial measures, if any contamination detected.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Drainage & Run-off	− Flash rains & cloud burst phenomena are common in the project area. Hence, construction materials at cross drainage structures will be removed in time so as not to block the water flow. − Storage of chemicals, fuels & other contaminants be away from water runoff.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Construction Camps Sanitation & Waste Disposal	− All construction camps will be located away from built-up areas, in consultation with locals. − Camps will have sewage system so that no water pollution takes place. − Camp must have medical & recreational facilities.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Emission from Construction Vehicles & Equipment	− All static plants will be downwind of human habitats. − Emission levels of all construction vehicles & equipment will conform to the prescribed standards, as per NEQS. − Pollutant parameters will regularly be monitored during construction. − Asphalt plants, crushers, & batching plants will be in the downwind from nearest human settlements. − Periodic tuning to all equipment will be ensured.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Noise from Vehicles, Plants & Equipment	− All construction equipment & plants will strictly conform to NEQS noise standards. − All vehicles & equipment used will be fitted with noise abatement devices. − Industrial noise standards will be enforced to protect workers & residents from severe noise impacts. − Construction workers will be provided with earplugs.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timefrme	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	Noise level will be monitored during the construction. − Noise barriers/trees will be placed in urban locations. − Noise levels will be monitored at critical locations. − Sound barriers & insulations will be installed as warranted. − Warning signs at sensitive zones like hospitals, mosques, educational institutions etc. will be placed. − Timings may be staggered not to operate several machines at one time. − Public awareness program will be launched.						
Blasting Works	- Advance liaison & coordination within blasting area with local administration & communities. − All blasting works will be done in accordance with Explosives Act. − Highly controlled blasting will be done. - Pre-announcement of blasting schedule & timings to the residents & its rigid adherence. − No blasting will be done between dusk & dawn. − Workers associated with blasting sites will be provided with earplugs. - Proper safety precautions: first aid kit with trained person must be on site. Warning signs should be installed.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Vegetation Losses	− All removed trees will be replanted according to "Re-plantation Program". − Prior permission of FD will be obtained for any tree removal. − Trees requiring removal will be paint-marked.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implement

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	− Trees not requiring removal will be red paint-marked.						ation Unit & NEPA
Soil Compaction	− All construction machinery & equipment will be stationed in designated areas to prevent vegetation compaction. − Any incidental damages like, soil trampling & damage to herbs, shrubs & grasses will be kept to the minimum. − Any damages will be restored after construction work is over.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Loss, Damage or Disruption of Wildlife	− Education to construction workers not to disrupt or damage the wildlife. − Wildlife Protection laws will strictly be followed. − All construction vehicles will ply specified routes to avoid accidents with cattle & wildlife.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Construction Activities & Accident Risks	− Safety signals will be installed on all hazard related works during construction − Strict enforcement of safety rules & regulations. − All blasting sites will have warning & clearance signals. Site will be inspected prior/after blasting. Blasting will be done during lean hours. − Workers will be provided safety equipment, like helmets, masks & goggles etc. − A readily available first aid unit, dressing materials etc, with paramedic will be ensured at critical locations. − Information dissemination through newspaper, radio/TV & banners etc about project time frame, activities causing disruption & temporary arrangements for public relief must	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	be ensured.						
Health Issues	− Drainage, sanitation, & waste disposal facilities will be provided at work places. − Drainage will be maintained to avoid water stagnation, leading to mosquitoes & disease. − Suitable sanitation & waste disposal facilities will be provided at camps by means of septic tanks & soakage pits etc. − Sufficient water supply will be maintained at camps to avoid water-related diseases & to secure workers health. − Health education & preventive medical care will be provided to workers. − Routine medical check-up of workers & avoidance of communicable disease.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Damages to Archaeological, Religious, Cultural & Properties	− In case of any chance finding of valuable articles such as, coins, artefacts, structures, or other archaeological relics are discovered, the excavation will be stopped & the archaeology departments will be informed. − The place will be cordoned & guarded till its inspection by respective officials. − Construction camps, blasting sites, & all allied construction activities will be away from cultural properties so they are not affected.	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implementation Unit & NEPA
Landscape Development	− Plantation of mixed specie, aesthetics trees, shrubs, & aromatic plants will be carried out. − In this context a detailed scheme will be prepared. − Green belts will be developed at the end of construction &	To be determined	At the site of respective SME.	During construction.	To be included in construction costs.	Enterprise Owners / Contractor	WEE-RDP, Safeguards Implement

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	maintained.						ation Unit & NEPA
Operational Stage							
Contamination from Spills	− An accident clearance contingency plan will be prepared & sites will be cleared immediately. − The soiled earth will be scraped into small lined confined pits nearby. − Such soils will be tested against any contamination & remedial measures will be adopted accordingly.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration
Dust Generation	− Maintenance of plantations will be ensured, which will act as live screens. − New plantations will be done at all blank sites within SME limits & adjoining areas. − Maintenance of continuous liaison with FD. − Periodic water sprinkling. − Dust masks for workers. − All precautions to be taken for reduction in dust level emissions from batching/hot mix plants & crushers etc. − Batching/hot mix plants & crushers etc will be at least 1 km downwind from the nearest habitation. All will be fitted with dust extraction & suppression devices. − Regular water spraying will be ensured at all mixing sites & temporary service roads. − During/after compacting works, water spraying on all dirt surfaces will be a regular feature to prevent dust. − All delivery vehicles will be covered with tarpaulin.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	Mixing equipment will be sealed & equipped as per existing standards.						
Air Pollution	− Vigilant controls against all types of toxic emissions. − Positive deliberations & practical steps for emission reduction as per NEQS. − If deemed necessary, emission measurements at critical places of pollutants like SPM, CO, SO2, NOx & Pb will be monitored on as required basis. − Maintenance of plantations to be ensured within SME limits & around it. − Penalties under the law imposed for continuous violations.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration
Water Contamination	− Untreated, raw & contaminated water will not be allowed to be disposed in perennial, non-perennial water channels or close to any water source & reservoirs. − Discharged water must meet the irrigation standards. − Regular cleaning of drainage system will be ensured. − Water quality will be monitored as per the monitoring plan, as per NEQS.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration, PHD
Flora & Fauna	− SME plantations will be strictly monitored & maintained. − General education & awareness for wildlife conservation. − An on-going liaison & coordination with FD, Agriculture & Wildlife Departments.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration
Accidents	New industries are more prone to accidents due to non-adoption & non-establishment of SOPs, slack controls & many more, which must be controlled through;	To be part of SME's operational	Respective SME.	Throughout operati	To be determined & born by	Enterprise Owners / Operators	District Administra

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	- Enforcement of rules, regulations & laws. - Early establishment of SOPs. - Selected team of workers for operations at critical places & machines. - Suitable trainings. - Work restrictions. - Safety restrictions & warning signs at critical spots. - Contingency plans for accident recovery.	plan.		ons	enterprise owners or operators.		tion, Police, HD
Hazardous Materials	− Dealing with hazardous substances must be done under certification by respective departments. − Such chemicals must be marked with appropriate signs in block CAPITALS with red paint, warnings for all. − Any spillage will be reported to respective agency, who will be responsible for contingency measures of cleaning the spill within shortest time. − Workers dealing with hazardous materials must have proper safety equipment. − Periodic free medical check up of workers.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	NEPA, District Administration, Police, HD
Safety Measures	− Development of coordinated SME safety management plan. − Well established & rehearsed safety related SOPs. − Safety related monitoring systems & penalty against violators. − Coordination with respective state officials, district administration, police & health officials. − Firefighting equipment & training to workers.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	District Administration, Police

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Community Development Councils and Community Consultative Dialogue	It will be an on-going feature throughout the operational phase of SME, which must be recorded. Maximum efforts must be made to take respective state officials on board for such forums. Main advantages will be: – Community will be consulted for various SME related matters of their concerns. – Will as information dissemination forum. – Confidence of community members will be gained. – A sense of ownership for protecting SME related assets of public benefits will be inculcated. – Employment for locals in skilled and semi-skilled jobs. – Intensity of such consultations may vary in various sections according to on-going activities. – Grievances will be discussed & addressed.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	District Administration, Community Elders
General Amenities	– Provision of shelters, restaurants, cafeterias & tuck stop for workers. – Rest & recreational areas. – Mosque & ablution place. – Residential quarters for selected workers, if SME is working for more than one shift.	To be part of SME's operational plan.	Respective SME.	Throughout operations	To be determined & born by enterprise owners or operators.	Enterprise Owners / Operators	District Administration
II. ARCHEOLOGICAL AND CULTURAL ASPECTS							
Chance Findings	– Follow procedures identified in WEE-RDP ESMF **Annex B: Procedures for heritage chance finds**	To be determined	At the site of respective SME.	During operations.	To be included in planning costs.	WEE-RDP, SIU, Enterprise Owners,	MoCT, NEPA, Safeguards Implement

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
						Provincial / District Administration	ation Unit, NGOs
Religious Heritage	- Respecting religious heritage, more so in a sensitive culture like Afghanistan. - Display of respect towards shrines, grave-yards & mosques etc.	To be determined	At the site of respective SME.	During operations.	To be included in planning costs.	Enterprise Owners, Provincial / District Administration, Local Elders	MoCT, NEPA, NGOs
Protection & Maintenance	- Repair & maintenance of community mosques. - Fencing & protection measures for the local shrines & grave-yards. - Tree plantations, green belts & ornamental flowers etc. - Installation of introductory & guiding sign boards at places of public interests.	To be determined	At the site of respective SME.	During operations.	To be included in planning costs.	Enterprise Owners, Provincial / District Administration, Local Elders	MoCT, NEPA, NGOs
VI. SAFETY AND SECURITY							
Chance Findings of AXOs, UXOs or Landmines etc	Followings procedural drills are recommended: – Construction work may be stopped temporarily. – Occurrence may be reported to concerned authorities & their advice sought. – The site be surveyed & reconnoitered by an appropriate agency dealing with the matter.	To be determined	At the site of respective SME.	During operations.	To be included in planning costs.	WEE-RDP, SIU, Enterprise Owners, Provincial / District	MoI, Safeguards Implementation Unit, NGOs

Environmental Issues & Components	Remedial Measure	Reference to Contract Document	Approximate Location	Timeframe	Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	– Work may only be resumed once clearance has been obtained. – Constant vigilance may be maintained by informing & notifying all concerned. – Education & awareness to construction workers. – Restricted movements within the site & its adjacent vicinity.					Administration	

Table-7: Environmental and Social Impacts Management Matrix.

5. Stakeholder Consultation and Disclosure

One day stakeholder consultation workshop on PMP for WEE-RDP/ MRRD conducted to a total of 18 representatives of PPQD of MAIL, Home Economic Directorate (HED) of MAIL, NEPA, NHLP, OFWMP-AF, AAIP, CCNP, EU-Farm/GIZ/MAIL and faculties of Environmental Science and Agriculture of Kabul University. The invitation letter was also sent to MoPH and union of inputs suppliers, however their representatives did not participate. The workshop was taken place on Monday, December 31, 2018 at conference hall of WEE-RDP building, MRRD, Kabul, Afghanistan.

The main purpose of the workshop was to ensure the inclusion of relevant stakeholders in PMP preparation and implementation. And the objectives are as follow:

- Ensure that the inputs and suggestions of relevant stakeholders are thoroughly incorporated in PMP.
- Strengthen mechanisms for coordination.
- Strengthen partnerships for sustained behavior change on safe use of pesticides and dissemination of Integrated Pest Management (IPM) Practices.

The stakeholder consultation workshop on PMP for WEE-RDP conducted successfully, the major findings of the consultation workshop are:

- Relevant stakeholders were consulted and informed about WEE-RDP (PDO, components, coverage, targets of WEE-RDP), focus of WEE-RDP to WEE-NPP pillars, SIU responsibilities and implementation of ESMF, rational and objectives of PMP for WEE-RDP, potential health and environmental effects of pesticides under WEE-RDP, legal framework, institutional arrangements, coordination, capacity building and awareness raising on proper PMP implementation under WEE-RDP.
- Inputs and suggestion of relevant stakeholders are thoroughly incorporated in draft PMP for WEE-RDP.
- PPQD and HED ensured their full support in the implementation of the proposed PMP.
- NHLP, OFWMP-AF and AAIP thoroughly ensured their full support on technical aspects, capacity building, awareness raising and the implementation of the proposed PMP.
- NEPA and faculties of environmental science and agriculture also confirmed their support on research work, awareness raising and follow-up of the proposed PMP implementation.

For detailed information, see full report of the stakeholder consultation workshop on PMP for WEE-RDP in annex-5.

6. Institutional Arrangements

The body responsible for pesticide regulation in Afghanistan is the Plant Protection and Quarantine Department (PPQD) in Ministry of Agriculture, Irrigation and Livestock (MAIL). Though, it is anticipated that the activities under WEE-RDP would lead the some VSLAs, EGs and PAs to use some pesticides in order to protect their agri-based business, however, these practices might result negative

environmental and health impacts. Therefore, the proposed PMP will address and mitigate issue related to safe use of the pesticide.

With close collaboration of MAIL/PPQD and DAIL offices, the proposed PMP will be implemented by SIU of WEERDP in the target areas of the program. SIU has two officers (male and female) at each regional office of WEE-RDP, they will provide awareness raising trainings and mobilization on improved IPM practices, safe pesticides, storage, handling and application. In the meantime, there will be close coordination with NEPA during the implementation of PMP. WEE-RDP beneficiaries will participate in public awareness and social mobilization activities. In addition, NGOs and other environmental organizations of the civil society can also participate in informing, educating and sensitizing farmers and the general public on environmental and social aspects associated with the implementation the PMP.

6.1 Grievance Redress Mechanism at WEE-RDP

Effective grievance redressal would give an opportunity to WEE-RDP to implement a set of specific measures to ensure quality field operations and accountability, by improving the effectiveness of the program activities, increasing transparency and getting proper feedback from the beneficiaries and rural population. It includes measures to:

- Ensure effective implementation of the WEE-RDP elements directly relevant to improving field operations, transparency and accountability,
- Enable beneficiary and general public to receive and provide information about the program operations and performance
- Enable program staff at village level and program beneficiary to give feedback on programmatic issues.
- Improve quality of work that EGs, SHGs and other groups provide to its beneficiaries.
- To provide a formal grievance redressal mechanism (GRM) for clients
- To ensure that clients are protected against fraud, deception or unethical practices
- To handle/resolve complaints speedily and efficiently
- To consistently assess the impact of services in order to serve clients better.

6.1.1 WEE-RDP Complaints Registration Channels

Various channels can be used for receiving grievances from different category of stakeholders. The following are different avenues for getting and registering grievance from users, beneficiaries, SHGs, EGs, VSLAs, WEE-RDP staff at different level, community, CDCs, Media …and etc.

a. Phone

Telephone numbers would be the most suitable channel to get grievance from rural and illiterate people.

WEE-RDP has already established this channel for getting complaints from rural communities. Most of the rural people have familiarity with this channel.

The following two numbers will be available during office time from 7:30am till 4:30 (except Thursdays and Fridays). Where anyone could register his/her complaint / grievance through them.

1. 0093(0)745 222 860
2. 0093(0) 745 222 861

b. Walk in

Anyone can come to WEE-RDP central or regional office and register any grievance/complaint in the complaint form.

c. Website

A portion in the website is allocated for grievance registration where anyone can log in and register his/her complaint. This channel can be used for very limited people because internet facility and computer literacy are very limited in Afghanistan. It would be very useful for HR related complaints. Through the WEE-RDP-MRRD site it's reachable to everyone, The following E-mail address portioned for the complaint purpose.

complaints. weerdp@mrrd.gov.af

d. WEE-RDP Complaint boxes

The preference for a particular channel depends on its accessibility, effectiveness and trustworthiness. It is therefore important to broaden the access to the beneficiaries.

WEE-RDP has established Grievance Redress Mechanism which is a part of the machinery of any administration in order for developing the transparency and better working environment, improving service delivery and enhancing overall project effectiveness in government programs. In order to be effective, WEE-RDP has designed different channels for receiving grievance e.g.: telephone numbers, e-mail address, complaint box, direct form for the complaint registration, through each of these channels complaint can be registered and received to the WEE-RDP/SIU, also SIU developed guide-line for the formulation of the Grievance Redressal Committee (GRC) based on the provinces where the grievances could be registered within the particular provinces and it has fixed service standards for grievance resolution; prompt and clear and strong reviewing procedures and monitoring systems are in place; and an effective and timely grievance response system to inform complainants of the action taken.

6.2 Capacity Strengthening and Awareness Raising

Since the SIU of WEE-RDP has the responsibility of the proposed PMP implementation, although current capacity of SIU regarding the PMP implementation is low, for that reason, specialized study

tours for SIU and ToT trainings for relevant regional, Facilitating Partners (FPs) staff and other stakeholders have been considered.

The program will also raise awareness through formal and informal training sessions, workshops, flyers, posters and practical demonstration on:

a) Purchasing pesticides in single-use sachets

b) Provide information and demonstration to program beneficiary in local languages about the labels, chemical composition, use of dosage, risk reduction, safety pictograms and safety equipment and their protection against health hazards etc.

c) Improved storage, handling application of pesticides.

d) Beneficial pests and insects. Program beneficiary will to be introduced with the common beneficial insect pathogens, spiders, predators, and parasites and will oriented on the ways of protecting them.

e) Use of safety equipment and tools including practical demonstration of the improved equipment such as sprayers, protective cloths and tools etc.

6.3 Coordination

To ensure proper implementation of PMP in the program targeted areas, WEE-RDP will coordinate with MAIL, NEPA and World Bank funded at MAIL, i.e. OFWMP-AF, AAIP and NHLP in disseminating pesticides law, technical support and implementation of IPM technologies developed.

6.4 PMP Budget

For comprehensive implementation of the proposed PMP, a budget of 79,000 US $ has been estimated, the cost of items below concerns those activities that are likely to be covered under WEE-RDP.

Table-8: PMP budget.

#	Activity	Estimated cost (in US$)
1	**Stakeholder Consultation:** one day stakeholder consultation and PMP orientation workshops at central and regional offices.	3,000
2	**Capacity Building**	
2.1	Study visits	25,000
2.2	Training of Trainers (ToT), trainings for relevant regional, FPs staff and other stakeholders	12,000
3	**Support services**	
3.1	Communication materials: cost of posters, flyer, brochure and other communication materials	5,000

3.2	Awareness raising: awareness raising and training programs to EGs, VSLAs, PAs and other groups on safe use of pesticides and IPM practices.	20,000
4	Environmental Management and M & E: environmental audit of pesticide monitoring in surface water bodies in or around project areas.	10,000
5	**Contingency**: due to fluctuation and exchange rate, the contingency is estimated about 5%.	3,750
Total		**78,750**

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Annexes

Annex-1: List of Pesticides and Other Chemicals Banned or Severely Restricted in Use but that are Found Being sold in Afghanistan Markets

It is illegal in the Government of Islamic Republic of Afghanistan (GoIRA) to import, manufacture, formulate, offer, hold on stock, sell, use or advertise the following Banned Chemicals, though not enforced:

Pesticide/ Chemical Compound Banned	
1. 2,4,5-T (2,4,5 Trichlorophenoxyacetic acid)	26. PARATHION-METHYL (Toxic Oragno-Phophorus Pesticide present in ─Spiridin
2. ALDRIN	
3. ALDICARB	27. HCH
4. BENOMYL+CARBOFURAN+THIRAM Formulation	28. HEPTACHLOR
5. BENZENE HEXACHLORIDE	29. HEZACHLOROBENZENE
6. BINAPACRYL	30. LINDANE (Present in Thiodal form Senegal)
7. CALCIUM CYANIDE	31. MALEIC HYDRAZIDE
8. CAPTAFOL (80% Powder)	32. MENAZONE
9. CABOFURON (50% SP)	33. MERCURY COMPOUNDS
10. CHLOROBENILATE	34. METHAMIDOPHOS FORM
11. CHLOROBROMOPROPANE	35. METHOMYL 12.5% L
12. CHLORODANE	36. METHOMYL 24% L
13. CHLORODIMEFORM	37. METHYL BROMIDE
14. COPPER ACETOARSENITE	38. METHYL PARATHION
15. DDT (Persistent Organo-Phosphate, found in Cock Brand Coil from PRC)	39. MONOCROTOPHOS and its Formulations
16. DIELDRIN	40. NICOTIN SULFATE
17. DINOSEB	41. NITROFEN
18. DINOSERBY SALTS (DNOC and its salts)	42. PARAQUAT DIMETHYL SULFATE
19. ENDRIN	43. PARATHION
20. ETHYL MERCURY CHLORIDE	44. PENTACHLORO-NITROBENZENE
21. ETHYL PARATHION	45. PENTACHLOROPHENOL
22. EHTYLENE DIBORMIDE (EDB)	46. PHENYL MERCURY ACETATE
23. ETHYLENE DICHLORIDE	47. PHOSPHAMIDON
24. ETHYLENE OXIDE	48. SODIUM METHANE ARSENATE
25. FLUOROACETAMIDE	49. TAA (Trichloro Acetic Acid)
	50. TETRADIFON
	51. TOXAPHENE

Source: Plant Protection and Quarantine Department of the Ministry of Agriculture, Irrigation and Livestock, Islamic Republic of Afghanistan.

Annex-2: Complete List of Pesticides Found being sold and used in Afghanistan with and/or without the Government's Consent.

Trade Name	Class	Status	Manufacturer	Active Ingredient	Area of Use
2,4.D	III	C	Rhône Poulenc	2,4-dichlorophenoxyacetic acid	Herbicide broad leaf weeds
6-Fenoxy supper	None	R	Qingdao Jiner Agrochemicals	Fenoxaprop-p- ethyl	Herbicide
Abamore	None	R	Shenyang jinlaiwang Chemical	Dimethylavermectin alamixture + dimethyl 2.5-di (1-methylpropyl) -2.5 (methylethyl) avermectine	Insecticide
Abomore	None	R	Shenyang jinlaiwang Chemical	Abamectin	Insecticide
Acis	II	C	Aventis	Deltmethrin	Insecticide
Acarus	None	C		Fenpyroximate	Acaricide
Afra	None	C	Calliope	Cypermethrin	Insecticide
Agreezor	None	C		6+12+6 Fe+Zn+TE	Supplementary
Agrifol EC	III	C		Dicofol	Insecticide
Aluminium Phosphides	None	R		Aluminium Phosphides	Rodenticide
Ametrin	None	C		Cayno (3 phnoxy phenyl) (methyl 3-(2-2,-dichloroethenyl)- 2,2-	Insecticide
Amitraz	None	R		Amitraz	Insecticide
Antracal wp	None	R		Propine other ingrediets	Fungicide
Arisban	II	R	Dow AgroScience	Chlorpyrifos	Insecticide
Arisbon	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Atlantis	None	C		Mesosulfuron-mythel	Herbicide
Azylon	None	C		Phosalone	Insecticide
Best	None	C			Supplementary
Bioestrene Fe	None	C		Fe	Supplementary
Biomax	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Bordeaux Mixture	None	C		Tobacco and soap	Insecticide
Bordeaux paste	II	C		Copper sulphate and lime	Bactericide
Boxer EC	II	R	Zeneca	Lambda-cyhalothrin	Insecticide
Buthchi	None	R		Buthachlor	Herbicide
Chlorofet- EC	None	C		Chlorofet	Insecticide
Chlorpyrifos	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Ciran	None	R		Zn, I, B, Cu, Mg, Mn, P, N, Cl	Supplementary

Citruban	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Confidor SL	II	C		Imidacloprid	Insecticide
Copper oxychloride	II	C		Copper oxychloride, inertingrediets	Fungicide
copravit	None	C		Copper	Fungicide
Copravet Blue 50%	None	C		Copper oxychloride	Fungicide
Crops plus	None	C		Increase crops growth	Fungicide
Crown SL	II	C		Imidacloprid 200 mg/L	Insecticide
Cyclodan EC	None	C		Endosulfan + Emulsifier-Stabilizer Solvent	Insecticide
Cypermethoate	None	C			Insecticide
Cypermethrin1 WP	None	C	Calliope	Cypermethrin	Insecticide
Cupervit Blue	None	C		Dipteryx Malathion	Insecticide
Daemavite EC	None	C		Immolation	Insecticide
Damon	None	R		Bromopropylate	Acaricide
Danadim EC	II	C	Cyanamid	Dimethoate	Insecticide
Danitol EC	II	R		Fenpropthrin	Insecticide
Dasa-1	None	C		Growth hormones for grapes	Supplementary
Deltamethrin	II	R	Aventis	Deltamethrin	Insecticide
Deltamethrin	II	R	Aventis	Deltamethrin Emulsifier	Insecticide
Denadol EC	II	C	Cyanamid	Dimethoate + and immolathion	Insecticide
Denadoul	III	C	Calliope	Malathion	Insecticide
Dena Super	None	C		S-12 bis (Ethoxycarbony) ethyl10.0 Dimethyl Phosphorodithioate	Insecticide
Diazinon	II	R	Marubeni	Diazinon	Insecticide to control stem borers of cereals sugarcane, millipedes, locusts and grasshoppers
Dicofol	III	C		Dicofol	Acaricide
Diflubenzuron	U	R		N-[[(4- chlorophenyl) amio] carboyl] -2,6-difluorbenzamide	Insecticide
Dimethoate	II	C	Cyanamid	Dimethoate	Insecticide
Dimethoate	II	C	Cyanamid	Dimethoate	Insecticide
Dimilin	II	A	Uniroyal Chemical	Diflubenzuron (60g/l)	Insecticide against locusts
Dipterex	II	R		Trichlorophon	Insecticide
Dragon	III	C	Calliope	Glyphosate	Herbicide
Eagle EC	None	R	Calliope	cypermethrin	Insecticide
Endoria	II	R	Changzhou	Endosulfan	Insecticide

			Biochemical Co.		
Endosulfan	II	R	Changzhou Biochemical Co.	Endosulfan	Insecticide
Ethion	None	C		Ethion	Insecticide
Fenoxysuper	None	R		Extractable Acid	Insecticide
Fenvalerate	II	C	China AgroChem	Atropine sulphate	Insecticide
Fenvalerate	II	C	China AgroChem	Fenvalerate	Insecticide
Fifanoun	None	C	Nanjing	Malathion	Insecticide
Flea & Tick wp	II	C	Zeneca	Lambda-Cyhalothrin	Insecticide
Foliol winter oil	None	C		Mineral oil	Preventive
Gima	None	R		Neo Pynamin + Solvent + LPG (Propan butan)	
Green crop	None	C		N,K,B,Zn,Mg,Cu	Supplementary
Green Crop	None	C		N,K,Zn, Mg,Cu	Supplementary
Haloxyfop	None	R		Haloxyfop-R methyl Exter	Herbicide
Hawk	None	R		Ioxynil Octanoate	Herbicide
Hef oil	None	R		Sulphonation	Fungicide
Helal Pearl	II	R		Imedaclopride	Insecticide
Herbikill	I and II	C	Vapco	Paraquat	Herbicide
Icon 1	III	C	Zeneca	Perethroid lambda-Cyhalothrin	Insecticide
Ifra	None	C	Calliope	Cypermethrin	Insecticide
Illograss	III	C		Diclofop Methyl	Herbicide
Imidacloprid	II	C		Imidacloprid	Insecticide
Imidacloprid WP	II	R		Imidacloprid + Methylena bis – naphthalines + Sodium Sulphonate + Sodium Lauryl Sulphate + Light Calcium Carbonate	Insecticide
Imidacloprid 2	II	C		Imidacloprid + Other ingredients	Insecticide
Killer EC	None	R		Diethyl mercaptosuccinate	Insecticide
Kissan SL	Ib	C		methamidophos [O,S-dimethyl phosphoramidothiate]	Insecticide
Kumulus -DF	None	C		Active ingredients + others	Fungicide
Karate	II	C	Zeneca	Lembda-Cyhalothrin	Insecticide
Lannat SP	None	C		Thioacetimidate-	Insecticide
Lazer EC	Non	C		Cypermthrin + Dimethoate + other ingredients	Insecticide
Lobello	II	R	Aventis	Deltamethrine	Insecticide
Lorsban EC	II	C	Dow AgroScience	Chlorpyrifos	Insecticide

Mactomeil EC	None	C	Calliope	Cypermethrin 100, Immolation	Insecticide
Malathion	None	C		Malathion	Insecticide
Mancozeb	U	C		Mancozeb + Other Ingredients	Fungicide
Mantax- forte	U	C		Mancozeb + copper + xychloride and sulfate + Iron sulfate	Fungicide
Manthane	U	C		Mancozeb	Fungicide
Matador	II	R	Zeneca	Fenpropathrin	Insecticide
Fifanoun	None	C	Nanjing	Malathion	Insecticide
Flea & Tick wp	II	C	Zeneca	Lambda-Cyhalothrin	Insecticide
Foliol winter oil	None	C		Mineral oil	Preventive
Gima	None	R		Neo Pynamin + Solvent + LPG (Propan butan)	
Green crop	None	C		N,K,B,Zn,Mg,Cu	Supplementary
Green Crop	None	C		N,K,Zn, Mg,Cu	Supplementary
Haloxyfop	None	R		Haloxyfop-R methyl Exter	Herbicide
Hawk	None	R		Ioxynil Octanoate	Herbicide
Hef oil	None	R		Sulphonation	Fungicide
Helal Pearl	II	R		Imedaclopride	Insecticide
Herbikill	I and II	C	Vapco	Paraquat	Herbicide
Icon 1	III	C	Zeneca	Perethroid lambda-Cyhalothrin	Insecticide
Ifra	None	C	Calliope	Cypermethrin	Insecticide
Illograss	III	C		Diclofop Methyl	Herbicide
Imidacloprid	II	C		Imidacloprid	Insecticide
Imidacloprid WP	II	R		Imidacloprid + Methylena bis – naphthalines + Sodium Sulphonate + Sodium Lauryl Sulphate + Light Calcium Carbonate	Insecticide
Imidacloprid 2	II	C		Imidacloprid + Other ingredients	Insecticide
Killer EC	None	R		Diethyl mercaptosuccinate	Insecticide
Kissan SL	Ib	C		methamidophos [O,S-dimethyl phosphoramidothiate]	Insecticide
Kumulus -DF	None	C		Active ingredients + others	Fungicide
Karate	II	C	Zeneca	Lembda-Cyhalothrin	Insecticide
Lannat SP	None	C		Thioacetimidate-	Insecticide
Lazer EC	Non	C		Cypermthrin + Dimethoate + other ingredients	Insecticide
Lobello	II	R	Aventis	Deltamethrine	Insecticide
Lorsban EC	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Mactomeil EC	None	C	Calliope	Cypermethrin 100, Immolation	Insecticide
Malathion	None	C		Malathion	Insecticide
Mancozeb	U	C		Mancozeb + Other Ingredients	Fungicide

Mantax- forte	U	C		Mancozeb + copper + xychloride and sulfate + Iron sulfate	Fungicide
Manthane	U	C		Mancozeb	Fungicide
Matador	II	R	Zeneca	Fenpropathrin	Insecticide
Matox	none	C		Tetramethrin	Insecticide
Mr-Clean	None			Parathyroid	Insecticide
Naboud	II		Calliope	Cypermethrin 1	Insecticide
Oxadiazon	U	C		5- tert-butyl 1-4dicloro-5)	Herbicide
Padan SP	None	R		Cartap Hydrochloride	Insecticide
Padide	II	C	Senchim AG	Cypermethrin kind of crawling	Insecticide
Paraxon	I and II	R	Zeneca	Paraquat	Herbicide
Paraxon SL	None	C		1,1dimethyl 4,4 bipyridilium and dichloride	Herbicide
Partner w/p	III	C		Isoproturon	Herbicide
Parto	II	C	Calliope	Cypermethrin-	Insecticide
Parumi	None	C		Permethrin-	Insecticide
Patak	None	C	Senchim AG	Tetramethrin + Cypermethrin, Perfum + Solvents and	Insecticide
Patron	II	C	Calliope	Cypermethrin	Insecticide
Peykar	None	C	Senchim AG	D-allethrine Tetramethrine + Cypermethrine + Pipronlle butoxide Solvent + Propellant	Insecticide
Power Lorsban	II	C	Dow AgroScience	Chlorpyrifos	Insecticide
Project	None	C		Propargite	Acaricide
Pujing EC	None	C		Fenozaprop-p-ethyl	Herbicide
Puma Super	None	C		Puma	Herbicide
Puma super EW	None	C		Fenozaprop-p-ethyl + other ingredients	herbicide
Pyridate	None	C		Pyridate	Herbicide
Radical	None	C		EPTC	Herbicide
Rat Kill	Ib	C		Zinc phosphide	Rodenticide
Rest	II	C		Propiconazole	Fungicide
Roundup	III	C		Glyphosate 490 gm and inert material	Herbicide
Sahara	None	C			Rodenticide
Senitox EC	II	C	Cyanamid	Dimethoate	
Sevan wp	None	C			Insecticide
Seven Top	None	C			Insecticide
Spain ghar	None	C		All micronutrients	Supplementary
Spot	None	C			
Stream	None	C		Tridemorph	Fungicide
Sulfur	None	C		Sulfur	Fungicide
Sunicidin	None	C		Cyano-3phenoxy-benzl-2(4chlorophenyl)-3methyl-butyrate+optanal	

Supercide	None	C		Methidathion	Insecticide
Superdin	None	C	Calliope	Malathion + immolathion	Insecticide
Super dithion	None	C		Superdithion + Amosulphide	Insecticide
Super Don EC	None	C		Superdon	
Super grower	None	C		N,P,Mg,S,Boron,Co,Ma,Iron	Supplementary
Super Lorsban	II	C	Dow AgroScience	Chloropyrifos	Insecticide
Super Malathion	None	C	Calliope	Malathion	Insecticide
Super sure	None	C	Calliope	Malathion + immolation	Insecticide
Super Tonic	None	C		Co. + Ma. + N	Supplementary
Super top	None	C		C23H19CIF3NO3	Insecticide
Super top	None	R		Parathyroid	Insecticide
Super work U46 Combi Fluid	None	R		Extractable acid , 2,4 Dunethumin salt	Insecticide
Systan	Ib	R		Oxydemeton-methy	Insecticide
Taromar	None	C	Senchim AG	Cypermethrin PBD, Perfume	Insecticide
Thiodan EC	II	C	Senchim AG	Endosulfan	Insecticide
Timer EC	None	C	Qingdao Jiner AgroChem	Emamectin benzoate	Insecticide
Tophas	None	C	Calliope	Malathion	Insecticide
Topgun	None	R		Clodinafop Propargyl	Herbicide
Trichlorfon SP	II	R	Dow AgroScience	Trichlorfon	Insecticide
Trymethoate 40%EC	None	C	Cyanamid	Immolation	Insecticide
Unigol	None	C		K,P,N,I,EDTAchelate,Z,Boron, Mg,Co,Mo	Supplementary
Vacomil-Plus 50	None	C		Copper Oxycholoride	Fungicide
Vetavax thiram wp	None	R		Thiram , Emulsifier	Fungicide
Wettasul- w/w	None	C		Sulphur	Fungicide
Zed	None	C	Calliope	Cypermethrine	Insecticide
Zineb wp	U	C		Active Ingredients + Zinc ethylenebis (dithiocarbamate) (polymeric) + Others	Fungicide
Zinc Phosphidew/w	Ib	R		Zinc Phosphide	Rodenticide
Zubin	II	C	Sumitomo	Fenvalerate	Insecticide
Zubin EC	None	C	Sumitomo	Cyano(3-phenoxyphenyl) + methyl-4-chloro-a	Insecticide

Source: Plant Protection and Quarantine Department; HLP's Agro-chemical survey 2009.

The table above shows the inventory of pesticides that have been retrieved from survey of all the stakeholders. Furthermore, the database has been divided into different categories on various

classification bases i.e. on pesticide type bases, systemic/contact etc, also classified according to world standards based on their active ingredients as A= environmentally friendly; C= acceptable; R=dangerous; RR= very dangerous; and B= Baned. Unfortunately, among all the pesticides in the inventory only the ‒Dimilin‖ insecticide falls under the environmental friendly (A) category.

Annex-3:

Afghanistan Pesticide Law: Unofficial Translation

Islamic Republic of Afghanistan

Ministry of Justice

Pesticide Law

Official Gazette

No. (1190)

Published: 27/07/1394 (19 October 2015)

Unofficial Translation: Abdul Waheed Hannan 01 March, 2016

Legislative Decree of the President of the Islamic Republic of Afghanistan on the signing of the Pesticide Law.

No. (71)

Date: 08/06/1394 (30 Aug

2015) Article 1:

Pursuant to the provision of Article (79) of the Constitution of the Islamic Republic of Afghanistan, I hereby sign the Pesticide Law of Afghanistan which has been ratified by the Cabinet of the Islamic Republic of Afghanistan within (30) Articles and (6) Chapters, on 04/06/1394 (26 Aug 2015).

Article 2:

The Minister of Justice and the Government Minster on Parliamentary Affairs, are assigned to present/table this decree within (30) days of the first meeting of the National Assembly.

Article 3:

This decree, shall, along with the Cabinet resolution, be promulgated in the official gazette.

Mohammad Ashraf Ghani,

President of the Islamic Republic of Afghanistan

The Resolution of the Cabinet of the Islamic Republic of Afghanistan on the Pesticide Law of Afghanistan.

No. (19)

Date: 04/06/1394 (26 Aug 2015).

I hereby, approve the Pesticide Law of Afghanistan which has been ratified by the Cabinet of the Islamic
Republic of Afghanistan within (30) Articles and (6) Chapters, in its meeting on 04/06/1394 (26 Aug 2015).

Mohammad Ashraf Ghani,

President of the Islamic Republic of Afghanistan.

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CHAPTER ONE: GENERAL PROVISIONS

Legal Basis: Article 1

This Act is enacted in pursuant to the Article (14) of the Constitution of the Islamic Republic of Afghanistan.

Objectives: Article 2

The objectives of this Act are:

1. To control the production, import, transport, maintain, distribute and use of pesticides;
2. To prevent risks to human, animal, plant health, resulting from the use of pesticides;
3. To protect plants and environment from the adverse effects of pesticides;
4. To prevent the losses of agricultural products through application of sound techniques.

Descriptions: Article 3

The terms used in this Act shall have the following meaning:

1. **"Pests":** All living factors such as insects, nematodes, disease (fungus, viruses and bacteria) weeds, that damage plants and agricultural products/fruit, qualitatively and quantitatively.
2. "**Pesticides**": Chemical substance or mixture of substances used for preventing, controlling or destroying pests that include:
   - Vectors of human and animal disease factors.
   - Undesirable species of plants and animals, listed in this Act.
   - Substances which may be administered to animals for the control of pests in or on their bodies.
   - Substances intended for use as a plant growth regulator, defoliant and desiccant.
   - Substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.
   - Substances used to eradicate or pacify germs, repellants, pests and sterilizing agents.
3. **"Eradication"** refers to activities for, neutralizing, destroy of isolate wastes, used tools contaminated with agricultural pesticides. **"Label"** refer to written, printed or graphic matter on or attached to the immediate package and on every other covering the package containing pesticides.
4. **"Package or Packaging"** means the container together with the protective wrapping used to carry pesticide products via wholesale or retail distribution to users.
5. **"Residue"** means any substances in or on food, agricultural commodities or animal feed resulting from the use of a pesticide, including:
   - Any derivatives of a pesticide, such as conversion products, metabolites, reaction products and impurities considered to be of toxicological significance; and
   - Residues from unknown or unavoidable chemical source uses.
6. **"Premises"** mean any land, shop, stall, place, vehicles or other physical location where any pesticide is, manufactured, stored, transported, sold or used.

7. **"Distribution"** means the process by which pesticides are supplied through trade channels to local or international markets.
8. **"Manufacturer"** means any legal entity in the public or private sector engaged in the manufacture of a pesticide's active ingredient or preparing its formulation or product, whether directly or through an agent or through an entity controlled by or under contract with it.
9. **"Risk"** means a function of the probability of an adverse health or environmental effect, and the severity of that effect, following exposure to a pesticide.
10. **"Poison"** means a substance that can cause disturbance of structure or function, leading to injury or death when absorbed in relatively small amounts by human beings, plants or animals.
11. **"Formulation"** means the combination of various ingredients designed to make a product useful and effective for the purpose or purposes claimed.
12. **"Agricultural pesticide product"** means the pesticide active ingredients and other components, in the form in which it is packaged and sold.
13. **"Poisoning"** means occurrence of damage or disturbance caused by a pesticide on living organism (human, animal, and plant).
14. **"Active ingredient"** means the chemically active part of the pesticide present in a formulation.
15. **"Permit"** refers to a written document issued by the Ministry of Agriculture, Irrigation and Livestock to license the import, export, store, sale and advertising of the pesticide, in accordance with this Act.
16. **"Registration Office"** refers to an office where a pesticide along with its qualitative and quantitative values is registered.

Implementing Authority: Article 4

The Ministry of Agriculture, Irrigation and Livestock is responsible for implementing the provisions of this law.

Chapter Two: Duties and Authorities

Duties and Authorities of the Department of Plant Protection and Quarantine: Article 5

The Department of Plant Protection and Quarantine shall have the following duties and authorities:

1. Issue and register permits, listed in this Act;
2. Develop and implement of programs to control, monitor and inspection of pesticides.
3. Develop and implement research programs on pesticides;
4. Approve maximum concentration of pesticide residues in consultation with Pesticide Committee, in accordance with this Act.
5. Establish relations with countries, national, regional and international organizations, in accordance with this Act.
6. Organize and management of meetings of the Pesticide Committee.

7. Accomplish other functions listed in this Act.

The Pesticides Committee: Article 6

(1) In order to better implementation of provisions of this Act, the Pesticide Committee shall consist of the following members:

a. The Deputy Minister (Technical) of the Ministry of Agriculture, Irrigation and Livestock, who shall act as Chairman;
b. The Head of the Plant Protection and Quarantine Department of the Ministry of Agriculture, Irrigation and Livestock, as deputy chairman;
c. An authoritative representative of the Ministry of Commerce and Industry, as member.
d. An authoritative representative of the Ministry of Public Health (MOPH), as member.
e. Head of Agricultural Research Institute, as member.
f. Director General of Livestock and Animal Health, as member
g. An authoritative representative of the National Environment Protection Agency (NEPA), as member.
h. An authoritative representative of the Afghan National Standards Authority (ANSA), as member.
i. A professor from the Agriculture Faculty of Kabul University, as member.
j. A professor from the Veterinary Faculty of Kabul University, as member.
k. Head of Agricultural Chemistry Division of the Plant Protection Department, as secretary
l. A professor from the Environment Faculty of Kabul University, as member.

(2) The Pesticide Committee, may invite experts of relevant fields for consultations and technical information, if required, to its meetings.

(3) The manner of convening the Committee meetings, referred to in paragraph (1) of this Act, and its activities, shall be organized in accordance with the procedures, to be approved by the committee.

Functions and Authorities of the Committee: Article 7

The Pesticide Committee shall have the following functions and authorities:

1. Approve or reject applications for the registration, re-registration, suspension, substitution and removal of pesticides from the relevant registry office.
2. Prepare lists of allowed and prohibited pesticides
3. Review, suspend, substitute or removal of pesticides from the list in accordance with

new scientific information, on the request of relevant agency or two committee members.

4. Set forth necessary conditions, pursuant to provisions of this Act, for acquiring permit.
5. Provide advice and set forth criterions for the management and better use of pesticides.
6. Provide advice, pursuant to provisions of this Act, in performing good agricultural practices, determination of fees to be collected for the services provided.
7. Approve maximum limit of residue concentration of pesticides.
8. Make sure the registration of pesticides.
9. Select location for store and use of pesticides.
10. Organize the modality of transporting the pesticide and set forth special conditions.
11. Organize the modality of eradicating unusable pesticide, empty containers and liquids from washing pesticide tools, in an environmentally sound manner.

Appointing Inspectors: Article 8

(1) The Plant Protection and Quarantine Department, in order to implement the provisions of this Act, shall assign inspectors, whose interests are not opposed to the under inspection matter.

(2) The inspectors, referred to in paragraph (1) shall have the following duties and authorities:

a) Control and inspect individuals, who produce, import, export, pack, label, sell, distribute, transport, use and advertise pesticides.

b) Seek information and necessary technical assistance from individuals in order better carry out functions set forth in this Act.

c) Take samples of any substances to which this Act is applied, and send such samples for analysis to relevant laboratory.

d) Probe violations/offences against the provisions of this Act, and report to the Pesticide Committee.

e) Stop all activities contrary to the provisions of this Act.

f) Confiscate all documents and substances, insinuate violation and considered offence by the provisions of this Act.

g) Inspectors, referred to in paragraph (1), are required to show the special card, during inspection.

Right of Appeal: Article 9

(1) Any person, not satisfied with the decision of inspector or the laboratory section, may submit his written objection to the Pesticide Committee within a period of thirty (30) days from the date on which the decision is communicated to him.

(2) The Pesticide Committee, after receiving the appeal, referred to in paragraph (2) of this Article, within (30) days of acceptance or rejection of the appeal, shall make its decision, and that decision shall be the final.

Chapter Three: Permits/Licenses

Issuance of Permits: Article 10

(1) Production, import, export, transportation, store, sale and distribution of pesticides, without permit, shall be prohibited.

(2) A Legal entity, in order to obtain a permit, referred to in paragraph (1) of this Article, may submit a written application to the Plant Protection and Quarantine Department.

(3) The Plant Protection and Quarantine Department, shall only issue an import permit to a legal entity, registered in accordance with Afghanistan Law, for a period of one year, provided that the entity:

a) holds a business/trade permit;

b) imports pesticides from international firms of good standing;

c) provides samples of pesticides to be imported for analysis, before importing;

d) appoints professionals holding third level science degree at pesticide sale stores;

e) provides list of retailers and sale agencies associated to the Plant Protection and Quarantine Department;

f) registers pesticides upon import with the Registration Office of the Plant Protection and Quarantine Department;

(4) Affairs related to produce, export, transportation, store, sale, distribution of pesticides and the royalty amounts, referred to in paragraph (2) of this Article, shall be regulated by a separate regulation;

(5) The permit, referred to in paragraph (1) of this Article, is not transferrable;

(6) If the application, referred to in paragraph (2) of this Article, is rejected by the Plant Protection and Quarantine Department, the applicant may submit a written appeal to the Pesticide Committee. The committee decision on acceptance or rejection, is then final.

Purchase without obtaining Permit: Article 11

Agriculture Cooperatives may purchase necessary pesticides, without a license, proportionate to the land area, in accordance with the recommendations of the relevant technical personnel of MAIL and must undertake to store and use them safely.

Obligations of the Permit/License Holder: Article 12

The permit/license holder may have the following duties/responsibilities:

(1) Maintain documents related to production, import, export, store, purchase, sale, use, distribution, formulation and other documents related to pesticides, for at least (3) years.

(2) Make available, upon request, documents referred to in paragraph (1) of this Article, to inspectors and public authorities.

(3) Take necessary measures to protect, store and transport any

pesticides. (4) Comply with environmental protection measures.

(5) Import pesticides via ports, where equipment for analysis are available.

(6) Comply with any and all conditions set forth in the permit/license.

Renewal of Permit/License: Article 13

(1) The holder of permit/license, shall renew the relevant permit within a period of (30) days after the end of the date of expiry. A fine of AFG 500 shall be paid thereafter for each delayed day.

(2) The permit, after the end of expiry date, may be renewed in accordance with relevant regulation, provided that the provisions of this Act are complied.

Termination of Permit/License: Article 14

The permit/license shall be terminated, if:

(1) Provisions of this Act are not complied with;

(2) Permit/license holder dies or his legal entity is dissolved.

(3) There are safety reasons which justify limiting the trade or use of a pesticide, a premise or other element included in the license.

Returning the Permit/License: Article 15

When the permit/license holder, is unable to perform his/her duties, he/she shall submit the permit/license along with a written report on the pesticide to the Plant Protection and Quarantine Department.

Chapter Four: Registration of Pesticides

Application for Registration: Article 16

(1) Any person, desiring to register a pesticide product, shall, according to the provisions of this Act, submit an application for registration to the Plant Protection and Quarantine Department.

(2) The Plant Protection and Quarantine Department, shall register the allowed pesticides in its relevant office.

(3) Any pesticide, which existed prior to enactment of this Act, and considered unusable according to the provisions of this Act, shall receive a special ruling by the Pesticide Committee to determine how much quantity and the time period will be allowed for the exceptional use of this same pesticide, otherwise, shall be immediately banned.

Import of Un-registered Pesticides: Article 17

The manufacture, import, export, transport, storage, sale, distribution, application, use or advertisement of unregistered pesticides, are all prohibited.

Pesticides, imported in emergency cases, in order to prevent a severe pest outbreak, are excluded from this provision, on authorization from MAIL.

Temporary Research Permits/Licenses: Article 18

(1) The Plant Protection and Quarantine Department after the approval of the Pesticide Committee, in accordance with the provisions of this Act, may grant a temporary permit to licensed individuals or entities authorizing them to import, formulate or use of pesticide for the purpose of scientific research.

(2) Individuals, referred to in the paragraph (1) of this Article, shall always submit the outcome of their research to the Plant Protection and Quarantine Department.

Use of Pesticides in Emergency Cases: Article 19

The Plant Protection and Quarantine Department, after the approval of the Pesticide Committee may grant permits to licensed individuals for the use of unregistered product in cases of emergency or a pest outbreak, provided that:

(1) There is no product in the Registry available and affordable in sufficient quantities to manage the pest outbreak causing the emergency.

(2) The permit to use is for a specific time period only, and specified by the Pesticide Committee.

(3) The permit holder and consignments are clearly identified.

Revoking of a Pesticide from the Registry Office: Article 20

The Pesticide Committee may cancel the registration of a pesticide and remove it from

the list when:

(1) It is no longer effective for its intended purpose.

(2) Based on new scientific information that the pesticide presents hazards to human, plant, or animal health or the natural environment.

(3) Other products or management measures become available that are more or equally effective, and less hazardous.

(4) The pesticide becomes banned or restricted in a country with similar governance and ecological circumstances, or by an international agreement or convention that Afghanistan has acceded to.

Ban on Pesticides Usage: Article 21

(1) If the Pesticide Committee has reasons to believe that the use of any registered pesticide may result in risk/injury to human beings, animals or the environment, it may:

a. Temporarily prohibit the sale, distribution or use of the pesticide, or a specified batch of pesticides.
b. Specify the area and period of validity in its official notification to an individual or the registration office.
c. Carry out an investigation of the matter.

(2) According to the results of the investigation, the Pesticide Committee shall order either the removal of the temporary prohibition, or the amendment, suspension, or cancellation of the registration.

Investigation Outcomes: Article 22

(1) The Pesticide Committee shall carry out investigation on a prohibited pesticide within the period of 3 months and shall, based on the findings of the investigation, decide on temporary prohibition or removal.

(2) In case a pesticide is permanently banned as a result of the investigation and decision of the committee, it shall make a decision on eradication of any existing remaining stock.

Chapter Five: Protective Measures

Labeling: Article 23

All containers of pesticides shall be accompanied by a label in one of the official languages of the Islamic Republic of Afghanistan that includes:

(1) Common and trade names, concentration formulation and ingredients of the pesticide.

(2) The type of product (e.g. insecticide, fungicide, herbicide, rodenticide).

(3) The name of the pest which the pesticide is intended to eradicate and the recommended dosage.

(4) The use instructions, application methods, persistency and pre-harvest interval.

(5) Warnings and cautionary measures, including signs and symptoms of poisoning and information on safety, health and first aid measures, warning symbols and precautions for environmental protection.

(6) The date of manufacture, expiry, batch number and name of the manufacturing country. (7) Other relative technical requirements.

Ban on Commercial Advertisement of the Pesticides: Article 24

Advertisement of unregistered pesticides, or the use of pesticides restricted to trained operators and technical equipment, is prohibited.

Chapter Six: Miscellaneous Provisions

Establishment of Laboratory: Article 25

(1) The Ministry of Agriculture, Irrigation and Livestock may establish laboratories to carry out pesticide formulations and analysis of samples.

(2) The Plant Protection and Quarantine Department shall send the pesticides, collected by inspectors to laboratories, referred to in the paragraph (1) of this Article, for analyses, quality control and registration

Functions of Laboratories: Article 26

(1) The functions of the laboratories, referred to in Article (25) of this Act, shall include:

a) Providing information to applicants on active ingredients of the pesticide and the amount of residue of the pesticide on agricultural products, for the purpose of registration.
b) Carry out studies on the presence and eradication of pesticides which are Persistent Organic Pollutants (POPS), harm the environment, are banned or unregistered pesticides.
c) Support the development of protocols for studies on pesticide residue.
d) Coordination between pesticide residue and other pesticide related studies, with the National Environmental Protection Agency (NEPA).

(2) The pesticide laboratory staff shall preserve the confidentiality of the formulae submitted for analysis or test, along with its records.

Punitive measures: Article 27

(1) If a person, without holding permit/license or package, serial number and particular label, engaged in importing and selling pesticides, the Plant Protection and Quarantine Department shall, apart from confiscating the pesticide, fine the offender 30% of the total cost of the imported pesticide.

(2) If a person, contrary to the list of the allowed pesticides, without a permit/license imports any pesticide, the Plant Protection and Quarantine Department shall, apart from confiscating the pesticide, fine the offender 30% of total cost of the imported pesticide.

(3) If a permit/license holder, shows indifference in keeping the relevant documents or does not reveal upon request by inspectors, the Plant Protection and Quarantine Department shall close the storage facility of the offender until presentation of the documents. In case of

failure to present the required documents within one month, the permit/license may be annulled.

(4) If the permit/license holder does not submit a request for registration of pesticides to the relevant office, and without registration engages in import, store, advertise, sell, distribute, implement and use of pesticides, the Plant Protection and Quarantine Department, shall, considering the type of the offense, order this person to pay 20% of the total cost of the imported pesticides.

(5) If the outcomes of analysis prove contrary to the samples presented, the imported pesticides shall be confiscated and the offender may be fined to pay 20% of the total cost of the imported pesticide.

(6) The Plant Protection and Quarantine Department shall, within (10) days, deposit the collected amount in the government income account.

Responsibilities of the Agencies: Article 28

(1) Ministries of Finance and Trade and Industry, the Customs Department and other relevant agencies, shall cooperate with the Ministry of Agriculture, Irrigation and Livestock on the control, import and export of pesticide, and prevent the import of all pesticides prohibited by the provisions of this Act.

(2) Customs officials, required to allow/deny a permit/license holder to import pesticides.

Propose Regulation and Setting Procedures: Article 29

The Ministry of Agriculture, Irrigation and Livestock, in order to better implement the provisions of this
Act, may propose regulations and set procedures, not adverse to the provisions of this Act.

Enforcement: Article 30

This Act shall, from the date of signature, be enacted and promulgated in the official gazette of the Government of the Islamic Republic of Afghanistan.

Annex-4:
List of WEE-RDP provinces and districts

Region	Name of the Province	Name of Districts	Number of CDCs	Number of CDCs to be covered 70%
Central	1. Wardak	Maydan Shahr	52	36
	2. Logar	Khoshi	77	54
		Pul-i-Alam	235	165
	3. Bamyan	Yakawlang	143	100
		Bamyan Centre	110	77
		Panjab	99	69
		Sayghan	34	34
		Shibar	76	53
	4. Parwan	Bagram	78	55
		Chaharikar	80	56
		Jabalussaraj	73	51
		Salang	44	31
		Sayed Khill	62	43
	5. Kapisa	Nijrab	255	179
		Muhmad Raqi	91	64
	6. Kabul	Chahar Asyab	51	36
		Bagrami	99	69
		Istalif	32	22
	5. Panjsher	Anaba	42	29
		Bazarak	29	20
	7. Dai Kundi	Nili	58	41
		Kiti	88	62
SW	1. Helmand	Nawa-e-barakzai	218	153
		Lashkargah	161	113
	2. Kandahar	Kandahar (Dand)	145	102
		Daman	64	45
	3. Nimroz	Zaranj	178	125
		Chahar Burjak	59	41
	4. Zabul	Qalat	195	137
	5. Uruzgan	Tarin Kowt	201	141
SE	1. Khost	Mandozai	80	56
		Khost (Matun)	228	160
	2. Ghazni	Ghazni town	181	127
	3. Paktiya	Gardez	154	108
		Ahmad Abad	76	53
	4. Paktika	Sharana	98	69

NE	1. Badakshan	Darayim	114	80
		Fayzabad	166	116
	2. Takhar	Baharak	110	77
		Taluqan	330	231
	3. Kundoz	Ali Abad	74	52
		Kundoz	230	161
	4. Baghlan	Pul-e-khumri	99	69
		Baghlan-e- Jadid	237	166
NW	1.Jawzjan	Fayzabad	72	50
		Shibirghan	136	95
	2.Faryab	Bilchiragh	68	48
		Maymana	92	64
	3. Samangan	Hazrat-i-sultan	60	42
		Aybak	127	89
	4. Balkh	Balkh	118	83
		Chahar Kint	64	45
		Dehdadi	36	36
		Nahr e shahi	36	36
	5. Sar-e-pul	Sar-e-pul	177	124
		Gasfandi	87	61
East	1. Laghman	Mihtarlam	220	154
		Qarghayi	154	108
	2. Kunar	Asad Abad	53	37
		Narang wa badil	62	43
	3. Nuristan	Patun	55	39
		Wama	59	41
	4. Nangarhar	BEHSUD	124	87
		DARAH-I-NOOR	63	44
		KAMA	78	55
		KHEWA	93	65
		RODAT	78	55
		SURKH RUD	149	104
West	1. Ghor	Chakhcharan	336	235
	2.Badghis	Qala-I-Naw	95	67
		Jawand	125	88
	3. Herat	Guzara	225	158
		Injil	221	155
		Karukh	80	56
		Kushki Rubati Sangi	159	111
	4. Farah	Farah	148	104
Total	**34**	**76**	**8956**	**6301**

Annex-5: Stakeholders Consultation Workshop on PMP for WEE-RDP

Report of stakeholder consultation workshop on PMP for WEE-RDP/ MRRD, at National level, Kabul, 31/12/2018

Photo of Stakeholder Consultation Workshop on PMP for WEE-RDP

I. Introduction

One day stakeholder consultation workshop on Pest Management Plan (PMP) for WEE-RDP/ MRRD conducted to a total of 18 representatives of PPQD of MAIL, HED of MAIL, NEPA, NHLP, OFWMP-AF, AAIP, CCNP, EU-MAIL/GIZ and faculties of Environmental Science and Agriculture of Kabul University. The workshop was taken place at conference hall of WEE-RDP building, MRRD, Kabul, Afghanistan.

II. Objective workshop

The main purpose of the workshop was to ensure the inclusion of relevant stakeholders in PMP preparation and implementation. And the objectives are as follow:

- Ensure that the inputs and suggestions of relevant stakeholders are thoroughly incorporated in PMP.
- Strengthen mechanisms for coordination.
- Strengthen partnerships for sustained behavior change on safe use of pesticides and dissemination of Integrated Pest Management (IPM) Practices.

III. Participants

Participants of the workshop included representatives of PPQD of MAIL, HED of MAIL, NEPA, NHLP, OFWMP-AF, AAIP, CCNP, EU-FARM/GIZ/MAIL and faculties of Environmental Science and Agriculture of Kabul University. The complete list of participants is attached in figure-7.

IV. Agenda

The agenda of workshop enabled participants to get a big picture of WEE-RDP, and understand rational and objectives of PMP for WEE-RDP. The workshop followed pre-developed agenda outlined. The agenda is attached in table-1.

V. Workshop Proceedings

The workshop proceeded as per agenda (attached below in table-1). Below is summary of opening remarks by each individual and main message from the presentation, proceeded by technical discussions and mutual coordination on the PMP implementation under WEE-RDP.

Opening remarks given by: Mr. Mohammad Waheed Ibrahimzada, Deputy Director for Program.

The stakeholder consultation workshop was officially commenced with the recitation few verses of the holy Quran by Qari sahib, later on opening speech was delivered by Deputy Director for Program of WEE-RDP/MRRD, Mr. Mohammad Waheed Ibrahimzada. He extended a warm welcome to the participants on behalf of WEE-RDP/MRRD, highlighting the importance of the stakeholder consultation workshop to be implemented in the sub-program activities of WEE-RDP.

Presentation on PMP for WEE-RDP

In the first session, Mr. Mohammad Mustafa Sahebzada (ESS Manager at WEE-RDP), presented and thoroughly discussed the history of AREDP and route to WEE-RDP (PDO, components, coverage, targets of WEE-RDP), focus of WEE-RDP to WEE-NPP pillars, SIU responsibilities and implementation of ESMF, rational and objectives of PMP for WEE-RDP, potential health and environmental effects of pesticides under WEE-RDP, legal framework, institutional arrangements, coordination, capacity building and awareness raising on proper PMP implementation under WEE-RDP.

Figure-1: presentation on PMP for WEE-RDP

In the second session, technical discussions and issue raised by the participants, as follow;

1. Name: **Ms. Fawzia Mumtaz,** Department of Plant Protection, Agriculture Faculty, Kabul University.

Technical Discussion: Ms. Fawzia Mumtaz, highlighted the technical aspects of pest management and prevailing problems and constraints of pesticide use in Afghanistan, her discussion was on below points:

- Illegal products, do enter Afghanistan on a regular basis, like DDT, etc. are easily found in retail shops.
- Incorrect dosage use of pesticides is a serious issue among farmers.
- There is hardly any personal safety protection equipment available in the market. Even if they are available, the farmers feel reluctant to wear them.
- It is common practice with women to store their pesticides at home and do not lock them out of children reach.

Figure-2: Technical discussion on prevailing problems and constraints of pesticide use in Afghanistan

2. Name: **Mohammad Mustafa Sahebzada**, ESS Manager at WEE-RDP.

Raised Issue: how can NHLP support WEE-RDP on safe use of pesticides and dissemination of IPM practices at community level.

Respondent Name: **Fahim Stanikzai**, ESM Specialist at NHLP.

Fortunately NHLP is also a national program like WEE-RDP, and NHLP can support the beneficiaries of WEE-RDP at community levels, as on regular basis, NHLP provides technical and practical trainings to extension workers and then to lead farmers at Farmer Field School, afterward these lead farmers further capacitate and aware more farmers on the pest management aspects and adoption of IPM methods, as a result, staff, beneficiaries or target groups of WEE-RDP can participate in these trainings.

Figure-3: Discussion on NHLP's pest management and IPM strategy

3. Name: **Masihullah Safi,** Environmental Expert at NEPA.

Raised Issue: WEE-RDP should properly monitor the procurement, transportation and application of pesticides.

Respondent Name: **Mohammad Mustafa Sahebzada**, ESS Manager at WEE-RDP.

The potential environmental and health impacts of pesticides under WEE-RDP would be minimal, as agriculture activities supported under component 3 may lead EGs and PAs to use some pesticides for agriculture related works and agribusiness related activities, in addition, WEE-RDP neither procure nor distribute inputs and pesticides, therefore, it will be not required to cover the mentioned points, though relevant groups of WEE-RDP will be trained on safe usage and storage of inputs.

Figure-4: Discussion on role of NEPA in PMP implementation and follow-up

4. Name: **Ms. Farida, Gender Coordinator,** EU-FARM/GIZ/MAIL.

Raised Issue: Dose PPQD or World Bank funded project has provide training to women of pest management or IMP?

Respondent Names: Mr. **Ghulam Sarwar Haidarzada**, IPM specialist at AAIP/MAIL
Fortunately AAIP with close collaboration of PPQD of MAIL, organized a specialized training for women on IPM practices at Kabul, the participants of the mentioned workshop were DAIL staff and women from local communities.

Figure-5: Discussion on IPM training for rural women at AAIP.

5. **Ms. Fawzia Mumtaz,** Professor at Department of Plant Protection, Agriculture Faculty, Kabul University.

Raised Issue: Pesticides Law issued in 2015, however still it is not being implemented.

Respondent Names: **Abdul Rahman Wahidi**, Head of Pesticides Unit, PPQD/MAIL.

Still the pesticides law is not fully implemented as still the pesticides regulation is not issued government cabinet, in addition, the pesticides and pest complex lab has not fully functionalized by AAIP, therefore the implementation of pesticide law has not initiated.

Figure-6: Discussion of the implementation of Afghanistan Pesticides Law

6. **Mr. Mujiburahman Ahmadzai,** Lecturer at Environmental Science Faculty, Kabul University.

Raised Issue: My concern is about climate change as these changes will boost up the growth of pest as well enable feasible environment to pest's expansion, as a result, MAIL should focus on climate smart agriculture practices and establish demonstration plots.

Respondent Names: **Sayed Jamaludin,** Agronomist at OFWMP/MAIL
OFWMP, has established irrigation demonstration sites at its regional offices where modern and drought resistant methods of agriculture activities are practiced, in the meantime, OFWMP has been working on land laser leveling which is a great step towards efficient irrigation.

7. Name: **Abas Ali,** Senior ESS officer at CCNP/MRRD.

Raised Issue: dose the proposed PMP has training plan for capacity building of DRRD staff.

Respondent Name: **Mohammad Mustafa Sahebzada**
The proposed PMP for WEE-RDP clearly declared capacity building and awareness raising of regional staff of WEE-RDP, DRRD staff and relevant stakeholder is mandatory.

8. Name: **Ramazan Mehdiyar**, Advisor to HED/MAIL.

Raised Issue: Mr. Mehdiyar discussed the importance of using of Personal Protective Equipment (PPE) during pesticides application as most of the rural farmers are aware of the importance of PPE, therefore, I suggest to include this point in the PMP for WEE-RDP.

Respondent Name: **Mohammad Mustafa Sahebzada.**

Well noted with thanks, as I discussed during my presentation that the main focus of WEE-RDP will awareness raising and information dissemination on safe usage of pesticides, in the meantime, special focus will be paid to aware program beneficiaries on the importance of PPE during pesticides application.

The workshop was officially ended with the closing remarks of Mr. Sahebzada, ESS Manager of WEE-RDP, he expressed thanks and requested, representatives of HED-MAIL, PPQD-MAIL, NEPA, NHLP, OFWMP, AAIP, environmental sciences and agriculture faculties of Kabul University to support WEE-RDP in the implementation and monitoring of the proposed PMP.

Islamic Republic of Afghanistan
Ministry of Rural Rehabilitation & Development (MRRD)
Women Economic Empowerment Rural Development Program (WEERDP)

Stakeholder Consultation Workshop on Pest Management Plan (PMP) for WEE-RDP **Monday, 31-12-2018**

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19					
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22					
23					
24					
25					

Figure-7: Participants list of Stakeholder consultation workshop on PMP for WEE-RDP.

Table-1: Agenda for Stakeholder Consultation Workshop on Pest Management Plan Monday, 31-12-2018

S.N	Activity Description	Resource Person	Time
1	Registration	All Participants	08:30 – 08:40
	Recitation of Holy Qu'ran	Qari Sahib	08:40 – 08:45
	Introduction	All Participants	08:45 – 08:50
2	Opening Remarks	Mohammad Waheed Ibrahimzada	08:50 – 09:20
3	Presentation on Pest Management Plan	Mohammad Mustafa Sahebzada	09:20 – 10:00
Tea Break			**10:00 – 10:15**
5	Technical Discussion and Q & A	All Participants	10:15 – 12:00
Lunch Break			