**THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA**

**MINISTRY OF WATER, IRRIGATION AND ELECTRICITY**

# Rural Water Supply Operation and Maintenance Manual

# Module - E

## A Trainer's Manual for Spare Part Supply and Managem

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# MODULE - E: SPARE PART SUPPLY AND MANAGEMENT

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## DEFINITIONS OF TERMS:

| | |
|---|---|
| **Accessibility** | Is having a functional and reliable water supply facility without any barriers within a radius of 1500 metres for Rural Water Supply |
| **Access Coverage** | Is the percentage of people with access to safe, adequate and reliable water supply within 1500m at 15 l/c/d for rural community. |
| **Adequate Water** | Is the quantity of water required to meet the minimum demand per capita per day. The standard being 15l/capita/day by 2015 for Rural people. |
| **Community** | Refers to a group of people living in a designated area who share residential and developmental challenges and benefits. It may also refer to all people sharing such challenges and benefit regardless of geographical and social boundaries |
| **Community Based Management** | Is the process of empowering community members to assume the lead role in decision making about the levels of services they require, whilst organizing themselves to plan, implement, operate and maintain their water supply and sanitation facilities. |
| **Community Management** | Is a form of community participation in which the community takes the final decision on all aspects of planning, implementation, management, monitoring, evaluation, O&M of the water supply facility |
| **Evaluation** | Is the periodic and systematic review and analysis of a practice to determine the relevance, effectiveness, efficiency and impact of programmes/projects compared to the set objectives. |
| **Maintenance** | Refers to activities required to sustain the water supply facilities in a proper working condition. It includes preventive maintenance, corrective maintenance and crisis maintenance. |
| **Monitoring** | Is the regular and continuous checking of whether plans, activities and situations are being implemented as planned, and includes the provision of feedback to facilitate the taking of corrective measures by relevant stakeholders. |
| **Operation** | Refers to the day to day running and handling of the water supply facilities in a manner that optimizes their use and contributes to a reduction in breakdown and maintenance needs |
| **Preventive Maintenance** | Refers to an activity that includes checking the status of hand pump components at regular fixed intervals |
| **Rehabilitation** | Is the correction of major defects and the replacement of equipment to enable the facility to function as originally intended. |
| **Reliable Water Supply** | Is the supply of water on a continuous basis meeting the minimum demand per capita per day |
| **Repair** | Is the restoration of a defective component to return the facility to acceptable working condition. The cost of the repair should be borne by the community. |
| **Rural Area** | "Areas of population outside urban and peri-urban using point or piped water supply system for which the community is responsible for the O&M" in addition, low population densities characterize rural areas, with small houses isolated from each other. |
| **Safe water** | Is water that is free from harmful quantities of physical, chemical and pathogenic matter and that meets the minimum Ethiopian standards (usually WHO Guidelines) |

| | |
|---|---|
| **Seed Money** | Is the initial sum of money disbursed to an organization in order to create/start a revolving fund for undertaking a designated programme |
| **Scheme (Water)** | The entire facility (concrete works, pipes, pumps) established to extract water from a water source, and distribute it to (close to) people's homes |
| **Sustainable Supply Chain** | Is a system of procuring and supplying spare parts that guarantees a continuous supply of spare parts. |
| **Source (Water)** | The natural water source only, i.e. spring, groundwater, river, etc |
| **Supply chains** | Is the term used for the process that relates all activities involved with the flow and transformation of goods from the raw materials stage through to the end-user, as well as the associated information flows |
| **WASHCO** | Is a committee of representatives from a number of Water, Sanitation and Hygiene Point Committee of the same village. Sometimes WASHCO committee may refer to 2 or more village representatives benefitting from a water and sanitation point. |

# 5. MODULE – E: SPARE PART SUPPLY AND MANAGEMENT

## 5.1. Introduction

This Training manual comprise of:

Session – 1: Introduction to Spare part Management

Session – 2: Organizational Set-up of SPM (Spare part Outlet Models)

Session – 3: Preparation of Spare part Outlets

Session – 4: Daily Shop Operation and Management

Session – 5: Replenishment and Price Revision

Session – 6: Quality Control and Quality Assurance

Session – 7: Supervision and Monitoring

## 5.2. Manual to be referred

This training module is extracted from operation and maintenance Part-E of the manual. Please refer it whenever necessary.

## 5.3. Session – E1: Introduction to Spare part Supply and Management

| | |
|---|---|
| **MODULE – E:** | **SPARE PART SUPPLY AND MANAGEMENT FOR RURAL WATER SUPPLY SCHEMES** |
| **SESSION – E1** | **INTRODUCTION TO SPARE PART SUPPLY AND MANAGEMENT** |
| **Introduction** | The spare parts supply and management includes spare parts requirement, their production and supply, how they are going to be distributed to the Woredas and sold to the user communities.<br><br>To supply clean and safety water continuously to community, maintenance of water schemes is crucial. Particularly hand pumps (HPs) require replacement of spare parts (SPs) from time to time, because HPs are made of many movable parts and it is unavoidable wearing and breakage of the parts. |
| **Objective** | The purpose of this SSM manual is to develop practical tools towards providing the goods and services required for sustainable functioning of existing and future water supply service systems in the Country.<br><br>SSM Manual is intended to provide clear and straight forward instructions to involve by various stakeholders who introduce, facilitate, and maintain |

| | |
|---|---|
| **MODULE – E:** | **SPARE PART SUPPLY AND MANAGEMENT FOR RURAL WATER SUPPLY SCHEMES** |
| | Supply Chain for spare parts through step-by-step guidance on the following undertakings:<br>▪ How the concept and institutional framework of sustainable supply chain for spare parts under Revolving Fund Office is established.<br>▪ How the sustainable supply chain is "*realistically*" planned, budgeted, funded, introduced and established.<br>▪ How the operation and management of supply chain is "*practically*" carried out.<br>▪ How the supply chain is maintained in "*sustainable*" manner. |
| **Outputs** | Participants are understood the concept of supply chain for rural water supply schemes. |
| **Timing** | 1 hour |
| **Target Group** | Regional Water Bureau, Zone and Worda Water Offices, Local Service Providers, NGOs, Micro Finance Institutes, and WASHCOs. |
| **Session Guide** | |
| **Step 1: Definition of Supply Chain** | In the context of this manual, Supply Chains is understood to mean the entire process that includes:<br>**Planning** / **Delivery**<br>**Budgeting** / **Procurement**<br>**Specifying** / **Production**<br>**Tendering** / **Distribution** |
| **Step 2: Existing Supply Chain Situation** | Explaining the existing supply chain management: supply of spares has hitherto been done mainly by:<br>1. Regional Water Bureaus or Zone or Woreda Water Office through bulk purchasing ( some distribute free while other sale with reasonable price)<br>2. By partners (NGOs, UN organizations, Bilateral etc) on project base with virtue of free<br>3. Purchasing from private spare part shops<br>Each of them does have their own merit and demerit.<br>Ask the participants their merit and demerit in provision of spare parts!! |
| **Step 3: Effect of SP Supply Chain Establishment** | If SP outlets are established and sustainably operated, availability of SP will be ensured in their surrounding areas. |

| MODULE – E: | SPARE PART SUPPLY AND MANAGEMENT FOR RURAL WATER SUPPLY SCHEMES |
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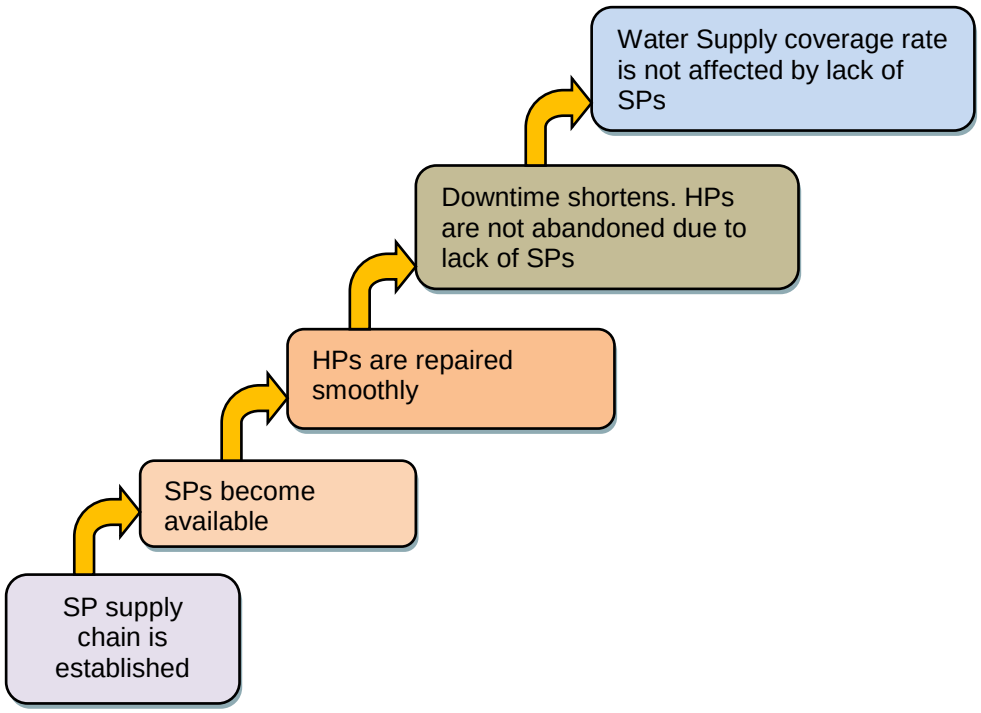
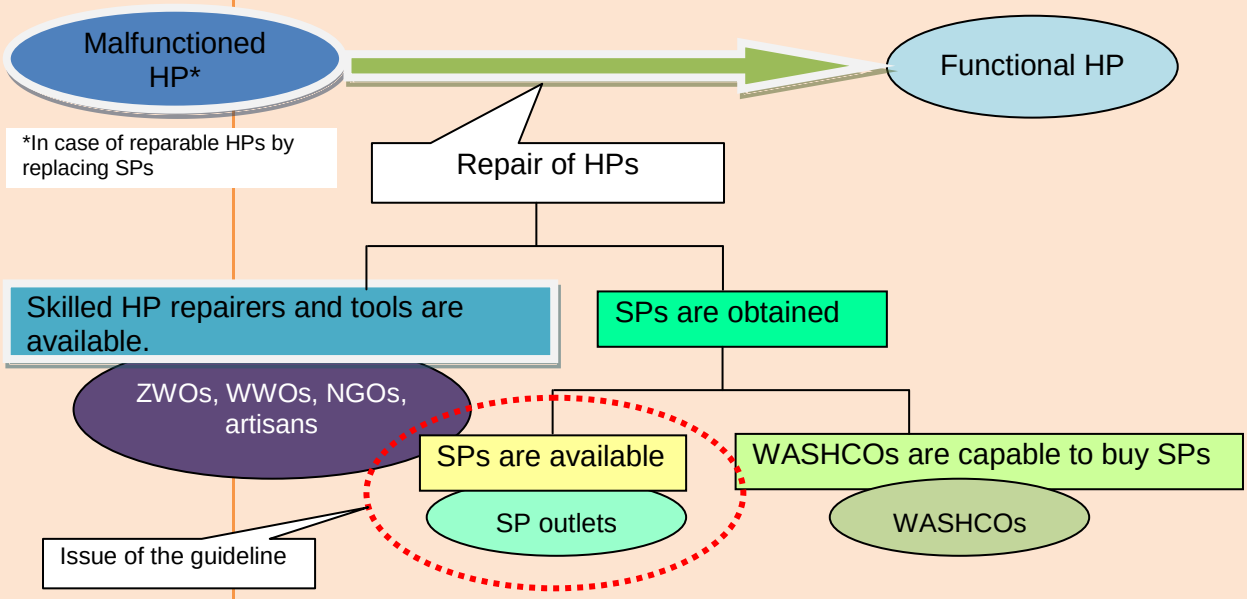
**Figure 5-1: Effect of SP Supply Chain Establishment**




**Step 4: Conditions for HP Maintenance**

Explain the following diagram which indicates the various requirements in the maintenance of HPs.

**Figure 5-2: Conditions for HP Maintenance**



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|---|---|
| **MODULE – E:** | **SPARE PART SUPPLY AND MANAGEMENT FOR RURAL WATER SUPPLY SCHEMES** |
| **Review questions** | How do ensure the sustainability of rural water supply schemes? What method of rural water supply scheme supply chain management is effected to ensure the sustainable use of the schemes? |
| **Session Attachments** | N/A |

## 5.4. Session – E2: Organizational Setup of SSM

| | |
|---|---|
| **MODULE – E:** | **SPARE PART SUPPLY AND MANAGEMENT** |
| **SESSION – E2** | **ORGANIZATION SET UP OF SSM (SP OUTLET MODEL)** |
| **Introduction** | The section demonstrates the basic spare parts (SPs) supply model through SP outlets and recommended SP outlet models. It explains the organizational structures to ensure the sustainability of spare parts supply chain for rural water supply schemes. |
| **Objective** | At the end of this session, the participants are able to:<br>o Understand the establishment of revolving fund office or enterprise,<br>o Have a knowledge of involvement of the private sectors in spare part retailing,<br>o Have an awareness on the linkage among the revolving fund office, local service providers and micro finance institutes in ensuring the supply chain |
| **Outputs** | Created awareness on the organization set up of spare part supply and management among various stakeholders and implemented it. |
| **Timing** | 1 hour |
| **Target Group** | Worda Water Offices, Kebele Water Desk, WASHCOs, Artisans |
| **Methodology** | The facilitator needs to be describe the spare part outlet models through the FGD with the participants, and discuss the advantage and disadvantages. |
| **Session Guide** | |
| **Step 1: Concept of Supply Chain Management** | **1. Establishment of Spare Parts Outlets and Shops**<br>▪ For the sustainability of rural water supply facilities, there must be appropriate spare parts that are readily available and reasonably priced.<br>▪ Local service providers/associations are the body which establishes operates and manages the shops.<br>▪ Spare parts should be available at a reasonable distance (Accessibility).<br>▪ Spare part outlets at least as Zonal should be established by Revolving Fund Office.<br>▪ Spare part shops should be open at Woreda towns.<br>**2. Revolving Fund**<br>▪ Spare parts are sold at prices that ensure the sustainability of supply chain.<br>▪ Quantities of initial seed stock are determined to satisfy the “annual” demand in |

| MODULE – E: | SPARE PART SUPPLY AND MANAGEMENT |
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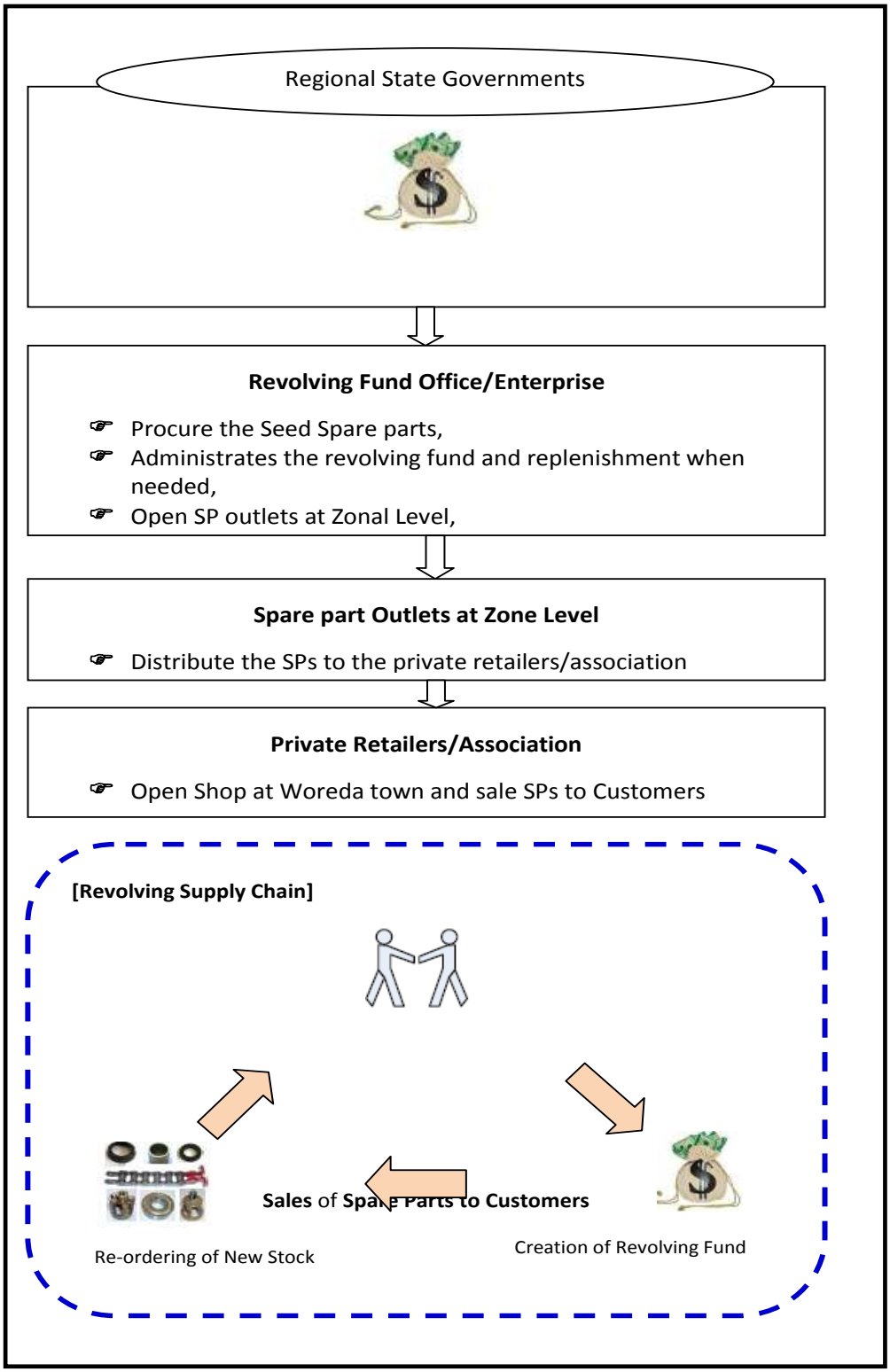
each Woredas.

- Thus, the stock will need to be replenished in one year cycle, utilizing the revolving fund created through sales of spare parts.
- Moreover, all operation costs should also be incurred by the sales.
- Key for successful management of the revolving fund is timely replenishment and periodical price revision (at least once a year) so as to avoid a disparity between market prices and selling prices at the spare parts shop.

**3. Non-Profitability**

- The Spare parts provision should be on a non-profit basis.
- The objective is to make rural population have access to safe water, so spare parts to be sold in a shop should be affordable in terms of their prices.
- Specifically, prices of spare parts should be minimized as long as the revolving fund is safely sustainable. **It does not mean that operational costs, price escalation and incentive provision for the retailers should not be considered.**

## MODULE – E: SPARE PART SUPPLY AND MANAGEMENT



| **MODULE – E:** | **SPARE PART SUPPLY AND MANAGEMENT** |
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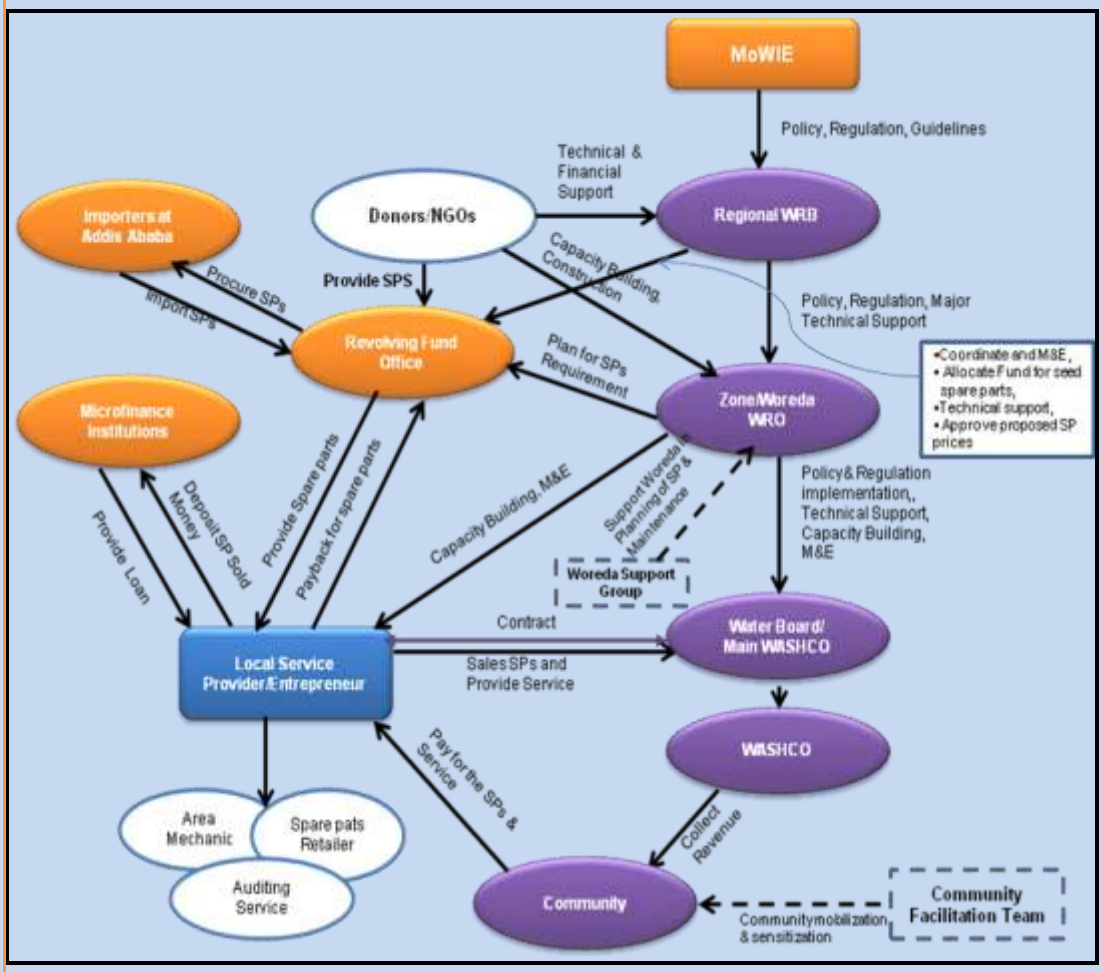
**Step 2: Supply Chain Management Model**

## 1. Structural Model




## 2. Roles and Responsibilities of the Stakeholders

| No. | Actors | Roles and Responsibilities |
|---|---|---|
| 1 | Ministry of Water, Irrigation and Energy | ▪ Sets policies, standards, guidelines and specifications,<br>▪ Appoints a specific Supply Chain Coordinator, who supervises the many various steps of the establishment of the supply chain,<br>▪ Identifies the necessary financial implications of the supply chain and ensures that the arrangements comply to financial regulations,<br>▪ Opens a dialogue with the private sector suppliers and the NGO's in order to establish an atmosphere of common understanding and mutual trust,<br>▪ Offer capacity building for Supply Chain Management. |
| 2 | Manufacturers/Suppliers | ▪ Various manufacturers exist in the World who produce various brand of electro-mechanical |

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| | | | equipment and sale to their customers through suppliers,<br>▪ Many suppliers exist in the country who supplies electro-mechanical equipment and their SPs through bidding process. |
| | **3** | Regional Water Bureaus | ▪ Establish Revolving Fund Office/Enterprise,<br>▪ Allocate fund for seed spare parts,<br>▪ Offer capacity building for RFO/E and LSPs,<br>▪ Assist RFO/E to establish SP outlets al Zonal level and shops at Woreda towns,<br>▪ Approve the price of SPs and assist in the procurement,<br>▪ Establish linkage with RFO/E, Micro Finance Institutes and Local Service Providers/Associations in managing SPs,<br>▪ Check, order revision and approve a price revision proposal,<br>▪ Approve SPs replenishment budget, which prepared by RFO/E/E,<br>▪ M&E Revolving Fund Office/Enterprise,<br>▪ Arrange Auditing of RFO/E/E. |
| | **4** | Revolving Fund Office/Enterprise | ▪ Managing the supply chain,<br>▪ Procure and distribute spare parts, and replenishment in annual bases,<br>▪ Establish spare part outlet at Zone Towns, from which SPs distribute to Woreda Shops,<br>▪ Assist the LSPs in the establishment of SP's shop at Woreda towns,<br>▪ Linking the spare part management with local service providers,<br>▪ Conduct inventory and Plan the SPs demand along with Woredas and LSPs,<br>▪ M&E of RFO/E staff at Zonal level and LSPs peRFO/Ermance,<br>▪ Fixing incentives for LSPs and Administration costs and pay for them on monthly bases, |
| | **5** | Zone and Woreda Water Offices | ▪ To facilitate the outlet and shop establishment and monitor the operation of all shops in its Zone and Woreda,<br>▪ Conduct community mobilization and sensitization about SPs shop,<br>▪ To train the all staff who concerned with shop |

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| | | | operation and management in its Zone and Woreda, in particular capacity and financial flow,<br>▪ Plan the demand of SPs along with other,<br>▪ To check reports and proposals submitted from all shops in its Zone and Woreda e, and point out mistakes,<br>▪ To provide advices on the management and operation of all shops,<br>▪ Strengthen local service providers to fulfil their responsibility,<br>▪ Inform the revised prices of SPs to WASHCOs/WBs in the target area through the WWOs<br>▪ Establish linkage between WASHCO's and LSPs,<br>▪ M&E of LSPs. |
| | **6** | Donors/NGOs | ▪ Offer training on spare part management to LSPs, WASHCOs and WWROs,<br>▪ Donate spare parts to Revolving Fund Office/Enterprise, |
| | **7** | WASHCO/WB | ▪ To advertise the SP shop<br>▪ To sensitize and strengthen communities and APMs on self-sustaining O & M,<br>▪ Plan the demand and buy spare parts base on preventive maintenance concept.<br>▪ Report the peRFO/Ermance of LSPs/APMs on maintenance and spare parts used to the WWO.<br>▪ Pay to APMs for the service offered. |
| | **8** | Local Service Providers/Spare part retailers/ Area Mechanical (technician) | ▪ To sell spare parts<br>▪ To issue and keep all records of change in stock and sales<br>▪ To prepare and submit a part of monthly and annual reports to WWO and RFO/E/E<br>▪ To hold monthly and annual shop meeting with WWO and RFO/E/E,<br>▪ Involve in the planning of SPs requirements,<br>▪ Endorse the daily sell amount in MFI. |
| | **9** | Micro Finance Institutes | ▪ Provide loan for LSPs/Association,<br>▪ Access banking to the LSPs for revolving fund flow,<br>▪ Access the Revolving Fund Office for the financial |

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| | | |
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| | | control of the revolving money |
| **10** | Community | ▪ To use their water supply facilities properly,<br>▪ To raise funds for operation and maintenance of their water supply facilities, including purchase of spare parts,<br>▪ To contact with WASHCO/APMs and Water Supply Service Office immediately after their water supply facilities has problems<br>▪ To buy spare parts necessary for the repair, and ask AMs to repair their water supply facilities |

## 3. Establishment of Revolving Fund Office/Enterprise

The first activity in establishment of the RFO/E is developing and issuing legal framework such as:

- Proclamation
- Directive, and
- Regulation

These legislation document should contain the mandate of the above mentioned stakeholders and how they are linked each others:

### About the Revolving Office/Enterprise:

The RFO/E should be an independent entity, which is accountable for the regional water bureau.

The RFO/E/E is not only provision of spare parts but also offers services like well rehabilitation and maintenance of complex issues.

### Detailed mandates of the RFO/E:

- Procure spare parts based on the government proclamation procedures and sale of spare parts,
- Giving of services(Crain, rehabilitation rig , welding machine and pumping test service),
- Provides spare parts to water supply and irrigation schemes of WASHCO, WUA and water supply services,
- Manpower and Material Administration,
- Administrate the revolving fund,
- Arrange linkage between Micro Finance Institute and local service providers in controlling the cycled revolving money,
- Collect the revolving fund from the microfinance institutes and replenishing the

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| | spare parts on annual bases,<br>▪ Recruit employee as per the organizational structure,<br>▪ Make a contractual agreement with the supplier either local or international,<br>Sources of Finance for Initial Seed Spare parts:<br>▪ Donation from the regional government in cash or in kind<br>▪ Donation obtained from NGO, donors etc<br>▪ Donation from WASHCO and Water Supply Services Offices.<br><br>**4. Establishment of Local Service Providers/Associations**<br>☞ Local Service Providers (LSPs) are associations established as entrepreneurs who do business with water-related services, such as **Area Pump Mechanics, plumbers, or traders of water-related technical equipment, auditing service and spare part retailer.**<br>☞ In many countries, private businesses fill the gap left by inefficient public water service providers, and play a critical role in supplying water to rural communities.<br>☞ LSPs/Associations must be a **legal entity** and it must have **license to operate** a water supply system and sale spare parts. MUST OBTAIN FROM WWO/RFO/E.<br>☞ The legal framework must contain specific terms and conditions.<br>☞ Costs of spare parts replaced as well as remuneration and incentive to AMs for maintenance and repair of facilities and spare part sales should be borne by communities and revolving fund office.<br>☞ Regional Water Bureaus through RFO/E will grant funds and arrange loan from Micro Finance Institutes to:<br>▪ Open shop and its facilities at Woreda town,<br>▪ Provide initial seed stock of spare parts and tools, and<br>▪ advertise the shops, and |
| **Step 3: Hold Stakeholder Meeting** | After fully understanding the concept of the One WASH National Program (OWNP) and supply chain management (SCM) as well as actors involved in the supply chain for spares, RFO/E calls a stakeholder meeting for the introduction of the supply chain:<br>**1) First meeting**<br>**a) Consensus building on the establishment of the spare parts supply chain**<br>**b) Selection of LSPs to operate and manage the spare parts shop** |

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| | **c) Confirmation of the tasks and responsibilities of the stakeholders**<br><br>**d) Adoption of a Work Plan for Establishment of the Supply Chain**<br><br>**2) Occasional Meeting**<br><br>**a) Amendment of the agreement made in the stakeholder meeting**<br><br>**b) Discussion on any issues which are not specified in the SCM manual**<br><br>**3) Annual meeting**<br><br>Annual stakeholder meeting shall be held to review the shop operation and management for 1 year and discuss how stakeholders can contribute to SCM.<br><br>**a) Review of Annual Reports**<br><br>**b) Stakeholders' support** |
| **Review** | How participants understood the establishment of RFO/E, LSPs for the sustainable SCM?<br><br>Do the LSPs will answer the sale of SPs and provision of repair and maintenance that lacked by WWO or WASHCO?<br><br>What risk do you suggest in operation and management of RFO/E? Do you think it would be sustain? |
| **Session Attachments** | None |

## 5.5. Session – E3: Preparation of Spare part Outlets

| MODULE – E | RURAL WATER SUPPLY, SPARE PART SUPPLY & MANAGEMENT |
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| **SESSION – E3** | **PREPARATION OF SPARE PART OUTLETS** |
| **Appropriate Facilitator Background** | Community Trainer with experience in spare part management; Technician with the relevant practical and technical background from Woreda Water Offices |
| **Introduction** | In order to establish an SP outlet, there must be an organization which operates its SP outlet. In selecting such organization, the following requirements for the organization specified according to its function should be considered first. The function of a SP outlet is basically to store and distribute to SPs retailers. Existence of an appropriate storeroom and always available quality. |
| **Objectives** | ▪ The objective of this section is to show the way to increase the number of SP outlets and shops so that all WASCHOs have an access to SPs. |
| **Outputs** | Participants understood the necessity of the establishment of spare part outlets and shops:<br>▪ Ensured the availability;<br>▪ ensured the accessibility;<br>▪ ensured the appropriateness; |
| **Timing** | 4 hours |
| **Target Group** | ▪ Regional Water Bureau<br>▪ Revolving Fund Office<br>▪ Zone and Woreda Water offices<br>▪ Local Service Providers. |
| **Methodology** | ▪ Presentation and discussion |
| **Session Guide** | |
| **Notes to facilitator** | Facilitator should clarify any specific terminology, for example:<br>▪ Spare part outlets<br>▪ Spare part shops |
| **Step 1: Existing Schemes and planned in the** | According to the 2011 National WASH Inventory: |

**future**

| Item No. | Type of Rural Schemes | Qty | %age | Rank |
|---|---|---|---|---|
| 1 | Deep Well with Distribution | 2735 | 2.95 | 7th |
| 2 | Hand Dug Well with Handpump | 34,229 | 36.97 | 1st |
| 3 | Hand Dug Well with Rope Pump | 5,639 | 6.09 | 6th |
| 4 | Other | 6,346 | 6.85 | 5th |
| 5 | Protected on-spot Spring | 24,596 | 26.56 | 2nd |
| 6 | Shallow Well | 8,106 | 8.75 | 4th |
| 7 | Spring with Distribution Small | 10,937 | 11.81 | 3rd |
| | **Total** | **92,588** | **100.00** | |

**For our purpose, HDW with HP = 34,229**

**SW with HP = 8,106**

**On-Spot Spring = 24, 596**

**Total = 66,931 (2011), if this number increased by 15%, by now at National level there would be 76,970 HDWs + SWs + On-Spot Spring exist. Of these schemes about 25-30% is non-functional (19,000 – 25,000).**

**One of the reasons for this huge non-functionality is the absence of spare parts.**

**According to OWNP, the following schemes will be intended to construct in the entire region by 2014 & 2015**

**HDWs with HP = 27,398**

**SWs with HP = 11,648**

**On-spot Springs = 11,095**

**Total = 50,141 schemes.**

**Thus, the total available schemes of the 3 types could be 127,111.**

**All these schemes need SPs to be replaced!!**

## HAND PUMP DENSITY

- In order to test the commercial viability of spare parts supply at the user level, one approach is to establish the density of pumps required to produce enough demand to generate sufficient turnover of spares and sufficient profit for the retailer.
- The minimum density required to fulfill this is defined as the Handpump Density Breakpoint (HDB). We can estimate the HDB by using a very crude method, as follows:

1. There are **"N"** hand pumps in a given area, and **"t"** is the average time period between subsequent spare parts required for any given hand pump. The number of parts, **n**, required from the supplier/local manufacturer/retailer per year is therefore given by:

$$n = \frac{N}{t(years)}$$

2. If the average profit per spare part sold is **"$p_a$"**, the annual profit, **P**, generated from the sale of spare parts will be given by:

$$P = P_a \text{ X } n$$

*Approximation 1*: Based on all parts weighted for frequency of breakdown the average profit per part is approximately: $P_a$ = 15.00 Birr.

$$P = 15xn = \frac{N}{t} \Rightarrow N = 15Pxt$$

3. If $P_{min}$ is the minimum annual profit (in Birr) required by the supplier for commercial viability, then the minimum number of handpumps, $N_{min}$, required within a given radius of access, will be:

$$N_{min} = P_{min} \text{ X } t$$

4. Radius of access, $R_a$, is defined as the average of the maximum distances from the retailer to potential customers in all directions, and determines the area realistically served. This will be heavily influenced by transportation links, topography, geographical and political boundaries etc.

5. The Handpump Density Breakpoint (pumps/km$^2$) is given by:

$$HDB = P_{min} X \frac{t}{\Pi X R^2{}_a}$$

**Box 1: Example for the Calculation of Handpump Density Breakpoint**

For an India Mark II pump, average time between the spare parts required **t** = 2 Years, and the radius of access, **R**a = 50km.

Based on interviews with retailers, an annual profit of ($P_{min}$) at least Birr 1,000 is required to make spares supply commercially worthwhile. This is a conservative figure, based on minimum figures quoted and $P_{min}$ is likely to be higher in most cases.

HDB = 1,000 X 2/(3.14X50$^2$) = 0.254 pumps / km$^2$
$N_{min} = P_{min}$ X t = 1,000 X 2 = 2,000
i.e. 2,000 pumps within 50 km of outlet

**Step 2: Principle of Planning of SP Outlet Allocation**

The objective of this section is to show the way to increase the number of SP outlets so that all WASCHOs have an access to SPs.

### a) Universal Access to SPs

- ✓ **In the implementation of the water resources policy, WASHCOs** have to purchase SPs to repair their HPs. To make this materialized, WASHCOs must be strengthened enough to collect water tariff from users,
- ✓ **SPs must be available at accessible location to WASHCOs at reasonable prices,**
- ✓ **As for the availability of SPs, RWBs should establish SP outlets at accessible location to all WASHCOs in principle.**

### b) Appropriate Distance

*(1) Accessible Distance*

The accessible location for a WASHCO to a SP outlet may differ depending on the conditions of an access road, public transportation, capacity of a WASHCO, assistance from WWOs, etc

(i) If the sales become lower, stock of SPs will be left for a longer period on shelves. Quality of rubber made SPs will be deteriorated as time goes by. In addition, shelf life of cement solvent and solvent cleaner is short.
(ii) Lower sales means that customers visit the SP outlet less frequent. It will impede the staff of SP shop LSP to get accustomed to its operation.
(iii) In case that a SP outlet and shop is operated by a LSP, lower sales may lose motivation to sell SPs.
(iv) Establishment of too many SP outlets will impose an excessive burden on the operation and supervision of a SP outlet requires a certain cost to RWB, a ZWO.

### c) Accessibility

Location of a SP outlet should be convenient for WASHCOs in its surrounding Woredas. More specifically, each SP outlet should be accessible to surrounding Woreda towns by all weather roads.

Zone town X provides SP outlets center from which LSP obtained SP for their shops opened at convenient access to surrounding Woreda towns.

**Figure 5-3: : Convenient location though it is not the centre of the area**

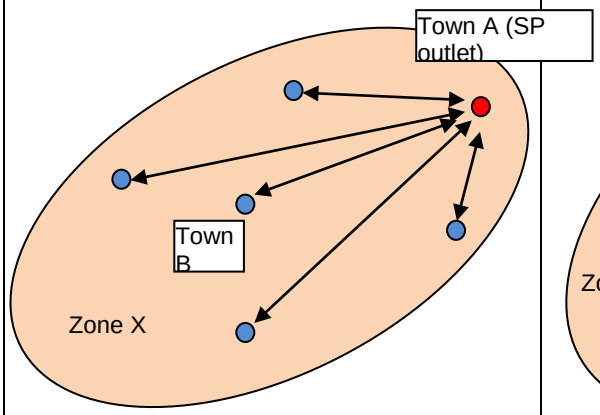



**Figure 5-4: Inconvenient location though it is the centre of the area**

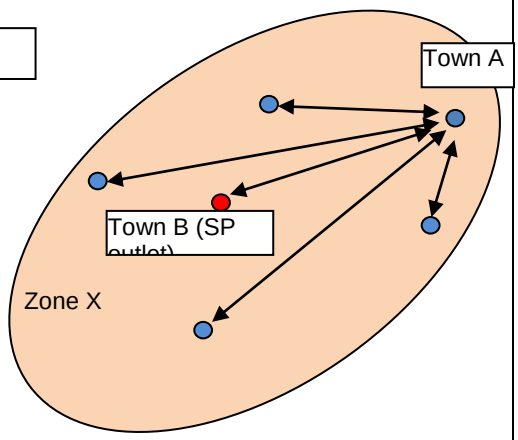



**Figure 5-5: Inconvenient location though it is a zonal capital**

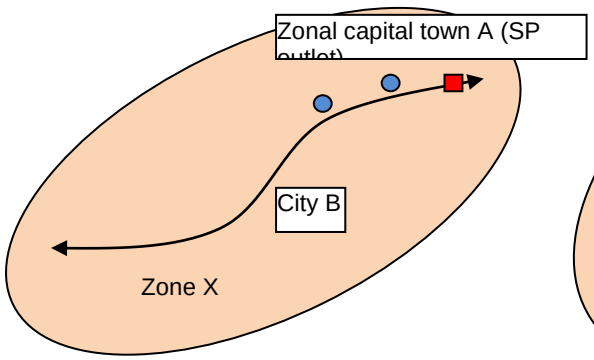
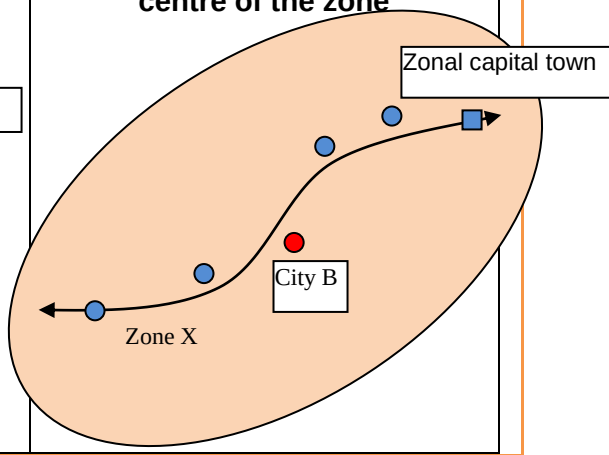



**Figure 5-6: Convenient location since it is located in the centre of the zone**




**Step 3: Seed Spare part provision**

**If Revolving Fund Office/Enterprise is established, the following seed spare part provision is calculated for Afridev and Indian Mark –II HPs.**

**Table 5-1: Examples of lists of seed SPs for Afridev and Indian Mark-II SPs**

**a) Afridev hand pump**

| **Target Region** | **Region - X** | | | |
|---|---|---|---|---|
| **Target Area** | **X-Zone in the region** | **Y-Zone in the region** | **Z-Zone in the region** | **T-Zone in the region** |
| **No. of Afridev** | **120** | **150** | **180** | **200** |

| No. | SP Name | SP/100 HPs/Year | Number of Initial stock | | | |
|---|---|---|---|---|---|---|
| **1** | O - Ring | 3 | | | | |
| **2** | U - Seal | 10 | | | | |
| **3** | Bobbin | 1 | | | | |
| **4** | Plunger | 1 | | | | |
| **5** | Foot Valve | 4 | | | | |
| **6** | Bush Bearing | 8 | | | | |
| **7** | Rod Centralizer | 15 | | | | |
| **8** | Fulcrum Pin | 1 | | | | |
| **9** | Cylinder Assembly | 1 | | | | |
| **10** | PVC Pipes | 4 | | | | |
| **11** | Coupling for PVC pipes | 40 | | | | |
| **12** | Rod | 4 | | | | |
| **13** | Rod Hanger Pin | 1 | | | | |
| **14** | Nylon Rope | 1 | | | | |
| **15** | Cement Solvent | 3 | | | | |
| **16** | Solvent Cleaner | 3 | | | | |
| **17** | PVC pipe Centralizer | 4 | | | | |

**b) Indian Mark - II hand pump**

| **Target Region** | **Region - X** | | | |
|---|---|---|---|---|
| **Target Area** | **X-Zone in the region** | **Y-Zone in the region** | **Z-Zone in the region** | **T-Zone in the region** |
| **No. of Indian Mark - II** | **110** | **80** | **60** | **130** |

| No. | SP Name | SP/100 HPs/Year | Number of Initial stock | | | |
|---|---|---|---|---|---|---|
| **1** | Chain | 3 | | | | |
| **2** | Piston | 1 | | | | |
| **3** | Bearing | 1 | | | | |
| **4** | Cylinder | 1 | | | | |
| **5** | Rubber Sealing | 2 | | | | |
| **6** | Socket (coupling) | 2 | | | | |
| **7** | Sealing Ring | 1 | | | | |
| **8** | Upper Foot Valve | 1 | | | | |
| **9** | Head Bolt and Check Nut | 7 | | | | |
| **10** | GI Pipes | 2 | | | | |
| **11** | Road | 2 | | | | |
| **12** | Cup Seal | 1 | | | | |

Note: The numbers of HP are only those functional and reparable

| | |
|---|---|
| **Step 4: SP outlet allocation Plan** | |
| **Review Questions** | 1. What do you think in the planning of SP outlets and shops? |
| **Session Attachments** | None |

## 5.6. Session – E4: Daily Shop Operation and Management

| | |
|---|---|
| **MODULE – E** | **SPARE PART SUPPLY AND MANAGEMENT** |
| **SESSION – E4** | **DAILY SHOP OPERATION AND MANAGEMENT** |
| **Introduction** | This session will described after receiving all the spare part items, how to operate and manage the shop. In this stage, supply chain is practically managed through day-to-day operation and management of the spare parts shop in a Woreda town, which includes stock management, daily sales and expenditure, stocktaking, monthly and annual reporting and others. |
| **Objective** | At the end of the session, the participants will be able to:<br>☞ Acquaintance how stock management is carried out<br>☞ Familiarize with daily sales operation (receiving customers, confirmation of spare part, receiving payment and issue receipts, and so on.<br>☞ Understanding the occasional expenditures (requesting, approval, withdrawal, ordering and delivering of spare parts)<br>☞ Reporting and meetings (monthly, quarterly and annual meeting and report requirements) |
| **Outputs** | The output of this session created awareness how to operate and manage the spare part outlet shops by the local service providers. |
| **Timing** | Session should take approximately 3 hrs |
| **Target Group** | Regional Water Bureau, Zone and Woreda Water Offices, Revolving Fund office, Local Service Providers and WASHCOs. |
| **Methodology** | Lecture and discussion with exercise |
| **Session Guide** | |
| **Step 1: Stock Management** | **Explaining the principle of stock management for the SPs:**<br>**a) Always Available Stock**<br>The most important obligation of the spare parts shop is to have all types of spare parts available at the shop at all time. The key action for this is timely replenishment.<br>Replenishment of an item must be completed before finishing the stock. Therefore, the shop needs to start the process of replenishment when the remaining stock of any item reached to its re-order level.<br>A re-order level is set at 25% of the initial stock volume. Since the volume of initial stock differs from item to item, the re-order level of each item is also different. Moreover, initial stock volume is renewed whenever new stock is |

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|---|---|
| | received resulting from replenishment. The details of replenishment are described at Replenishment and Price Revision section.<br><br>The re-order level of each item is indicated on bin cards and monthly inventory reports. Storekeeper, who is responsible for filling and preparing both bin cards and monthly inventory reports, has to notice the timing of replenishment.<br><br>**b) Appropriate Stock Organization**<br><br>**(1) Put your goods in groups**<br><br>Similar products should be put next to each other. This makes it easier and quicker for Storekeeper and customers to find what they are looking for. For example, put India Mark II spares kits together and Afridev spares elsewhere.<br><br>**(2) Use containers**<br><br>It is good to put similar items together, but they must not be mixed. Several kinds of seals, bolts and nuts should be clearly organized separately each other, as these items are relatively small and can easily disappear. Therefore, plastic containers such as buckets should be used to separate and safely organize these items.<br><br>**(3) Label your products well**<br><br>Labels make it easier for Storekeeper and customers to see the products they are looking for and to be attracted to them. The name of the product and its serial number are indicated on each label, and the label is put on the edges of shelves, below each product.<br><br>**(4) Show the prices clearly**<br><br>A price list, on which the approval by a district council is shown by a seal and signature, should be displayed on the wall or counter of a shop. The price of each part can also be shown on a label of each spare part. |
| **Step 2: Daily Sale Operation** | Daily sales operation of spare parts shall be peRFO/Ermed as the following routine activities.<br><br>**1. Receiving Customers**<br><br>**a) Guiding customers to shop staff**<br><br>- Responsible staff: All staff of LSPs<br><br>When customers visit local service providers, they should be guided to Storekeeper or any other shop staff by any personnel of the Woreda office. All staff should have knowledge of this.<br><br>**2. Confirmation of Spare Parts**<br><br>**a) Confirmation of types of spare parts**<br><br>- Responsible staff: Storekeeper and RFO/E officer<br><br>Storekeeper first confirms the types and quantities of spare parts which |

| | |
|---|---|
| | customers need to buy.<br>To avoid misunderstandings, Spare Parts Catalogue should be used to identify the type of spare parts. It is also advisable that Storekeeper takes customers to the shop to show the actual items. RFO/E officer may help parts identification through clarifying the function and position of the parts.<br>**b) Confirmation of stock availability**<br>- Responsible staff: Storekeeper<br>Storekeeper informs customers of the availability of the spare parts requested, meaning that Storekeeper must always know the remaining stock volume. If the stock availability is not clear, Storekeeper must visit the shop and check it.<br>If the stock of requested spare parts is finished, Storekeeper informs the customers the expected delivery date of the items.<br>**3. Receiving Payment and Issuing Receipt**<br>- Responsible staff: Cashier<br>**a) Confirmation of prices**<br>Storekeeper takes customers to Cashier for paying. Cashier shows customers the price list and total price of spare parts s/he intends to buy, and obtain her/his approval of purchase.<br>**b) Receiving payment and issuing a receipt**<br>Cashier receives payment from customers and gives an original receipt in return. A duplicate is provided to Storekeeper, and a triplicate is to be left in a receipt book.<br>**c) Depositing money**<br>Cashier must deposit cash paid by customers in shop's bank account every day. Cash must be kept in a cash box with a lockable system until it is deposited in the bank. |
| **Step 3: Issue of Spare parts** | **1. Issuing of Spare Parts**<br>- Responsible staff: Storekeeper<br>**(1) Issuing the items**<br>Storekeeper takes customers to a shop and gives them spare parts according to the receipt.<br>**(2) Updating bin cards**<br>Storekeeper updates the bin cards while issuing stock. This should not be carried out after the customer has left. Example of an updated bin card is shown below. |

**Table 5-2: Standard Format of Bin Cards**

Name: Water Meter

| Purchase Price (ETB) | | Selling Price (ETB) | | Initial Stock Volume | | Re-order Level | |
|---|---|---|---|---|---|---|---|
| Date | | Date | | Date | | Date | |
| 09/06/2014 | 2,000.00 | 15/09/2014 | 2,250.00 | 15/08/2014 | 250 | 15/08/2014 | 50 |

| Date | Description (Receipt No.) | Received | Issued | Balance |
|---|---|---|---|---|
| 15/08/2014 | GRN 00232 | 250 | | 250 |
| 31/08/2014 | Rcpt 00003 | | 1 | 200 |
| 05/09/2014 | Rcpt 00015 | | 2 | 150 |
| | | | | |
| | | | | |

Serial number of sales receipts

**Step – 4: Occasional Expenditure for Daily Operation**

## Occasional Expenditure for Daily Operation

Expenditure for the costs of daily operation and management of the shop should be made whenever necessary. The source of funds is the accumulated sales of spare parts, and therefore a proper process must be taken for the withdrawal. Replenishment, which is the major expenditure for shop operation, is explained at Replenishment and Price Revision section.

### 1. Request Expenditure

- Responsible staff: ZWO/WWO and Treasurer

Once a necessity of expenditure arises, ZWO/WWO asks Treasurer to prepare a letter to request a withdrawal of money from Microfinance shop's bank account, and send it to Revolving Fund Office for approval. The major purposes of expenditure are expected as reprinting of receipt books or bin cards. Any shop staff can raise the necessity of expenses and discuss with ZWO/WWO.

### 2. Obtain Approval

- Responsible staff: Treasurer

RFO/E gives approval to the expenditure and withdrawal of money from Microfinance shop's bank account.

### 3. Withdrawal of Cash

- Responsible staff: Treasurer

Upon approval by RFO/E, Treasurer asks for a signatory from both panel A

| | |
|---|---|
| | and B to withdraw money.<br><br>**4. Ordering and Delivery**<br><br>- Responsible staff: Treasurer<br><br>Treasurer orders the supplies to provide necessary goods and checks the goods once they are delivered.<br><br>**5. Payment**<br><br>- Responsible staff: Treasurer<br><br>Treasurer pays a bill to the suppliers and keeps a receipt for it. |
| **Step – 5: Monthly Report and Meeting** | The records of inventory, sales and expenditure should be summarized every month as monthly reports, and all the revolving fund office at Zonal outlet and Woreda towns spare parts shop private retailers staff should hold a monthly meeting as described below<br><br>**(i) Monthly Sales and Expenditure Report**<br><br>- Responsible staff: Cashier and Treasurer<br><br>- Formant: Table 5-3: Monthly Sales and Expenditure Report<br><br>- References: Sales receipt books, expenditure receipt books, and bank statement<br><br>- Process:<br><br>(1) Cashier records the sales of spare parts for a month on the specified format referring to the sales receipt books, and submit it to Treasurer by the 5th of the following month.<br><br>(2) Treasurer obtains a bank statement at the end of every month.<br><br>(3) Treasurer records expenditures on the format submitted by Cashier referring to the expenditure receipt books and bank balance based on the bank statement<br><br>(4) Treasurer checks up the account balance against bank balance. If the two figures don't match, Cashier and Treasurer check all receipts.<br><br>(5) Treasurer submits the completed format to the Director of Revolving Fund Office<br><br>- Due: 10th of every month |

**Table 5-3: Example of Monthly Sales and Expenditure Report**

**Month and Year: June, 2014**

| Date | Categories | Description | Sales | | | Expenditures | | | Balance |
|---|---|---|---|---|---|---|---|---|---|
| | | | Quantity | Unit price | Total Amount (Birr) | Quantity | Unit price | Total Amount (Birr) | |
| Carry over from the last month | | | | | | | | | 80,000 |
| 01/06 | Spare Part of Indian Mark-II | Check valve | 1,000 | 1 | 1,000 | | | | 81,000 |
| 04/06 | | GI pipe | 800 | 5 | 4,000 | | | | 85,000 |
| 10/06 | | Bolt & Nut | 100 | 2 | 200 | | | | 85,200 |
| 15/06 | | Bearing | 700 | 1 | 700 | | | | 85,900 |
| 22/06 | | Bolt & Nut | 100 | 2 | 200 | | | | 86,100 |
| 29/06 | | Bearing | 700 | 1 | 700 | | | | 86,800 |
| | Spare part Water Meter | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 30/06 | Others | Bank Charge | | | | 200 | 2 | 400 | 86,400 |
| | | Fuel | | | | 1000 | 1 | 1,000 | 85,400 |
| | | Per-diem | | | | 150 | 5 | 750 | 84,650 |
| | | | | | | | | | |
| Total as of end of month | | | | | | | | | 84,650 |
| Bank balance (filled by Accountant) | | | | | | | | | 84,650 |
| Total number of customers | | | | | | | | | 6 |

Two figures must be identical.

### (ii) Monthly Inventory Report

- Responsible staff: Storekeeper and Treasurer
- Formant: Table 5-4:Monthly Inventory Report
- References: Bin cards, Table 5-5 Stocktaking Sheet (Quarterly)
- Process:

(1) Storekeeper records changes in inventory both issuing and receiving on the specified format referring to Bin cards. If quarterly stocktaking is conducted, its result is also reflected on the format.

(2) Storekeeper checks the necessity of replenishment based on the re-order level and balance of each item.

(3) Storekeeper submits completed format as a monthly inventory report to Treasurer by the 5th of every month.

(4) Treasurer checks up the monthly inventory report against the monthly sales and expenditure report of the same month. If the numbers of issued items and sales data don't match or numbers of receiving items and purchasing data don't match,

Storekeeper re-checks sales, purchasing receipts and bin cards.

(5) Treasurer submits the report to the Director of Revolving Fund Office

- Due: 10th of every month

**Table 5-4: Examples of Monthly Inventory Report**

| S.No. | Spare Parts Item | Re-Order Level | Stock | | Balance | Adjusted Balance | Necessity of Re-order |
|---|---|---|---|---|---|---|---|
| | | | IN | OUT | | | |
| For Generator | | | | | | | |
| 1 | Oil | 10 | 0 | 2 | 22 | No stocktaking | - |
| 2 | Oil Filter | 10 | 0 | 2 | 15 | -do- | - |
| 3 | Belt | 3 | 0 | 1 | 8 | -do- | - |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

These figures must be consistent with the expenditure quantities of spare parts on a monthly sales and expenditure repot

These figures must be consistent with the sales quantities on a monthly sales and expenditure report.

### (iii) Monthly SP Outlet Staff Meeting

- Chairperson: Director of RFO/E,
- Participants: Treasurer, Cashier, Storekeeper, RWB, Zone or Woreda Water Offices and any necessary personnel,
- Timing: Upon the submission of a monthly inventory report and monthly sales and expenditure report to Director of RFO/E/E from Treasurer
- Agenda:

(1) Inquiries, requests and comments from customers

(2) Necessity and progress of replenishment and price revision

(3) Any issues to be discussed

### (iv) Monthly Management Report

- Responsible staff: Director of RFO/E/E,
- Formant: Annex 3-3 Monthly Management Report
- References:

(1) Annex 3-1 Monthly Sales and Expenditure Report

(2) Annex 3-2 Monthly Inventory Report

(3) Results of monthly shop staff meeting

- Process:

(1) Director of RFO/E/E prepares the monthly management report based on the specified references.

(2) Director of RFO/E/E submits the report, and it will be transferred as follows;

Director of RFO/E →Regional Water Bureau → □MoWIE

- Due: 15th of every month

### (v) Quarterly Stocking

One of most basic and important information in stock management is the physical number of stock. Balance shown in a bin card does not necessarily tell the true number of remaining stock.

Misplacing of items, misreading the information on sales receipts, and mis-recording of bin cards may occur anytime.

Therefore, stock of spare parts should be physically counted from time to time, and records on bin cards should be revised if necessary as explained below.

### (vi) Process of Stocktaking

- Responsible staff: Storekeeper and Treasurer
- Formant: Table 5-5 Stocktaking Sheet
- References:

(1) Bin cards

(2) Sales receipt books

(3) Invoice

- **Process:**

(1) Arranges stock well in the shelves

(2) Count the number of all stock by type and fill in the “Quantity (stocktaking)” column on the stocktaking sheet

(3) Fill in the “Quantity (bin card)” column on the stocktaking sheet

(4) Fill in “Quantity (difference)” column on the stocktaking sheet

(5) If some differences exist, (i) Check two sales receipts kept by Cashier and Storekeeper to find out the mis-recording on bin cards, and (ii) Check the invoice of purchased stock to find out the mis-recording on bin cards

(6) Fill in “Remarks (How a bin card is adjusted)” column on the stocktaking sheet based on the results of (5)

(7) Amend the figures on bin cards based on the results of (5), refer the following example

(8) Reflect the result of stocktaking on the immediate monthly inventory report

Frequency: Every 3 months and before preparing a proposal for replenishment

**Table 5-5: Example of Stocktaking Sheet**

| S.No. | SP Items | Quantity | | | Remarks (How a bin card is adjusted) |
|---|---|---|---|---|---|
| | | Stocktaking (1) | Bin Card (2) | Difference (1) – (2) | |
| **1. For Indian Mark-II** | | | | | |
| 1.1 | Axle | 35 | 35 | 0 | |
| 1.2 | Bearing | 44 | 41 | 3 | Mis-recording of the bin card (refer the sales receipt #00034, date 12/05/2014) |
| 1.3 | Bolt and Nuts | 150 | 158 | -8 | Mis-recording of the bin card (refer the purchasing invoice # 0013975, date 25/11/2013) |
| 1.4 | Chain and Coupling | 26 | 29 | -3 | Reason is not found out. Probably misplacing items. |

**Bin Card for Bearing**

| DATE | DESCRIPTION (Receipt No. | RECEIVED | ISSUED | BALANCE |
|---|---|---|---|---|
| | | | | |
| 11/09/2014 | #00066 | | 1 | 41 |
| 30/09/2014 | Adjustment by Stocktaking (refer the sales receipt #00034, date 12/05/2014) | 3 | | 44 |

**Bin card for Chain and Coupling**

| DATE | DESCRIPTION (Receipt No. | RECEIVED | ISSUED | BALANCE |
|---|---|---|---|---|
| | | | | |
| 17/09/2014 | #00067 | | 3 | 29 |
| 30/09/2014 | Adjustment by Stocktaking (Reason is not found out) | | 5 | 26 |

**Step 6: Annual Report**

## (i) Annual Audit

Auditing is verification of accounting and stock records whether these statements are true and fair representation of the organization. Also it extends to ensuring adherence to policies and evaluation of internal controls.

**Procedure**

- Responsible staff: Zone/Woreda Internal Auditor
- Method: The audit of the spare parts shop is conducted as a part of the audit of LA

- Report: An audit report should be submitted to RFO. RFO should give feed back to RWB.
- Frequency: Once a year

### (ii) Annual Report and Meeting

The records of inventory, sales and expenditure should be summarized every year as annual reports, and all personnel concerned with shop operation and management should hold an annual meeting as described below.

### (iii) Annual Sales and Expenditure Report

- Responsible staff: Cashier and Treasurer
- Formant**: Table 5-6** Annual Sales and Expenditure Report
- References:

(1) All monthly sales and expenditure reports (Annex 3-1) for the last 1 year

(2) Bank statement at the end of last year

- Process:

(1) Cashier sums up the sales of spare parts for the last 1 year by the type of hand pumps, and fills in the corresponding column of the specified format.

(2) Cashier submits the partly filled format to Treasurer by June 20 every year.

(3) Treasurer sums up the expenditure for the last 1 year by category, and find out the balance of payment for the last year.

(4) Treasurer cumulates the balance of payment since the inauguration of a shop.

(5) Treasurer checks up the balance of payment since the inauguration of a shop against the bank balance. If the two figures don't match, Cashier and Treasurer check all receipts.

(6) Treasurer submits the report to RFO-RWB.

- Due: June 25 EFY

Example is shown below.

**Table 5-6: Annual Sales and Expenditure Report**

**1. Balance of Payment for This Year**
**From (Month and Year): July, 2013 until (Month and Year): June. 2014 EFY**

| Categories | Items | Sales (Birr) | Expenditure (Birr) | Balance (Birr) |
|---|---|---|---|---|
| Sales | Spare parts for Generator | 8,920.00 | | 8,920.00 |
| | Spare part Indian Mark-II | 2,850.00 | | 11,770.00 |
| | Spare part Afidev | 0 | | 11,770.00 |
| | | | | |
| Expenditure | Bank charge | | 1,200.00 | 10,570.00 |
| | Fuel | | 5,450.00 | 5,120.00 |
| | Accommodation | | 2,630.00 | 2,490.00 |
| | Allowance | | 2,100.00 | 390.00 |
| | Reordered spare parts | | 6,500.00 | -6110.00 |
| | Others | | 2,000.00 | -8,110.00 |
| | | | | |
| **Total** | | | | -8,110.00 |

Accumulated sales for the last 1 year

Accumulated Expenditures for the last 1 year

*All sales and expenditure data in this table is collected from monthly sales and expenditure reports.

| Categories | Amount (Birr) |
|---|---|
| Carry over from previous year (Refer "carry over from the last month" in the first monthly sale and expenditure report of this year) | 900,000.00 |
| Balance of payment for this year (from the above table) | -8,110.00 |
| Total (Balance of payment since the inauguration of a shop) | **891,890.00** |
| Bank balance of end of this year | **891,890.00** |

### (iv) Annual Inventory Report

- Responsible staff: Storekeeper
- Formant: Table 5-7 Annual Inventory Report
- References:

(1) All monthly inventory reports for the last 1 year

(2) The monthly inventory report on the last month in the year before last (2 years ago)

- Process:

(1) Sum up the number of stock received and issued by item for the last 1 year, and fill in the specified formant.

2) Confirm the balance of stock as of beginning of the last year from the balance of stock in the monthly inventory report of June in the year before last

(3) Submit the report to Treasurer by June 20, and Treasurer checks it.

- Due: June, 25 EFY

- Example is shown below

**Table 5-7: Annual Inventory Report**

**From (Month and Year): July, 2005 EFY** **until (Month and Year): June, 2006 EFY**

| S. No. | Spare Parts Item | Balance as of beginning of a year | Accumulated Stock | | Balance |
|---|---|---|---|---|---|
| | | | IN | OUT | |
| 1. For Indian Mark-II | | | | | |
| 1.1 | Bearing | 35 | 0 | 8 | 27 |
| 1.2 | Chain and Coupling | 20 | 6 | 12 | 14 |
| 1.3 | Axle | 40 | 55 | 40 | 55 |

A B C

"Balance" in the Monthly Inventory Report in June, 2012

Accumulated quantities of received stock

Accumulated quantities of issued stock

Balance of stock at the end of June, 2013. It supposed to be (A + B) - C

## (v) Annual Trend Report

- Responsible staff: Treasurer

- Formant: Table 5-8 Annual Trend Report

- References: All monthly sales and expenditure reports and monthly inventory reports for the last 1 year

- Process:

Fill in "number of sold items" on the format based on the corresponding figures from monthly inventory reports for the last 1 year.

(1) Fill in "number of customers", "Sales" and "Expenditure" on the format based on the corresponding figures from monthly sales and expenditure reports for the last 1 year.

* If Treasurer is good at working on MS Excel, it is recommended to develop line graph based on Annual Trend Report. It will show the trend graphically. In addition, annual sales trend by item may be prepared for further detailed analysis, if Treasurer is

capable to do it.

(2) Submit the report to RFO

- Due: June 25 EFY

Example is shown on the next page.

| S. No. | Spare Parts Item | Re-Order Level | Stock | | Balance | Adjusted Balance | Necessity of Re-order |
|---|---|---|---|---|---|---|---|
| | | | IN | OUT | | | |
| For Generator | | | | | | | |
| 1 | Oil | 10 | 0 | 2 | 22 | No stocktaking | - |
| 2 | Oil Filter | 10 | 0 | 2 | 15 | -do- | - |
| 3 | Belt | 3 | 0 | 1 | 8 | -do- | - |

**Table 5-8: Annual Trend Report**

**From (Month and Year): July 2013** **until (Month and Year): June, 2014**

| Item \ Month | Jul. | Aug. | Sept. | -------- | June | Total |
|---|---|---|---|---|---|---|
| No. of soled items | 8 | 9 | 11 | ---------- | 10 | 95 |
| No. of customers | 5 | 4 | 6 | ---------- | 5 | 50 |
| Sales (Birr) | 4,800.00 | 5,100.00 | 6,800.00 | ---------- | 7,900.00 | 526,000.00 |
| Expenditure (Birr) | 2,500.00 | 2,200.00 | 2,150.00 | ---------- | 1,500.00 | 19,600.00 |

| Date | Categories | Description | Sales | | | Expenditures | | | Balance |
|---|---|---|---|---|---|---|---|---|---|
| | | | Qty | Unit price | Total Amount (Birr) | Quantity | Unit price | Total Amount (Birr) | |
| Carry over from the last month | | | | | | | | | 80,000 |
| 01/06 | Spare Part of Indian Mark-II | Check valve | 1,000 | 1 | 1,000 | | | | 81,000 |
| 04/06 | | GI pipe | 800 | 5 | 4,000 | | | | 85,000 |
| 10/06 | | Bolt & Nut | 100 | 2 | 200 | | | | 85,200 |
| 15/06 | | Bearing | 700 | 1 | 700 | | | | 85,900 |
| 22/06 | | Bolt & Nut | 100 | 2 | 200 | | | | 86,100 |
| 29/06 | | Bearing | 700 | 1 | 700 | | | | 86,800 |
| 30/06 | Others | Bank Charge | | | | 200 | 2 | 400 | 86,400 |
| | | Fuel | | | | 1000 | 1 | 1,000 | 85,400 |
| | | Per-diem | | | | 150 | 5 | 750 | 84,650 |
| | | | | | | | | | |
| Total as of end of month | | | | | | | | | 84,650 |
| Bank balance (filled by Accountant) | | | | | | | | | 84,650 |
| Total number of customers | | | | | | | | | 6 |

### (vi) Annual RFO Staff Meeting

- Chairperson: Director of RFO
- Participants: Treasurer, Cashier, Storekeeper, RWSS officer and any necessary personnel
- Timing: Upon the submission of an annual inventory report, annual sales and expenditure report and annual trend report from Treasurer
- Agenda: All items to be described in Annual Management Report (Annex 3-8) specifically as follows.

(1) Staff allocation (Change of personnel)

(2) Inventory (Well sold items, seasonal trend)

(3) Sales and Expenditure (Major expenditures, seasonal trend)

(4) Replenishment and Price Revision (achievement and plan of replenishment and price revision)

(5) Bank Balance and Audit (Result of checking bank balance against sales and expenditure reports, result of Audit)

(6) Customers (Customers' background, Inquiries, requests and comments received)

(7) Advertising (Achievement of advertising)

(8) Challenges and Countermeasures (Existing and potential challenges and countermeasures)

(9) Others, if any

Due: End of June (EFY)

### (vii) Annual Management Report

- Responsible staff: RFO
- Formant: Annex 3-8 Annual Management Report
- References:

(1) Table 5-5 Annual sales and expenditure report

(2) Table 5-6 Annual inventory report

(3) Table 5-7 Annual trend report

(4) Annual shop staff meeting

Process:

(1) RFO prepares the report based on the specified references.

(2) RFO submits the report, and it will be transferred as follows;

RFO RWB

- Due: End of June (EFY)

### (viii) Annual Stakeholder Meeting

- Chairperson: RWB
- Participants: The members of stakeholder meeting, RFO staff and any necessary personnel
- Timing: Upon the submission of an annual management report from RFO to RWB
- Agenda:

(1) Progress report on inventory, sales, expenditure and customers by RFO

(2) Audit report by Zone/Woreda internal auditors

(3) Advertising report by ZWO/WWO

(4) Challenges and Countermeasures (by all participants)

(5) Others, if any

- Due: 2nd week of July in the following year

**Step 7: Spare part outlet and shop operation training**

RFO/E gives training to the staff of a SP shop and responsible staff of a Zone RFO/E on SP outlet operation before the inauguration of the SP outlet and shop. Training on restocking and price revision will be provided during 1st, and refreshment training should be given whenever necessary after opening the SP outlet and shops. The outline of the training is shown in Table **5**-9. Apart from the Operation Manual and Materials, various kinds of training manuals and materials are to be used in the training.

**Table 5-9: Subject of Spare part Operation Training**

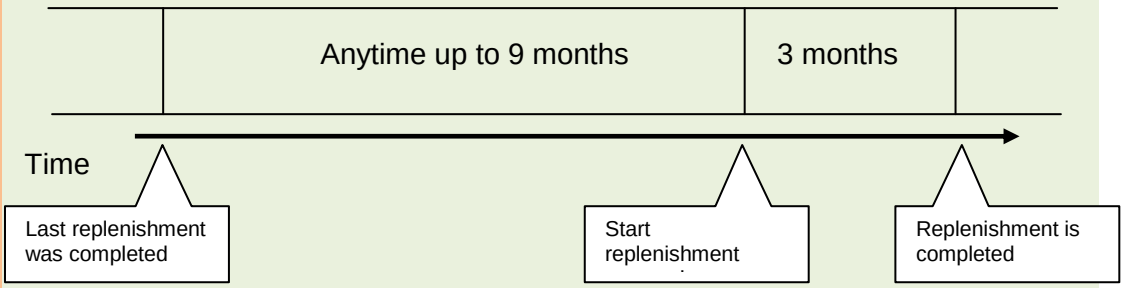
| Timing | Subjects & Necessary hours | Teaching manual & materials | Participants |
|---|---|---|---|
| As of opening a SP outlet | SP outlet operation<br>・process of selling SPs<br>・recording bin cards<br>・writing receipts<br>・preparing monthly inventory and financial reports<br>・conducting monthly meeting<br>(2 days: 10 – 12 hrs.) | ・Operation Manual,<br>・Operation Materials,<br>・Training Manual Part, | Staff of a SP outlet and Responsible staff of a ZWMED |
| During the 1st year | Refreshment training on SP outlet operation<br>(1 day: 6 – 7 hrs.) | Whatever necessary | Staff of a SP outlet and Responsible staff of a ZWMED |
| | Restocking and price revision<br>(1 day: 6 – 7 hrs.) | ・Operation Manual,<br>・Training Manual<br>・Training | |

| | | | | |
|---|---|---|---|---|
| | | | Materials | |
| | During the 2nd year | Refreshment training on SP outlet operation and Restocking and price revision (1 day: 6 – 7 hrs.) | Whatever necessary | Whoever necessary |
| **Review** | ▪ How the participants are understand the SP outlets and shop operation and management; | | | |
| **Session Attachments** | | | | |

## 5.7. Session – E5: Replenishment and Price Revision

| | |
|---|---|
| **MODULE – E** | **SPARE PART SUPPLY AND MANAGEMENT** |
| **SESSION – E5** | **REPLENISHMENT AND PRICE REVISION** |
| **Introduction** | Activities involved in this stage are the replenishment of stock and price revision. These activities must be conducted timely so that to make all items of spare parts available and to accumulate sufficient amount of revolving fund. |
| **Objective** | At the end of the session, the participants will be able to:<br>☞ How items are available in the store and requires for replenishment spare parts just to reflect the cyclic of parts,<br>☞ Price calculations for replenishment of SPs based on the current prices and thinking price escalation,<br>☞ How to demanding the Revolving Fund Office for replacement<br>☞ Financial Management that links with Micro Finance Institutes |
| **Outputs** | Created awareness and knowledgeable of spare part replenishment and price adjustment. |
| **Timing** | 3 hours |
| **Target Group** | Regional Water Bureau, Zone and Woreda Water Offices, Revolving Fund office, Local Service Providers and WASHCOs. |
| **Methodology** | Lecture, discussion and exercise |
| **Materials** | ▪ Flip chart<br>▪ Overhead projector |
| **Session Guide** | |
| **Step 1: Timing of replenishment and Price Revision** | **1. Timing of Replenishment**<br>There are two kinds of conditions to start the process of replenishment.<br>■ **Re-order level (0 - 9 months)**<br>Once a remaining stock of any kinds of spare parts reaches to its re-order level (25% of its initial stock volume), the retailers request the demand for replenishment, and the Revolving Fund Office starts the process of replenishment. |

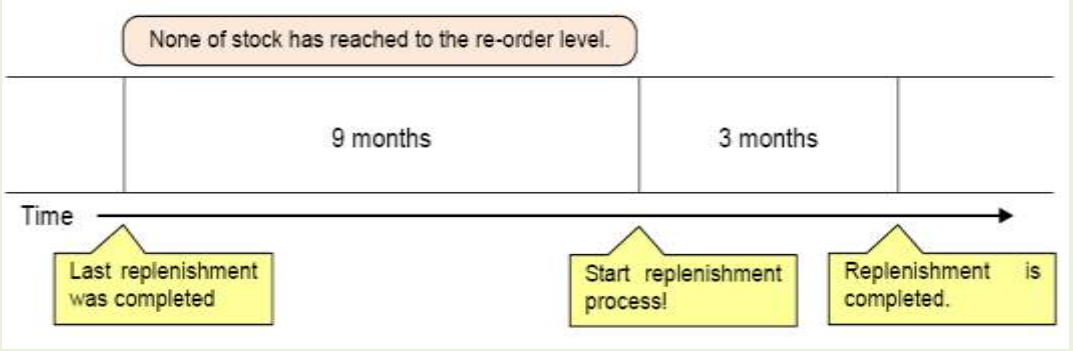
**Figure 5-7: Timing of Replenishment by Re-order Level**




- **9 months has passed**

Even if none of stock is decreased to the re-order level, a shop starts the process of replenishment as of 9 months passed since previous replenishment/inauguration of a shop.

**Figure 5-8: Timing of Replenishment by 9-month Time Limit**




**(2) Price Revision**

A shop starts the process of price revision immediately after the proposal of replenishment is approved by Council Secretary / Town Clerk (CS / TC).

## 2. Responsible Personnel for starting the process

Necessity of replenishment of each item should be indicated in the corresponding column on a monthly report (see an example below). The report is prepared by Storekeeper, reviewed by Treasurer and submitted to Director of Revolving Fund Office (RFO/E). All of them should pay attention to the necessity of replenishment. Based on the report and with the consent of Zone and Woreda Water Offices, and water boards, orders concerned staff to start the process of replenishment.

### Sample of Monthly Inventory Report

**MONTHLEY INVETORY REPORT**

**Year and Month: June 30, 2006 EFY**

| No. | SP Items | Re-Order Level[1] | Stock | | Balance | Adjusted Balance[2] | Necessity of re order[3] |
|---|---|---|---|---|---|---|---|
| | | | IN | OUT | | | |
| **For Transmission Lines** | | | | | | | |
| 1.1 | Gate valve | 15 | 0 | 4 | 19 | No stocktaking | - |
| 1.2 | Water meter | 5 | 0 | 2 | 7 | -do- | - |
| 1.3 | Union | 30 | 0 | 10 | 40 | -do- | |
| 1.4 | Nipple | 60 | 0 | 20 | 55 | -do- | √ |

Now is the time to start the replenishing process, because the number of remaining Nipple, 55, is fewer than its re-order level, 60.

## Step 2: Prepare Replenishment Proposal

A proposal for replenishment shall be prepared step by step as explained below. It is important to replenish not only the items which reach their re-order levels but also other items so that sufficient volume of spare parts is stocked for the next 1 year.

### Stocktaking (assessing the condition)

- Responsible staff: Storekeeper and Treasurer
- Formant: Table 5-5 Stocktaking Sheet
- Reference: Existing stock
- Process:

(1) Storekeeper and Treasurer conduct stocktaking as explained at【Stage 3-4】Quarterl Stocktaking

- Due: 3 days after the completion of (Stage 4-1)

### Calculation of Quantity of Stock to be replenished

- Responsible staff: Treasurer
- Formant: Annex 4-2 Calculation of Spare Parts to be replenished
- Reference: Bin cards, stocktaking sheet (completed at(Stage 4-2-1)

Calculation example is shown below

If it is the first restocking, volume of the seed spare parts is the volume of initial stock. It must be updated whenever replenishment is conducted.

For another example, if elapsed months since the previous replenishment is 3 months, it is 3/12 = 0.3 years

**Condition: 7 months passed since the completion of the previous replenishment**

**CALCULATION OF SPARE PARTS TO BE REPLENISHED**

| No. | Name of Spare part | (1) Initial volume of stock | (2) Existing volume of stock | (3) Volume of sales = (1) - (2) | (4) Period in years since the last replenishment $= \frac{Period in month}{12}$ * Round out to one decimal place |
|---|---|---|---|---|---|
| | For Indian Mark - II | | | | |
| 1.1 | Bearing | 35 | 34 | 1 | $= \frac{7 months}{12} = 0.6$ |
| 1.2 | Chain and Coupling | 20 | 12 | 8 | |
| 1.3 | Axle | 40 | 10 | 30 | |
| 1.4 | | | | | |

| (5) Estimated sales volume for the next $1 year = \frac{(3)}{(4)}$ | (6) Buffer rate = 1.25 | (7) Ideal stock volume adjusted by buffer rate =(5) x (6) *If (5)x(6)<4, (7)=4 **Round out to the whole number | (8) Quantity to be Replenished =(7) -(2) *If (7)-(2) <0, (8) =0. | (9) Expected volume of stock after replenished = (2)+(8) |
|---|---|---|---|---|
| 1/0.6 = 1.7 → 2 | 1.25 | 2*1.25=2.5→4 | 4-34=-30 →0 | 34+0=34 |
| 8/0.6 = 13.3 → 14 | | 14*1.25=17.5→ 18 | 18-12=6 | 12+6=18 |
| 30/0.6 = 50 → 50 | | 50*1.25=62.5→63 | 63-10=53 | 10+53=63 |
| | | | | |

Minimum quantity of initial stock is 4, the result of calculation at (7) is 2.5, but it smaller than 4, thus apply 4

If (7) – (2) is less than 0, it means that (2) existing volume of stock is still more than enough, there is no need to replenish

- Process:

(1) Find the initial stock volume of each item on its bin card, and fill "(1) Initial volume of stock" on the specified format. If initial stock volume is not written on bin cards, use balance immediately after receiving stock at the previous replenishment as the initial stock volume.

(2) Fill "(2) Existing volume of stock" on the format based on the completed stocktaking sheet.

(3) fill "(3) Volumes of sales" on the format by subtracting (2) from (1)

(4) Fill "(4) Period in years since the last replenishment" on the format. If 8 months has passed since the previous replenishment, the period is 8/12=0.67 year.

(5) Fill "(5) estimated sales volumes for the next 1 year" on the format by dividing (3) by (4)

(6) Buffer rate is 1.25.

(7) Fill "(7) Ideal stock volumes adjusted by buffer rate" on the format by multiplying (5) by

(6). Minimum quantity of (7) is 4. If a number fewer than 4 is worked out, apply 4.

(8) Fill "(8) Quantity to be replenished" on the format by subtracting (2) from (7). If negative number is computed, apply 0.

(9) Fill "(9) Expected volume of stock after replenished" on the format by adding (2) to (8).

(10) Submits the completed format to the RFO. RFO checks it.

- Due: 5 days after the completion of(Stage 4-2-1)

### Procurement for replenishment

Follow the procurement guideline of goods. After preparing the bill of quantity and specification of the spare parts, the RFO/E should get approval from the respective Regional Water Bureau. After obtaining approval the budget from the bureau's, the procurement of the spare parts float for bid either NCB or ICB, depending the potential suppliers of spare parts at national and regional level.

**Step 3: Conduct Replenishment**

| | |
|---|---|
| **Responsibility** | **Revolving Fund Office** |
| **Time Frame** | **As needed** |

After submitting a proposal for replenishment, the planned replenishment shall be carried out as explained below.

### 1. Ordering

- Responsible staff: Treasurer and other relevant LA's staff
- Formant: Annex 2-15 Local Purchase Order
- Reference: Proposal for Replenishment submitted at【Stage 4-2】
- Process:

(1) Select a supplier according to the procurement regulation

institutionalized by GoE Public Procurement Agency (EPPA).

(2) Prepare Annex 2-15 (Purchase Order) and sends it to a selected supplier

(3) Receives an order acknowledgement from the supplier

(4) If advance payment is necessary, facilitates the withdrawal of money from the bank account

(5) Withdraw the money and pays to the supplier.

- Due: 5 days after the completion of 4-2-5

**2. Delivery**

- Responsible staff: Revolving Fund Office/ Storekeeper
- Formant: Goods received note and Bin cards
- Reference:

(1) Purchase order issued at (Stage 4-2)

(2) Annex 2-16 Spare Parts Catalogue

(3) Annex 2-17 Technical Specification and Information on Hand Pump

- Process:

(1) Once the ordered goods become available at the supplier, Treasurer facilitates the withdrawal of money from bank account for the payment of balance, fuel and per-diem. Treasurer keeps the receipts of all the payment.

(2) RFO officer visit the supplier and inspect the ordered spare parts in the supplier's store room before delivery. Use the specified references to identify each item, confirm its specifications and quality.

(3) RFO officer receives an invoice of the good which they have received and pay the bill accordingly. Treasurer keeps the invoice.

(4) RFO officer delivers the goods to the spare parts shop.

(5) LSP issues goods received note4, and Treasurer keeps a copy of it.

(6) Storekeeper updates bin cards regarding purchasing prices, initial stock, re-order level, and balance as explained at (Stage 2-14-2).

- Due: 5 days after the goods become available at the supplier

**Step 4: Prepare Price Revision Proposal**

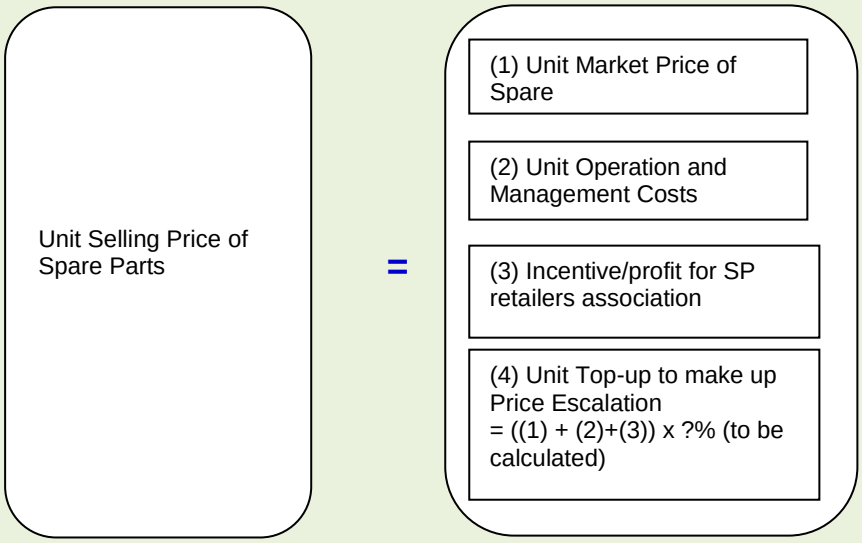
| | |
|---|---|
| **Responsibility** | **Revolving Fund Office** |
| **Time Frame** | **As needed** |

Immediately after the proposal for replenishment approved by RWB, the process of price revision shall be started. It is important to revise the prices of all items based on the current market prices and costs incurred since the last replenishment.

## (i) Concept of Pricing

The selling price of each spare part consists of three components, (1) unit market price of spare part, (2) unit operation and management costs, and (3) top-up to make up price escalation per unit as shown below.

**Figure 5-9: Basis of Price Revision**




**(1) Unit purchasing price of spare part**

The unit market price of each spare part is indicated in the supplier's quotation. It is important to have quotations of all items regardless of whether it is planned to be replenished or not, because the prices of all kinds of spare parts are revised at this occasion. VAT must be added to each price even if it is exempted when the seed stock was procured.

**(2) Operation and management costs since the last replenishment**

Total operation and management costs since the last replenishment are comprised of the following:

- Daily Operation and management costs since the last replenishment

These costs include monthly bank charge, costs for consumables such as printing receipt books and bin cards. However, costs for advertising are excluded. The costs can be figured out from monthly sales and expenditure reports since the last replenishment.

- Transportation costs of replenishment

The costs include the delivery costs of re-ordered stock at zone level spare part outlets and woreda shops but also necessary travel costs of a driver and appointed officer to inspect the goods before delivery.

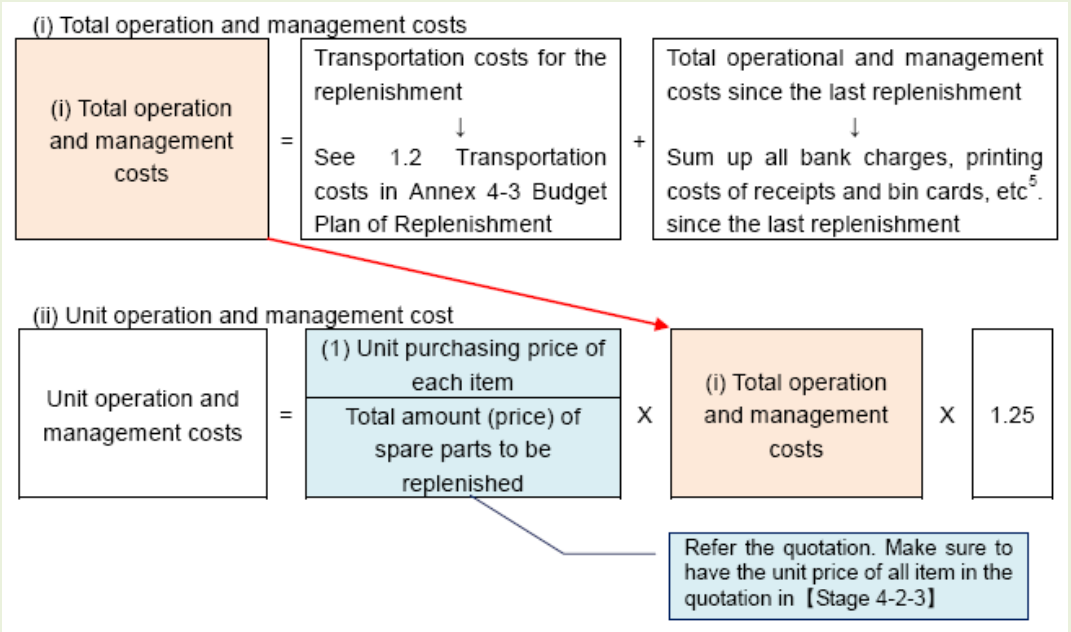
- Incentive/Profit for the LSP/Association

Incentive/profit as agreed with the spare part retailers associations at Woreda shop need to be fixed by the RFO/E in consultation with the regional water bureaus. This incentive/profit should be considered in price revision of spare part sale.

Total operation and management costs should be divided into small pieces and passed on the prices of spare parts to be sold. The unit cost of each item should be in proportion to its purchase price. In other words, expensive items need to carry more cost while less expensive item should bear less cost.

In addition, unit operation and management costs should be adjusted as much as the buffer rate (15 to 25%). The unit costs should be calculated based on the estimated amount (price) of spare parts to be sold for the next 1year. The amount can be obtained from the total amount (price) of seed stock adjusted by the buffer rate.

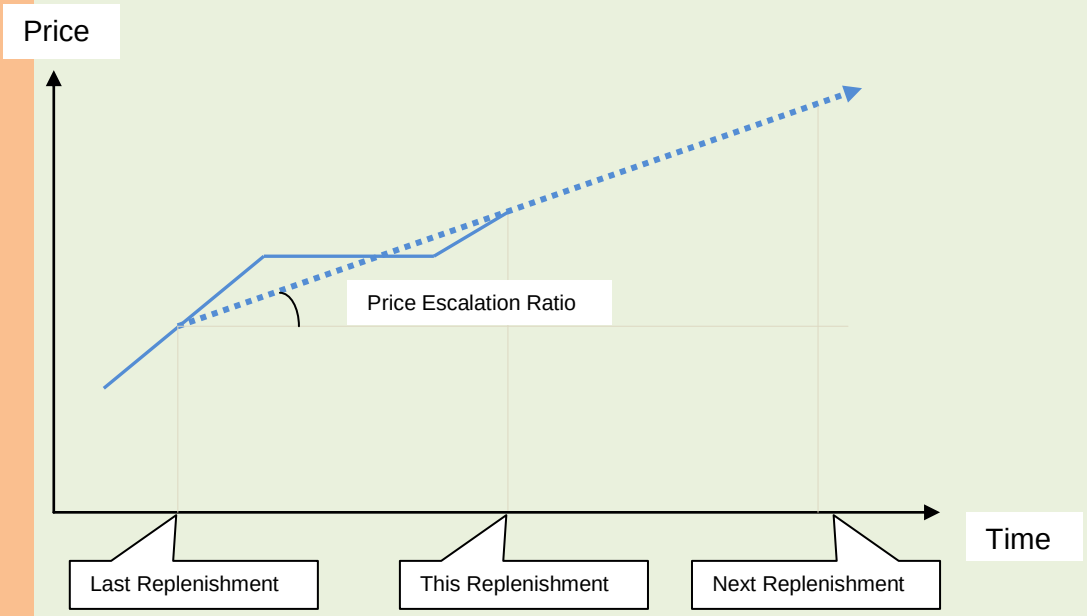
The formula to work out operation and management costs for 1 year per unit is shown below.




### (3) Unit Top-up to make up Price Escalation

It is important to maintain the sufficient amount of a revolving fund to replenish necessary items and volume of spare parts. As it is expected that the prices of spare parts transit upward trend, the selling prices should be increased to cope with future price escalation. Price escalation ratio between the last and current replenishment can be calculated and should be applied as price escalation ratio until the next replenishment as shown in the following figure.

**Figure 5-10: Concept of Price Escalation Ratio**




The price escalation ratio of each item must be different, so average ratio should be estimated taking into account the re-ordered volume and price of each item.

**4) Purchasing price calculation coefficient**

All figures such as total operation and management costs and total amount (price) of spare parts to be replenished in the pricing calculation are common to every item. These figures can be pre-calculated as a purchasing price calculation coefficient.

- Unit selling price is calculated by the following formula.

Unit selling price = { (1) Unit purchasing price + (2) Operation and Management Costs per Unit + (3) Incentive/ Profit for retailers } x (4) Price escalation ratio =?

Applying the formula for the calculation of (2) Operation and Management Costs per Unit into the above formula,

$$\text{Unit selling price} = \left[\text{(1) Unit purchasing price} + \frac{\text{(1) Unit purchasing price}}{\text{Total amount (price) of spare parts to be replenished}} \times \text{(i) Total operation and management costs} \times 1.25 \times ?\right]$$

The formula is divided into "(1) Unit purchasing price" and "Selling price calculation coefficient" as follows.

$$\text{Unit selling price} = \text{(1) Unit purchasing price} \times \left[1 + \frac{\text{(iii) The total costs in Annex 2-8 (Costs of Operation and Management)} \times 1.25}{\text{(ii) Total amount (price) of seed stock}}\right] \times ?$$

Selling price calculation coefficient

The method of preparing a price revision proposal and calculation sample is shown below.

### (ii) Calculation of New Prices

- Responsible staff: RFO staff: Treasurer and E-M Engineer
- Formant: Annex 4-7 Calculation of New Prices
- Reference:

(1) Selected quotation of spare parts for this time

(2) Annex 4-3 Budget Plan of Replenishment

(3) All Monthly Sales and Expenditure Reports since the last replenishment

(4) Annex 4-2 Calculation of Spare Parts to be replenished

(5) Bin cards

- Process:

**Treasurer**

(1) Confirm unit purchasing prices of spare parts on reference (1)

(2) Calculate "1.(2) (i)Total Operation and Management Costs" on the specified format based on reference (2) and (3)

(3) Calculate "1.(3) Price Escalation Ratio" on the format based on reference (1) and (5)

(4) Calculate "1.(4) Selling price calculation coefficient" on the format based on reference (1) and "1.(2) (i)Total Operation and Management Costs"

(5) Calculate "2. New Prices of Spare Parts" on the format based on reference (1) and "1.(4) Purchasing price calculation coefficient"

(6) Submit the completed formant to Director.

**RFO-Director**

(7) Checks the submitted format and revises it, if necessary.

- Due: 7 days after the proposal for replenishment submitted to RWB

Calculation example is shown below

| No | Conditions | Amount (Birr) |
|---|---|---|
| 1 | Transportation costs | 30,000.00 |
| 2 | Sum up all bank charges, printing costs of receipts and bin cards, etc6. since the last replenishment | 20,000.00 |
| 3 | Unit purchasing price of Bearing | 680.00 |
| 4 | Unit purchasing price of G.I. Pipe | 500.00 |
| 5 | Unit purchasing price of Pedestal (Three legs) | 3,000.00 |
| | Total amount (price) of spare parts to be replenished | 54,180.00 |

CALCULATION OF NEW PRICE

**(2) Operation and Management Costs per Unit**

(i) Total operation and management costs

| (i) Total operation and management costs (Birr) | = | Transportation costs for the replenishment ↓ See above Transportation costs in Annex 4-3 Budget Plan of Replenishment | + | Total operational and management costs since the last replenishment ↓ Sum up all bank charges, printing costs of receipts and bin cards. |
|---|---|---|---|---|
| (i) 50,000.00 | | 30,000 | | 20,000 |

**(3) Price Escalation Ratio**

| No. | Top 5 spare parts items in re-ordering volume | (i) Re-ordering Volume | (ii) Unit Purchase Price for now | (iii) = (i)*(ii) | (iv) Unit Purchase Price at the last replenishment | (v) = (i)*(iv) |
|---|---|---|---|---|---|---|
| 1 | Nut | 80 | 75 | 6,000.00 | 68 | 5,440.00 |
| 2 | Rubber Cup | 60 | 115 | 6,900.00 | 105 | 6,300.00 |
| 3 | Cylinder Seal | 40 | 200 | 8,000.00 | 180 | 7,200.00 |
| 4 | Rod Socket | 30 | 250 | 7,500.00 | 220 | 6,600.00 |
| 5 | Grease | 20 | 130 | 2,600.00 | 10 | 200.00 |
| | | | **Total** | **31,000.00** | | **25,740.00** |
| Price Escalation Ratio | | Total of (iii) 31,000 / Total of (v) 25,740 | | 1.20 | | |

### (4) Selling price calculation coefficient

| Selling Price Calculation Coefficient | = | 1 + | (2)(i) Total operation and management costs / Total amount (price) of seed stock | X 1.25 | X | ? |
|---|---|---|---|---|---|---|
| 1.14 (round out to the 2nd decimal place) | = | 1+ | 50,000 / 54,180.00 | X 1.25 | X | 1.20 |

### 2. New Prices of Spare Parts

| S/No. | Items | (1) Unit purchasing price | (4) Selling price calculation coefficient | Unit selling price =(1) X (4) |
|---|---|---|---|---|
| **For India Mark II** | | | | |
| 1 | Axle | 1,700.00 | 1.14 | 1,700*1.14=1,938.00 |
| 2 | G.I. pipe | 500.00 | | 500*1.14 = 570.00 |
| 3 | Pedestal (Three legs) | 3,000.00 | | 3,000*1.14 = 3,420.00 |
| | | | | |

### Finalization and Submission of the Proposal

- Responsible staff: RFO Treasurer and RWB
- Formant:

(1) Annex 4-8 Price Revision Schedule

(2) Annex 4-6 Price Lists of Spare Parts

(3) Annex 4-5 Proposals for Price Revision

- Reference: Completed Annex 4-7 Calculation of New Prices
- Process:

(1) RFO Treasurer and RWB jointly prepare the specified format (1) and (2)

(2) RFO prepares the specified format (3) based on the format (1) and (2)

(3) RFO submits the format (3), and it will be transferred as follows; RFO → RWB→ Finance and General Purposes Committee.

Meeting → RWB Engineer

(4) The proposal is approved at a full Regional Management meeting.

Due: (1) - (3) should be completed within 3 days upon the approval of the replenishment proposal by RWB.

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|---|---|
| | **Announce of New Prices**<br><br>The new prices of spare parts should be announced to customers, LSPs/Associations, and other stakeholders as soon as they are approved by the RWB and RFO meeting.<br><br>**Announcement of New Prices**<br><br>- Responsible staff: LSPs/Associations and Stakeholders (WWO's)<br><br>- Process:<br><br>(1) RWB submits the new price list to RFO.<br><br>(2) RFO gives the new price list to all shop staff/LSPs.<br><br>(3) Shopkeeper updates prices on bin cards and displays the new price list in a shop.<br><br>(4) Cashier displays the new price list in her/his office.<br><br>(5) Other shop staffs keep the new price list.<br><br>(6) The approved price list is disseminated to all stakeholders.<br><br>Due: (1) - (4) should be completed within 3 days upon the approval of the proposal of price revision, (5) should be completed within 3 weeks upon the approval of the proposal of price revision. |
| **Review** | |
| **Session Attachments** | Attachment |

## 5.8. Session – E6: Quality Control and Quality Assurance

| MODULE – E | SPARE PART SUPPLY AND MANAGEMENT |
|---|---|
| **SESSION – E6** | **QUALITY CONTROL AND QULAITY ASSURANCE** |
| **Introduction** | The word 'Quality' literally refers to "degree of excellence". The aim of "Quality Control" is to get hand pumps and related equipment of acceptable quality as defined in the specifications. |
| **Objective** | At the end of the session, the participants will be able to:<br>☞ How quality control and assurance is carried out,<br>☞ How inspection of the equipment is done, |
| **Outputs** | Created awareness and knowledgeable of quality control and quality assurance |
| **Timing** | 1/2 hour |
| **Target Group** | Regional Water Bureau, Zone and Woreda Water Offices, Revolving Fund office, Local Service Providers and WASHCOs. |
| **Methodology** | Lecture, discussion and exercise |
| **Materials** | ▪ Flip chart<br>▪ Overhead projector |
| **Session Guide** | |
| **Step – 1 Introduction** | The word 'Quality' literally refers to "degree of excellence". The aim of "Quality Control" is to get Electro-Mechanical equipment of acceptable quality as defined in the specifications.<br>To ensure that only good quality Electro-Mechanical equipment is used, the following steps are of major importance:<br>▪ Defining Quality Standards in the Electro-Mechanical equipment Specification,<br>▪ Identification of manufacturers and Pre-qualification of manufacturers,<br>▪ Assessment of Independent Inspection Agencies,<br>▪ Development of a Quality Control Manual,<br>▪ Final Assessment of Manufacturer and Registration as "Certified Supplier,"<br>▪ Training of QS personnel.<br>Quality control, like training, is not a "one-off" activity. Quality programmes follow the philosophy to constantly improving the quality, as otherwise the quality standards are slipping slowly back. |

| | |
|---|---|
| **Step – 2 Quality Inspection** | ☞ The tender documents for hand pumps and related equipment procurement for supply and distribution of HPs and spare parts in Ethiopia should all specify "Pre-delivery Inspection" at the manufacturer's premises.<br><br>☞ All pumps, generators, pipes, fittings, water meters etc, and spare parts coming from abroad (or manufactured in the country) have to be inspected by an independent inspection agency prior to delivery.<br><br>☞ The bidder coming from abroad shall state in the bid the name of the proposed inspection agency.<br><br>☞ The purchaser shall confirm approval of the nominated agency. The cost for inspection has to be included in the quoted price. |
| **Step – 3 Consignee end inspection** | ☞ When the E-M equipment or spare parts have reached the suppliers warehouse and are ready for shipment to the sub-regional outlet stores, the Revolving Fund Office/Enterprise along with the Regional Water Bureau needs to make the necessary quality assurance checks before the products are delivered. The main objective of the consignee level inspection is to ensure that only inspected and accepted materials are received by buyers.<br><br>☞ The consignee end inspection can be carried out by RFO/E/E and RWB themselves or by an authorized representative. In Ethiopia at present, limited capacity is available to peRFO/Erm the necessary quality control checks and inspections. The Quality and Standards Agency of Ethiopia (QSAE) can assist in the quality control. |

## 5.9. Session – E7: Supervision and Monitoring of SP Outlet & Shop

| | |
|---|---|
| **MODULE – E** | **SPARE PART SUPPLY AND MANAGEMENT** |
| **SESSION – E6** | **SUPERVISION AND MONITORING OF SP OUTLETS & SHOPD** |
| **Introduction** | The spare part outlets located at regional and zonal level as well as shops operated at Woreda level, the day to day activities shall be supervised as well as conduct a period monitoring the performance of the Revolving Fund Office and Local Service Providers. |
| **Objective** | At the end of the session, the participants will be able to:<br>☞ Understanding of which organization is supervising and monitoring,<br>☞ Identification of the supervision and monitoring activities,<br>☞ Creating in understanding of the timing and frequency of supervision and monitoring. |
| **Outputs** | Created awareness and knowledgeable supervision and monitoring of the spare part outlets and shops. |
| **Timing** | 1 hour |
| **Target Group** | Regional Water Bureau, Zone and Woreda Water Offices, Revolving Fund office, Local Service Providers and WASHCOs. |
| **Methodology** | Lecture, discussion and exercise |
| **Materials** | ▪ Flip chart<br>▪ Overhead projector |
| **Session Guide** | |
| **Step – 1 Supervision** | Water Bureau is a responsible to supervise Revolving Fund Office/Enterprise at the regional level, while Zone Water Office at the SP outlets established at Zone level.<br>Basically, there are two levels of supervision.<br>**First:**<br>▪ RFO/E is responsible for the SP supply chain throughout the region. RWB directly supervises RFO/E, and also indirectly supervise all SP shops.<br>▪ All the monthly reports and proposals are submitted from the RFO/E to RWB, and then RWB checks the documents and request the revision to the outlets.<br>▪ It is recommendable for RWB to visit RFO/E at region and Zone SP outlets for direct observation and consultation with them at least every six months. |

**Second:**

- The RFO/E along with the ZWO and WWO has a responsibility to directly supervise SP shops of the local service providers/associations in the respective Woredas.

**Step – 2 Monitoring & Evaluation**

- As a part of the supervision, periodical monitoring and evaluation (M & E) on SP outlets/local service providers/spare part retailers; Zone and Woreda Water Offices and Regional Water Bureaus should conduct along with the Revolving Fund Office/Enterprise. Basically, there are two levels of M & E as shown in Table 5.10.
- First, ZWO/WWO is primarily responsible for M & E on the local service providers/spare part retailers its Zone and Woreda.
- Second, RWB/RFO/E conducts M & E regularly on concerned Zones and Woreda and occasionally on SP outlets and local service providers/spare part retailers in the entire region. Specifically, RWB monitors and evaluates the performance of RFO/E as the direct supervisor of SP outlet(s) in their region.

**Table 5-10: Outline of M&E**

| Evaluation target | Evaluator | Evaluation frequency | Evaluation criteria | Evaluation items |
|---|---|---|---|---|
| **RFO/E** | RWB | 4 times per year | Procurement and Management Capacity | ▪ Planning and Procurement procedures<br>▪ Delivering, storing and distribution of SPs,<br>▪ Restocking of SPs<br>▪ Trouble shooting<br>▪ Internal communication<br>▪ Refreshment training<br>▪ Replacement of the staff<br>▪ Checking monthly reporting |
| | | | Sustainability Capacity | ▪ Continuity of existing SP outlets<br>▪ Planning of new SP outlets<br>▪ Budgeting<br>▪ Implementation |
| **LSP/Shop** | RFO/E<br>ZWO/WWO | 4 times per year | Operation Capacity | ▪ Handling and recording of stock<br>▪ Handling and recording of sales |
| | | | Management Capacity | ▪ Open the shop daily<br>▪ Monthly report submission<br>▪ Meeting & trouble shooting<br>▪ Replacement of the staff,<br>▪ Endorsement of SP sold money to MFI (monthly) |

| | | | | | |
|---|---|---|---|---|---|
| | | | | Sustainability Capacity | ▪ Restocking<br>▪ Price revision<br>▪ Dependency on others<br>▪ Willingness to continue |

The evaluation results of LSP/SP retailers should be reported to RWB and also informed to each SP outlet, so that the outlet can improve its performance based on the evaluation result.

With the same objective, the evaluation results of concerned ZWO's/WWO's should be informed from RWB. Similarly, the result of evaluation on RWB needs to be shared to the MoWIE and the regional state council.

**Step – 3 Record Keeping for supervision**

☞ In supervision by RWB and ZWO's/WWO's, there are **two points** should be kept in mind:

- One is to maintain contact with the object of supervision by means of reports, proposals, and verbal communication.
- Another is to keep and sort out the following documents and records created and/or exchanged through the process of establishing and operating each SP outlet.

1. Supervision Record of Spare Parts Outlets
2. MoU
3. Monthly Inventory Report
4. Monthly Financial Report
5. Proposal for Restocking
6. Proposal for Price Revision
7. Monitoring and Evaluation Grid
8. Other necessary records

Above mentioned documents and records should be filed separately in RWBs and ZWO's/WWO's outlet by outlet.

Apart from records and documents No. (2) – (8) which shared with SP outlets, (i) Supervision record of Spare Parts Outlets should be prepared RWBs and ZWO's/WWO's separately for the sake of supervision. On this document, information such as profile of a SP outlet, training history, consultation visit, submission of monthly reports, restocking, price revision, and any issue to be followed up are to be recorded.

**Step – 4 The Benefits of Monitoring the Sustainable Supply Chain**

☞ The benefits of establishing and monitoring a revolving spare parts system are:

1. A spare parts supply chain can be maintained,
2. Spare parts can be readily available in the Wored shop and communities can purchase them when needed,
3. Water facilities can be maintained, as spare parts can be easily accessed for repair work,

| | |
|---|---|
| | Reliable water supply can be maintained. |
| **Step – 5 Monitoring of the Entire O&M Process** | ☞ The entire O&M monitoring process should revolve around the status of the water supply schemes. The status of the water supply schemes will inform on how much work needs to be done and how much it will cost.<br><br>☞ For the entire O&M monitoring system to be effective, the following parameters should be considered:<br><br>**1. User contribution:** Users contribute agreed amounts towards O&M.<br><br>**2. Availability of spare parts:** Spare parts should be readily available at designated shops/centers.<br><br>**3. O&M records:** LSPs/APMs prepare workbooks, caretaker maintenance books, treasurer's record books, WB/WASHCO meeting minutes etc.<br><br>**Availability of skills:** For all the components, skills are necessary to manage finances and to know the technical problems to effectively carry out O&M activities. |
| **Step – 6 Sustainable Management System of Spare Parts** | Water Board/WASHCO should be the holder of the O&M supply budget. Within the Water Boards/WASHCOs, this responsibility could be delegated to the Water Administration Office/Operator. The Water Boards/WASHCOs should employ operators if there is none.<br><br>☞ The budget holder is responsible for the following:<br><br>**1.** Setting the budget accurately.<br><br>**2.** Ensuring no expenses are included or made against the vote unless it is properly authorized.<br><br>**3.** Filling in required forms for all expenses for the activities, and noting the budget code and vote number on the requisition forms.<br><br>**4.** Reviewing the activities against the expenses and ensuring that these are comparable.<br><br>**5.** Reviewing the expenses and their code and ensuring that they are correct. If anything is miscoded etc., ensuring that corrections are requested.<br><br>**6.** Ensuring that the accounts section receives budget information so that expenditure reports are prepared. |

# Annex -1. Organizational Set UP

## Annex 1.1. Standard Work Plan:

| No. | Action | Year / Mobth / Week | 1st Year | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| I | **Revolving Fund Office Meeting** | | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | | |
| 1 | **Organizational Set Up** | 5.0 | | | | | | | | | | | | |
| 1.1 | Issue Proclamation, Directive and Regulation for establishment of Revolving Fund Office/Enterprise | 1.0 | | | | | | | | | | | | |
| 1.2 | Establish Revolving Fund Office/Enterprise | 2.0 | | | | | | | | | | | | |
| 1.3 | Formulate a Guidance Document for Supply Chain Managment (SCM) | 1.0 | | | | | | | | | | | | |
| 1.4 | Understand the Concept of OWASHP and SCM | 0.25 | | | | | | | | | | | | |
| 1.5 | Recognize Actors involved in SCM | 0.25 | | | | | | | | | | | | |
| 1.6 | Hold Stakeholder Meeting | 0.25 | | | | | | | | | | | | |
| 1.7 | Conclude an Official Document on Operation and Managment on a Spare part Shop | 0.25 | | | | | | | | | | | | |
| 1.8 | Organize Local Service Providers/Private Entrepreneurs | 0.50 | | | | | | | | | | | | |
| 1.9 | Develop an Organizational Regulation for RFO/E and Spare parts Shop and Job Descriptions for the | 0.50 | | | | | | | | | | | | |
| 1.10 | Capacity Building for RFO/E and Local Service Providers | 0.25 | | | | | | | | | | | | |
| 1.11 | Formulate Agreement between RFO/E and LSPs, and between RFO/E, MFI and LSPs | 0.25 | | | | | | | | | | | | |
| 1.12 | Formulate Quality Control/Quality Assurance Procesures | 0.25 | | | | | | | | | | | | |
| 2 | **Planning** | 7.0 | | | | | | | | | | | | |
| 2.1 | Collect the Demand of Spare parts from Woredas and Water Supply Service Offices | 1.0 | | | | | | | | | | | | |
| 2.2 | Estimate the Volume and Costs of Seed Stock | 0.5 | | | | | | | | | | | | |
| 2.3 | Establish Outlets in the designated town (Zone level) | 2.0 | | | | | | | | | | | | |
| 2.4 | Plan Warehouse and Store room for Spare parts shop | 0.5 | | | | | | | | | | | | |
| 2.5 | Plan advertising tools | 0.25 | | | | | | | | | | | | |
| 2.6 | Prepare Budget Proposal | 0.5 | | | | | | | | | | | | |
| 2.7 | Prepare Pricing Proposal | 0.5 | | | | | | | | | | | | |
| 2.8 | Obtain Approval for Budget and Pricing Proposals by Regional Water Bureaus | 0.25 | | | | | | | | | | | | |
| 2.9 | Request Budget for the Establishment of RFO/E, Outlets and Shops to RWB | 1.0 | | | | | | | | | | | | |
| 2.10 | Open an independent Bank Account for Spare part shop | 0.5 | | | | | | | | | | | | |
| 2.11 | Budget Allocation | 0.3 | | | | | | | | | | | | |
| 2.12 | Preparation of Stores facilities for spare parts outlets and shops | 1.5 | | | | | | | | | | | | |

| No. | Action | Year | 2nd Year | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mobth | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | Week | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
| I | **Revolving Fund Office Meeting** | | | | | | | | | | | | | |
| **3** | **Tendering, supplying and distributing** | **5.0** | | | | | | | | | | | | |
| 3.1 | Preparation of Tender Documents | 1.0 | | | | | | | | | | | | |
| 3.2 | Advertising for the tender | 1.0 | | | | | | | | | | | | |
| 3.3 | Evaluate the Tender | 1.0 | | | | | | | | | | | | |
| 3.4 | Award the Tender | 0.25 | | | | | | | | | | | | |
| 3.5 | Quality Control/Quality Assurance | 4.00 | | | | | | | | | | | | |
| 3.6 | Supply the spare parts at the selected outlets | 4.00 | | | | | | | | | | | | |
| 3.7 | Prepare Receipts and Bin Cards | 0.25 | | | | | | | | | | | | |
| 3.8 | Receive and Distribute seed stock to each shops | 0.50 | | | | | | | | | | | | |
| 3.9 | Fix Selling Price and sell to the customers | 0.50 | | | | | | | | | | | | |
| **4** | **Dairy Shope Operation and Management** | **7.0** | | | | | | | | | | | | |
| 4.1 | Stock Managment | 1.0 | | | | | | | | | | | | |
| 4.2 | Daily Sales Operation | 0.5 | | | | | | | | | | | | |
| 4.3 | Occastioanl Expenditures | 2.0 | | | | | | | | | | | | |
| 4.4 | Monthly Report and Meeting | 0.5 | | | | | | | | | | | | |
| 4.5 | Quarterly Stocktaking | 0.25 | | | | | | | | | | | | |
| 4.6 | Annaul Audit | 0.5 | | | | | | | | | | | | |
| 4.7 | Annual Reportings and Meeting | 0.5 | | | | | | | | | | | | |
| **5** | **Replenishment and Price Revision** | | | | | | | | | | | | | |
| 5.1 | Start Replenishment and Price Revision | | | | | | | | | | | | | |
| 5.2 | Prepare Replenishment Proposal | | | | | | | | | | | | | |
| 5.3 | Conduct Replenishment | | | | | | | | | | | | | |
| 5.4 | Prepare Price Revision Proposal | | | | | | | | | | | | | |
| 5.5 | Announce New Prices | | | | | | | | | | | | | |

Conduct Relenishment and Price revision whenever necessary

## Annex 1.2. : Sample of RFO/E Resolution on Spare Part Shop

## Resolution XXXX

**Establishment, Operation and Management of Spare Parts Shop by**

**Local Service Providers/Private Associations: [ *Name of the Association* ]**

The resolution on the establishment, operation and management of spare parts shop (hereinafter referred to as "Resolution") is approved on the *date* of *month, year* upon the approval in the *Name of Revolving Fund Office*.

It is hereby approved as the Resolution as follows:

## 1. Background

---------- *Woreda* has about (*Numerical Figure*) hand pumps which are to be operated and maintained by WASHCO and related support service providers such as Area Pump Menders (APMs), and (*Numerical Figure)* Rural Piped Systems which are operated by Water Administration Office/Water Board, WASHCO and Operators. Availability of spare parts is crucial for the appropriate operation and maintenance (O&M). Therefore, a sustainable supply system of spare parts is necessary at the Woreda level. The Regional Water Bureaus under One WASH program has initiated the establishment of the spare parts supply system by a revolving fund.

## 2. Undertakings by *Name of Revolving Fund Office*

The Revolving Fund Office shall undertake the followings in accordance with the supply chain management (SCM) manual:

1 To obtain necessary funds from the Regional Water Bureaus, NGOs, Bilateral Organizations and Woreda for the procurement of the initial stock of spare parts, establishment of outlets at Zone towns, preparation of a spare parts shop at Woreda towns through the local service providers, advertisement of the shop and operation of the shop.

2 To prepare the spare parts shop at Woreda town through the involvement of local service providers/associations where water supply spare parts are appropriately organized and safely kept at the location of the shop. The shop can be a newly constructed building or renovated existing facility if any.

3 To prepare spare parts procurement proposals for the initial stock and replenishment, get it approved and procure the necessary spare parts.

4 To prepare a proposal for setting the prices of spare parts whenever necessary and get it approved.

5 To store spare parts and related items in a safe and secure manner in the shop.

6 To recruit local service providers/associations to sell spare parts with the fixed prices. Incentives/ marginal profit for the LSPs fixed by the RFO/E in consultation with the regional water bureau

7 To sell the spare parts through the local service provider/associations in the shop to communities at approved prices in the Regional Water Bureau.

8 To update bin cards, issue sales receipt books and deposit sales by LSPs.

9 To prepare and submit a monthly management report, monthly inventory report, and sales and expenditure report, and transfer the reports to the Regional Water Bureau.

10 To conduct quarterly stocktaking

11 To prepare an annual report and submit it to the Regional Water Bureau.

12 To open an independent bank account at Microfinance Institutes to manage sales of the spare parts by LSPs.

13 To prepare advertisement tools and advertise the shop to communities through Woreda Council, LSPs/Area mechanics.

14 To mobilize user communities so as to raise necessary funds for self-reliant O & M such as procurement of spare parts for replacement, request of repair to LSPs/APMs, etc.

15 To conduct audit of the outlets and shops

16 To assign appropriate staff to peRFO/Erm the above mentioned undertakings.

## 3. Amendment and Termination

This Resolution may be amended or terminated by an approval in the Regional Water Bureau. IN WITNESS whereof the parties hereto have signed this Resolution to be executed in accordance with the responsibilities stated above.

| | |
|---|---|
| Signed:_____<br>*Name of Signatory*<br>**Regional Water Bureau**<br>Date: _____ | Signed:_____<br>*Name of Signatory*<br>**Revolving Fund Office**<br>Date: _____ |

## Annex- 1-3: Standard Format of Memorandum of Understanding (MoU)

# MEMORANDUM OF UNDERSTANDING

**Between**

**Revolving Fund Office: [Name *of RFO/E]***

**and**

**Local Service Provider/Association: [Name *of the Association]***

This Memorandum of understanding (hereinafter referred to as "MoU") is made on *insert date as* (dd/mm/yyyy) BETWEEN *Name of Revolving Fund Office* (hereinafter called RFO/E) of the one part and *Name of Local Service Provider/Association* (hereinafter called LSP) of the other part.

This Memorandum of Understanding is:

Effective (starting): *Effective (dd/mm/yyyy)*

And is valid until: *Expiring (dd/mm/yyyy)*

It is hereby agreed between the parties as follows:

## 1. Background

---------- *Woreda* has about (*Numerical Figure*) hand pumps which are to be operated and maintained by WASHCO and related support service providers such as Area Pump Menders (APMs), and (*Numerical Figure)* Rural Piped Systems which are operated by Water Administration Office/Water Board, WASHCO and Operators. Availability of spare parts is crucial for the appropriate operation and maintenance (O&M). Therefore, a sustainable supply system of spare parts is necessary at the Woreda level. The Regional Water Bureaus under One WASH program has initiated the establishment of the spare parts supply system by a revolving fund.

**2. Undertakings by *Name of Revolving Fund Office***

The RFO/E shall undertake the followings in accordance with the SCM manual:

1 To obtain necessary funds from the Regional Water Bureaus, NGOs, Bilateral Organizations and Woreda for the procurement of the initial stock of spare parts, establishment of outlets at Zone towns, preparation of a spare parts shop at Woreda towns through the local service providers, advertisement of the shop and operation of the shop.

2 To prepare the spare parts shop at Woreda town through the involvement of local service providers/associations where water supply spare parts are appropriately organized and safely kept at the location of the shop. The shop can be a newly constructed building or renovated existing facility if any.

3 To prepare proposals for procuring spare parts for the initial stock and replenishment, get it approved and procure the necessary spare parts.

4 To prepare a proposal for setting the prices of spare parts whenever necessary and get it approved.

5 To conduct quarterly stocktaking.

6 To finalize a monthly inventory report and monthly sales and expenditure report which are partly prepared by LSP, prepare a monthly management report and submit these reports to a Regional Water Bureau.

7 To prepare annual reports and submit the reports to a Regional Water Bureau.

8 To open an independent bank account to manage sales of the spare parts.

9 To monitor the shop operation by LSPs and provide necessary guidance to LSPs.

10 To prepare advertisement tools and advertise the shop to communities through Woreda councilors, APMs, and area development committee (ADC).

11 To mobilize user communities so as to raise necessary funds for self reliant O & M such as procurement of spare parts for replacement, request of repair to APMs, etc.

12 To conduct audit of the shop.

13 To assign appropriate staff to peRFO/Erm the above mentioned undertakings.

## 3. Undertakings by *Name of Local Service Provider/Association*

*Name of Local Service Provider* shall undertake the followings in accordance with the SCM manual:

1. To store spare parts and related items in a safe and secure manner in the shop.
2. To sell spare parts in the shop to communities at specified prices by RFO/E.
3. To update bin cards, issue sales receipts and deposit sales.
4. To prepare a part of monthly inventory report and monthly sales and expenditure report and submit the reports to LSP.
5. To assign appropriate staff to peRFO/Erm the above mentioned undertakings.

## 4. Amendment and Termination

This agreement may be amended or terminated by mutual consent of both parties to the agreement hereto. The mutual consent must be documented and signed by the same parties as signed hereto.

IN WITNESS whereof the parties hereto have signed this MoU to be executed in accordance with the responsibilities stated above.

| | |
|---|---|
| Signed:_____<br>*Name of Signatory*<br>**Manager of Revolving Fund Office**<br>Date of Sign<br>Signed:_____ | Signed:_____<br>*Name of Signatory*<br>**Representative of Local Service Provider/Association**<br>Date of Sign<br>Signed:_____ |

## Annex 1.3. : Task and Responsibilities of Staff Concerned in Spare Part outlet and Shop

## Tasks and Responsibilities of Staff of Revolving Fund Office/Enterprise

Tasks and Responsibilities of the RFO/E personnel who is concerned with the operation and management of the spare parts are specified below.

## 1. REVOLVING FUND OFFICE DIRECTOR

Revolving Fund Office Director (RFO/ED) takes full responsibility of the spare parts operation and management. Specifically, s/he has to peRFO/Erm the following functions;

a. To submit a budget proposal to the Regional Water Bureau (RWB) to establish spare parts outlets, shops and obtain funds,

b. To facilitate the process of establishing a spare parts outlets and shop including procurement of seed stock, preparation of a store facility, advertisement, etc.

c. To facilitate the approval of pricing proposal for seed stock at a full RFO/E meeting,

d. In case the spare parts shop is to be operated by RFO/E with the retailer of LSP, to sign a MoU on shop operation between RFO/E and LSP,

e. In case the spare parts shop is to be operated solely by RFO/E, to facilitate the approval of a resolution of the spare parts shop in a full RFO/E meeting,

f. To facilitate all RFO/E staff to prepare the monthly reports and submit them to a RWB,

g. To facilitate the approval of a price revision proposal at a full RFO/E meeting,

h. To approve a replenishment proposal

i. To call an annual stakeholder meeting to report the progress and issue of the RFO/E in the 1$^{st}$ month of every fiscal year.

j. To facilitate Treasurer, Cashier, and Storekeeper to prepare, review and submit, a monthly inventory report, a monthly sales and expenditure report by the specified dates of every month

k. To prepare a monthly management report based on the two monthly reports and supplemental information from other RFO/E staff,

l. To submit the monthly management report to RWB every month,

m. To order Treasurer to prepare proposals for replenishment and price revision,

n. To check the proposals and send them to a RWB for reviewing, if necessary,

o. To submit a proposal for replenishment to RWB, obtain approval, and conduct replenishment with other RFO/E staff,

p. To submit a proposal for price revision to RWB, obtain approval at a full RWB meeting, and request RFO/E's staff and Woreda Council members to disseminate the new price list to communities and APMs through WWOs,

q. To call an annual LSPs meeting,

r. To prepare an annual management report based on the three annual reports and supplemental information from other shop staff

s. To monitor and supervise RFO/E staff and LSPs whether they peRFO/Erm in accordance with their tasks and responsibilities specified here and the SCM manual

t. To detect and solve the any problems of the RFO/E in collaboration with RFO/E staff and staff of LSPs,

u. To carry out any other functions, as may be delegated to him/her by RWB from time to time.

## 2. TREASURER

Treasurer monitors the assets of the RFO/E including cash and inventory through checking consistency between cash, sales records and inventory. Moreover s/he prepares the proposals for replenishment and price revision together with Woreda Council. Specifically s/he has to perform the following functions:

a) To prepare a budget plan to establish a spare parts shop,

b) To facilitate the process to open a bank account for a shop,

c) To obtain a bank statement at end of every month,

d) To check up the bank balance against the corresponding figure in a monthly sales and expenditure report,

e) To facilitate Cashier and Storekeeper to submit a monthly inventory report and a monthly sales and expenditure report by 5$^{th}$ of every month, review the two reports, and submit them to Director by 10$^{th}$ of every month,

f) To conduct quarterly stocktaking with Storekeeper,

g) To prepare the proposals for replenishment and price revision with RWB's consent, and submit to RWB,

h) To withdraw money from a bank account for a RFO/E with the approval by RWB,

i) To procure spare parts and other necessary goods with the approval by RWB,

j) To facilitate Cashier and Storekeeper to submit an annual inventory report and an annual sales and expenditure report by *Sene 20* every year, review the two reports, prepare annual trend report, and submit three annual reports to RWB by *Sene 25* every year,

k) To attend a monthly and annual RFO/E staff meeting,

l) Ensure that the spare parts RFO/E complies with the required obligations and provisions of Ethiopia Revenue and Custom Authority, (i.e. Tax obligations, exemptions and holidays for the spare parts RFO/E and its clients),

m) To carry out any other functions, as may be delegated to him/her by with the approval by Director from time to time.

## 3. Electro-mechanical Engineer

The Electro-mechanical Engineer has to perform the following function, but not limited:

a) Identify spare part requirements,

b) The E-M Engineer prepare specification for spare parts to be supplied,

c) Prepare Bill of Quantities for Spare parts and Cost Estimates,

d) Prepare tender Documents,

e) Evaluate the Bids,

f) Inspection and quality control,

g) Facilitate outlets and spare part distribution,

h) Fixing the sell price of spare parts along with other RFO/E staff and RWB,

i) Offer capacity building for LSPs and other staff,

j) To carry out any other functions, as may be delegated to him/her by with the approval by Director from time to time.

## 4. Procurement Specialist

The procurement specialist has to perform the following function, but not limited:

a) Prepare procurement planning,

b) Ensure the allocation of budget,

c) Identify suppliers,

d) Prepare bidding document

e) Prepare Request for Proposal/Quotation,

f) Announce the bid for spare part supply,

g) Evaluate the bid along with other professionals,

h) Select the supplier and award as per the evaluation output,

i) Prepare contract agreement,

j) Facilitate signing of contract,

k) Schedule disbursement,

l) Facilitate LC opening,

m) Approve the payment for the supplied items.

## 5. RWSS OFFICER

RWB officer technically supports both the RFO/E staff and LSPs in identifying spare parts, inspecting the quality of them, etc. Moreover, s/he facilitates the overall process of RFO/E operation in collaboration with Woreda Council. Specifically, s/he has to perform the following functions:

a. To inspect the quality of all incoming stock in collaboration with Storekeeper,

b. To assist identifying necessary spare parts for customers if they are not sure of it,
c. To check the overall process of RFO/E operation,
d. To assist and advise other staff to facilitate the overall process of RFO/E operation;

Approved by: .....

Date: .....

## 6. CASHIER

Cashier appropriately handles cash and maintains accurate record of sales and expenditure.

Specifically s/he has perform the following functions:

e. To receive cash payment from customers and write receipts in return,
f. To keep the copies of receipts given to customers,
g. To deposit cash to a bank account opened for exclusively use of the shop,
h. To keep records of cheques issued and received,
i. To keep receipts of all expenditure,
j. To keep records of withdrawal,
k. To prepare and submit a monthly sale and expenditure report to Treasurer by the 5th of every month,
l. To prepare an annual sale and expenditure report by Sene 20 every year,
m. To attend a monthly and annual LSPs staff meeting,
n. To carry out any other functions, as may be delegated to him/her by RFO/E from time to time.

## 7. STOREKEEPER

Storekeeper mainly receives customers to the shop, sells spare parts, manages the stock appropriately. Specifically s/he has to perform the following functions:

a. To maintain the stock and store facilities well organized and keep the stock safely,
b. To inspect the quality of all incoming stock with assistance of RWB officer and physically count its number
c. To issue the stock to customers,
d. To update bin cards whenever stock is received or issued,
e. To prepare and submit a monthly inventory report to Treasurer by the 5$^{th}$ of every month
f. To conduct quarterly stocktaking with Treasurer,
g. To prepare and submit an annual inventory report to Treasurer by Sene 20 every year,
h. To attend a monthly and annual RFO/E staff meeting,
i. To carry out any other functions, as may be delegated to him/her by Treasurer and/or

RFO/E from time to time,

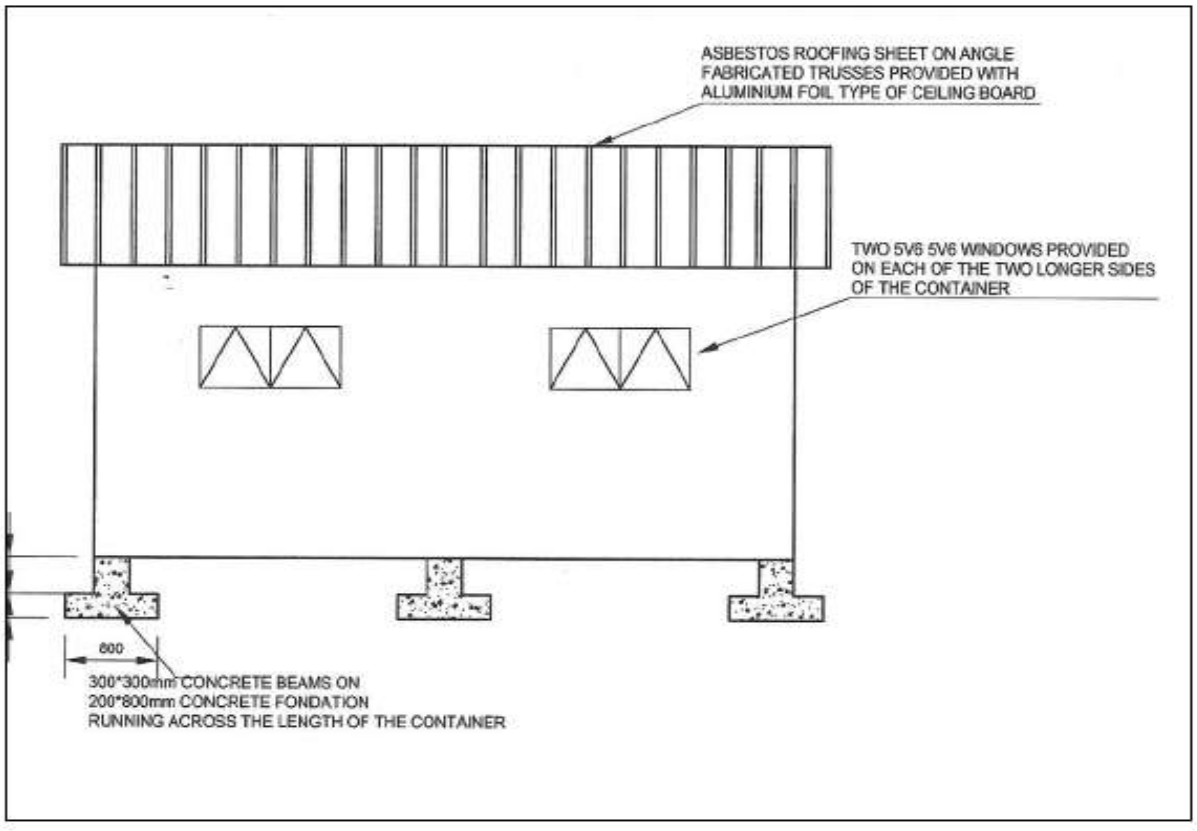
# Annex -2. Preparation of Spare Part Shop

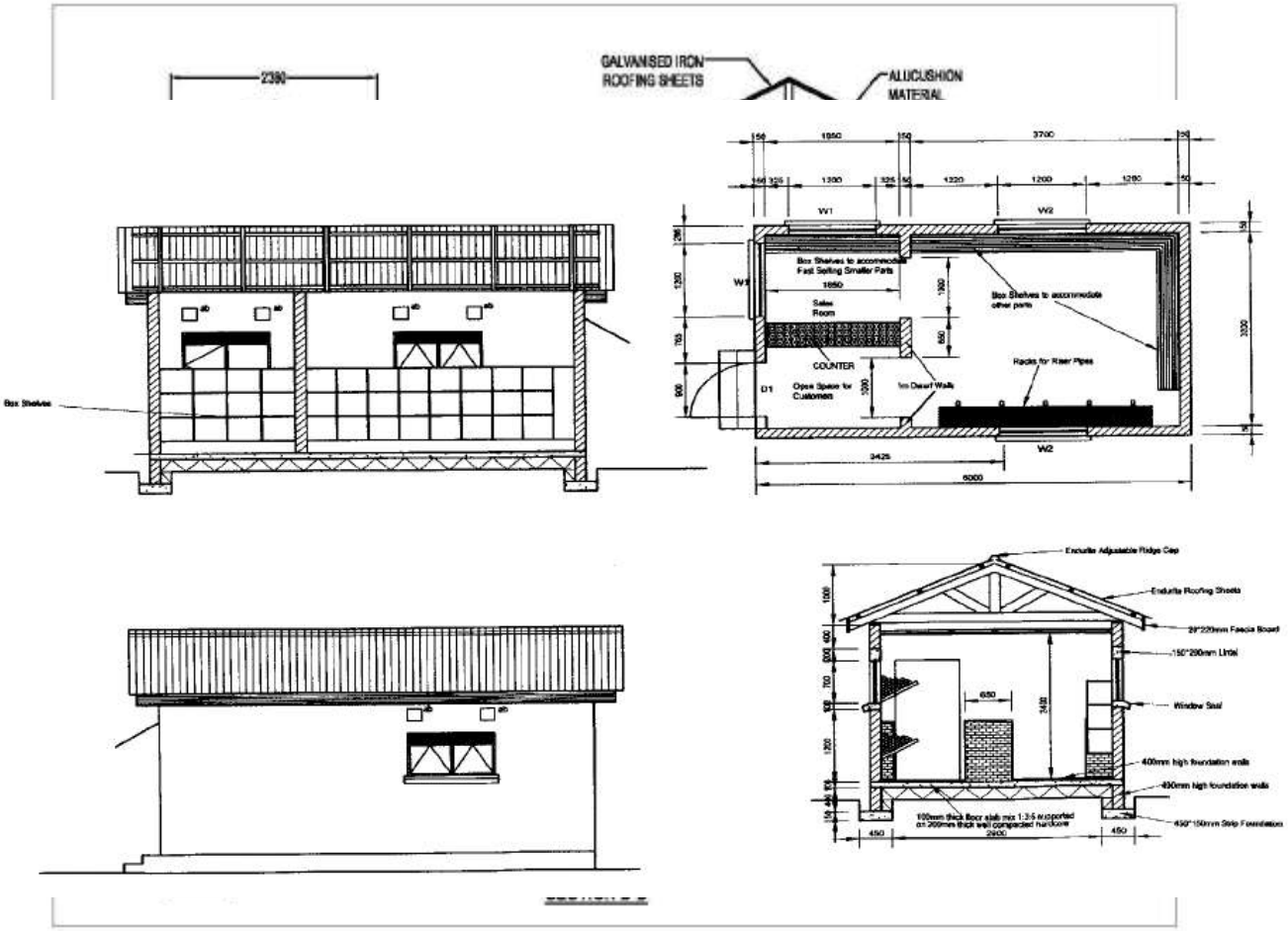
## Annex -3. : Design of Spare parts Shop by Refurbishing a Container

**Refurbishment Process of a Container**

- Secure a piece of land as large as 5 x 10 m area as minimum
- Purchase a six meter store facility,
- Setup a counter at entrance for serving customers
- Put up display boards with samples of the spares that are stocked in the store facility.
- Set up an aisle. On one side wooden shelves should be installed for the smaller items and on the other side install steel racks for riser pipes and rods,
- Construct roof with iron sheets with *allocution* beneath the iron sheets, on top of metal container to reduce day time temperatures in the container. The roof to have over hangs over the container.
- Construct concrete pillars on which the container will be bolted.
- Drill openings and install small windows with burglar bars on three sides of the metal container, to allow for good air circulation.
- Install fluorescent tubes for lighting along the aisle with electric switch.

Proposed Construction Design for Spare Parts Shop




2390
GALVANISED IRON ROOFING SHEETS
ALUCUSHION MATERIAL
Box Shelves
Box Shelves to accommodate Fast Selling Smaller Parts
Sales Room
COUNTER
Open Space for Customers
1m Dwarf Wall
Box Shelves to accommodate other parts
Racks for Riser Pipes
W1
W2
D1
3425
6000
Enduflo Adjustable Ridge Cap
Enduflo Roofing Sheets
Window Sill
400mm high foundation walls
450*150mm Strip Foundation

## Annex 2.1. Sample Design of Billboard and Brochure

(Brochure)

# GET YOUR SPAR PARTS HERE

# List of SPARE PARTS

## Just What You Need!

PLEASE CONTRACT --------- WOREDA FOR THE PRICES

| India Mark II | |
|---|---|
| I-1 | Handle Axle |
| I-2 | Ball Bearing |
| I-3 | Bearing Spacer |
| I-4 | Hex. Bolt (M12 x1.75 x 40) |
| I-5 | Chain Bolt (H.T. Bolt M10 x40) |
| I-6 | Chain with Coupling (Chain Assembly) |
| I-7 | Upper Valve (Upper Valve Guide) |
| I-8 | Rubber Seating (Check Valve Seal) (Rubber Seal Small) |
| I-9 | Cylinder Assembly |
| I-10 | Cylinder Body and Reducer Caps |
| I-11 | Sealing Ring (Cylinder Seal) |
| I-12 | Cylinder Valve Seat |
| I-13 | Check Valve (Check Valve Guide) |
| I-14 | Check Valve Assembly (Foot Valve Assembly) |
| I-15 | Rubber Seating (Foot Valve Seal) (Rubber Seal Large) |
| I-16 | Front Cover |
| I-17 | G.I. Riser Pipe (3m) |
| I-18 | G.M. Spacer |
| I-19 | Grease (200g) |
| I-20 | Handle Assembly |
| I-21 | Inspection Cover Bolt (Hex. Bolt M12x20) |
| I-22 | Nut (M12 x 1.75) |
| I-23 | Hex. Lock Nut (Nyloc Nut (M10)) |
| I-24 | Stand Assembly (Pedestal (Three Legs)) |
| I-25 | Pipe Socket (G.I. Coupling) |
| I-26 | Plunger Rod Assembly |
| I-27 | Plunger Yoke Body |
| I-28 | Head Assembly (Pump Head Box) |
| I-29 | Pump Rod (Connecting Rod) |
| I-30 | Third Plate Assembly (Rod Guide Plate) |
| I-31 | Rod Socket (Hex. Coupling: M12X50) |
| I-32 | Rubber Cup (Pump Bucket) |
| I-33 | Washer (for M12) |
| I-34 | Water Tank Assembly |

| Afridev | |
|---|---|
| A-1 | Bobbin |
| A-2 | Bush Bearing |
| A-3 | Cement Solvent |
| A-4 | Socket (Coupling for PVC Pipe) |
| A-5 | Cylinder Assembly |
| A-6 | Foot Valve Body Assembly (plastic) |
| A-7 | Fulcrum Pin Assembly |
| A-8 | O-Ring |
| A-9 | Pipe Centralizer |
| A-10 | Plunger Assembly (Plastic) |
| A-11 | Pump Rod Assembly (Hook & Eye) |
| A-12 | PVC Riser Pipe |
| A-13 | Rod Centralizer |
| A-14 | Solvent Cleaner |
| A-15 | U-Seal for Plastic Plunger |

## Annex 2.2. Cost of Operation and Management

| No. | Items | Quantity | Unit Price (ETB) | Amount (ETB) | Remarks |
|---|---|---|---|---|---|
| 1 | Delivery of seed stock | | | | |
| 1.1 | Hiring Vehicle | | | | |
| 1.2 | Fuel | | | | |
| 1.3 | Accommodation of driver and assigned staff | | | | |
| 1.4 | Allowance of driver and assigned staff | | | | |
| 1.5 | Others | | | | |
| | Sub Total | | | | |
| 2 | Expected operation and management costs for 1 year | | | | |
| 2.1 | Printing receipt books | | | | Quotation |
| 2.2 | Printing bin cards | | | | Quotation |
| 2.3 | Photocopy | | | | |
| 2.4 | Bank charge | | | | |
| 2.4 | Cheque book | | | | |
| | Others | | | | |
| | Sub Total | | | | |
| | Total | | | | |

Prepared by: .....
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Submitted on: .....

Attachments: Relevant Quotations

## Annex 2.3. Budget Proposal for Establishment of Spare parts Shop

We hereby propose the allocation of budget for establishment of a spare parts shop in ---------- ---------- Woreda.

1. Management and Operation

   The shop is to be operated and managed by ---------- (insert *Name of Local Service provider/Association).* The undertakings by ---------- (*Local Service provider/Association)* are shown in *Revolving Fund Office/Enterprise Resolution/ MoU* as Attachment 1 (Annex 1-2 or 1-3). Detail work plan is described in Attachment 2 Work Plan (Annex 1-1).

2. Budget

   Necessary budget to procure seed stock, prepare a store facility, operate the shop for the 1st year, and advertise the shop are summarized below.

| No. | Description | Amount (Birr) | Reference |
|---|---|---|---|
| 1 | Purchase cost of seed stock | | Attachment 3: Plan of Seed Stock |
| 2 | Preparation cost of store facility | | Attachment 4: Plan of Store Facility |
| 3 | Operation and management cost of the shop | | Attachment 5: Costs of Operation and Management |
| 4 | Advertisement cost of the shop | | Attachment 6: Costs of Advertisement |
| | **Total** | | |

Prepared by: .....

Submitted on: .....

## Annex 2.4. Sample of Sales Receipt

---------- Woreda

---------- Local Service Provider/ Association

Address: Telephone No. ----------
E. mail: xxxxxxxx @xxxxx.com

| | | | | |
|---|---|---|---|---|
| Date | | | No. | |
| Received from | Name: | | | |
| | Kebele: | | | |
| In payment for | | | | |
| Amount (Birr) | | | | |
| Amount in Words | | | | |
| | | | | |
| Cash/Cheque | Cheque No. | | Cheque date | |
| Cashier's name | | | | |
| Signature | | | | |

Original: Customer's copy, Duplicate: Storekeeper's copy, Triplicate: Book Copy

## Annex 2.5. Standard Format of Bin Cards

Name: _____ for _____ Spare Part, S.No._____

| Purchase Price Birr)K) | | Selling Price (Birr) | | Initial Stock Volume | | Re-order Level[1] | |
|---|---|---|---|---|---|---|---|
| Date[2] | Amount | Date[3] | Amount | Date[4] | Qty | Date[5] | Qty |
| | | | | | | | |
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| DATE | DESCRIPTION (Receipt No.) | RECEIVED | ISSUED | BALANCE |
|---|---|---|---|---|
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Note:
1 Initial Stock Volume x 0.25
2 As of ordering, not delivery
3 As of start selling at this price
4 As of delivery
5 As of delivery

## Annex 2.6. Pricing Proposal for Seed Stock

We hereby propose the pricing of seed stock of spare parts which will be dealt in a shop operated by .....

1. New prices of spare parts

The prices of spare parts are shown in Attachment 1: Price List of Seed Spare Parts. Detailed calculation process is shown in Attachment 2: Calculation of Prices of Seed Stock.

Prepared by: .....

Submitted on: .....

Attachment 1: Price List of Spare Parts (Annex 2-9)
Attachment 2: Calculation of Selling Prices of Seed Stock (Annex 2-10)

## Annex 2.7. Price List of Seed Spare Parts

| S.No. | **Spare Parts Item** | **Unit Price (Birr)** | S.No. | **Spare Parts Item** | **Unit Price (Birr)** |
|---|---|---|---|---|---|
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Note: Spare part item distinguishes by type like: for pump, generator, pipe fittings, valves, hand pump (Indian Make-II, Afrideve) etc.

Authorized by: .....

Date: .....

## Annex 2.8. Calculation of Prices of Seed Stock

(i) Preparation for Calculation
From the quotation of seed stock

1. Unit Operation and Management Costs

Unit operation and management costs = (i) Unit purchasing Price of each item / (ii) Total amount (Price) of seed stock x (iii) The total costs in Annex 2-8(Costs of Operation and Management) x 1.25

2. Price Escalation Ratio

Price Escalation Rate in 1 year: 1.1 (Prices are expected to be increased by 10%).

3. Selling price calculation coefficient

Unit selling price is calculated by the following formula.

Unit selling price = [(1) Unit purchasing price + (2) Unit operation and management costs] x (3) Price escalation ratio = 1.1

Applying the formula to calculate (2) Unit Operation and Management Costs into the above formula,

Unit selling price = [(1) Unit purchasing price + (1) Unit purchasing price / (ii) Total amount (price) of seed stock x (iii) The total costs in Annex 2-8 (Costs of Operation and Management) x 1.25] x 1.1

The formula is divided into "(1) Unit purchasing price" and "Selling price calculation coefficient" as follows.

Unit selling price = (1) Unit purchasing price x [1 + (iii) The total costs in Annex 2-8 (Costs of Operation and Management) x 1.25 / (ii) Total amount (price) of seed stock] x 1.1

Selling price calculation coefficient

Selling price calculation coefficient = 1 + (x 1.25) x 1.1

(ii) **Unit Selling Prices of Seed Stock**

| S/No | SP Items | (1) Unit purchasing price | (4) Selling price calculation coefficient | Unit selling price =(1) x (4) |
|---|---|---|---|---|
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