



Ministry of Environment



# Rwanda National IWRM Conference

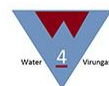
## 'Leaving no-one behind'



Kingdom of the Netherlands



Partnership for  
nature and people



# Protection of springs Catchments Areas

***WATER WEEK, MARCH 2019***

## **Presentation outline**

1. Introduction
2. Why Springs catchment protection?
3. Requirement in protection of springs .
4. Springs catchments management
5. Preventive activities required in the spring catchment areas
6. Conclusion

# Introduction

- ❖ Access to safe drinking water and sanitation is crucial, not only for people's health and wellbeing, but also for poverty reduction and economic development;
- ❖ When do we say to have access to safe water?
  - As per the MDGs that we have been implementing; People have access to an improve source of safe water when:
    - ✓ They fetch near by not far than 500m in rural area and 200m in urban area;
    - ✓ The access of safe water is reliable, affordable and adequate quantity:  
20l/person/day in rural area & 80/person/day in urban

## Introduction Cont'd

- Improving the access, quality, availability and sustainability of water supply and sanitation services in urban and rural areas is one of the challenges in Rwanda as well as Worldwide;
- The continuing degradation of water quality across the world by the discharge of high loads of pollutants in the water sources, intensive use of fertilizers and pesticides, inappropriate solid waste management and land use changes calls for an urgent attention.
- The water source degradation has the effect of reducing the flow rate of the springs or causing the drying up and water scarcity

## **Why Springs catchment protection?**

- To properly manage all collective sources intended for the supply of drinking water;
- To assess their vulnerability;
- To strengthen the protection and conservation of the resource;
- To monitor the implementation of protection and conservation measures;
- To ensure the sustainability of public investments in drinking water treatment.
- To protect of water intakes and their watershed
- To ensure production and distribution of quality drinking water in sufficient quantity
- To ensure sustainable management of water resources

## Requirement in protection of springs

Protection of the spring has two main objectives:

- 1. to improve the recharge of the aquifer,*
- 2. to prevent contamination of the groundwater.*

This requires activities such as:

- Planting lawn grasses to mitigate erosion
- Control the growing and uprooting potential trees in catchment zone
- Cleansing the surface water drain or protection ditch
- Fencing of the catchment zone (about 50 m radius)
- Tracking the quality of water
- Controlling the yield of the source

## Springs catchments management



**Lack of proper drainage system at the catchment point**



**Cultivation activities at the catchment point**

## **Springs catchments management**



**Uprooting trees in the catchment zone**



**Unprotected sources catchment**

## **Springs catchments management**



**Typically Protected Spring catchment area**

## Preventive activities required in the spring catchment areas

Components	Actions	Frequency
Lawn grasses	Trim, replace and adds plants	Once a month
Growing trees in the catchment zone	Cut and uproot any trees growing over the catchment trenches.	As required
Springs marks	Maintain the location and repaint in red and white the springs marks (concrete sticks)	Once a year
Fence	Renew or reinforce the fences posts, lattices Trim uneven growing trees	Check once in three months and perform as required
Drainages / Protection ditch	<ul style="list-style-type: none"> <li>Clean off mud, sediments and deposits</li> <li>Cut grasses and trees growing in the trenches.</li> </ul>	<ul style="list-style-type: none"> <li>After heavy rains</li> <li>Once in three months</li> </ul>
Surrounding catchment area.	Fight Erosion through: <ul style="list-style-type: none"> <li>Maintain land cover and runoff barrier</li> <li>Develop water retaining and infiltration trenches</li> </ul>	Check one a year and perform as required

## Preventive activities required in the spring catchment areas Cont'd)

Components	Actions	Frequency
Check the quality of water	<ul style="list-style-type: none"> <li>• Taking the water temperature with a thermometer</li> </ul>	Every day
	<ul style="list-style-type: none"> <li>• Testing the turbidity of water</li> </ul>	More often during rainy season
Yield of the source	<ul style="list-style-type: none"> <li>• Measuring the source discharge</li> </ul>	In the beginning, in the middle and at the end of every season.

## Conclusion

- ❖ Improving the access, quality, availability and sustainability of water supply requires a high attention on the management of the natural water sources that we have. Therefore, it is up to all of us to maintain the sources catchment areas, to ensure the water quality and quantity sustainability as we move toward the 100% water access to all.

**Thank you for your  
attention**