

# OUR ENVIRONMENT OUR HERITAGE

## *Water Resources Management*

### *– why it's important to act now!*

Water is a critical resource to the provision and sustenance of social, economic and environmental benefits, and achievements of these key elements requires improved water resource management. In spite of economic improvements over the past decade, some significant challenges remain as access to quality water is hindered by inadequate water supply and exacerbated by little or no adaptation measures to natural disasters such as flooding and droughts.

Protection of water sources for both surface and underground from adverse developments and natural events is crucial as this determines the supply of water for all consumptive and non-consumptive users. The impacts of climate change will affect quality and quantity of water. More importantly it will also affect the surrounding environment which nurtures water sources such as springs and boreholes. The likelihood of climate-related risks in Samoa affecting water resources can be evaluated in extreme rainfall events (both six-hourly and daily) and extreme air and water temperatures. Impacts of climate change are inevitable however the magnitude of extreme events such as heavy rain causing flooding can be reduced if developments near watershed areas are addressed too.

It is widely recognized that the existence of hardship amongst communities is due to the fact people have limited access to opportunities particularly people's vital requirement for water. Samoa was gravely affected by cyclones in the early 1990s, with prolonged water shortages as one significant effect. The situation was worsened by little or no forward vision to prepare people individually and as a whole community to natural disasters even though people were consciously aware of Samoa's vulnerability to extreme winds, flooding and drought from time to time.

Flooding from heavy rain is a well recognized paired hazard with cyclones. This type of flooding was evident during recent cyclones over the last two decades. Previous flooding events proved costly for Samoa during the 2001 and 2006 flooding which caused considerable economic and financial damages particularly in infrastructure, health, finance and water supply in the Apia urban area. The excessive amount of rain together with poor drainage systems around Apia worsened the situation. There was also concern with health issues rising daily due to exposure to raw sewage from overflowing septic tanks. In addition the quality of water was extremely affected and irregular supply was imparted temporarily until water was safe for distribution.

The prevalence of drought or pro-longed dry weather conditions have also impacted unpleasantly particularly for both local farmers and communities. Past pilot environmental initiatives in rural communities such as the International Waters Programme (IWP) at Lepa and Apolima Island discovered water shortage a real problem particularly during dry season (May - Oct). Field survey revealed reduced forest cover around watershed areas also contributed to the low levels of water supply.

For many years the management of water has been fragmented amongst key government ministries and corporations with the vast percentage of water catchment's areas managed and utilized by customary land owners. The perpetual belief amongst communities on water resource management a responsibility solely by the Government creates a barrier to the management of this critical resource, as many communities restrict access to water resources, control distribution and demand compensation for its utilization.



However, whether communities rely on Independent Village Schemes (IVS) or the public water system for water supply, catchment's management highly entails the involvement of communities. Empowering people to safe guard their own water resources is the first step to reducing and preventing problems from happening at the end point.

Likewise water resource management also requires a strong collaboration amongst key government agencies. The prioritization of water resource management to include public health, led the government to adopt a sector-wide approach known as the Water Sector Support Programme (WaSSP), a five year programme funded by the European Union (EU). This is to ensure coordination and integration of activities across existing implementing agencies (SWA, MoH, MWCSO) and stakeholders interests to meet common sector goals and targets. The establishment of a new Water Resources Division (WRD) within the Ministry of Natural Resources and Environment (MNRE) will ensure catchment management will improve the status of surface and underground water and their surrounding environment. Prevention of pollution and contamination at water sources is a key task on catchment management and this is a crucial approach for villages relying on IVS for water supply. Such management also requires the formulation and implementation of Sustainable (watershed) Management Plans.

Improved water resource management also requires other issues are addressed. Thus, improving drainage systems and waste disposal are issues also addressed through the Sanitation and Sewage Drainage Programme (SSDP) running concurrently with the WaSSP. Whilst the SSDP will see more improvement in urban areas the WaSSP will ensure rural water supplies are improved substantially so as to reduce hardship amongst communities. Moreover lessons learned from IWP are under review and will be applied according to management plans.

All in all, it is also recognized that the implementation of adaptation and preventative measures will not guarantee an end to the impacts of climate change. However implementation of integrated and targeted actions will assist communities to deal with climate change, water quality and supply; and management. Building and strengthening community capacity to manage their water resources is one crucial component of the sector-wide approach, and today not tomorrow is our time to deal with all these challenges.

**For more information contact:**

**Water Resources Division / MNRE**

**Matautu-tai**

**Tel: (+685) 23701**

**Fax: (+ 685) 25421**

# OUR ENVIRONMENT OUR HERITAGE



## Children's Corner



Children aged 9-15 are invited to answer the following corner. The name of 3 students with top scores at the end of every month will be posted under the "Children's Corner" for special prizes. "Children's Environment Awareness 2007 Awards will be given to 10 students with top total scores at the end of the year.

### Water-Word Search

Find the following words in the box

1. water
2. resource
3. management
4. flooding
5. climate
6. safe guard
7. community
8. involvement
9. disasters
10. quality

g	p	e	c	r	u	o	s	e	r	m
q	u	a	i	t	y	k	o	l	a	
d	g	n	i	d	o	o	l	f	w	n
c	o	m	m	u	n	i	t	y	a	a
m	a	n	a	g	e	m	e	n	t	m
s	r	e	t	s	a	s	i	d	e	e
s	a	f	e	g	u	a	r	d	r	h
t	n	e	m	e	v	l	o	v	n	i

For many years the \_\_\_\_\_ of water has been fragmented amongst key \_\_\_\_\_ ministries and corporations with the vast percentage of \_\_\_\_\_ catchment's areas managed and utilized by \_\_\_\_\_ land owners.

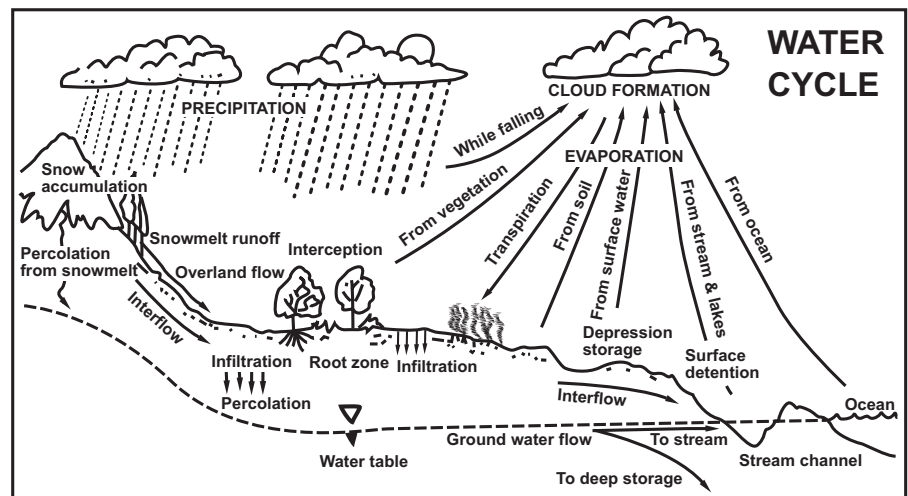
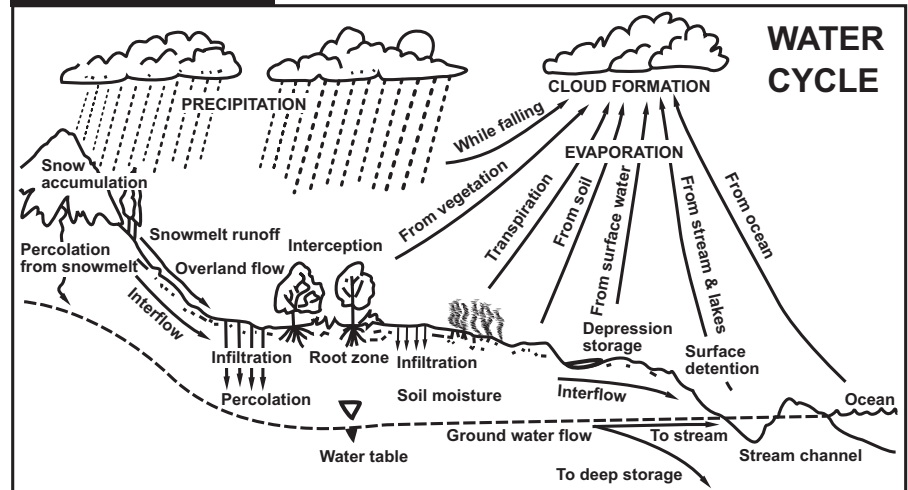
### Water-Acronyms

State the long form for these acronyms

1. IWP \_\_\_\_\_
2. IVS \_\_\_\_\_
3. EU \_\_\_\_\_
4. WaSSP \_\_\_\_\_
5. SWA \_\_\_\_\_
6. MOH \_\_\_\_\_
7. MWCS D \_\_\_\_\_
8. MNRE \_\_\_\_\_
9. SSDP \_\_\_\_\_
10. WRD \_\_\_\_\_

### Can you find the 6 differences?

Correct figure



Wrong figure

The \_\_\_\_\_ of climate \_\_\_\_\_ will affect \_\_\_\_\_ and \_\_\_\_\_ of water.

## ACKNOWLEDGEMENTS

We wish to acknowledge and thank the following companies for sponsoring our children's corner and pages

- Samoa Biscuits
- Business System Ltd
- West End Company Ltd
- McDonald's Family Restaurant

Produced by the Ministry of Natural Resources and Environment

Capacity Building & Human Resource Development Section

Private Bag, Apia, SAMOA  
Phone : 23800/25419/30966  
Fax : 25856/23176  
Email : mnre@samoa.gov.ws



Government of Samoa