

January Flooding in Apia Disaster Management Office



Your cooperation is necessary to improve our Monthly News letter, so please give us information about coming events and projects.

What causes torrential rainfall on Friday morning (25th January 2008) and the subsequent flooding in the Apia urban area?

The cloud bands associated with a trough of low pressure located south of Samoa brought about torrential rainfall which causes all river systems in the Apia urban area to rise beyond their natural and or artificial banks. The rainfall data recorded in Apia from 12 midnight to 6am on Friday morning amounted to 10mm and six hours later about 98mm was recorded bringing the total rainfall in the same area to 108mm by 12 noon on the same day.

The water from flooded river systems coupled with heavy ground surface runoff inundated the roads, businesses, offices, public areas, homes and the drainages within the urban area. The areas that were badly affected by the flooding included Pesega, Vaimoso, Vaimea, Fugalei, Saleufi, Taufusi, Savalalo, Sogi, parts of Tauese, Tufuiopa, Lalovaea, Togafuafua, Matautu, Vaipuna, Faatoia, Leone and Lelata.



Infront of the LDS temple Vaimoso river / bridge CCCS church Vaimoso

The DMO of the MNRE called upon key emergency services such as the Ministry of Police, Fire and Emergency Services Authority, Samoa Red Cross, Ministry of Education and Ministry of Works, Transport and Infrastructure to respond to the situation. Other emergency services such as Electric Power Corporation, Samoa Water Authority, SamoaTel and the Ministry of Health had already mobilized their response teams into the affected areas.

The Disaster Management Office had also contacted all the radio and television stations to advice the public to take precautionary measures when traveling into town and to undertake safety measures at home if their homes are inundated. The public was also advised to warn their children to stay away from rivers and drainages.



Inside the Fugalei Market

Flood water levels:

Site	Stage (m)	Remarks	Time
MagikCinemas	0.300	Left Lamp post infront	10.15am
Lavalava Samoa	0.250	Right-corner side	10.18am
	0.400	Sidewalk	
	0.100	Mid-road between Lavalava Samoa and Magik Cinemas	
Bluebird Saleufi	0.180	Front of 2nd post from left	10.25am
	0.200	3 corners road	
Fugalei	0.250	Behind SCB at Market place beneath signboard	10.30am
	0.410	Traffic light post infront of Niks	
	0.350	Left lamp post infront Ah Boons	
Vaimoso Uta	0.190	Pacific-Com fence	10.58am
	0.170	Corner lamp post beside CCC-Vaimoso	
	0.350	Left lamp post turning to St.Marys College Rd	
	0.150	Corner of AoG complex	
Pesega (3 corners)	0.350	Traffic light post turning left opposite Temple	11.10am
	0.600	Traffic light post infront Temple bench	
	0.450	Garden light, right of the signage outside temple	
	0.400	LDS signage behind bench	



Vehicle in drainage - Fugalei Fugalei area Vaimea area

The majority of the businesses and offices in the affected areas were closed for business from mid-morning to allow their employees to relocate their valuables and goods to higher levels of their offices and shops respectively.

The roads in the affected areas had sustained several potholes. Sediments and rubbish washed by the water were deposited on the roads.

With reference to the water supply the Samoa Water Authority had issued a public notice to inform the public of the damages at some of the water reservoirs such as Alaoa. The public was also advised to boil drinking water as the water supply was not good for consumption.

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United Nations Framework Convention on Climate Change Bali, Indonesia, 3 -14 December 2007

The Conference hosted by the Government of Indonesia, took place at the Bali International Convention Centre and brought together representatives of over 180 countries together with observers from intergovernmental and nongovernmental organizations, and the media.

The two week period included the sessions of the 13th Conference of the Parties to the UNFCCC, its subsidiary bodies as well as the 3rd Meeting of the Parties of the Kyoto Protocol. A ministerial segment in the second week concluded the Conference.

Samoa was represented at the conference by the Minister of Natural Resources and Environment (MNRE), Hon. Faumuina Tiatia Liuga; the Associate Minister of MNRE, Hon. Fonotoe Pierre L. Meredith who attended the high level segment from 11th - 13th December 2007. Other members of the delegation include, Samoa's Ambassador to the United Nations in New York, Aliioaiga Feturi Elisaia; Chief Executive Officer of MNRE, Tuu'u Dr. Ieti Taulealo; Chief Executive Officer of Samoa Lands Corporation, Afoa Arasi Tiotio; Assistant Chief Executive Officer, Mulipola Ausetalia Titimaea and Principal Officer Climate Change, Anne Rasmussen.

The decision by Australia to ratify the Kyoto Protocol was echoed and well received by the conference and urges other nations to do likewise, particularly those metropolitan countries with a fair share to the global green house gas emissions. Samoa's presentation highlighted, agreeing to host the UNDP global hub in Apia and its support for the Global Environment Facility, Pacific Alliance Strategy (GEF-PAS).



Samoa's representatives:

Front row (L-R) : MNRE Minister Hon. Faumuina Tiatia Liuga and
MNRE Associate Minister Hon. Fonotoe Pierre Meredith

Back row (L-R) : ACEO Mulipola Ausetalia Titimaea, CEO Tu'u'u Dr Ieti Taulealo,
Samoa's Ambassador to the UN-NY Aliioaiga Feturi Elisaia

Monthly Summary of Earthquake Events in Samoa January 2008

Summary of individual earthquake events recorded at AFI AS095

DATE	MAG	DATE/TIME (SAMOAN TIME)	LATITUDE / LONGITUDE	DEPTH (km)	REGION
05 th Jan	6.6	12:02:05(am)	51.276°N 130.750°W	10	Queen Charlotte Is
"	6.1	06:14:17(pm)	37.150°N 22.934°E	50.9	Southern Greece
06 th Jan	4.9	07:30:06(am)	18.245°S 177.927°W	515.9	Fiji Islands
08 th Jan	5.1	11:24:51(pm)	21.804°S 179.984°W	601.6	Fiji Islands
"	5.7	04:23:37(am)	4.033°S 131.357°E	35	Banda Sea
"	6.4	09:26:45(pm)	32.315°N 85.179°E	10	Western Xizang
09 th Jan	6.4	02:37:18(pm)	43.883°N 127.228°W	10	Off the Coast of Oregon
10 th Jan	4.9	12:00:33(pm)	39.528°N 141.807°E	54.6	Eastern Honshu, Japan
10 th Jan	4.4	12:31:32(pm)	16.704°N 145.823°E	148.9	Northern Mariana Islands
13 th Jan	5.1	12:16:36(am)	16.000°S 173.063°W	10	Tonga
15 th Jan	6.5	06:52:15(am)	21.882°S 179.532°W	597.6	Fiji
21 st Jan	6.0	08:55:53(pm)	15.296°S 175.320°W	35	Tonga
"	6.1	11:49:26(pm)	15.331°S 175.664°W	40.5	Tonga
22 nd Jan	5.2	01:20:09(am)	20.428°S 175.623°W	34.7	Tonga
29 th Jan	6.2	08:32:47(pm)	7.324°S 127.753°E	42.4	Kepulauan, Indonesia
30 th Jan	5.2	02:41:58(pm)	6.299°S 129.743°E	35	Banda Sea

Listed in the table below is a summary of earthquake events recorded at the Afiamalu seismic station (AFI AS095) for the month of January 2008. A total of sixteen earthquake events were recorded, there is **"NO FELT"** earthquake recorded for the Samoan Region within this month.

Summary of earthquake events for the month of January 2008

Total number of earthquake events recorded:	16
Highest magnitude event recorded	6.6 (Queen Charlotte Islands)
Lowest magnitude event recorded	4.4 (Northern Mariana Islands)
Average magnitude of events recorded	5.7

Applications of the information

The information provided may be useful for all members of society in the context of disaster and risk planning as well as management, and also for engineering purposes. In particular, the information provided reminds us of the devastating nature of tsunamis, and the importance of undertaking necessary preparation measures to minimize and mitigate the impacts of this hazard at all levels of society in Samoa, should a disaster of this type occur.

For more information, please contact the Geophysics Section or the National Disaster Management Section of the Samoa Meteorology Division.

WATER RESOURCES LEGISLATION

The Water Resources Division [MNRE] being the division responsible for the management, protection, and controlled allocation and use of Samoa's surface and underground water resources, is formulating a water resource legislation.

A first draft of the Water Resources Bill was developed and a series of consultations involving the Ministry, Implementing agencies - WaSSP (SWA, MWCSO, MOH, MOF & MNRE), Public sector as well as selected local communities from around Upolu and Savaii were carried out to facilitate discussions on identified issues concerning the key features of the new law.

1. MNRE ACEOs & Principals 11 Jan 2008 DBS Building
2. WaSSP Implementing Agencies 15 Jan 2008 DBS Building
3. Public Consultations 16 Jan 2008 DBS Building
4. Upolu community consultation 17 Jan 2008 DBS Building
5. Savaii community consultation 18 Jan 2008 Manutoao Hall

Following on from the consultations some significant amendments were made to the draft bill. A final draft Bill is now in place to be finalized by the Working Group 1 committee of Component 1 (WaSSP) and the CEO before submission to the Attorney General's Office.

SUMMARY OF THE WATER RESOURCES BILL 2008

The Water Resources Bill 2008 repeals the Water Act 1965 and makes comprehensive provision in relation to the management, control and regulation of water resource in Samoa. The management of Samoa's water resources shall be the responsibility of the Ministry of Natural Resources and Environment, and specifically its Water Resources Division. The water resource shall be managed on a sustainable basis. A comprehensive water management plan shall form the basis of the proper management of the resource on scientifically sound principles. This shall include all relevant policies and technical data, and the individual management plans for watershed and water catchment areas. A Water Resources Board shall be established to ensure that proper management of the water resource is achieved in the long term. Rights of State management and control are clearly stated.

The major water using utilities (EPC, Samoa Water Authority and the Independent Water Supply Schemes) shall have rights to access water for their statutory functions. The Fire and Emergency Service shall have the right to use water for fire fighting and prevention purposes. All other persons who drill for water or who take water from river, streams and underground aquifers for commercial purposes must have a licence to do so. Licences shall control the amount of water which can be taken, and the rate at which it may be pumped out. Villages shall be empowered to make by-laws to protect water sources in their local areas.

A full explanatory memorandum for the Water Resources Bill 2008 will be included in the next edition.



RANET TRAINING

Tile Tofaeono of the Meteorology division attended a course held at the Bureau of Meteorology Training Centre, Melbourne, Australia from the 12 - 23 of November 2007. The Government of Australia through the Bureau of Meteorology (BOM) and AusAID under its Pacific Governance Support Program (PGSP) sponsored it jointly.

Representatives were from the Cook Islands, Kiribati, Niue, Papua New Guinea, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, FSM, Indonesia, Philippines, Sri Lanka, Uganda, USA-Guam and Samoa.

The training was delivered by meteorological scientists and experts from around the world. The experts included those based at the Bureau of Meteorology (Australia), Uganda Meteorology Services, University of Guam, Red Alert Australia and the Australian Satellite Company.

During the two weeks of the course, the participants were trained in;

- Setting up satellites to receive World space RANET data feeds,
- Setting up HF email networks and FM community radio station,
- Performing maintenance and repairs of computers
- Understanding regional meteorological systems and networks and how they function in the network.

Overall the training provided the participants with the necessary tools to help diagnose errors and help to improve meteorological systems.

Such knowledge will further improve the accuracy of meteorological reports issued to the public.



Training Participants

Building Capacity for Effective Participation in the Biosafety Clearing House (BCH)

Samoa has already established and set up its Biosafety Clearing House (BCH) system within the Division of Environment and Conservation. This system is basically an information exchange established to facilitate sharing of information on and in conjunction with, and experience with genetic modified organisms (GMOs) and living modified organisms (LMOs).

The main aim of the workshop was:

- i) to strengthen the capacity of MNRE and representatives of Samoa's Biosafety Clearing House Task Team to participate effectively in the UNEP Biosafety Clearing House;*
- ii) Why? To assist Samoa as a Party to implement its obligations and to facilitate information sharing on relevant biosafety-related information.*

A workshop was held on the 12th to 14th December 2007 at SPREP and was attended by participants from various Government Ministries and organization in which their work involves seaport and airport border control, plants, crops and soil research, environment protection, conservation and fisheries.

This would help and assist the Government to make better-informed decisions regarding the importation or release of LMOs and GMOs.

The workshop was funded by the UNEP/GEF - Biosafety Unit in Geneva, Switzerland. The UNEP BCH Coordinator, Mr Frederic Vogel was present to facilitate Samoa's request with the assistance from the two Regional Biosafety/BCH IT Coordinators - Mr Sam Sesega and Mr Samuela Fonua.

Future challenges of the progress for Samoa National BCH node is now invested and vested in the hands of the new Samoa BCH Coordinator - Seumalo Afele Faiilagi (Principal Terrestrial Conservation Officer) and his team - quote "I am looking forward to the challenges and commitment contributing to ensure Samoa meets its obligations as party to the Protocol before the end of the BCH component of the Biosafety Project at the end of 2008" unquote - Afele Faiilagi

Consequently, certificates of participation and validation were issued and awarded by the UNEP official to all participants who were actively involved in this important workshop.



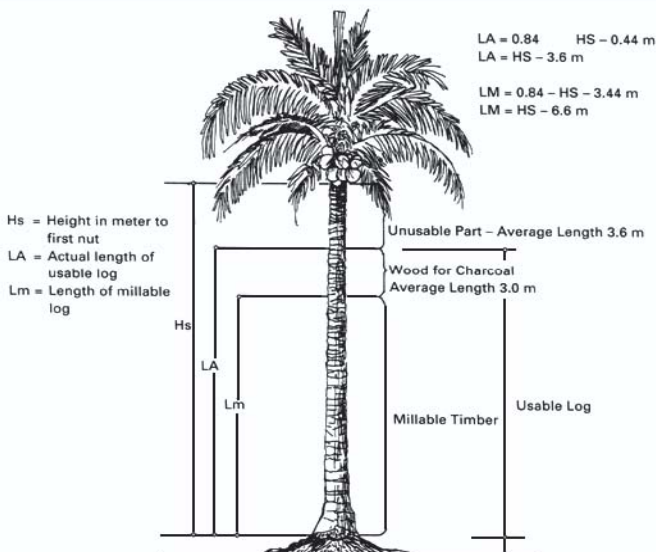
IMPROVING VALUE AND MARKET OF COCONUT WOOD PROJECT



In the Pacific region, larger areas of coconut palms (*Cocos nucifera*) have senesced and consequently, copra yields are greatly reduced. The cost and phytosanitary implications of clearing senile palms are real impediments to replant. The production of flooring material from senile stems has been proposed as a solution to this problem.

There is a very high demand for flooring products in Asia, America and Europe. This market was estimated globally at \$5.4B Australian in 2004 with production for strong growth. For example the US market is focused to grow by 40% by 2008. Generally, however, while market demand is increasing, the supply of suitable resource is increasing, particularly for hard, dark timbers from sustainable resources. Market appraisals by two Australian companies (Boral, Australia's largest timber flooring producer and Krakatoa Trading Co, a building company expanding into importation of coconut products) indicated that the unique attractive appearance of cocowood, combined with its hardwearing properties and sustainable plantation origins will ensure high levels of consumer demand. It has long been recognized that cocowood is an attractive material, highly suitable for appearance applications (Meadow.D.J 1979 - the current state of coconut stem utilization from palm felling to the end-products. FAO). This implies that the attractiveness is not just due to transient fashion trends. Meadow also noted that further research and promotion would enable cocowood to become an extremely valuable commodity, playing an important role in the economies of coconut-growing nations.

Use of the Coconut palm stem



The ongoing business success of Pacific Green in the highly competitive interior furniture market attests to the enduring aesthetic qualities of the material.



Chair

Limited volume of coconut wood flooring have been produced in Indonesia and exported to Europe, however, no industry-scale coconut wood flooring manufacturers can currently be identified. This project therefore aims to develop appropriate processes and provide the technical information that will underpin the manufacture and broad acceptance of coconut wood in the international high value flooring market.



Laminated table-top

The project actually started in June 2007 and is for (3) three years and is funded by the Australian Center for International Agricultural Research (ACIAR). And the two countries involve are Fiji and Samoa. A collaborative effort by the Forestry Division and Strickland Brothers Co (sawmiller) in Samoa in the implementation of this project has been the key element of this project.



Briefcase

In November 2004, a workshop was held in Nadi, Fiji on the Utilization of coconut wood and was attended by Aukuso Leavasa Principal Forest Policy and Planning Officer (MNRE) and Launiuvao Sosia Joe Strickland General Manager of Strickland Bros Co as a member of the forest industry.

A consultant (Leslie Francis) from the Department of Primary Industry of Queensland Australia is currently in the country doing research study in finding a suitable chemical that can remove fungal, bacterial and moulds attacks that happens to destroy the appearance on the coconut wood when used for flooring.



Cross section of coconut palm stem at breast height

Asia Pacific Regional Conference on Environmental Justice and Enforcement

UNEP has been mandated by the UN General Assembly and UNEP's Bali Strategic Plan to assist developing countries with capacity building in the field of environmental law. UNEP Division of Environmental Law and Conventions and Regional Office for Asia and the Pacific, in cooperation with the Asian Environmental Compliance and Enforcement Network organised the Asia Pacific Regional Conference on Environmental Justice and Enforcement held at Amari Watergate Hotel in Bangkok, Thailand from 14-16 January 2008.

The conference aimed at providing judges, prosecutors and other legal stakeholders in the Asia and the Pacific region with an opportunity to enhance their capacity and competence in providing access to justice and enforcement, through the exchange of information on compliance and enforcement of environmental law including multilateral environmental agreements (MEAs) and the legal/judicial systems prevalent in their respective countries. It also aimed to help define the strategic direction that UNEP should follow in those areas.

The Conference overall theme "Mainstreaming the environment in the judiciary and enforcement".

About 100 participants, two from each of the 48 countries in the Asia and Pacific region participated in the Conference, in particular, judges and other legal stakeholders involved in compliance and enforcement of environmental law including MEAs, such as prosecutors, investigators and enforcement officials dealing with environmental cases. Samoa was represented by the ministry's Legal Consultant Josephine Stowers and ACEO Elisaia Talouli.

At the last day of the Conference, five parallel sub-regional groups had discussions on challenges and emerging issues faced by that particular region particularly to assess strengths and weaknesses of the existing national legal systems to address environmental issues. Following from this discussion the participants especially UNEP would identify challenges and opportunities for a way forward.

The Pacific region representatives presented three major challenges faced by most Pacific countries which are:

- (i) Review of Environment Legislations and/or draft Resource Management Legislation;
- (ii) Capacity Building for the Executive and the Judiciary on Environmental law issues to ensure cohesive enforcement;
- (iii) Climate Change - sea level rise



MNRE Legal Consultant - Josephine Stowers-Fiu at the Conference

NOTICE BOARD

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@@ Good - Luck @@

Resignation

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All the Best Mr. Polutea with your future endeavors!!