

2021

*Meteorology, Geoscience
and Ozone Services*

No. 7



SAMOA

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2021, No. 7

AN ACT to regulate the management of meteorology (weather and climate), geo-science and ozone services and establish the Multi-Hazard Early Warning System and for related purposes. *[03rd March 2021]*

BE IT ENACTED by the Legislative Assembly of Samoa in Parliament assembled as follows:

**PART 1
PRELIMINARY**

1. Short title and commencement:

This Act may be cited as the Meteorology, Geoscience and Ozone Services Act 2021 and commences on the date of assent by the Head of State.

2. Interpretation:

In this Act, unless the context otherwise requires:

“aviation meteorological services” means weather related services which are required for the purposes of civil aviation, and are subject to any requirements by the Ministry responsible for civil aviation services;

“Chief Executive Officer” means the Chief Executive Officer of the Ministry;

“climate” means the measurement of the mean and variability of relevant quantities of certain variables of the atmosphere over a period of time;

“climate change” includes a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods;

“Division” means the Meteorology, Geoscience and Ozone Services Division continued under this Act;

“emergency” has the same meaning as defined under the Disaster and Emergency Management Act 2007;

“geo-hazard” means any geological state that represents or has the potential to develop into an event leading to damage or risk, and includes volcanic activity or eruptions, tsunamis, earthquakes and other seismic events, and submarine or surface landslides;

“hydrology” means the properties, distribution, and circulation of water on and below the earth's surface and in the atmosphere referring to the hydrological cycle;

“hydrological services” means services provided by, or for water-related sectors and warnings issued in respect to water-related disasters and emergencies;

“international agreement” includes any treaty, instrument, protocol agreement, implemented on an international or regional basis, to which Samoa is a party of with regards to meteorology, geoscience and ozone services, including:

- (a) the Convention of the World Meteorological Organization;
- (b) international standards and practices recommended by the World Meteorological Organization under and in addition to its convention, which have been adopted and used by Samoa;
- (c) Kyoto Protocol under the United Nations Framework on Climate Change;

- (d) Montreal Protocol on Substances that Deplete the Ozone Layer 1987 being part of the Vienna Convention for the Protection of the Ozone Layer;
- (e) and any other international agreement.

“meteorology” means the branch of science concerned with the processes of the atmosphere and its phenomena including weather and climate;

“meteorological information” means any meteorological observation, analysis, meteorological forecast or warning, including climate and any other statement related to meteorology existing or expected meteorological conditions;

“meteorological-related event” means one (1) or more of the following natural phenomena including:

- (a) drought;
- (b) extreme temperature;
- (c) flash or extreme flooding;
- (d) fog;
- (e) hail;
- (f) heavy rain;
- (g) strong storm or hurricane force winds (not associated with a tropical system);
- (h) storm surges;
- (i) thunderstorm (including lightning);
- (j) tornado or similar phenomena;
- (k) tropical system (including a tropical disturbance, tropical depression or tropical cyclone);

- (l) El Nino; and
- (m) La Nina.

“meteorological services” means the development and supply of any weather or climate information data or material by, or authorized for release by the Meteorological Office, by or through any means prescribed under this Act, including those additional services arising from its functions under this Act including ocean services and seismic;

“meteorological warning” means a statement of observed and expected conditions related to a weather or climate related event which requires a response to minimize the risk of harm to life or damage to property or the environment from the impact of such event;

“Minister” means the Minister responsible for Natural Resources and Environment;

“Ministry” means the Ministry responsible for Natural Resources and Environment;

“Multi-Hazard Early Warning System” means the system of activities, arrangements and capacities required for generating and disseminating timely and meaningful warning information in order to enable individuals, communities and organisations threatened by a meteorological geo-science, ozone related event to prepare, and to act appropriately, and in sufficient time to reduce the risk of harm to human life, damage to property and the environment arising from the impact of such events;

“ocean information” means any ocean observation, analysis, forecast or warning relating to ocean temperature, sea level tides and waves, including any public release of information statement relating to the same;

“ocean related event” means any event relating to the extreme raise of ocean waves or swells or the significant displacement of water due to extreme weather, climate, submarine earthquake (seismic), tsunamis;

“ocean services” means the development and supply of any ocean information or material or by the Division, by and through any means prescribed under this Act including these services derived from its functions under this Act;

“officer” means an officer or employee appointed under section 5 of the Act;

“value added data” means data that has been improved by the Division under section 10;

“warning” means any advice, advisories, bulletins, alerts or public notification or release of information by the Division which identifies that an extreme weather and climate event (including cyclones, tropical storms, depressions and meteorological droughts), or the occurrence of a natural phenomena (including but not limited to earthquakes, landslides, undersea seismic activity, extreme wind, tornadoes, tsunami, tidal surges,

volcanic activity, coastal and extreme flooding of any nature) may expose a person or persons to the risk of harm, injury or a loss of shelter, and property to potential damage, destruction or loss;

“weather” means the state of certain variables of the atmosphere at a particular place and time;

“WMO” means the World Meteorological Organization established under the Convention of the World Meteorological Organization.

3. Objectives:

The objectives of this Act are:

- (a) to give recognition and authority to continue the functions of the Division;
- (b) to promote the development and improvement of meteorological forecasting, geo-science and ozone layer protection and regulatory services for Samoa;
- (c) to establish and maintain the Multi-Hazard Early Warning System;
- (d) to ensure that functions of the Division contribute to the safety security and protection of life and property through early detection analysis of available data and notification of all potential natural risks.

PART 2
METEOROLOGY, GEOSCIENCE
AND OZONE SERVICES

Division 1 - Administration

4. Continuation of the Division:

- (1) The Meteorology Division that exists at the commencement of this Act continues under this section as the Meteorology, Geoscience and Ozone Services Division.
- (2) The Division consists of:
 - (a) the Chief Executive Officer;
 - (b) the Divisional Head appointed under section 6; and
 - (c) such officers of the Ministry as are appointed and employed to positions within the Division in accordance with section 7.

5. Divisional Head:

- (1) The Divisional Head is responsible to the Chief Executive Officer for the duties and responsibilities of the Division.
- (2) An Assistant Chief Executive Officer appointed under the Public Service Act 2004, is the Divisional Head of the Division.

6. Appointment of other officers and employees:

Other officers and employees may be appointed pursuant to the Public Service Act 2004 for the proper discharge of the Division's duties and responsibilities.

7. Duties and responsibilities:

(1) The duties and responsibilities of the Division are to:

- (a) analyse and provide scientific and quality managed data and information in the areas of -
 - (i) meteorology including, weather, climate, and air quality;
 - (ii) geoscience including geological, geomagnetic, geophysics, oceans, which includes waves, storm surges, ocean-tides, sea-level rise, ocean acidification and astronomy;
 - (iii) ozone layer and space weather;
- (b) control collection, analysis and dissemination of quality managed data, information and material for the purposes of the Act;
- (c) provide meteorological services including data, information, warnings which may be provided by the Division

- for the benefit of the general public including but not limited to sectors such as agriculture, tourism, sports, education and cultural affairs;
- (d) provide aviation meteorological services or weather-related information or data for the purpose of aviation in accordance with NZCAA Part 174 - Annex 3 of ICAO;
 - (e) provide meteorological information for the purposes of maritime, navigation and shipping;
 - (f) provide a comprehensive range of meteorological related information, data, analysis, as well as other products and services, for the purposes of national, regional and international meteorological and climate change agencies;
 - (g) issue meteorological warnings, so as to protect and minimise the risk of harm to human life, property and the environment;
 - (h) provide astronomical and geo-scientific-related data, information and analysis relating to astronomy, earthquake, tsunami, landslides, volcanic warnings and other products and services, for the

- benefit of the general public including various sectors such as agriculture, farming, agronomy, fishing, tourism, sports, education and cultural affairs;
- (i) provide oceans services including oceans information, data, products and services relating to tides and ocean related measurements;
 - (j) provide oceans information relating to sea-surface temperatures, currents, wave activity for the purpose of maritime transport and monitoring activities;
 - (k) provide data on controlled substances under the Montreal Protocol on substances that deplete the Ozone Layer, including Hydro chlorofluorocarbons and monitor consumption of ozone depleting substances and global warming potent refrigerants;
 - (l) develop, improve and strengthen public information protocols and systems in order to ensure the effective and comprehensive dissemination of warnings issued under this Act under the Multi Hazard Early Warning System or otherwise;
 - (m) incorporate and implement the detection and assessment of extreme weather or natural phenomena as part of the country's Multi Hazard Early Warning

System and ensure that such remains fully operational at all times and is regularly updated and fully capable of providing the alerts and warnings necessary in order to protect the public property and any part of the country or community;

- (n) promote the understanding, recognition and where appropriate, the use of verified traditional knowledge and practices, related to meteorological, geoscience, and ozone related services, through the atmospheric, oceanic and earth observation of indicators occurring in nature, or through consultation with the community and by other means;
- (o) allow and facilitate the exchange of meteorological, geoscience and ozone data with the Division or their counterparts from other countries, territories and in accordance with Resolution 40 of the WMO Policy and Practice (Cg-XII);
- (p) oversee and monitor the use of all meteorological, geo-science, and ozone quality controlled scientific data, collected by the Division;
- (q) determine appropriate fees and charges for the provision of services by the Division, particularly where they are

- provided to commercial entities, or for commercial purposes, in order to recover all, or part of the cost of providing such services;
- (r) approve, undertake or support research, academic or scientific studies to further the understanding of meteorological, geo-science, and ozone phenomena;
 - (s) support the work of other Ministries and agencies in respect of preparing and planning for climate related events and the assessment of risk to life and property from weather and climate related phenomena;
 - (t) support the planning, preparation and response of Samoa to climate change and its related risks through the Division's functions under this Act;
 - (u) raise public awareness about functions of the Division and all meteorological, geo-science and ozone related matters;
 - (v) undertake and provide such other functions or services as are required by other Ministries or agencies or organisations as approved by the Minister.
- (2) The Division is to perform its functions under this Act in the public interest and for the following purposes:

- (a) public safety;
- (b) navigation, shipping and maritime safety of life at sea;
- (c) aviation and air safety;
- (d) disaster preparedness and disaster management;
- (e) contributing scientific and technical data, information to all climate related matters including climate change, climate adaptation and climate resilience for the benefit of the country;
- (f) to assist persons and any agency engaged in primary production, industry, trade, commerce, education, sports, leisure, special events and tourism.

Division 2 - Operating Principles

8. Precautionary principle:

A person exercising a power or performing a duty or responsibility under this Act, shall apply the precautionary principle by:

- (a) taking precautionary measures, including the making of any decision deemed appropriate and necessary in the circumstances;
- (b) anticipating, preventing or minimizing the risks and impacts of any meteorological, geoscientific, oceanic, or ozone related events that

threatens to endanger or likely to endanger life, property, land and the environment; and

- (c) where only limited or incomplete scientific information is available on the status of a meteorological, geo-scientific, oceanic, or ozone related event, such shall not be a reason for postponing the taking of any protective or preventative measures, or the taking of any decision which may protect life and the damage to property, land and the environment arising from such an event.

9. Scientific Integrity:

- (1) The Division must undertake its duties and responsibilities according to the prevailing national standards and must adopt and adhere to the accepted regional and international standards and protocols for the particular area of science or technical discipline as applicable and necessary and in accordance with the Act.
- (2) The Division must ensure that information data or any material it prepares, provides, or releases meets the applicable scientific standards and protocols relevant to such information and material.
- (3) The information under sub-section (2) must be:
 - (a) accurate and in a clear manner; and
 - (b) collected, pre-processed, processed, analysed, produced or created as a result of adopting and applying accepted

methods and ethical standards as are relevant to the particular field or discipline for which such information, data or material has been generated.

10. Protection of intellectual property rights:

- (1) A value added data or value added information created or generated by the Division under this Act is the property of the Division.
- (2) Subject to subsection (1), the Division holds the intellectual property rights to all value-added data or value added information created and generated by the Division as a result of carrying out its statutory duties and responsibilities under this Act.
- (3) An officer or employee of the Division must not release a value added data or value added information under subsection (1) and (2) without written authorisation from the Chief Executive Officer in consultation with the Divisional Head.
- (4) The Chief Executive Officer in consultation with the Divisional Head may authorise the use, distribution, broadcasting or publicising of value added data or value added information in such terms as the Division may determine.

11. Application of the Public Service Act 2004:

- (1) The values, principles and code of conduct for the Public Service under Part IV of the Public Service Act 2004 apply to this Act.

- (2) A breach of Part IV of the Public Service Act 2004 shall be dealt with under that Act.

PART 3
**ESTABLISHMENT OF THE MULTI-HAZARD
EARLY WARNING SYSTEM**

12. Establishment of the Multi Hazard Early Warning System:

- (1) A Multi Hazard Early Warning System is established.
- (2) In the operation of the System, the following objectives are to be pursued:
- (a) establish an integrated comprehensive framework for the roles, responsibilities and relationships of all relevant stakeholders in the system;
 - (b) to gather all available data, information and carry out analysis of all potential or actual natural risks in order to ensure -
 - (i) early warnings are issued to the public, mariners and aviators;
 - (ii) immediate and emergency precautions are undertaken by national agencies and organisations;
 - (iii) planned responses to the likely impact of the natural hazard by the relevant Ministries, agencies and organisations;

- (iv) arrangements are put in place to protect life and property; and
 - (v) address the impact of the natural hazard upon the safety of the public, property including the integrity of public water supplies; movement throughout the country; shelter for those affected; access to adequate food supplies; the maintenance of public order and national security and the availability of communications during and after the impact of the natural hazard.
- (3) The System is to be integrated into any disaster management arrangement made under the Disaster and Emergency Management Act 2007 and operate when and as required to support the functions of that Act.
- (4) The Division must ensure that the Multi-Hazard Early Warning System is kept updated, fully operational and is technically correct to ensure that the data is accurate, reliable and is capable of detecting potential risks associated with any natural phenomena or event which may endanger life or property.
- (5) The System and its components may be amended, updated and altered with the approval of the Chief Executive Officer.

PART 4
ISSUING OF ALERT AND WARNING

13. Issue of alert and warning by the Division:

- (1) In circumstances which may endanger life or property, the Division must use global observing systems and global forecast models for the purpose of the Multi Hazard Early Warning System under section 12 to detect and assess the likelihood of:
 - (a) an extreme meteorological related event;
 - (b) the occurrence of a geological hazard; or
 - (c) the impact of ozone depletion.
- (2) If the Divisional Head in consultation with the Chief Executive Officer is satisfied that the events in (1)(a) or (b) or (c) is likely to occur, he or she must issue an early alert at the same time to the Minister, the Disaster Management Office and other relevant agencies, in accordance with the common alerting protocol.
- (3) The Division is authorised to issue meteorological, geo-science or ozone warning bulletin and any other related warning or alert statement, directly to the public, based on the collection of data and information received from global observing systems and global forecast models.

- (4) The Division may, at its discretion, revise, downgrade or cancel any warning or alert statement issued under subsection (3), based on the information and data available at the time.
- (5) Where the Division issues a warning bulletin or any other warning or alert statement under subsection (3), such information must be disseminated and briefed at the same time to the Minister, the Disaster Management Office and other relevant agencies.
- (6) The Division may disseminate any warning bulletin, or any other warning or alert statement without delay, including any actions to be taken, in response to any extreme meteorological related event, or occurrence of geo-hazards that is imminent.
- (7) The following provisions apply to a warning issued under this section:
 - (a) the warning may be given as the authorised warning bulletin or update issued as part of the Multi Hazard Early Warning System;
 - (b) the warning is to be expressed in a clear and detailed manner in both English and Samoan;
 - (c) the warning is to convey the likely or possible impact of the potential risks to people, assets and economy; and

- (d) the warning is to be regularly updated to assure the recipients that the risk is continuously and accurately monitored or cancelled once the risk subsides.

14. Dissemination of warning to the public:

In issuing a warning to the public, the Chief Executive Officer must ensure that all warnings issued by the Division are disseminated widely using available and appropriate means of communication to inform the public and safeguard life and property.

15. Compilation and issuing of periodic bulletins:

The Division may compile and issue periodic bulletins for particular time periods, or reports for particular areas as may be required by the following:

- (a) upon the proclamation of emergency under Article 105 of the Constitution of the Independent State of Samoa 1960; or
- (b) upon the declaration of disaster under Part 5 of the Disaster and Emergency Management Act 2007; or
- (c) at the directive of the National Disaster Council established under an enactment; or
- (d) as requested by any other agency where necessary.

16. Obligation to consult and work cooperatively:

- (1) The Division must consult with all stakeholders where appropriate, in the undertaking of the

Division's duties and responsibilities that relate to the provision of services to the public or a particular sector of the public.

- (2) The Division must work cooperatively with other Ministries, agencies and organisations to ensure that the Multi Hazard Early Warning System is fully operational and provides the data, information and material necessary to identify the potential risks to life and property and support the actions taken to reduce the impact of such.
- (3) The Division is responsible to work cooperatively with the Disaster Management Office and other relevant Ministries and agencies to prepare a set of protocols, processes and strategies which shall form the Multi Hazard Early Warning System.

PART 5

REGIONAL AND INTERNATIONAL CONVENTIONS

17. Fulfilling regional and international obligations:

- (1) The Division shall ensure compliance with the country's regional and international obligations to which Samoa is a party, as necessary.
- (2) The Division shall make decisions under this Part in consultation with the Minister and the Chief Executive Officer in consultation with the

Divisional Head on all scientific and technical matters.

- (3) The Division shall ensure that the country is represented at all regional and international meetings by officers and employees who have suitable scientific and technical knowledge relevant to the particular meeting wherever possible.

PART 6 MISCELLANEOUS

18. Protection from personal liability:

- (1) This section applies to the following persons:
 - (a) The Chief Executive Officer;
 - (b) officers employed in the Division; and
 - (c) any other person required to carry out a function, duty or power under this Act.
- (2) A person to whom this section applies is not personally liable for an act or omission done honestly, in good faith and without negligence in carrying out a function, duty or power under this Act.

19. Offences:

- (1) A person commits an offence and is liable on conviction to a fine not exceeding 100 penalty units or to an imprisonment term not exceeding two (2) years, or both, who:

- (a) obstructs or attempt to obstruct an officer of the Division from carrying out any duty or responsibility under this Act; or
 - (b) interfere with, handle, move, tamper with, deface, or destroy any equipment, machinery or asset or any part of such equipment, machinery or asset belonging to the Division; or
 - (c) interferes with the operation of the Division's activities through the use of electric or electronic sound, radio or satellite equipment, drones or other flying objects or projectiles or through the use of any other form of technology.
- (2) A person commits an offence and is liable on conviction to a fine not exceeding 100 penalty units or to an imprisonment term not exceeding two (2) years, or both who:
- (a) knowingly or recklessly issues a false or unauthorised weather warning or a warning of another natural hazard such as earthquake, tsunami, volcanic eruption or landslides; or
 - (b) purports to broadcast, publicize or communicate in any manner, a weather report, weather warning or any warning of another natural hazard which has not been authorised or issued by the Division or the National Disaster Council or the Disaster Management Office; or

- (c) changes, alters or misuses any data, information or material provided by the Division or has been issued under the Disaster and Emergency Management Act 2017 by the National Disaster Council or the Disaster Management Office.
- (3) A person who breaches any other provision of this Act commits an offence and is liable to a fine not exceeding 1000 penalty units or to a term of imprisonment not exceeding three (3) years or both.

20. Regulations:

- (1) The Head of State may, acting on the advice of Cabinet, make regulations to give effect to or for the purposes of this Act, and in particular to make regulations:
 - (a) to prescribe for fees and charges, subject to the approval of the National Revenue Board established under the Public Finance Management Act 2001; and
 - (b) for matters required to be prescribed under this Act.
- (2) The amount of fees or charges prescribed in subsection (1)(a):
 - (a) must be published in the Savali;
 - (b) may be made non-refundable as approved by Cabinet on the advice of the Chief Executive Officer; and

- (c) a refund of fees or charges may be made without further appropriation and is a statutory expenditure payable out of the Treasury Fund.

21. Properties of the Division:

- (1) The properties used and operated by the Division under this Act is subject to the management of the Division for the discharge of its functions.
- (2) A facility or installation operated by the Division includes any part of any land which has been taken for the purposes of this or any other Act or for which the registered owner or authorised user has approved its use by the Division for its services.
- (3) In this section, “properties of the Division” means:
 - (a) in the case of real property -
 - (i) any equipment, instrument or machinery utilised for performance of the functions of the Division under this Act or regulations made under this Act or any other Act;
 - (ii) any installed or erected structure or facility which houses any equipment, instrument or machinery under subsection 3(a)(i);

- (b) in the case of personal property -
 - (i) any material or work which are subject to copyright protection under this, or any other Act;
- (c) any other asset (both real and personal) provided for the use of the Division for the performance of its functions under this Act, or any other Act.

22. Transitional provision:

At the commencement of this Act, the current Divisional Head and any officer or employee of the Division continue under their current terms of employment as if they were appointed pursuant to this Act.

The Meteorology, Geoscience and Ozone Services Act 2021
is administered by the Ministry of Natural Resources
and Environment.

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