

## A Study On The Cook Islands Climate And Natural Disasters--Basics Of The Global Monsoon Time Scale, G.R. Irlapati'S Geoscope-- & Irlapatism-A New Hypothetical Model Of Cosmology

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**Abstract:** Located right in the heart of the South Pacific Ocean, the **Cook Islands** have a beautiful warm, tropical **Climate** all year round. The months from May to October are slightly cooler and experience temperatures ranging from 22 - 27°C while in the warmer months from November to April temperatures reach 26 - 30°C with more. Nine of the islands are of volcanic origin and only 13 are inhabited. The Cook Islands are highly vulnerable to natural disasters and the effects of climate change. Cyclones are the most frequently occurring disaster, causing casualties and serious damage to property and infrastructure. Cook Islands being located around the tropical region and along the Pacific Ring of Fire is prone to natural disasters such as flood, cyclone, landslides, tsunamis, etc.

Keeping in view of all above geographical facts of the country, I have conducted many comprehensive studies on the Cook Islands weather conditions and natural calamities combined with my researches and proposed the Cook Islands Monsoon Time Scale, Cook Islands Weather Time scale and Cook Islands National Geoscope Project along with the other scientific results Bioforecast effect, Irlapatism-A New Hypothetical Model of Cosmology etc which can help to estimate the impending weather conditions and natural hazards of the country in advance to take mitigative measures and save the people, crops and other assets.

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**Key Words:** Basics of Global Monsoon Time Scale, G.R. Irlapati's Geoscope, IRLAPATISM-A New Hypothetical Model of Cosmology, Local Geoscope Centers, Regional Geoscope centers, Central Geoscope Centers.

### **1. Introduction:**

Keeping in view of the above facts of climate and natural hazards of the Cook Islands, I have conducted many comprehensive studies on the Cook Islands climate and natural calamities combined with my researches such as Global Monsoon Time Scale, G.R.Irlapati's Geoscope and Irlapatism-A New Hypothetical Model of Cosmology etc which can help to estimate the impending weather conditions and natural hazards of the country in advance to take mitigation measures and save the people, crops and other assets.

### **2. Irlapatism-A New Hypothetical Model Of Cosmology:**

#### **2.1. Importance:**

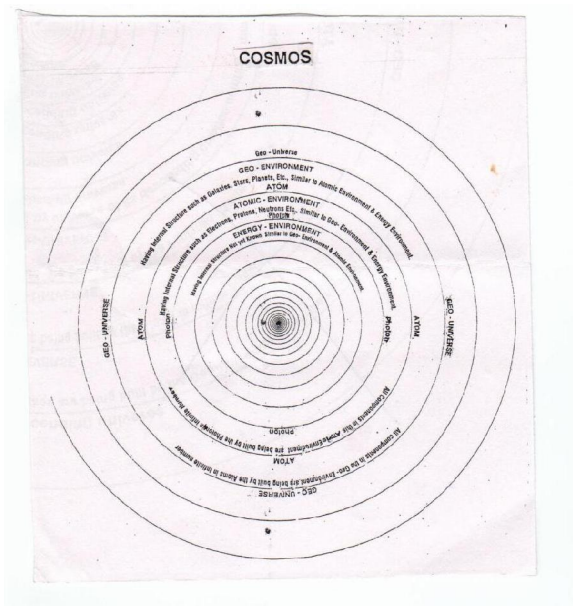
Before study the hazards, everyone should know about the origin, structure, nature, evolution of the universe and its various properties. Since, all the hazards on the earth directly or indirectly are associated with the gravitational forces of the universe. Further, this in order to be study the hazards, study of the cosmology is needed to know about hazards. There are hazards on the earth, on other planets and there are also happening within atoms. Human beings are on the earth, are on the outside planets of the earth and also on the neutrons in the atoms. Even if the world's people appreciate or

criticize me, it is fact. Hazards caused by asteroids, meteoroids, and comets as they pass near the earth, enter the earth's atmosphere, and /or strike the earth, and by changes in inter planetary ionosphere, and atmosphere. In the face of extra terrestrial hazards and events that can lead to disasters, it is important to live in a resilient community because these types of disasters are so unpredictable and depending on the size of meteorite can cause serious damage through the heat emitted during impacts with earth's surface. In addition, impact can cause earth quakes, Tsunami, wildfires, acid rains from nitrogen oxides, darkness from dust and soot and global warming. It is for this reason that staying aware and prepared at all times is extra important. This is not an implication to live in fear, but a reminder to stay educated about these types of disasters and to have a plan in place as with any other type of disaster. Before an extraterrestrial hazards /events occur, there are some steps that can be taken to mitigate and minimize the impact. I have conducted many studies on the universe and its extra terrestrial hazards and gravitational forces and its affect on the natural hazards on the earth. A new hypothetical model of cosmology will helpful to study and know the universe, extra terrestrial hazards and gravitational forces and its affect on the natural hazards on the earth.

## 2.2. Structure:

The cosmos is made up of universes in infinite number, having similar structure and properties, embedded one in each other and extended in ascending and descending order. To explain and justify this model, there are three universes so far known to us (a) Geo-Universe (b) Atomic-Universe (c) Photon-Universe. These three are having similar structure and properties, embedded one in each other and extended in ascending and descending order. Of these three, we know some extent about the internal structure and properties of the Geo-Universe but we do not know its external structure. We know some extent about the external structure and properties of the Photon-Universe but we do not know its internal structure. Between of these three universes, we came to know a large extent about the internal & external structure and properties of the Atomic-Universe. Hence, I have taken the similarities of external structure & properties between the Geo-Universe & Atomic-Universe to propose that all the universes in ascending and descending order of the creation are having similar internal structure and properties. The similarities of external structure & properties between the Atomic Universe and Photon-Universe are taken to propose that all the universe in ascending and descending order of creation are having similar

external structure and properties. And the manner in which of these three universes i.e., embedded one in each other, extended in ascending and descending order to propose that all the universes in ascending and descending order of the creation are embedded one in each other and extended in ascending and descending order.



## 2.3. Similar External Structure & Properties:

According to the model, all the universes in ascending and descending order of the creation are having similar external structure and properties. To justify this, I have taken many similarities between the atom and photon. For example:

### Atomic-Universe

1) The atom appearing in several forms such as Hydrogen to uranium etc., being due to the Internal structure having different atomic particles at various numbers.

2) The atom exhibiting several physical and chemical Properties such as weight, colour, taste, hardness etc being due to the internal structure having different particles at various number.

### Photon-Universe

1) The particle "Photon" related to energy appearing in several forms such as radio waves, gamma rays, violet rays

etc being may be probably due to the internal structure having different particles at various numbers.

2) The particle "photon" related to energy exhibiting properties such as wave length colour, temperature etc being may be Probably due to the internal structure having different particles at various number.

## 2.4. Similar Internal Structure & Properties:

According to the model, all the universes in ascending and descending order of the creation are having similar internal structure and properties. To explain and justify this, I have taken the many similarities between the atomic-universe and Geo-Universe.

### Atomic-Universe

1) Various atomic particles at different sizes in several numbers are present in the atom.

2) These atomic particles types of having three charges at negative, positive and neutral states are

### Geo-Universe

1) Various astronomical objects at different sizes in several numbers are present in the Geo- Universe

2) These astronomical objects having three type of charges at positive, negative and neutral states are present in the Geo-

**Atomic-Universe**

present in the atom.

- 3) Positively charged protons are present in the nucleus.
- 4) Neutrons at neutral state are present in the Nucleus.
- 5) Negatively charged electrons are present at large distance of the atomic nucleus in the atom
- 6) Additional neutrons called isotopes are present around
- 7) Radiation emitting from the atom.
- 8) There is a property of nuclear fission is in the atom. the

**Geo-Universe**

Universe

- 3) Stars built by atoms having positive charged nucleus are present in centre of the Geo-Universe
- 4) Planets at neutral state are present in Centre of the Geo-Universe.
- 5) Here is a concept that anti-matter cosmic bodies built by atoms having negatively charged nucleus are present at large distance of the Geo-Universe.
- 6) Additional planets called satellites the planets are present.
- 7) Cosmic rays emitting from the Geo- Universe.
- 8) There is a property of super Nova is in Geo- Universe.

**2.5. Descending Order Of Creation:**

The Geo-Universe that means the Universe seen around our earth is a universe having magnificent structure and properties such as galaxies, stars and planets etc. Some planets such as earth having suitable conditions similar to the Earth having continents, countries, oceans, trees, animals. Cyclones, human beings etc. Such Geo-Universe being built by Universes of its descending order of creation that means photons, particles, atoms.

Atomic-Universe that means the atom present in several forms from hydrogen to uranium etc is another universe having magnificent structure and properties such as electrons, protons, neutrons, etc and continents, countries, oceans, cyclones, trees, animals, human beings may be present on some neutrons having suitable conditions exactly similar to the earth planet resembling to the Geo-Universe. Such Atomic-Universe being built by universes of its descending order of creation that means energy particle ‘photons’.

The Photon-Universe that means the particle “photon” related to energy present in several forms of electromagnetic radiation is also another universe having magnificent structure and properties similar galaxies, stars, planets, electrons, protons and neutrons etc. resembling to the Geo-Universe and Atom. Continents, countries, oceans, seas, cyclones, trees, animals etc on some particles having suitable conditions exactly similar to the Earth. Such Energy-Universe may also being built by Universes of its descending order of creation that is not yet known to us.

Thus the descending orders of creation continuous infinitely.

**2.6. Ascending Order Of Creation:**

The Photon-universe that means the particle related to energy “photon” having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that means atom. All components in the atom such as electrons, protons and neutrons etc. are built by these

“photons” in infinite number. Such each and every energy particle “photon” is basis to an infinite descending order of creation.

The Atomic—Universe that means the “Atom” having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that means in our Geo-Universe. All components in the Geo-Universe such as stars, stars and planets etc., are built by these atoms in infinite number. Such each and every atom is basis to an infinite descending order of creation.

The Geo-Universe that means the “Universe” seen around our earth having magnificent structure and properties is being as a primary syntactic unit in the universe of its ascending order of creation that is not yet known to us. All similar galaxies, stars, planets etc components in that Universe are built by these Geo-Universes in infinite number. Continents, countries, oceans, seas, cyclones, trees, animals etc on some components having suitable conditions exactly similar to the Earth. Such each and every Geo-Universe in that ascending creation is basis to an infinite descending order of creation.

Thus the ascending orders of creation continuous infinitely.

**2.7. Cosmic-Environments:**

The fill of structure and characteristics in the universe of the cosmos proposed as cosmic environments. For example the fill of structure and characteristics like galaxies, stars, planets etc in the Geo-Universe proposed as Geo-Environment, the fill of structure and characteristics like proton, neutrons and electrons etc in the Atomic-Universe proposed as Atomic-Environment and the fill of structure and characteristics in the Energy-Universe that means in the photon that is not yet known proposed as Energy-Environment.

**2.8. Space Weather:**

The fill of structure and characteristics like galaxies, Stars, Planets and their orbits and other physical forces etc that surrounds in the universe

proposed as space atmosphere, the state of galaxies, stars, planets, nebulas. Pulsars etc at a particular region over a long period of time proposed as space-climate, the state of characteristics of space-climate like solar wind flares, asteroids etc at a particular region during a short period of time proposed as space-weather.

### **2.9. Space Regions:**

The state of space atmosphere being in still proposed as “Inactive Space Region”, the state of space atmosphere being in active proposed as “Active Space Region” The region of space atmosphere in which the celestial bodies are more widespread areas proposed as “Space High Pressure Area” the less widespread areas proposed as “Space Low Pressure Area”.

### **2.10. Space Low Pressure Systems:**

Some space times happens variation of differences of pressure in the space-climate, At such a juncture, the celestial bodies and other space dust present in the space high pressure area will try to occupy the space low pressure area all at once. In this attempt, they will whirl around the space low pressure. The centre of space low pressure area itself is the black-hole and the circular whirling celestial bodies & other space dust etc caused by the space low pressure area proposed as Galaxy.

### **2.11. Uses:**

By study and knowing more about the roots and origin of the universe & its affects of gravitational forces on the earth, researches on disasters can be more effective, therefore the country can be estimated the impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, extraterrestrial hazards, heavy rainfall, mudflows, extreme weather, cyclones, cloud burst, sand storms, hails and winds etc in advance.

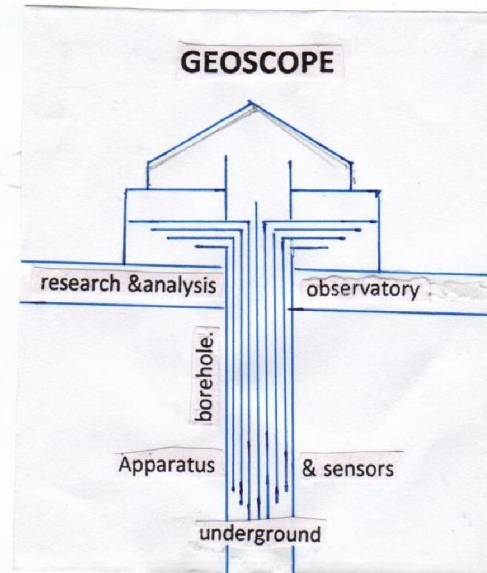
## **3. G.R.Irlapati'S Geoscope:**

### **3.1. Importance:**

This is very useful to study the Cook Islands underground mineral, water resources and natural calamities such as earthquakes and other geological hazards in advance. Earth Quake is the perceptible shaking of surface of the earth, resulting from the sudden release of energy in the earth's crust that creates seismic waves. Earth Quakes can be violent enough to loss people around and destroy whole cities. “The seismicity or seismic activity of an area refers to the frequency, type and size of Earth Quake experienced over a period of time. Earth Quakes can also trigger mud slides, mass movements, sink holes, coastal erosion, lahar, mud flows, volcanic activities, landslides, tsunami, shaking and ground rupture, avalanches, fires, soil liquefaction, floods and human impacts, tidal forces etc. I have conducted several

studies on the Earth Quakes and other geological hazards and invented the Geoscope which can help to forecast the geological hazards like Earth Quakes and its secondary consequent hazards in advance. Earth's underground mineral resources also can be found. Geoscope is also useful In emerging industries such as geothermal and geo-sequestration etc.

### **3.2. Construction:**



Geoscope means- a mechanical architecture established in between the underground and observatory with the help of bore-well proposed for conducting geological studies to know the earthquakes, ores and water currents etc.

A borehole having suitable width and depth has to be dug. An observatory having research & analysis facilities has to be constructed on the borehole Apparatus & sensors to recognize the geo-physical and geo-chemical changes generated in the underground such as foreshocks, chemical changes, electrogeopulses, micro-vibrations, pressure, geomagnetic forces etc should be inserted into the underground and linked with the concerned analysis sections of the observatory that is above the ground to study the changes taking place in the underground.

That means-relative results of geological & geographical researches & developments of past, present and future should be interposed, coordinated and constantly developed. The apparatus related to the geology and geography such as Richter scale etc also should be set in the observatories of the Geoscope. We can make many more modern ideas & modifications thus bringing many more improvements & developments in the Geoscope.

Many kinds of super high remote sensing technology in the area of sensor physics, signal



processing used specially image processing, electromagnetic detection technology etc should be used in the Geoscope.

Geophysical deep underground detectors and mineral exploration equipments, natural gas sensors etc should be used in the Geoscope.

Electromagnetic sensors may also be used in the Geoscope project.

### **3.3 National Geoscope Project:**

Geoscope can establish at a single place and extend in many places. For example, there should be established three level centers i.e., One or more required number of local Geoscopes should be established in the expected earthquake zones. There should be established a Regional Geoscope Centre at every expected quake zone to co-ordinate and codify the information supplied by the local Geoscope centers of the zone and a Central Geoscope Centre to co-ordinate and codify the information supplied by the Regional Geoscope Centers from all over country in a coordinated manner.

Whenever a Local Geoscope Centre sends warning about the onset of earthquakes, the observation personal should immediately send the information to its Regional Geoscope Centre. The Regional Geoscope Centre should analysis the information and send it to the Central Geoscope Centre. The Central Geoscope Centre analyze the information supplied by the Local Geoscope Centers, Regional Geoscope Centers and estimates the epicenter, time, area to be affected urban places etc., details of the impending earthquake and send to the authorities, and media and warnings in advance to take precautions.

### **3.4. Types Of Geoscopes:**

Geoscope can start from a simple device. A deep well having suitable width and depth has to be dug. Construct a room over the well. Wash the inner walls of the room with white Lime. Fix an ordinary electric bulb in the room. This construction involves no expenditure.

Even students, children's and science enthusiasts can make the Home-Made Geoscope and detect the earth-quakes 24 to 28 hrs in advance. By making certain changes and alterations, the house having a well can be converted into a Geoscope i.e., wash the inner walls of the house with white lime. Fix ordinary electric bulbs in the room.

Observe the colour of the room lighting daily. When the bulb glows, the light in room generally appears white in color, but before occurrence of an earth-quake, the room lighting turns blue in colour. The onset of earth-quake can be guessed by this "Seismic luminescence Emission.

To build a gigantic construction Geoscope i.e. a deep bore-well having suitable width and depth has to

be dug. An observatory having the most modern high-technological research facilities has to be constructed on that well. Most modern mechanical systems like electronic, physical and chemical sensors and apparatus to recognize the rise and fall of the underground water levels, micro-vibrations and shock waves generated in the underground, differences in pressure, temperature and other seismic activities should be inserted into the underground and linked with the concerned research analyzing departments of the observatory that is above the well to observe the seismic changes (and existence of mineral and water resources) taking place in the underground. The results of researches on the quakes like Richter scale etc., also should be setup in the Geoscope. Many kinds of super high remote sensing technology in the area of sensor physics, signal processing used specially image processing, electromagnetic detection technology etc should be used in the Geoscope. Geophysical deep underground detectors and mineral exploration equipments, natural gas sensors etc should be used in the Geoscope. Electromagnetic sensors may also be used in the Geoscope project. That means relative results of past, present and future pertaining to the earthquakes (seismic researches) mineral detecting apparatus should be interposed, co-ordinated, and constantly developed. We can make many more changes thus bringing many more developments in the Geoscope.

Observe the geophysical & geochemical changes such as foreshocks, chemical changes, ground water levels, strain in rocks, thermal anomalies, fracto-luminescence's gas anomalies, electro-geopulses, micro-vibrations, pressure, geomagnetic forces, etc taking place in the underground. The onset of earthquakes can be guessed by observing the aforesaid changes in the concerned analyzing departments of the observatory.

### **3.5. Studies:**

I have proposed much type of studies to study the earth's underground through the Geoscope by which we can predict the earthquakes 6 to 24 hours in advance.

### **3.6. Seismic Luminescence Study:**

This is a very easy and simple study in the Geoscope Project. Construct a room over a well having suitable width and depth. Wash the inner walls of the room with white lime. Fix an ordinary electric bulb in the room. (Otherwise by making certain changes and alternations any home or office having a well can be converted into the Geoscope. Wash the inner walls of the house with white lime. Fix an ordinary electric bulb but don't fix fluorescent lamp in the house. This method involves no expenditure).

Observe the colour of the lightning in the Geoscope room daily 24 hours 365 days. When the

bulb glows, the lightning in the room generally appears as white (reddish). But before occurrence of an earth-quake, the room lightning turns violet in colour.

Because, before occurring of an earthquake-gas anomalies such as radon, helium, hydrogen and chemico-mineral evaporations such as sulphur, calcium, nitrogen and other fracto-luminescence radiations show up earlier even at large distances from the epicenter due to stress, disturbances, shock waves and fluctuations in the underground forces. These gas anomalies & fracto luminescence radiations and other chemical evaporations enter into the well through the underground springs. When these anomalies occupy the room above the well, the room lighting turns violet in colour. The light in the room scattered in the presence of these gas anomalies, fracto-luminescence radiations and other chemico-mineral evaporations the ultra violet radiation is emitted more and the room lighting turns in violet colour. Our eye catches these variations in the radiation of the lighting in the room easily since

- a) The violet rays having smaller wave length.
- b) The violet radiation having property of extending greatly.
- c) The light becoming weak in the violet region.
- d) The eyes having greater sensitivity to violet radiation.

Due to all reasons the room may appear violet in colour then we can predict the impending earth quakes 12 hours in advance.

### **3.7. Electro Geopulses Study:**

This is also easy study to recognize the impending earth quake. A borehole having suitable width and depth has to be dug. An earth wire or rod should be inserted into the underground by the borehole and linked with the concerned analysis section having apparatus to detect, compare measure of the electric currents of the electric circuit of the earth systems. Otherwise by observing the home electric fans. etc. We can also study the electrogeopulses studies to predict the impending earth quake.

Observe the changes in the electric currents of the earth system 24 hours, 365 days. From a power station, the electricity is distributed to the far-off places. Normally the circuit of the power supply being completed through the earth system. Whenever if the disturbances occurs in the layers of the earth's underground, the fluctuation rate will be more due to the earth quake obstructions such as pressure, faults, vibrations, water currents etc., of the earth's underground. So we can forecast the impending earth quake by observing the obstruction of electric currents of circuit of the earth system in the observatory of the

Geoscope and also by the obstruction sounds in the electric fans etc.

### **3.8. Experiments Carriedout:**

I have carried out a number of experiments on the Geoscope project and all were successfully proved out in practice. The risk of earthquakes in Andhra Pradesh of India is less but the source is greater in north India and other regions in the world where the establishment of the geoscope is very useful.

### **3.10. Hazard Detection Method:**

We can find out many more secrets of the underground by keen study of the Geoscope.

For example, build Geoscope in the seismic areas and earthquakes can be predicted by virtue of performing studies as described above.

Another example, build Geoscope in the coastal areas of the sea and earthquakes and its consequent secondary hazards such as tidal forces, rogue waves, tsunami can be predicted by virtue of performing studies as described above.

Furthermore example, build Geoscope in the possible areas where landslides are likely to occur and the earthquakes and its secondary consequent hazards such as landslides mud slides, mass movements, sink holes, coastal erosion, lahar, mud flows, etc can be estimated by virtue of performing studies as described above.

One more example, build Geoscope in the volcanic activity areas and volcanic activities such as volcanic gases, steam generated eruptions, explosive eruption of high – silica lava, effusive eruption of low-silica lava, debris flow and carbon dioxide emission etc can be predicted by virtue of performing studies as described above.

These are some examples only. We can find out many more secrets of one country ground conditions by keen study of Geoscope.

## **4. Basics Of The Global Monsoon Time Scales:**

### **4.1. Importance:**

Monsoon means a seasonal reversing wind accompanied by its corresponding weather changes and natural calamities in precipitation. We cannot be said that a monsoon especially to be relevant to a particular continent, region or country. Each and every continent or region or country has its own monsoon winds. By establishing the Monsoon Time Scale and maintain, the Cook Islands can be estimated the impending weather conditions and natural calamities such as rains, floods, landslides, avalanches, blizzard and droughts, extreme winter conditions, heavy rainfall, mudflows, extreme weather, cyclones, cloud burst, sand storms, hails and winds etc in advance. Surface water resources can still be found.

### **4.2. Construction:**

The global Monsoon Time Scale – a Chronological sequence of events arranged in between

time and weather with the help of a scale for studying the past's, present and future movements of monsoon of a country and its relationship with rainfall and other weather problem and natural calamities.

Prepare the Global Monsoon Time Scale having 365 horizontal days from March 21<sup>st</sup> to next year March 20<sup>th</sup> of a required period comprising of a large time and weather have been taken and framed into a

square graphic scale. The main weather events if any of the country have been entering on the scale as per date and month of the each and every year. If we have been managing the scale of a country in this manner continuously, we can study the past, present and future movements of monsoon of a country. We can make separate monsoon time scales per each and every individual country.

4.3 Global Monsoon Time Scales	4.4. Regional Monsoon Time Scales	4.5 Sub-Regional Monsoon Time Scales
African Monsoon Time Scale	North American Monsoon Time Scale	South Asian Monsoon Time Scale
North American Monsoon Time Scale	North African Monsoon Time Scale	Maritime Continent Monsoon Time Scale
Asian Monsoon Time Scale	Indian Monsoon Time Scale	East African Monsoon Time Scale
Cook Islandsn Monsoon Time Scale	Western North Pacific Monsoon Time Scale	West African Monsoon Time Scale
European Monsoon Time Scale	South American Monsoon Time Scale	Indo-Cook Islandsn Monsoon Time Scale
	South African Monsoon Time Scale	Asian-Cook Islandsn Monsoon Time Scale
	Cook Islandsn Monsoon Time Scale	Malaysian Cook Islandsn Monsoon Time Scale
	East Asian Monsoon Time Scale	Northern Cook Islandsn Monsoon Time Scale
		Arizona Monsoon Time Scale
		Mexican Monsoon Time Scale
		South-West Monsoon Time Scale
		North-East Monsoon Time Scale
		South East Asian Monsoon Time Scale

**4.6. Construction:**

The global Monsoon Time Scale – a Chronological sequence of events arranged in between time and weather with the help of a scale for studying the past's, present and future movements of monsoon of a country and its relationship with rainfall and other weather problem and natural calamities. Prepare the Global Monsoon Time Scale having 365 horizontal days from March 21<sup>st</sup> to next year March 20<sup>th</sup> of a required period comprising of a large time and weather have been taken and framed into a square graphic scale.

**4.7. Maintanance:**

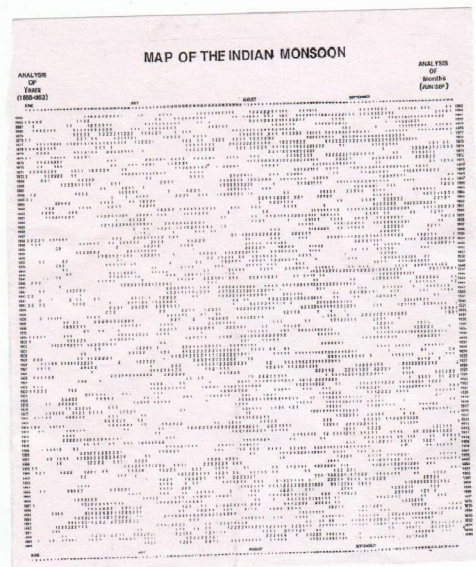
The main weather events if any of the Cook Islands have been entering on the scale as per date and month of the each and every year. If we have been managing the scale of the Cook Islands in this manner continuously, we can study the past, present and future movements of monsoon of the Cook Islands.

**4.8. Indian Monsoon Time Scale:**

For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1<sup>st</sup> April to next year March 31<sup>st</sup> of 128 years from 1888 to 2016 for the required period comprising of large time and weather have been taken and framed into a square graphic scale. The monsoon pulses in the form of low pressure systems over the Indian region have been entering on the scale in stages by 1 for low, 2 for depression, 3 for storm, 4 for severe storm and 5 for severe storm with core of

hurricane winds pertaining to the date and month of the each and every year.

**4.9. Preparation Of Scales:**



For example, I have prepared the Indian Monsoon Time Scale by Preparing the Scale having 365 horizontal days from 1<sup>st</sup> April to next year March 31<sup>st</sup> of 128 years from 1888 to 2016 for the required period comprising of large time and weather have been taken and framed into a square graphic scale. The scale is to be long. So that it is divided into four parts



suitable for publication. The first part is beginning from 1<sup>st</sup> April to July 12<sup>th</sup>, the second part is from 13 July to October 23<sup>rd</sup>, the third part is from 24<sup>th</sup> October to February 3<sup>rd</sup> and the fourth part is 4<sup>th</sup> February to March 31<sup>st</sup> ending.

Further the same has been prepared in three scales. The first one is preliminary basic scale, the second one is filled by data scale and the third one is filled and analyzed by data.

Besides the above manual scale, I have prepared a computer graphic scale generated by the system from the year 1888 to 1983 for the period of 1<sup>st</sup> June to September, 30<sup>th</sup>.

#### **4.10. Collection Of Data:**

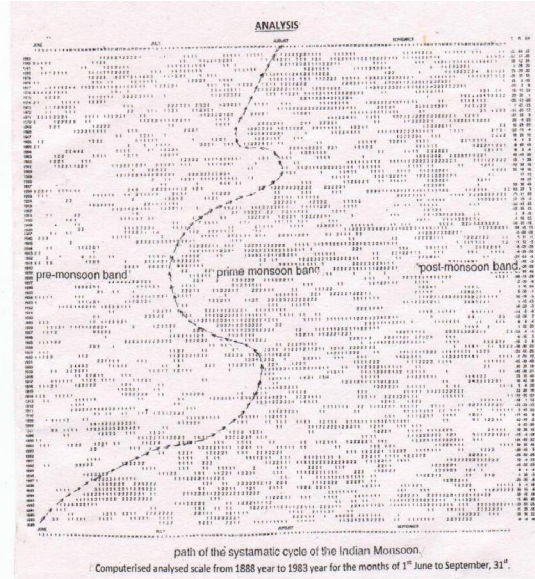
The monsoon pulses in the form of low pressure systems over the Indian region have been entering on the scale in stages by 1 for low, 2 for depression, 3 for storm, 4 for severe storm and 5 for severe storm with core of hurricane winds pertaining to the date and month of the each and every year. For this, a lot of enormous data of low pressure systems, depressions and cyclone has been taken from many resources just like Mooley DA, Shukla J (1987); Characteristics of the west ward-moving summer monsoon low pressure systems over the Indian region and their relationship with the monsoon rainfall. Centre for ocean-land atmospheric interactions, university of Maryland, college park, MD., and from many other resources.

If we have been managing the scale in this manner continuously, we can study the past's present's and future's of the India monsoon and its relationship with rainfall and other weather problems & natural calamities in India.

#### **4.11. Analysis:**

The Indian Monsoon Time Scale reveals many secrets of the monsoon & its relationship with rainfall & other weather problems and natural calamities. For example, some bands, clusters and paths of low pressure systems along with the main paths of the Indian Monsoon (South-west monsoon and north-east monsoon) clearly seen in the map of the Indian monsoon it have been some cut-edge paths passing through its systematic zigzag cycles in ascending and descending order which causes heavy rains & floods in some years and droughts & famines in another years according to their travel. For example, during 1871-1990's the main path of the Indian monsoon was rising over June, July, August and creating heavy rains and floods in most years. During 1900-1920's it was falling over August, September and causing low rainfall in many years, During 1920-1965's, it was rising again over July, August, September and resulting good rainfall in more years. During 1965-2004's it was falling over September and causing low rainfall and droughts in many years. At present it is rising upwards over June, July, August, and will be

resulting heavy rains & floods in coming years during 2004-2060. The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems. And also we can find out many more secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, real images of the Indian Monsoon, and onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale.



#### **4.12. Principle:**

This is an Astrogeophysical / Astrometeorological phenomenon of effects of astronomical bodies and forces on the earth's geophysical atmosphere. The cause is unknown however the year to year change of movement of axis of the earth inclined at 23½ degrees from vertical to its path around the sun does play a significant role in formation of clusters, bands & paths of the Indian Monsoon and stimulates the Indian weather. The inter-tropical convergence zone at the equator follows the movement of the sun and shifts north of the equator merges with the heat low pressure zone created by the rising heat of the sub-continent due to direct and converging rays of the summer sun on the India Sub-Continent and develops into the monsoon trough and maintain monsoon circulation.

#### **4.13. Hazard Detection Method:**

The tracking date of main path & other various paths such as south-west monsoon and north-east monsoon etc., of the Indian Monsoon denotes the onset of the monsoon, monsoon pulses or low pressure systems, storms and its consequent secondary hazard Sand Storms etc. And also we can find out many more



secrets of the Indian monsoon such as droughts, famines, cyclones, heavy rains, floods, real images of the Indian Monsoon, and onset & withdrawals of south west monsoon and north-east monsoon etc. by keen study of the Indian Monsoon Time Scale.

For example, the date of tracking ridge of path is the sign to the impending cyclone and its secondary consequent hazard floods, storm surges etc.

Another example, the thin and thick markers on the upper border line of the Indian monsoon time scale are the signs to the impending heavy rains & floods and droughts & floods. The thick marking of clusters of low pressure systems on the Indian monsoon time scale is the sign to the impending heavy rains and floods and the thin marking of clusters of low pressure systems on the Indian monsoon time scale is the sign to the impending droughts and famines.

Furthermore example, the main passage of line of monsoon travel from June to September and September to June are also signs to impending weather conditions of a country. For example, during 1871-1990's the main path of the Indian Monsoon was rising over June, July, August and creating heavy rains and floods in most years. During 1900-1920's it was falling over August, September and causing low rainfall in many years. During 1920-1965s, it was rising again over July, August, September and resulting good rainfall in more years. During 1965-2004's it was falling over September and causing low rainfall and droughts in many years. At present it is rising upwards over June, July, August, and will be resulting heavy rains & floods in coming years during 2004-2060 in India.

These are some examples only. In the same manner we can find out many more secrets of the country Cook Islands weather conditions by keen study of its monsoon time scale.

#### **4.14. Uses:**

Global Monsoon Time Scales used to forecast the weather changes and natural hazards of a country for example Cook Islands in advance. All other weather related natural hazards such as avalanches, cyclones, damaging winds, droughts and water shortage, floods, thunderstorms, tropical cyclones, typhoons etc can be predicted.

By establishing the Global Monsoon Time Scales can help to study the movements of the Cook Islands country's monsoon and its monsoon related weather changes and natural hazards.

#### **4.15. Conclusions:**

We can make many more modifications thus bringing many more developments in the Geoscope and Global Monsoon Time Scales.

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