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Theoretical Prediction and modeling of High Potential Risks to the Ecosystem Energies on The Earth due to Fierce Heat of the SunTowardsSustainability standards Of Life

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Abstract

The various environmental changes that occur whilst the atmospheric temperature of the earth increases, so that the ecological environment is affected. Natural destructions like volcanic eruptions, forest fires and the artificial air pollutants and water pollutants radiating waste water and the solid wastes from atomic power plants are the causing agents of temperature hike. The role of Carbon dioxide, carbon monoxide and chlorofluorocarbons released by industries have been demonstrated by researches proved that the increasing temperature on the planet Earth. In this context very few researches are going about the suns radiation energies. Fiercely increasing Suns temperature for the past centuries afar from the point of industrial revolution is true. The sun emits the ionizing radiations like alpha, beta, gamma and Galactic Cosmic Radiations due to its fierce furnace heat energy of the sun. These ionizing radiations happen every day but frequently it emits in dangerous ranges to the total environment and severely affects aquatic and terrestrial ecosystems. Thus results the total energy loss in each systems. These consequences happen through the electromagnetic fields of the atmosphere to the aquatic and terrestrial ecosystem. The modest attempt was made to the predicting the potential impact and severity of ionizing radiation from the sun. In this context the ecological model for energy losses shows the risks and endanger of the living things on the whole Earth in future.

Keywords:

1. **Ionizing-radiation.**
2. **Atmospheric temperature.**
3. **Electromagnetic field.**
4. **Aquatic, terrestrial eco systems, Modeling of Ecosystem Energy losses.**
5. **Computer applications, ecosystem modeling soft wares, Sustainable life.**

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1. Severity of the solar radiations

In this century the observations by the scientists about the sun gave wondering results. The observations were taken by the solar dynamic observatory systems by using unmanned flight aviation technologies. Not only have these observations of metrological department proved also Goddard space flight center proves the massive explosion taking place in sun with high solar flames. In other hand the work of the solar flares exhibits huge radiations on to the atmosphere through the propagation of high heat energies by the electromagnetic waves. Normally the heat of the suns energy absorbed by the Atmospheric influences like particulate matters, aerosols, clouds. The distraction of these energies also happens by high wind flow and heavy rain falls. The abnormal heat released by the sun enters into the earths near surface region by atmospheric windows and cause dangerous effects on biotic and abiotic components. The effects of this high solar radiation on the environment are one of the contexts in the study. Because each component has socio-economic and health serviceability by the total

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energies of the ecosystems. The aquatic eco systems and the terrestrial ecosystems affect due to its energy losses. The generation of carcinogens, changes in the DNA structures, changes in the metabolism activities in every biotic component, Thus results loss of green components in the environment. The abiotic components also affect like desertification, alterations on the mountainous and rocky structures ect.

2. Impact of solar radiation on ecosystem

The recent studies by NASA about the rising temperature of the sun proves by solar dynamic observatory, GSFC.In the previous studies about the temperature hike near by the surface earth for about the last sixteen decades mentioned by metrological department and other researches around the world says that, for about 0.8 degree Celsius increasing per year. These records of temperature hike may severely affects the environmental components and the relative effects has been taking place in the pyramids of numbers, biomass and energy. Therefore the recent days studies are mostly concentrate by the researchers on climate change and ecological modeling.

Table 1. The critical radiation parameters and their correlations

SLNO	CRITICAL FACTORS	IONIZING RADIATION PARAMETERS	KINETIC ENERGY	PERCENTAGE	SEVERITY INDEX	CORRELATION FACTORS
1	A	ALPHA PARTICLES	5MEV	18	28	±0 .0003
2	B	BETA PARTICLES	1.709MEV	28	21	±0.0004
3	C	GAMMA RAYS	8MEV	36`	23	±0.0004
4	D	X-RAYS	10KEV	12	18	±0.0002
5	E	GALACTIC COSMIC RADIATION (GCR)	3 X 10^21EV	6	12	±0.0001

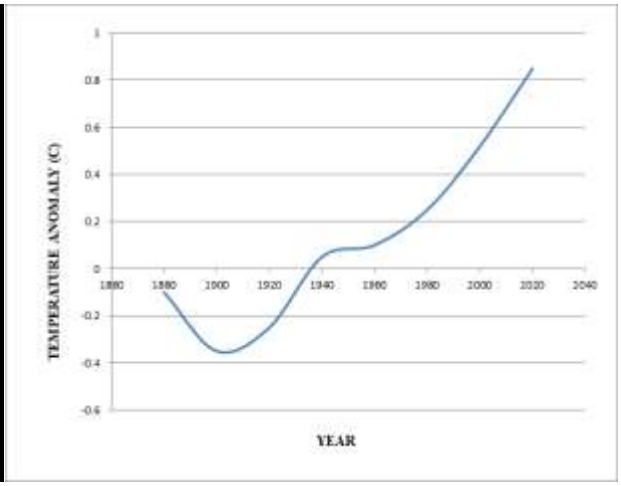
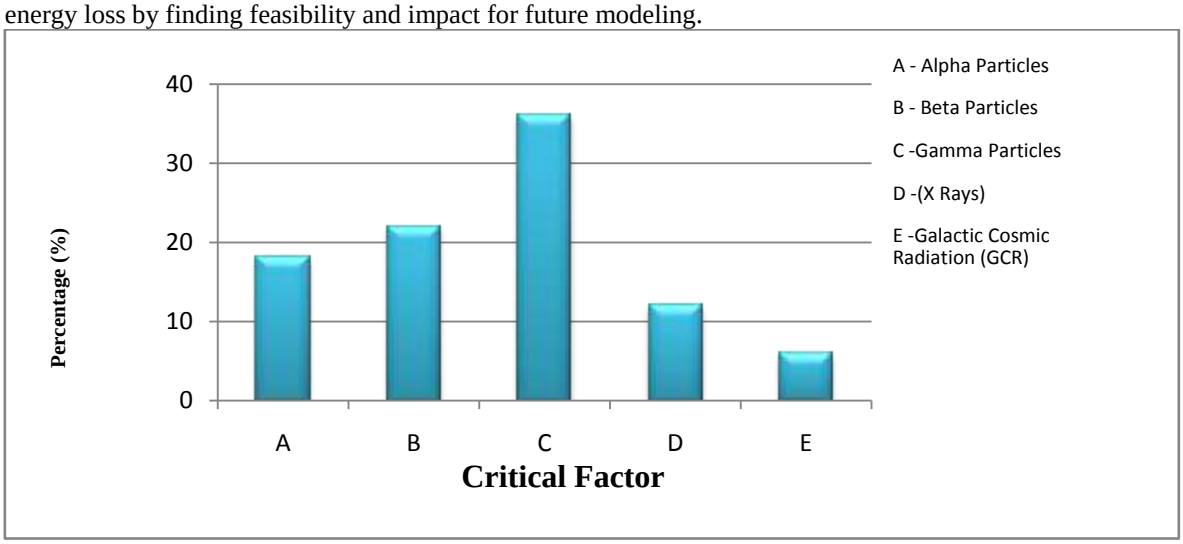


Figure 1. Fig 1. A large sunspot was the source of a powerful solar flare (an X 9.3) and a coronal mass ejection (Sept. 6, 2017). Image credit: NASA/GSFC/Solar Dynamics Observatory

Fig. 2. Increase of average temperature of the Near Surface Earth for the past140 years.

3.1 MODELING OF IMPACT RADIATIONS ON THE ENVIRONMENT

General ecological model are may not give the exact picture of all events and never shows the all sequences in the energy loss. But here we tried to prove that the ecological modeling will gives the valuable and influenced data to the becoming group of researchers. The modest attempt here made to show the ecological energy loss by finding feasibility and impact for future modeling.



General modeling equation for the impact of radiation on the environment implies that
Feasibility factor (s) =

$$\frac{\%\ \boldsymbol{of\ Radiation\ Influency\ Parameter} \times (\boldsymbol{severityIndex})}{\boldsymbol{correlation\ factors}}$$

Therefore,

$$(S_A) = \frac{18 \times 28}{\pm 0.0004} = \pm 1260000$$

$$(S_B) = \frac{28 \times 21}{\pm 0.0004} = \pm 1470000$$

$$(S_C) = \frac{36 \times 23}{\pm 0.0004} = \pm 2070000$$

$$(S_D) = \frac{12 \times 18}{\pm 0.0004} = \pm 540000$$

$$(S_E) = \frac{06 \times 12}{\pm 0.0004} = \pm 180000$$

Expected Impact Factor for radiation on environment

$$EIF = \frac{(S)A+(S)B+(S)C+(S)D+(S)E}{5}$$

$$EIF = \frac{(S)A+(S)B+(S)C+(S)D+(S)E}{5}$$

$$EIF = \frac{1260000+1470000+207000+540000+180000}{5}$$

EIF= + 1104000 (for cool climate areas)

EIF= - 1104000(for very hot climate areas)

3.2 Influence of ecosystem energy loss

It is considered as a natural process, where in the environmental ecosystem components, bio energy system, bio physical systems and even environmental management systems are viewed holistically. The whole ecosystem concept considered climate factors like rain, temperature, light, wind humidity and edaphic factors like soil, pH, topography, minerals and their inter relationship with each other. In this context, new and proven technologies are introduced, weighed, debated and incorporated or discarded.

The main objectives of whole ecosystem energy savings normally includes reducing energy losses, reducing both biotic and abiotic energy losses requiring environmental impact of the ecosystem to the environment and increasing the biological life occupant comforts, health and safety measures, increasing ecological servicing productive etc…

3.3 Modeling of impact radiations on the environment

Expected Impact Factor for the whole ecosystem-energy loss

$$EIF=\frac{3A+2B+C+2D+4E}{5}$$

$$= 141376.$$

By considering the linearity in the strategies Y=mx + c

Where,

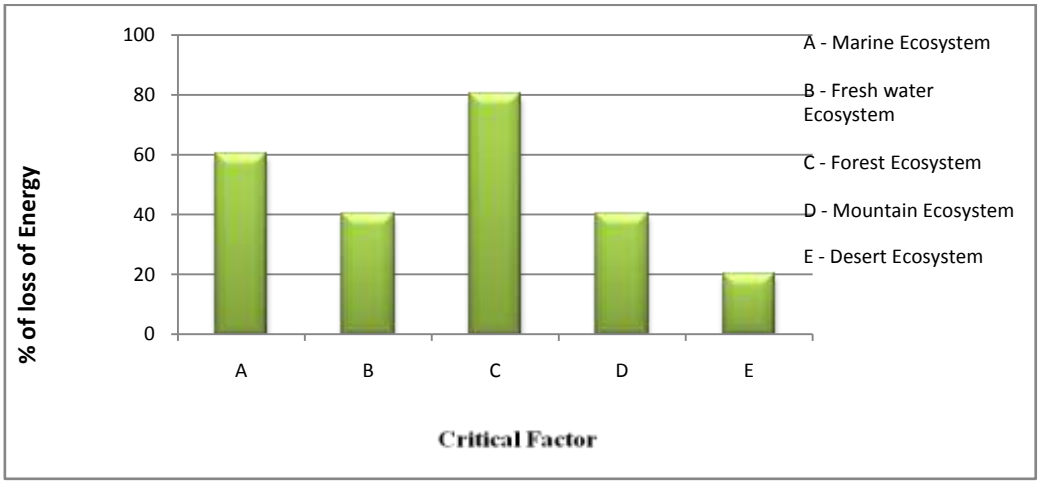
Y=Magnitude of EIF for Ecological energy loss

M=population of life of ecosystem

C=EIF for environment

X=correction factor (±0.0004)

For a generic case,



Y=mx + c

1, 41,376 =(x X+(EIF)ecosystem)

1, 41,376 =(x (0.0004)+1104000)….(1)

1, 41,376 = (x (0.0004) -1104000)….(2)

Typically we can formulate the governing modeling equation for different population size of small or large ecosystem for different application.

4. Conclusion

The matters warns and suggests that the sustainability of life in future Earth is possible only if the awareness about fierce heat of the sun and reducing the anthropogenic temperature increase in controlled level. Generally it is predicted that the temperature hike whilst the solar radiations are exhibiting ecosystem enmity approaches and energy losses are very high along with the huge utilization of the various components of the energy resources within the environment itself. Hence a modest attempt has been made for modeling the energy loss in the ecosystem and suggested some of the essential standards for "saving the ecosystems" through the energy saving policies and procedures towards highest ecological standards and consistent sustainable development. Ecological information modeling plays a key role for optimizing the day to day requirements with user friendly and speedy operations with perfections. In general, Individual based Models(IBM),Temporal variability models, equation based Models, bridging between bottom-up and top-down approaches are assisting the strategies for environmental structures, but time has come to implement virtual image modeling also in all the best possible manner towards ease of analyze and energy saving along with less environmental effects.

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The main references are international journals and proceedings. All references should be to the most pertinent and up-to-date sources. References are written in APA style of Roman scripts. Please use a consistent format for references – see examples below (9 pt):

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