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REAL TIME COMMUNITY ENABLING TO CARE FOR PLANETARY DISASTER  
REDUCTION

by

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ABSTRACT

Community enabling planetary disaster risk reduction is sustainable. Modelling and simulation of real and hypothetical Asteroid impact scenarios <https://cneos.jpl.nasa.gov/pd/cs/pdc21/> are useful assets. Planning and design of a real time students and family zero cost non formal education model for Planetary disaster reduction is designed. Simple cost free community based solutions for planetary disasters risk reduction hinge science and culture.

**Keywords** : Tunnel Effect, Real time, Community enabling, Space eco literacy, Students and family, Science and Culture.

1.0 Background

Since the onset of civilizations, nature and community based solutions for any internal and external threats are spontaneous and cost free. Positive responses of community in safeguarding health, safety, habitat loss, livelihoods and biodiversity examples are many [1]. It is also a fact, that natural and technological disasters have quadrupled over the past century. Since 1900 disasters are being documented and latest regularly on a weekly basis by agencies such as EM-DAT International Disaster Data Base[2]. Inline, planetary threats by Asteroids events are researched for over a decade since 1PDC 2009 [3]. As a good practice global cooperation in space enabled disaster charter had over 16 space agencies activated more than 520+ times in 120+ countries for variety of disasters[4]. Community focused Science and culture integration is essential for sustainable disaster risk reduction.

Since 1980s till 2020, environmental education and space eco literacy models sustained by popular science activities are identified [5] Interestingly, these cost free community scientific temperament building activities have been found simple and time tested [6]. These non formal environmental education models consider basic

environmental education guidelines from UNESCO/UNEP/IEEP,1977 Tbilisi declarations[7]. Interestingly these models are designed and executed by availing eco and space quest in the rich cultural heritage. An additional advantage has been a priority given by the state facilitating a proactive Human Resources development in post-independence India.. Yet , free education and assured job right is a mirage. Available environmental conditions and resources form the backdrop to develop non formal eco models. These models do not depend on expending additional financial resources from participant families and organising teams.

It is not surprising to find such societal wellness activities in India and other countries. Promotion of safety, health, wellbeing and future security form a basis of human wisdom. This could range from facilitating a wide range of human endeavours from spiritual, arts culture, physical facilities such as shelter for man and livestock, development of water body, and facilitating creative arts pursuit. Of course these Indigenous knowledge and wisdom is a rich heritage of human societies. Of course extreme abuses can make or mar community enabling for any defence operations.

The four non formal cost free education models have been presented at 7 PDC Session 12, E poster No 57. Notwithstanding, a deluge of data on planetary defence, enabling communities and civic societies is decisive. Cost Free community enabling is a real cultural heritage of any sustainable society. Eco Sense efforts are also zero cost tunnel effects. This is in contrast to the hard way of living through mountains of resistance [8].Annexure 8.1

## **2.0 Literature Survey**

Non formal and informal education can contribute to helping people achieve a level of Scientific and Technological literacy which will allow them to function effectively [9]. Non formal Education .is also identified as a hinge between Science ad Society[10].Planetary Pandemic Disaster Community living through the disaster by preventive public health architecture is evident since centuries old plague to the present. Adequate immunity from Infodemic and ulterior motives at the risk of precious human life are matter of concern. A flier brought out during COVID19 is a classical example [11] Health care by identification and integration of medicinal plants in preventive health care and food habits is one good practice. A flier brought out during National Science Day in India is a case[12] Annexure .8.2/.3. Engagement of Water knowledge and skill building is essential for eco sense and life style changes. A flier released during World Water Day 22 March 21 is an example[13] Annexure 8.4/.5.

An abuse of space technology in the form of overdoing consumerism is also evident. Planetary defence engagements may get impaired for uncontrolled and abuse of freedom of press. This is evident in the natural and technological disasters and pandemic management. It is here few take homes from WIN WHO the COVID19 are relevant[14].

## **3.0 Materials and Methods**

NF SSAC 21 is a non-formal Space Situational Awareness Campaign for students and family in 2021. It is a ten week one hour a week virtual science and culture creative signature activity. Annexure 8.6. A dimension of spiritual is embedded in it as per WHO definition of Health. World Health Organization defines

health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The World Health Organization (WHO) defines Public Health as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society. Comparable terms for public health are social medicine and community medicine; the latter has been widely adopted in the United Kingdom, and the practitioners are called community physicians [15].

The target population considered for NF SSA 21 are 5 to 9 Std students and a Handhold. The 5<sup>th</sup> to 9<sup>th</sup> standard students are chosen based on COVID19 lockdown reality. The students below 5<sup>th</sup> standard are not included for reasons of exposing to the Space Situational Awareness issues and Counter Space issues[10]. 10<sup>th</sup> Standard students are considered hard pressed for time. 10<sup>th</sup> Standard are not considered as it is a pre-qualification level for future career in life. The experience accrued from the zero cost four non formal and informal eco education and space eco literacy models vindicated this consideration. The best window for age consideration for NF SSAC21 was fixed for 5<sup>th</sup> to 9<sup>th</sup> Standard students. Ten week themes, contents, objectives of IEEP UNESCO UNEP compliance and web sources are listed [16]. Methodology deployed in the NF SSAC21 are. Informal identification of students through family members. Oral confirmation of interest in Space Education Out Reach.

Fundamental considerations for the design of the NF SSAC21 is over four decades time tested UNESCO UNEP premise. The mandatory guidelines of UNESCO UNEP IEEP,1977 objectives of environmental education are considered. This has been to facilitate individuals and community awareness, attitude, knowledge, skill and participation on living and working environment, which shall enable to manage their environment..

Step by Step methodology of NF SSAC21 are

1. Confirm the registration with a Reg. No for the participant and handhold.
2. Communicate the objective of Ten week one hour a week NF SSAC21
3. Every Week Communication
  - a. Indicate the focus of the week along with two page back ground note
  - b. Mention about the activity for one hour a week and output formats
  - c. Reference home pages for extra sources of information.
- 4 Restrict activity to one hour in one week time
4. Assignment submission on weekly basis before getting the next week assignment.

The typical week topic, theme , Two Page Note and Curriculum are furnished[17].

#### **4.0 Results and Discussions**

NF SSAC21 has been an eco sense cost free non formal ten week one hour a week integrating planetary defence themes. Over 60 students and an equal number of handholds are involved. The registration process is ongoing. Participants from USA, Indian State of Rajasthan and Karnataka are involved. There is no social, language and other barriers. The students are permitted to send their cultural signatures in any language. The economic background of the parents of students

range from very high socio cultural and economic status to ordinary informal road side vendors and service providers wards.

Typical results of similar topics in SEL SW Orientation deployed reveal creative responses[18]. Annexure 8.8 This was held in a similar virtual Lockdown period in 2020.

## 5.0 Inferences

The global defence on pandemics is not yet over. The resilience now building leads to community enabling. In any case, Art of Living through is the essence of community since centuries be it in the context of Pandemics/Infodemic, Disaster Risk Reduction and Climate Change. Additional burden of counter space and planetary threats are issues but not big enough in front of enabled community. The failure of public health architecture may not be able to stop leaning and living through. The new mountains of resistance has not hindered the students and family to pursue space quest. Thus, the best of mankind can be seen in the worst time for being positive. This has also sustained learning leading to community enabling to care their environment. 7PDC has been a rare convergence of a wealth of information on planetary defence for a simple cost free disaster management model NF SSAC21. Taking NF SSA21 and similar eco sense cost free community enabling to care its environment can change the governance of planetary defence. The clue lies in ignite the young minds with family for planetary safety and secure world.

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[16] High School Student Response, Typical Out put of SEL SW 2000

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All Students/ Handholds/Community enabling resource persons for four zero cost models. Since 1988

## **8,0 Annexures**

8.1 PSF Tunnel Effect

8.2/8.3 Amrutha Balli, National Science Day

8.4/8.5 Valuing Water 2021 UN Water Day

8.6 NF SSA21 Structure

8.7 Typical Curriculum

8.8 Typical Responses SEL SW 20