Editorial

The new Editorial team came to office, along with new Executive Committee of IGU on 1st April. However, due to some structural changes the new team started functioning from the 4th week of April. During the last couple of years a significant improvement has taken place in the quality of JIGU publication. The journal has been accredited with an Impact Factor of 0.225 by NISCAIR, the approved organisation for such accreditation by CSIR. At the fag- end of its term some specific efforts have been made by the outgoing editorial team to receive SCOPUS accreditation. As first step IGU, included in its website policy norms, adopted by the journal in ensuring publication ethics. Steps are to be taken to receive SCOPUS accreditation, and hopefully the new management of IGU would support our initiative and help us in achieving this. On behalf of incoming Editorial team I thank the previous team for providing a launching pad, through NISCAIR, to aim for higher goals. It is good that Prof. Shailesh Nayak has become President of IGU. Under his stewardship I am confident that IGU would enhance its reputation as the premier Earth system scientific society of India.

It has been pointed out by some members/ fellows that Journal of IGU management should be delinked from IGU to ensure speedy growth. Those who are not conversant with the management of IGU journal have supported the suggestion, leading to unnecessary controversy. IGU and IGU journal are linked but managed separately. IGU constitution does not contain any details pertaining to the journal and Bye-laws for administration of the journal. The journal that existed in 1960s and the present journal that was started in 1997 were managed separately, without any interference from IGU executive body. One would be surprised to learn that until last couple of years none have shown any interest in the publication of the journal and only couple of individuals struggled to ensure the journal come out on time, with reasonably fair scientific/ technical articles, mainly from universities and couple of government organisations. Only since two years, since it has become a recognised scientific publication, individuals started showing interest. We welcome such a change. The suggested complete delinking is not feasible as the journal is sponsored by IGU and in turn the Journal is acting as the mouth piece of IGU, in propagating the objectives and achievements of IGU. The journal needs patronage of IGU as it is run with the moral, ethical, physical and financial support of IGU. As one closely associated with the journal for long I do confirm that neither the Presidents nor executive committee members have ever interfered with the journal`s administration. Journal could not reach higher pedestal basically because of lack of patronage by scientific community. The rules framed by influential scientific administrators (who believe and advocate that publications in international journals alone qualify as authentic publications for any awards and recognitions) hampered the growth of Indian Journals. As pointed out by a learned senior scientist the planners who designed the framework within which research institutes should operate got their concepts wrong. They took the model of the Indian Administrative Service as a scale to measure against. So the fact that scientists are different creatures than administrators was forgotten. Such a mindset is responsible for blindly following the dictates made by influential western scientists. The hierarchical structure and strict adherence to senior-junior culture forced scientists to follow a law that is in many ways dictatorial. This led to blocking of articles to IGU journal. IGU journal survived till 2012 basically because of support extended by the students and teachers of our universities, who have been sidelined by the influential scientific bosses, for long. As pointed out by Prof.Jayant V Narlikar, the mistake that the early planners made was in bypassing universities when planning for science. In an attempt to create ideal conditions under which a scientist performs research, the planners created the national labs and research institutes all of them outside the realm of universities. Reason? A university will bring in students and with that a teaching load. By keeping a secluded environment around the scientist he will perform the best research. This argument has error. Not all teaching is a "load". A teacher gains a lot form students he or she teaches and the students too can get enthused by being in the presence of a teacher who also does research. This very point was given due weightage in my comments on the panel discussion on "Higher Education in Earth Sciences" (pp- 292-294, JIGU,Vol 18, No.2, April, 2014). Journals like

Current science and JGSI survived and gained better status because of respective organised structures, built by luminaries Dr. B. P. Radhakrishna and Prof. P. Balaram. Till now, those who have been associated with the IGU journal could not produce such level of results, for want of expertise and experience comparable with the above mentioned luminaries. In addition the onus of enhancing the visibility of the journal was on one or two part time volunteers. In spite of limitations and lack of facilities they strived hard to improve the quality. As mentioned above, the concerted efforts helped in getting recognition from NISCAIR. Even though such an accreditation is not sufficient, one should appreciate the success, instead of brushing it aside as insignificant. We do admit that JIGU needs to tighten its belt, to avoid some setbacks. Even small acts of negligence at any stage of publication by anyone can be destructive. Clinical precision can be achieved only when different works are carried out with utmost dedication and interest. Those who criticise are not aware of the existing reality. They, I am hopeful, can better visualise the drawbacks by visiting IGU office and interacting with the team of volunteers. When I requested learned to take reins and lead, none have shown interest. To ensure better quality publication, we have decided to re-structure the editorial board .We have included only couple of EC members of IGU in the editorial team, and inducted new blood to the extent of 50%. We have also discontinued the practice of naming the IGU Hon. Secretary as the Editor of the journal. We want a co-operative management, with the young closely interacting with the seniors. The newly inducted young Editorial Board Members are urged to come forward and help the journal, without any fear or favour.

To ensure a proper bondage between IGU and the Journal, the Hon. Secretary of IGU is one of the Executive Editors. Since IGU is financially supporting the journal`s publication he has been kind enough to attend to financial transactions. Assistant Editor will be lending needed support to Hon. Secretary of IGU in co-ordinating various financial transactions, in consultation with the Editor. Other members of the Editorial team would be concentrating on the technical aspects of journal`s publication. Such a change need not be interpreted in any way against the earlier structure or acceptance of the criticism. This is done only to get better involvement of learned editorial team. Presently introduced structure has a 3 tier system: Editor, Executive Editors & Assistant Editor and Editorial Board. The newly structured Editorial team will be in office for a period of two years. As done by the previous team, publication of all issues including April, 2016 will be the responsibility of the present team. I accepted to be the Editor (in spite of my age related health problems), knowing very well that my capabilities and energies are not sufficient to take forward the journal. I am confident that my editorial colleagues would lend needed support and ensure better quality publication. I look forward to that day when our journal receives international recognition, as a quality publication.

I am thankful to the three Executive Editors and Assistant Editor for accepting to share management responsibility. Once the three Executive Editors and the Assistant Editor, selected based on their experience in publication of journals and/ or excellence in scientific research, spare their valuable time on a regular basis and monitor various works and interact with the members of Editorial office and Editor either personally or through internet, and the members of the Editorial Board (that comprises both senior and young scientists) take interest to review articles and propagate the importance in their respective scientific circles, about the need to support the journal, and all those who are associated directly or indirectly with IGU (and those benefitted by receiving awards) contribute articles we can ensure a significant improvement in the journal`s quality. However, I request our learned colleagues not to arrive at a conclusion that the newly formatted structural change and better involvement of editorial team would produce better results overnight. Realistically speaking the journal will continue to survive and gain recognition, for some more time due to commitment of couple of individuals. However, if the newly structured team commits to serve, basically to enhance the quality, we can expect better results in two to three years. Hope those included in the board would lend their services in word and deed and thereby help me in meeting various time bound targets. I thank all the members of the Editorial Board for lending their services in enhancing the quality of the journal. The immediate goal is to get SCOPUS accreditation.

To establish a sustainable financial base number of changes are needed, including collecting from the contributors page charges and collecting yearly subscription from members and fellows of IGU, as done by Journal of GSI and other reputed Indian journals. We need time as only recently the journal could gain recognition and to ensure sustainable recognition and patronage by the scientific community we need to introduce changes gradually. It is also our responsibility to bring to the notice of the readers and contributors that the journal continues to be run by volunteers and as such some hurdles are to be removed first to make the journal self sustainable. To start with we wish to receive suggestions from the scientists so that a viable mechanism is established to meet the suggested demand. Once these suggestions are screened and accepted as the journal`s publication norms we will have separate financial base. Presently such a change is not possible and we have to depend on the patronage of IGU. It is also essential to note that the journal is acting as the mouth piece of IGU (as detailed earlier) and it is necessary to continue this link for mutual benefit of IGU and Journal of IGU. We request all those who are lending their support to the journal in different ways to extend their support and help in unequivocal terms.

As in the past, editorials would focus on topics of interest to the earth system scientists. We would also be happy to either include inputs from individuals as sub-sections of the editorial or include them as "Opinion". A separate section will be introduced to bring into focus useful suggestions under the subsection "Opinion Forum ". We invite such "opinions" (of one to two printed pages) to strengthen the bondage between readers and management of the journal. Kindly note our efforts can yield better results, only when the scientific community extends support to the journal.

It is decided to have Earth Sciences and Society as the main theme for the 51st annual convention of IGU. The topic is of paramount importance for the earth scientists, as it provides an opportunity to project viable solutions for many cumbersome problems. A brief introduction to the topic is given below, to attract the attention of the scientific community so that both the peers and the young researchers could contribute oral and poster presentations for the convention. If the readers find the topic interesting they may go through the first circular released recently and send the abstracts to IGU office electronically, as per the guidelines cited in the circular.

Earth Sciences and Society

The challenges presented by climate change, resource conflicts, and natural disasters point to the importance of studying the intersection of earth processes and human societies. Unfortunately, majority of the higher education centres do not give importance to this combination, leading to wastage of time and resources. During 50th annual convention of IGU a panel discussion was held on "Higher Education in Earth Sciences". Outcome of this interesting discussion and editorial comments were published in the News and Views section of April, 2014 issue of JIGU. Even though number of solutions have been suggested it is noticed from the available literature on initiatives made by number of universities of USA that a comprehensive inter disciplinary approach, as a part of the curriculum would attract meritorious students to the earth science education. However, the policy change in reorienting the syllabus needs support from committed teachers, who are already under stress due to number of stumbling blocks. Assuming the suggested approach may lead to a revised thinking in the higher education management circles some details are included in this editorial. Educating students through text book information, as a routine exercise that is being practiced since decades, does not attract the attention of the present generation students, as they can down load relevant information by clicking the "mouse". They need to be attracted through non conventional teaching that combines text book information with personal experiences and some anecdotes. One may say where is the encouragement for such a way of teaching when merit and discipline are battered in many universities. While we cannot bring out a radical change overnight we have to experiment step by step and such innovative steps need to be supported by one and all. Let us look into the suggested approach. If we are interested in helping the society in overcoming various setbacks innovative and thought provoking mixing of subjects of diverse interests is essential. One

such integrated approach involves integration of earth sciences, geography and social sciences. The interdisciplinary Earth Science and Society major, draws on the two allied disciplines; Earth Science and Geography. From Earth Science, students gain an understanding of natural processes that impact the distribution and use of resources such as water, fossil fuels, and soil, as well as natural hazards such as climate change, tsunamis and earthquakes. From Geography, students learn about the spatial distribution of physical and human phenomena and how human societies have been shaped by and also have changed the natural world. Geography is split broadly into two sub-disciplines, which are human geography and physical geography. Physical geography is focused primarily on the built environment and how solid earth, oceans and space as a part of single interconnected entity is created, viewed, as well as managed and handled by man, considering the influences that humans have on all the segments of the earth system they occupied. Physical geography on the other hand, deals with the natural environment and how other factors like climate, vegetation and life, soil, water and landforms are created and interact with each other. Geography can be best defined as the study of the earth and its features, including everything contained in it, like the ones inhabiting the earth and the different phenomena occurring in it. Geography's strengths mainly rely on its different branches, as it seeks to cover most concerns regarding the earth. On the other hand, its weakness is that it is not able to fully explain a certain field often, which is why there is a need to study other subfields of geography to cover for that weakness. Geographers bring spatial analysis of human environmental change, while earth scientists contribute their knowledge of the diverse natural processes shaping the earth's surface. Together, these distinctive yet complementary fields contribute to comprehensive understandings of the physical limitations and potentials, uses and misuses of the earth's natural resources.

The Earth Science for Society committee (ESSC) believes that increased science literacy is essential for the students of today as they are the decision-makers of tomorrow and the future caretakers of the Earth. Insights of the natural and social sciences to address a topic of societal concern have much more relevance compared to researches that are abstract in nature. This statement is not aimed at belittling highly thought provoking scientific researches pursued by intellectuals of high order. It is made only to attract the attention of these intellectuals to topics of relevance to the society, to better benefit our society. In the absence of quality scientific research we are invariably ending up in reinventing "wheel" and getting satisfied with the out dated inventions and incremental refinement of already existing models. It is heartening to learn that the School of Earth, Environment and Society (SEES) formed in 2007 to integrate Geology, Geography, and Environmental Studies and strengthen multidisciplinary research and teaching for understanding the earth's processes and our interactions with the environment, yielded excellent results. The School offers an exciting and diverse range of teaching and research opportunities that are both disciplinary and interdisciplinary in approach. The interdisciplinary approach combines in-depth understandings of physical, chemical and biological processes intertwined with societal, earth, and environmental issues. The current interdisciplinary programs in the School are Geospatial Science and Environmental Quality. The programs consider issues that are likely to be dominant in the next fifty years, including sustainability of human society, human health issues, population growth, global urbanization and industrialization, rapid consumption of natural and non renewable resources, environmental degradation, and climate change. Both programs feature the use of cutting-edge tools and technologies that are aimed to carry out advanced studies and address different research challenges. Let us introduce such innovations. If learned seniors, committed teachers and enthusiastic young blood co-operate with each other we can definitely see a brighter future.

With the explosive urbanization of the modern world, new and unprecedented demands are placed on the earth's hydrological systems. A variety of environmental issues-such as water provision and drought, depletion of aquifers, pollution of watersheds, flooding, regional climate change, privatization of supply and other policy questions-arise out of the insatiable demand for water by contemporary metropolitan regions. As such one of the courses needs to combine geographical and geological perspectives on the increasingly urgent problems of urban water. These integrated

perspectives could be supported by geophysical approaches/ theoretical- experimental models. This multidisciplinary course acquaints students with the debates and theoretical approaches involved in understanding resource issues from a gender and justice perspective. It is intended for those in the social and natural sciences who, while familiar with their own disciplinary approaches to resource issues, are not familiar with gendered perspectives on resource issues and the activism that surrounds them. Increasing concern for the development of more sustainable production systems has led to consideration of the ways in which gender, race, and class influence human-earth interactions. The course examines conceptual issues related to gender studies, earth systems, and land-use policies. It interrogates the complex intersections of activists, agencies and institutions in the global arena through a focus on contested power relations. The readings, videos and other materials used in the class are drawn from different environments (both the South and the North) to familiarize students with the similarities and differences in gendered relationships to the earth, access to resources, and resource justice activism.

Since post graduate students and young researchers have to shoulder the responsibility of taking appropriate initiatives to blossom their acquired knowledge they need to be encouraged to participate in group discussions and seminars. In these seminars both the teacher and the student can explore some basic concepts and approaches. In USA as a part of progressive development of knowledge base, some focused themes are selected for the weekly seminars. It is interesting to learn that many universities have organised seminars on feminist environmental analysis paying particular attention to feminist theory and its relevance to environmental issues. It is interesting to learn that outcome of these seminars has recognised, after examining a range of feminist research and analysis in 'environmental studies' that gender subordination and environmental destruction are related phenomena. That is, they are the linked outcomes of forms of interactions with nature that are shaped by hierarchy and dominance, and they have global relevance. The course helped students to discover the expansive contributions of feminist analysis and action to environmental research and advocacy; it provides the chance for students to apply the contributions of a feminist perspective to their own specific environmental interests. This example is cited to emphasize the need for introduction of learning processes that can enthuse students/ young researchers. (P.S: Excerpts from individual US schools and universities course structures helped in developing this topic). To appreciate better the importance of feminist theory some specifics on Ecofeminism is included below. Even though many may feel such details have no place in an earth science journal, they are added as they help us in better understanding the plight of our environment, in the name of development that is transitory in nature.

Ecofeminism:

It describes movements and philosophies that link feminism with ecology. The term is believed to have been coined by the French writer Françoise d'Eaubonne in her book, Le Féminisme ou la Mort (1974). Ecofeminism connects the exploitation and domination of women with that of the environment, and argues that there is a connection between women and nature. Ecofeminists believe that this connection is illustrated through the traditionally 'female' values of reciprocity, nurturing and cooperation, which are present both among women and in nature. Women and nature are also united through their shared history of oppression. Ecofeminists further believe that women have a special connection to the environment through their daily interactions and this connection has been ignored. It is argued that that women in subsistence economies who produce "wealth in partnership with nature, have been experts in their own right of holistic and ecological knowledge of nature's processes."

A common claim within ecofeminist literature is that patriarchal structures justify their dominance through binary opposition, these include but are not limited to: heaven/earth, mind/body, male/female, human/animal, spirit/matter, culture/nature and white/non-white. Oppression is reinforced by assuming truth in these binaries and instilling them as

'marvellous to behold' through religious and scientific constructs. (Courtesy: Wikipedia). Importance of ecofeminism was brought in to focus during the IGU workshop held in Umiam, Meghalaya in April, 2013. A close observation of various destructive developments in Uttarakhand and Northeastern states clearly tell us the need to take in to cognisance the importance of Ecofeminism and Geoethics. One of the most intractable problems facing environmentalists is how to address global environmental issues given the very different, often conflicting, ways that nature is valued within and across cultures. In many parts of the world, nature is valued as an exploitable resource that when used efficiently can raise standards of living, improve the quality of life, or increase the wealth of a select few. In other places, people believe that economic development efforts must be sustainable promoting natural balance and improving living standards are values that can be achieved simultaneously. For many people, the value of global justice suggests that rich nations must do more to protect the global environment in to allow for the legitimate improvement of the quality of life of the poor. To make things more complicated, there are additional values beyond the value of nature, and the value of justice. Those who give importance to environmental ethics believe in sustainable development. This philosophy has significant importance in regions that are fragile and susceptible for degeneration due to ill planned technological interventions (see Reddy.P.R, 2013; JIGU, v.17, no.4, pp: 369-381).

In this issue:

There are seven papers in this issue. In the first paper, Harikumar et al have carried out an investigation on the consequential features of SW monsoon-2007 onset and super cyclone "Gonu "using satellite Model and Ground – based data. The influence of ``Gonu" super cyclone on the monsoon onset and advance has brought in to focus the problems due to various interfering factors that can affect monsoon behaviour even at the eleventh hour. In In the second paper, A. B. Roy, as an opinion, detailed on Facts about Tsunami. The information could be of use in better visualisation of tsunami generation and propagation. In the third paper, Jaswal et al focused on the variability and trends of air temperature and rainfall over a period of 60 years, which reveals a tendency of increase in maximum temperature, decrease in minimum temperature and rainfall. This trend may have impact on agriculture, water resources and environment in Dharmasala and surroundings in Western Himalaya. In the fourth paper, Srinivas et al have delineated groundwater potential zones along the coastal parts of Kanyakumari district, Tamilnadu. Their study helped in locating fresh and saline water intrusion zones both laterally and vertically. This has reiterated the importance of geophysical techniques, in reducing well location failures even in geologically complicated terrains. In the fifth paper, Prasad et al, as the VI part of their study, have brought out clearly merits and limitations of south Indian convergence zone model in seasonal forecasting of rainfall in India. In the sixth paper, Prabhakar Prasad et al have detailed about the efficacy of passive and active seismic studies to estimate H/V spectral ratio for site classification in microzonation. The studies carried out in and around Chennai city show a good correlation with the local geology. They conclude that H/V spectral ratio obtained from the short duration data is adequate in microzonation. In the last paper, Gupta et al have tried to explain the importance of Conductive Heat Flow in the Godavari Sub-Basin, in understanding the impact of conductive Heat Flow at different depths in the crust and significance of such details on the regional tectonics.

I do hope the details given under News and Views, as in the past, could be of use.

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