

Report of the  
SYMPOSIUM

On

**SDGs, Knowledge and Democracy:  
Re-imagining Purposes and Opportunities**

16-17 January 2017

**Venue: D 232**

**School of Humanities and Social Sciences  
Shiv Nadar University  
Dadri, GautamBuddha Nagar**

Organized by  
**SHSS, Shiv Nadar University**  
and  
**CSSP, Jawaharlal Nehru University**

**Report submitted by**

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## **SDGs, Knowledge and Democracy: Re-imagining Purposes and Opportunities**

**Summary:** The Symposium was organized by the new Department of International Relations and Governance Studies, School of Humanities and Social Sciences, SNU, and the Centre for Studies in Science Policy, JNU, and was partially sponsored by SERB (DST), ICSSR –NRC, and SHSS (SNU). There were 60 registered participants on the 16<sup>th</sup> Jan., and 41 participants on the second day, 17<sup>th</sup> Jan. 2017. The Symposium had active participation by eminent scholars and students– both graduate and under-graduate. The purpose of the Symposium, to enable discussion on the SDGs and debate the contexts and relationships between the SDGs, knowledge and democracy, their mutual dependency and causal relationships, and arrive at a research and education agenda that the participants would engage with, was achieved. As an immediate follow-up the Symposium will (i) produce a Discussion Paper (by May 2017) and (ii) organize a half-day brainstorming (in March 2017) on the research themes and pedagogical questions that emerged from the Symposium, to design and launch a multi-University research programme and institutionalize related learning/capacity building agenda.

A brief session-wise report of the Symposium is presented here.

### **Inaugural Session:**

The Symposium began with a hearty welcome by Rajeswari Raina (Professor, SNU) who also introduced the programme of the next two days. The fundamental purpose of this Symposium was to initiate a dialogue. The centrality of *debate on our collective commitment* towards fulfilling Sustainable Development Goals (SDGs) was the key driver. Designed along four cross cutting themes, focusing on the SDGs as:

- a rubric for generating and utilizing reliable knowledge for development
- an umbrella for inclusive and democratic environmental deliberation
- a domain for cross-national harmonization
- a space for ethical decision making about attainable futures

the Symposium will ensure thinking outside and beyond the sectoral or domain-based expert knowledge and national or regional boundaries, identified for and situated within each of 17 SDGs and the 169 targets. In addition, two expert panels focusing on (i) STS (Science, Technology, Society studies) research and education, and (ii) democratic spaces and processes, were to bring to the participants the two powerful cognitive tools and processes that would ensure that the SDGs would pro-actively be about SDPs too – Sustainable Development Processes.

Professor Rupamanjari Ghosh (Honourable Vice Chancellor, Shiv Nadar University), welcomed all the participants, congratulated the Director, School of Humanities and Social Sciences, and

the fledgling Department of International Relations and Governance Studies for organizing the Symposium, bringing together some of the best scholars who have engaged with questions about science and other forms of knowledge, the environment, and development concerns that are so crucial to countries like ours. Prof Ghosh highlighted SNU's mandate, of encouraging multi- and interdisciplinary research, exchange of knowledge as well as teaching. She emphasized that these kinds of spaces (as this Symposium facilitates) should move beyond the confines of academic discussions and lead to some actionable agendas; for instance, what can we do to ensure sustainable energy transitions, and how do we do this.

Professor Sheila Jasanoff (Science, Technology Studies, Pforzheimer Professor at the Kennedy School of Government, Harvard University) delivered the keynote address. Prof. Jasanoff began the lecture emphasizing why the conventional STS as Science and Technology Studies had to move back to the more complex and pressing need for Science, Technology and Society Studies. In countries like the US, STS scholarship is yet to figure out how to relate STS to more critical social science theorizing. She argued that STS, besides explaining how knowledge and technology come into being and have impacts on society, provides interdisciplinary spaces, theoretical framings and analytical tools to understand how knowledge and practice exist and interact in society. These then demand much more than mere tools like Actor Network Theory or such simplistic mapping exercises. The questions that are important from the perspective of STS in the broader context of knowledge production are the questions that relate authority and responsibility, and how they relate to rights and duties. It is precisely because of the sovereign ambitions that science has, and has been vested with (quoting Michael Polanyi from his *Republic of Science*) that we need to understand these relationships. STS can analyse and explain the mechanisms through which the generation and use of knowledge and the controls over these are exercised, as well as the purposes that drive and legitimize them. The case of arsenic poisoning in Bangladesh, starting off as a small study of hydrogeochemistry (since 1984) with the involvement of British Geological Survey (BGS) and aid from Overseas Development Agency (ODA) leading to the installation of millions of shallow tube wells funded by UNICEF, World Bank and several leading NGOs, which has affected nearly half the population of Bangladesh was used to illustrate the need for STS. Using the lawsuit filed as *Sutradhar vs Natural Environment Research Council (NERC)* in 2006, demanding the accountability of these international agencies, and the judgment that supported the expertise of BGS (against the relative ignorance and lack of funds in Bangladesh) and the good intentions of ODA, accusing instead the poor performance of Bangladeshi health authorities and the assumption of the claimant that he was owed a "duty of care", Prof. Jasanoff explained the interplay between law/regulation and knowledge.

With the judgment that 'knowledge need not bring duty to serve the world,' Prof Jasanoff, highlighted three types of STS engagements with questions of expert authority and responsibility. These three mechanisms involve - play, protest and provocation. In the 'play' approach, STS engages with frameworks like the Actor-Network Theory, is not concerned about

law or the law maker's interest in the human subjects, and follows arsenic as it enters and gets positioned within actor networks in the Bangladesh economy. This approach however fails to enroll the NERC in relation to arsenic poisoning and attach responsibility. In the register of 'protest' STS uses theoretical frameworks such that question development asymmetries. It can draw from Ulrich Beck's *Risk Society* and organized irresponsibility. Here STS asks for another legal theory of development. Without this, in our modern societies, which have failed to develop institutions at a collective level that can deal with the uncertainties and irresponsibility, Bangladesh is legitimately constructed as an incompetent entity twice-once under the British colonial rule and second time as an independent nation incapable of developing its institutions of science and technology. In the third register of 'provocation', STS Shiv Vishvanathan's idea of experimentality and the laboratory state acts as the theoretical background. In this frame the whole developmental project is seen in a historical context which looks at colonial intervention where British were interested in trade rather than human subjects. This frame regards development as a scientific project which represents the contemporary rituals of the laboratory state. Questioning the Polanyian stance of the 'Republic of Science', Jasanoff argues that it is important for the STS scholarships to bring to the fore the questions of constitutional duties of science when science is entitled to its constitutional rights. Along with this she emphasizes the importance of STS studies in bringing up and incorporating the perspectives of the disenfranchised into the whole knowledge creation discourse.

Prof. Ashok Jain, the Chair of the session, in the context of the plenary talk, explicated that the conflict in modern democracies has resulted due to the lack of recognition of local and situated knowledge. The formal scientific knowledge systems seem to be incapable of perceiving and responding to the range of local knowledge systems that people live with and use in their own societies. In order to address this, there is a need to question forms of knowledge, power and authority as it exists between different knowledge systems that interact in the day-to-day life of people.

### **Session 1 | SDGs**

#### **- *A rubric for generating and utilizing knowledge for development***

The Chair, Prof. Pranav Desai (Centre for the Study of Science Policy in JNU) introduced the session by highlighting the unprecedented convergence of development problems and environmental problems that the world faces today. Knowledge generation to ensure development in this context is a complex and multifarious task. The question is whether the SDGs are aware of the preparedness of our knowledge organizations to cater to the generation and utilization of knowledge for development. Prof Milind Sohoni (CTARA, IIT Mumbai), Dr. Sunil Agarwal (SEED Division DST) and Dr. Shiju Sam Verughese (Science Policy, Central Univ Gujarat) presented their work on the ways in which knowledge useful for development is perceived and addressed.

Prof Sohoni visited the democratic and ecological concepts visualised in this seminar (concept note), asking how the transnational SDGs would work in less-than-democratic societies like ours, especially given the rampant resource extraction (specifically water) that has become the norm for private agents (like farmers with water guzzling cash crops in the rabi season in drought prone parts of Maharashtra), and for the state (for drinking water supply, urbanisation demands, etc.). He asked why the drinking water well and the cook stoves (chulhas) were not part of the scientific research agenda and university and school curriculum, and whether the same undemocratic and ecologically unsustainable norms applied to the sciences and education systems too. Presenting a hypothetical model of a pollution game, he asked how sustainability could be seen as a survival game. Sustainability and the SDGs require collective behaviour by various local agents in our society, which must be called strategic. They must, for example, collaborate on groundwater, elect competent representatives, contest and complement the activities of state agents and the bureaucracy, and choose local producers. The big question is of implementation: how is this to be achieved, i.e, what theory will inform such collective behaviour? Collective action and community mobilization, through culture and education seem to offer an answer. But will India's social sciences and the technocracy wake up to this potential?

The presentation by Dr. Sunil Agarwal, focused on the evolution and current implementation of the Government of India's programme (housed within the Department of Science and Technology (DST)) on Science for Equity, Empowerment and Development (SEED). The concerns about inclusive, environment friendly, and participatory technology generation and utilization for sustainable development is at the core the SEED Division. Dr. Agarwal highlighted how the division had arrived the conclusion that the creation of sustainable livelihoods (SL) was at the core of sustainable development – SL as seen at the intersection of social equity, technological empowerment, and ecological and economic efficiency. When visualised thus, the conventional linear technology generation and delivery mechanisms get transformed into non-linear responsible governance networks, which essentially has to be a systems approach, beginning with a thorough understanding of the problems and technological needs at the local level. Addressing nine major livelihoods options through specific programmes for building S&T capacity in rural areas, delivering knowledge and technological inputs and services designed for the weaker sections (caste groups or tribal populations, women, the elderly and the youth in rural areas), the SEED programmes work in partnership with a wide range of public, private and civil society organizations. DST's Core Groups (that have received long-term support under the TARA scheme for building a cadre of S&T personnel in rural India) are a major platform form that work with the Government to enable sustainable development.

Dr. ShijuVerughese spoke about the prevalent engagements of SDGs with society in developing countries, and asked if the SDGs were indeed driven by concern for sustainability or were a way of saving capitalism from the crisis it is in today. If these goals are designed “for” society by a group of international actors (even if the processes were participatory), so that society or societies

can be designed to ensure the survival and sustainability of capitalism, there is little sense in asking what kind of democratic spaces and processes are available to societies today for sustainable development. How do we change the SDGs from a 'reformist' agenda to a 'reconstructive project'? STS gives us three fundamental concepts to address this reconstructive project – science, community and democracy. Dr. Verughese pointed out that community and science were discussed from two different angles (that of cultural and social engagement, and that of delivering technological inputs) in the previous presentations here. STS enables us to revisit these actors and their interactions in different technological frameworks, and question their capacity (including power) for democratic engagement. Dr. Verughese spoke about the dominant theoretical orientations in social science research on sustainability and on science.

The discussion focused on (i) the nature of the community and opportunities for engagement with knowledge in the community and wider processes of knowledge and policy, (ii) the nature of sustainability sciences (including reward systems for the scientific 'community'), opportunities to read the SDGs subversively, the epistemology of scale and scaling-up, the opportunities to marry state led sustainability initiatives (like DST's SEED initiatives) to the registers of play, protest and provocation (raised by Sheila in the morning session).

## **Session 2 | SDGs**

### ***- An umbrella for inclusive, democratic environmental deliberation***

The SDGs were formulated in and will have to be achieved by changing existing contexts and processes of extreme inequality, exclusion and massive destruction (often irreversible) of ecosystems. The Chair, Prof. Vinod Vyasulu (School of Public Policy, JGU) spoke about the need for democratic deliberation imbued with ecological values. This, the second session included presentations by Prof. Bina Agarwal (former Director of IEG, Delhi University), Dr. Mekhala Krishnamoorthy (School of Humanities and Social Sciences, Shiv Nadar University) and Dr. Bruno Dorin (Economics and Development Research, Centre for Science and Humanities, CIRAD-New Delhi) whose paper on Biodiversity in Indian Agriculture was read out.

Prof. Agarwal, who was one of the experts involved in the formulation of the SDGs, used SDG No. 15 (of the SDG) and linked it to Goal 5 trying to bring out a synergy between the two goals (forest and gender) with cases in India and Nepal to illustrate the gender dimensions of sustainability and justice that are often ignored. The main questions she raised were about how we intend to achieve these goals; what are the questions we ask about the processes? More importantly, if these processes are crucial, shouldn't we also think about the sustainability of these processes? Prof. Agarwal spoke from her analysis of 135 forestry groups in India and Nepal, and the results that showed how inclusion of more women in decision making leads to more forestations and improvement in forest conditions and community forestry in States (like in

Gujarat) – and that these States perform better than at the national level. Community forestry has had a significant effect on forest health. The participation of women, to be understood in a layered manner from nominal inclusion to empowered participation (especially of landless women), enables easier implementation and easier knowledge dissemination. It also brings to the fore, the different types of knowledge vested with and nurtured by men and women. Women have better understanding of forests. For scaling up community forestry Prof. Agarwal suggested lateral and vertical alliances with federations and self-help groups to communicate the local needs to the national level. The long term sustainability issues thereby demand alternative fuels, livelihoods, building materials, and inclusion of local energy needs in national energy policy.

In the next presentation, Dr. Krishnamoorthy illustrated the Goal 12 of the SDG on sustainable production and consumption, asking why markets are missing in this specific SDG. The institutional complexities of markets have been highlighted by Barbara Harris-White's work on the grain market- the *Mandi*. Yet, SDGs are oblivious of these complexities that have a direct bearing on the processes to achieve the SDGs, as acts and categories of Regulation and Disruption. There are three handles to see the Mandi as a category, than the market as a strictly economic entity (of prices, supplies and demands); Intermediaries, Materials and Aggregation. Inclusion, and the space for deliberative environmental negotiation depends critically on how these categories are understood and negotiated. Dr. Krishnamoorthy stressed intermediaries as a category perceived to cause disruption in market transactions, are actors who are central to the distribution of risk. The risk of storage (in the soyabeanmandi) is borne by the intermediary! The very nature of Materials and their handling in different commodity markets brings specific measures and materials into the transaction. For instance, sampling as a process. The ratio of 10:2:2 for moisture: bad seeds: foreign material (like stones, leaves etc.) is created in the mandi; the act of "ratio banana" or making the ratio, makes it a creative and inclusive process. That these have implications for several other commodities like sugar or milk brings to the fore several actors and their agency - changes caused by these measures and practices of grade making and standards setting. The political motifs and changing procurement policy in the country, as seen through the Minimum Support Price, is key to aggregation policy. There are ways in which the MSP, say for pulses, makes for a positive step for social and ecological framing. There are also ways in which there is no support price for millets accounts for production decisions in India's drylands. How do these differences in pricing and aggregation policy figure in production decisions and consumption decisions, that are so obviously central to the SDG?

Dr. Bruno Dorin's paper addressed the framing of the relationship between agriculture and biodiversity. He began with the paper by Green et al (2005) in Science, on the Borlaug question of agricultural technologies being land saving. Green et al model and compare two options for agriculture, land sparing (focus on intensive farming so as to conserve biodiversity-rich natural landscapes elsewhere) and land sharing (cultivate in wild-life friendly but less productive ways that conserve less spaces of wildlife nature). In order to answer which of these – land sparing or

land sparing– conserves biodiversity more, Green et al construct a model, and conclude that it is likely that the land sparing option is more biodiversity conserving than the land sharing option. Given that others also attempt such models, Dr. Dorin poses the questions about (i) how one biodiversity index (bird species) is adequate with no understanding of inter- and intra-species diversity, (ii) why a narrow and highly inadequate understanding of food security as food production levels continues to be used for such models. The models that ignore the complexities of food production, land use and biodiversity have a lot to learn from the alternatives present in India – a land constrained and labour abundant country. As we go on to the future, the gap in productivity between the capital intensive industrial agriculture of the North America or Europe and the labour intensive agriculture of South Asia and Sub-Saharan Africa will only increase. India may need to strongly support – especially in the national and international forums–a paradigm shift from the monocultures and techno-centric policies and practices of the green revolution to “agro-ecology” where biological synergies (instead of subsidised industrial inputs) are boosted below and above ground, amongst numerous plant and animal species, from soil fungi to trees, from soil bacteria or worms to buffalos, etc. And this in turn would demand marrying science to traditional knowledge; a core concern if the SDGs are to be taken seriously by the Governments implementing them.

The discussion focused on (i) how local, multi-commodity and multi-buyer markets are central to Indian agriculture, and how community plays a central role – whether in markets, forest regeneration and management, or biodiversity, and (ii) the nature of some crucial actors (the Aarthiyas) whose linkages with production and trade are so deeply entrenched in the mental models of the state and the farmers, that even sustainability or conservation questions are problematised in their language – in the same prevalent paradigm.

### **Session 3 | *Panel Discussion***

#### ***-- Science, Technology, Society Studies (STS): Research and Education***

This Session included presentations by Prof. Dhruv Raina (ZHCES, JNU), Prof. Sheila Jasanoff (Harvard Kennedy School of Government), and Prof. Shiv Visvanathan (Jindal Global Law School), with Prof. Ajay Dandekar (Director, School of Humanities and Social Sciences, SNU) chairing. The session examined questions on the history, practice, and teaching/study of STS in India.

Professor Raina gave an account of STS entering education through three narratives: the academic, the critical and the technocratic. The History and Philosophy of Science (HPS) owes much to the emergence of the social studies of science (SSS) in India, in particular the role that has been played by the IIT system (led by Leela Rao (a student of Bernal) - in the late 1970s). Yet, the SSS has inhabited the interstices between different institutions and systems. Though genuine attempts at creating integrated science education programs have been frequent, they



have found limited opportunity for STS in their engagement with science students (“you cannot make social constructivists out of practicing scientists”). Prof. Raina called for a kind of science studies that addresses the apolitical tendencies of science students as well as the need for more thinking about and education at the intersection of science, ethics and democratic citizenship. Given the inter-disciplinary questions that STS deals with, the University system can provide the space for new forms knowledge and opportunities to grow and challenge or disrupt. The Bangalore Communique, the revival of indigenous knowledge, and the attempts to theorise local knowledge systems are legacies that STS can and should build on in India. But for this, STS needs to step out of the case study method and theorise about social, political and scientific processes we live in and shape.

Prof. Sheila Jasanoff spoke about the limitations of history in telling the story of STS (“once one gets historical, the lines go everywhere”). Prof. Jasanof emphasized the importance of institutional boundary work and underlined the need for a critical field that calls into question the technocratic imagination dominant even in organizations like the Harvard Kennedy School. The need for a MA/M.Sc. programme in STS is considered extreme (science, unlike so many other fields, seems immune to having a critical domain exploring its limits and endeavour); it is as if the knowledge questions should not be asked. There are also questions about knowledge and power that STS can study, while acknowledging that there is only so much space that power offers to knowledge. In education and research, STS needs interdisciplinarity while maintaining a disciplinary boundedness; we need a Mertonian understanding of science in action. STS has not been perceived as an existential threat so much as a counterpoint to science departments, and while she observed that the best STS programs have been attached to engineering departments, she expressed that STS might find its best home in the liberal arts campus. The tools are there, going well beyond case studies, into the realm of sustained critique of science and technology.

Professor Visvanathan, wondered how STS might maintain its eccentricity and edge as a critical field. In India, the post-emergency period was a blessing of sorts; many a critical analysis of science and the role of science in nation building was posed during this period. But again, this phase did not lead to a larger body of knowledge on STS or enabled by STS. Prof. Visvanathan spoke of the urgent need to ask questions about democracy (because of the incompleteness of the idea of citizenship), violence (especially in India), and the vulnerability of traditional knowledge to alternative ways of seeing the world. He interrogated the genocidal aspects of development, and asked what different ideas of diversity. Does STS bring a dialogue, a language of diversity? The social and ecological history of India can relate democracy and knowledge in new ways. Nomadism, subversion and dissent, he contended, are ways of creating a different holism that STS could provide in imagining a different world. For us in India, we need eccentric minds that can create a new cosmology, include nature in the Indian constitution. We need the STS understanding to re-think economics, and explain the economics of suffering and time.

The discussion questioned and elucidated issues like (i) the meaning of a democracy yoked to free market economics, (ii) the nature of disciplinary boundedness and whether it would indeed be good for STS, (iii) history and philosophy of science that has produced the scientists doing STS in India, and their need for definitions, (iv) the understanding of eccentricity (as celebrated in the UK – which comes from ‘class’), as descriptive and normative engagements with the world of science or knowledge, and the need for STS to engage with various categories of eccentricity.

#### **Session 4 | SDGs**

##### **- *A domain for cross-national harmonization***

The fourth session included presentations by Mr. Sukumar Muralidharan (journalist, and former Fellow of the Indian Institute of Advanced Study, Shimla) and Prof. Vinod Vyasulu (School of Public Policy, Jindal Global University), and Dr. Nupur Chowdhury (Centre for Law and Governance Studies, JNU). The session was chaired by Prof. Shiv Visvanathan (Jindal Global University).

Mr. Muralidharan began his presentation with an insight into recent global negotiations; it is often the case that in global negotiations we forget what is in our interest as a people and take the official position. We assume that we use ‘reliable knowledge,’ which can be a pragmatist view or an instrumental view. What are our “true” priorities and interests in generating and making instrumental use of reliable knowledge, highlighting the contexts of discovery in knowledge production and questions of externalities and inclusion in conventional economic paradigms? Utilitarian logic does not work where there are externalities. Mr. Muralidharan proceeded to give an account of utilitarian logic as against social contract theory through a discussion of Rawls and Habermas. How do we discuss equal citizenship in IR theory? Do we demand that development costs and gains are shared equally among all citizens? In particular he discussed the difference principle, Rawls’s “Veil of ignorance”, and Habermas’s account of the public sphere as challenges for thinking about sustainability. He asked if ‘realism’ emerges as the only model of international relations. Cross-national harmonization, cross-regional harmonization, and cross-generational dialogue (“if I cannot be part of the solution then I should get out of the way”) emerged as problematics.

Professor Vinod Vyasulu addressed the fundamental reality that national Governments, many of them democratically elected Governments have agreed to implement the SDGs. The question then, is whether the neoliberal and neoclassical economic agendas that these Governments engage with, in a context where current critiques from the ideological right and many more from the ideological left who are not speaking to these crises, are helping at all with decisions that have to be made for sustainability and sustainable development. Globally, issues like the influence of the WTO (which he illustrated using the Novartis battle over Gleevac in the India

legal system), in conflicting national legal systems pose new puzzles on how to apply knowledge for decision making. Perhaps it is time for decision makers the world over, to turn to the economics of production that includes the production of waste, and consider the generation and use of energy in each production process. Prof Vyasulu referred to the economist Nicholas Georgescu-Roegen's work on entropy and the pressing need for new technologies as well as a re-orientation of economics globally, in order to meet the agreed upon SDG targets. It is because as humans we have access to exosomatic sources of energy that we expand our reach into planetary sources of energy or resources. If each unit of energy used increases entropy, and if there are global effects of monetary policy and climate change that cannot afford any more entropy (through the generation of waste, emissions), then it is advisable that we slow down the economy, within nation states and globally.

The presentation by Dr. Nupur Choudhury explored the idea of 'ecosystem republics' instead of the prevalent nation state. The earth as we see it, is a physical reality and as we see it in a picture, is nothing more than an *imagined* reality. In this imagined reality, the nation-state is a political experiment that has served us well. It emerged as the receptacle of our collective identities that are imbued in race, ethnicity, religion and caste. We have to understand that environmental challenges do not respect political boundaries. Dr. Choudhury developed and defended the hypothesis that the nation states and nationalism are inimical to the idea of environmental sustainability. There is an urgent need for reimagining nation states as a series of *ecosystem republics* with the objective of ensuring the integrity (sustainability) of these eco-systems. New developments in international policymaking like the Millenium Ecosystem Assessment by UN, or in international legal theory (recognition of obligation *ergaomnes*(obligations that states have towards international community) and international relations theory (new regionalism) are but expressions and indeed recognize the limitations of the nation-state as a political unit of organization. SDGs are the *de minimum* agenda that internationally governments have agreed within the UN system to pursue individually as well as collectively to "end poverty, protect the planet and ensure prosperity for all." Although the need to abandon states as separate political territories and therefore separate spheres of political action is necessary, however in the current context states continue to be the only legitimate political actor. Legitimate in the sense of ensuring democratic accountability. It is therefore important not to abandon political processes within the state but in fact strengthen it towards this end. It is important therefore that the voice of those communities whose life systems are intimately woven with natural eco-systems, are given most value in reimagining governance to achieve the SDGs.

The discussion focused on (i) diversity and multiplicity squaring in on the demand for harmonization, the question of inter-generational harmonization (Habermas) when they are not here to deliberate, the Rawlsian assumption about information that all stakeholders have and how political theory compares with a theory of justice or ethics, (ii) theoretical understanding that came before thermodynamics (like Patrick Geddes theorizing the Indian national movement), the

suitability of theories to address our realities, and the epistemology of development - the paper here (by Nupur Choudhury) is not so much about nation states but about the ways in which meanings are made and shared.

### **Session 5 | *Panel Discussion - Democratic Processes and Spaces for Sustainability***

This, the second panel discussion included three panellists Prof. Keshab Das (GIDR, Ahmedabad), Mr. Dinesh Abrol (CSSP, JNU and ISID, New Delhi) and Dr. Samuel Berthet (SHSS, SNU), all addressing questions about the relevance of SDGs in historically excluded terrains or spaces. The panel presentations were chaired by Dr. Jaideep Chatterjee (SHSS, SNU).

Prof Keshab Das addressed the development burden that was imposed on the rural non-farm sector, especially the crafts sector; the most crucial sector that can achieve SDG No. 8. Given that the farm sector is constrained to reach a target of 4 per cent annual growth in income, landless households account for a staggering 38 per cent of all rural households and the marginal and small farmers account for 85 per cent of cultivators, the burden of rural income and employment rests on the so-called non-farm sector. Given that the state has now identified innovation as a path to include the crafts sector in its development efforts, it has to confront the major forms of exclusion that this sector has faced – Spatial, Sectoral, Systemic and Seasonal. The policy apathy to rural industrialization has been analysed by many a scholar; what is not discussed is the opportunity and democratic space for the artisans and owners of these crafts to engage effectively with the development process, articulate appropriation or displacement of their resources (be it clay for the Mullela pottery in Rajasthan or any other where the resource has been leased out to urban builders), and demand innovation that builds on the existing skill sets in the crafts clusters. There are many countries where the prevalent exclusions were acknowledged and changes made in conceptualization, governance and linkages between the state (local government) and artisanal production systems and markets. A Cluster-Grid based on such experiences and the reality of these production systems has been proposed for India too. But these lessons are useful or possible for India only if our policy makers shift from the subsistence industrialization they subject these crafts to, and re-imagine crafts as creative sustainable production systems.

The presentation by Mr. Dinesh Abrol brought into focus the antagonistic political positions and power structures that the SDGs confront. Whether it is Governments that take positions that favour markets and international trade, or global regimes that allegedly address development demands in less developed regions, the processes are the same as those during the colonial era. The power structures and the elite capture of any new form of knowledge or resource is taken for granted. Dr. Abrol asked how the SDGs, which have inevitably followed the failed MDGs, will be any different? As far as development demands are concerned, there are ways in which CSIR and many NGOs and the People's Science Movement working with scientists had articulated real

life problems, identified and implemented technology based development solutions suitable for these problems. Cases ranging from leather technology to food processing and pottery technologies are available – irrespective of whether one calls them alternative technologies or intermediate technologies or appropriate technologies. The idea was to make people and the formal sciences work together in constructing new knowledge led production systems. But the success of these technologies, production systems and their sustainability is lost on a S&T system established and governed by the State, following the same dictats of liberalisation and intellectual property rights for profits. The State and its formal S&T system should engage with these histories and lived experiences in contemporary India, and enable sustainable development processes and goals or targets.

Dr. Samuel Berthet asked the participants to visualise the tribal areas of India and revisit the discourse on development. He presented his first entry into Bastar a tribal district in erstwhile Madhya Pradesh, now in Chhattisgarh, a new State. It was Iqbal who helped the scholars visiting Bastar with all the interviews they did, the data and information they collected. That Iqbal is no more, was killed recently, speaks volumes about the agency and voice that the tribals have in articulating their development demands or engagements with the state. While tribal India has gone through several phases of programmes for excluded areas, the ITDP (Integrated Tribal Development Programme) and the Modified Area Development Programme, the key actor has been the District Development Commissioner, and the articulation of development for the entire region is done by this officer. For the tribals, development has become an idea to perpetrate forms of exclusion. When relentless protests and anguish led to PESA, and when PESA was bypassed, followed by many other lost opportunities, the invariant constant was a bunch of people like Iqbal who saw the actors and their agency, who could articulate the paradox of “more State and less governance” in tribal areas. It is ironical that these people, the perpetually excluded populations did not make a demand for statehood – in this the formation of Chhattisgarh, but watched warily as a new governance began in their lands and their lives, in the form a new State. We are talking about sustainable development – both goals and processes, little realizing that the people who could articulate the multiple meanings of development are being eliminated slowly but certainly. There is a dire need for democratic spaces where these voices can be heard, dialogue opened and engaged with, to hope for sustainable development.

The presentations provoked a discussion on (i) the dynamics of power as played out in the democratic spaces we have now (as apathy, perpetuation of forms of exclusion, or increasing space for self expression), and the assumption that more democracy will lead to sustainability, and (ii) the possible theory of the relationship(s) between knowledge, democracy and sustainability.

### *- A space for ethical decision making*

In this last session of the Symposium, Mr. Samar Verma (Senior Program Specialist, IDRC, South Asia Office) and Prof. Girish Agarwal (School of Engineering Sciences, SNU) approached the SDGs and ethics question from their work on sustainability in the domains of practical development research and education. The session was chaired by Dr. Kaveri Gill (School of Humanities and Social Sciences, SNU), who began the session with a statement that ethical concerns and spaces are unfortunately relegated to the background when decisions (interventions or investments) are made for development.

Mr. Samar Verma presented the SDGs as a move towards goals that aim to be transformative, universal, inclusive, and feasibly implemented (an entire goal SDG No. 17 dedicated to implementation) through revitalised global partnerships. The most profound ethical challenge is captured in SDG No. 16.- to promote peaceful & inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions. He noted that the MDGs needed usable data for goals at multiple levels. But the SDGs beginning with a goal that questions prevalent social formations, access to justice and accountability of institutions, are built on a “data revolution.” This forms the cornerstone for the U.N.’s strategy for drafting, developing and implementing the SDGs. The work at the IDRC was in some ways ahead of the SDGs. In 2012, IDRC devoted itself to a programme titled Southern Voices, involving 49 IDRC supported Think Tanks, to address two key ethical problems in the global development agenda (i) knowledge asymmetry and (ii) participation deficit. Using the case of data availability, quality and institutional capacity in Bangladesh, he illustrated how IDRC was helping national implementation strategies. Many such demands like district level disaggregated data and information systems are crucial for ethical decision making. A lot more needs to be done – including in India, to implement the SDGs.

Professor Girish Agarwal in his presentation focused on education at SNU, as he presented slides he uses in some of his classes to bring about questions of sustainability. He described how he discusses sustainability indicators with his students, as well as various definitions of sustainability emerging from the Brundtland Commission, the Limits to Growth, even in much older texts from Thomas Malthus and others. One of the biggest challenges is to get 18-year-olds to be introspective, and open to understanding their own predicament in a world where the environmental problems they face or the solutions that they have been given are discussed with no ethical or moral context or consequence. Prof Agarwal spoke in particular about the how his class is asked to look at SNU as itself a case study in the contradictions of sustainability discourse. The University built on a predominant wetlands in the Yamuna flood plains, poses a major ethical question. Does education about SDGs or environmental governance in a campus

that has been responsible along with several other agencies, for degradation and loss of the wetlands and all its biodiversity, bode well for ethical practice?

The subsequent discussion revealed (i) the challenges for data-driven approaches, in terms of availability, accessibility, accountability, and usability; in the terms of attendees, and on how data can be used to make “objective” representations, and (ii) the ethical dimensions of development decisions fading out in the relationship between sustainability and power, and how the ambiguous term ‘ethics’ is being used in policy research and STS in India in contexts that are evidently unethical.

### **Session 7 | SDGs - *goals and processes***

This last session gave a brief insight into the key issues discussed in the previous sessions. The participants agreed that the group assembled here, perhaps with other research partners, should meet in SNU again to bring together a multi-institutional research programme, involving undergraduate, graduate and post-doc students, civil society organizations, industrial and government partners. This meeting could be scheduled around mid-March or early-April, to initiate a research programme.

Dr. Raina thanked all the participants, the collaborator (CSSP-JNU), the donor agencies (SERB-DST and ICSSR- Northern Regional Centre) and the SHSS (SNU) for meeting the shortfall in funds, colleagues in the Department of International Relations and Governance Studies and the Director, School of Humanities and Social Sciences, the student volunteers, rapporteurs, and organizational support team from SNU administration (accommodation, transport and catering services in particular) and finance.

(Rapporteurs – Deepak Singh, Poonam Pandey, Hilton Simmet, DebanjanaDey, Anurag Kanaujia, SadhnaSahu)

## Symposium Programme

Day 1	
TEA/COFFEE – 10.30-11 AM	
Session 1: 11AM-1PM <b>SDGs-</b> <b>A rubric for generating and utilizing knowledge for development</b>	Chair: Pranav Desai(Centre for Studies in Science Policy, Jawaharlal Nehru University)  MilindSohoni (Indian Institute of Technology, Mumbai)  Sunil Agarwal (SEED- Science for Equity, Empowerment and Development, DST)  ShijuVerughese (Centre for Studies in Science, Technology and Innovation Policy, Central University Gujarat)  Discussion: 12-1 PM
<b>CONFERENCE LUNCH – 1-2 PM</b>	
Session 2: 2-4 PM <b>SDGs-</b> <b>An umbrella for inclusive, democratic environmental deliberation</b>	Chair: Vinod Vyasulu (School of Public Policy, Jindal Global University)  Bina Agarwal (Professor of Development Economics and Environment, University of Manchester UK)  Bruno Dorin (Economics and Development Research, CSH)  MekhalaKrishnamoorthy (School of Humanities and Social Sciences, Shiv Nadar University)  Discussion: 3-4 PM
TEA/COFFEE: 4.00-4.30	
Session 3 – 4.30-6.00  <b>Panel discussion – Science, Technology,</b>	Chair: Ajay Dandekar (School of Humanities and Social Sciences, Shiv Nadar University)  Sheila Jasanoff (Kennedy School of Government, Harvard)



<p>Society Studies (STS) – Research and Education</p> <p><b>Interaction with students</b></p>	<p>University)</p> <p>Shiv Visvanathan (Jindal Global Law School, Jindal Global University)</p> <p>Dhruv Raina (ZHCES, Jawaharlal Nehru University)</p>
<p>Dinner : Shiv Nadar University – Dining Hall 7.00-9.00 PM</p>	
<p><b>Day 2</b></p>	
<p>17<sup>th</sup> January Session 4: 9.30-11.30 <b>SDGs-</b> <b>A domain for cross-national harmonization</b></p>	<p>Chair:Shiv Visvanathan (Jindal Global Law School, Jindal Global University)</p> <p>SukumarMuralidharan (Indian Institute of Advanced Study (2014-16), Shimla)</p> <p>Vinod Vyasulu (School of Public Policy, Jindal Global University)</p> <p>Nupur Chowdhury (Centre for the Study of Law and Governance, Jawaharlal Nehru University)</p>
<p>TEA/COFFEE: 11.30-12.00</p>	
<p>Session 5 – 12-1.30 PM</p> <p><b>Panel discussion</b> Democratic Processes and Spaces for Sustainability</p> <p><b>Interaction with students</b></p>	<p>Chair: Jaideep Chatterjee (School of Humanities and Social Sciences, SNU)</p> <p>Keshab Das (Gujarat Institute of Development Research, Ahmedabad)</p> <p>Dinesh Abrol (TRCSS Programme, CSSP, Jawaharlal Nehru University and Institute for Studies in Industrial Development)</p> <p>Samuel Berthet (School of Humanities and Social Sciences, Shiv Nadar University)</p>
<p>LUNCH – 1.30-2.30 PM</p>	
<p>Session 6: 2.30-4.30 <b>SDGs-</b> <b>A space for ethical decision making</b></p>	<p>Chair:Kaveri Gill (School of Humanities and Social Sciences, Shiv Nadar University)</p> <p><b>Y. Madhavi (National Institute of Science, Technology and Development Studies, CSIR-NISTADS)</b></p> <p>Samar Varma (Think Tank Initiative, IDRC South Asia Office,</p>

	New Delhi)  Girish Agarwal (School of Engineering Sciences, Shiv Nadar University)
TEA\COFFEE 4.30-4.45 PM	
Session 7 - 4.45-5.45 PM  <b>SDGs – goals and processes</b>	Discussion on a research agenda
5.45-5.50 PM	Vote of thanks
Dinner:– Shiv Nadar University, Dining Hall 2 - 7.00 -9.00 PM	