IGCS BULLETIN

From the Editors' Desk



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Dear Readers,

This bulletin issue is overshadowed by the recent event that has become known by now as the Chennai Flood 2015. As many of you may have learned through the media, for most of November and especially the first two weeks of December, large parts of the city and its outskirts were affected, causing tremendous damage to property and human suffering.

Once the event was over many thought the next calamity, the outbreak of epidemics and diseases, was in the waiting. Fortunately this

did not happen. Even though the city faced severe consequences, there were also signs of resilience. We can only hope that the lessons will be learned for the future. The Opinion piece discusses some of the critical issues in the light of the flood. IGCS was also directly affected as we had to postpone our conference from December to February. In spite of this, many other activities took place as you can read in the news section.

Thanking you, B S Murty and Christoph Woiwode **Editors**



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Prof. Chr. Woiwode

IGCS NEWS

2nd Multi-stakeholder Workshop on Peri-urban Dynamics of Sriperumbudur

Around 35 participants from State Planning Commis- changes and agent based modeling (ABM) scenarios. sion, Chennai Metropolitan Development Authority, academics, civil society groups, social and labor activists, research institutions, research scholars and students joined this workshop by expanding the scope of deliberations.

principal investigator, introduced the status of ongo-

Sriperumbudur Taluk in Kanchipuram District was set ing research on 'Peri-urban Dynamics and Sustainaaside for industrial development while without an bility: A case study of Sriperumbdur' to participants. integrated Master Plan. The apt revelation came out Master students who are engaged in the research during a half-day multi-stakeholder workshop orga- project shared their preliminary findings on governnized by IGCS on 27th November at IC&SR, IIT Madras. ance, information and communication, land use

Santha Sheela Nair, I.A.S. (Retd.), vice chairman, State Planning commission suggested that media and executive intervention are necessary to fructify the sustainability of growing peri-urban regions. Bangalore based Center for Study of Science Technology & Poli-Prof. Sudhir Chella Rajan, coordinator of IGCS and cy (C-STEP), which conducts a similar study in periurban region of Bangalore, were also invited to share



Upcoming Event

IGCS Winter School 2016 on Sustainable Application of Liquid Biofuels

22nd February to 5th March 2016 at IIT Madras

This IGCS Winter School on Biofuels is organized by IIT Madras in collaboration with OWI Oel-Waerme-Institut GmbH at RWTH Aachen University. The Winter School will focus on technologies in the energy domain with emphasis on liquid biofuels as sustainable fuel for future use. This IGCS Winter School will focus on production, characterization and the utilization of liquid biofuels covering related fundamentals, technological implications and policy issues. Along with class room lectures, the schedule of this Winter School will include laboratory activities, short focused team projects, brainstorming sessions and visits to biofuel facilities around Chennai.

For further information visit http://www.igcs-chennai.org/?page_id=3590



their research findings.

IGCS Visiting Prof. Christoph Woiwode led the lively discussions on inputs and observations from the participants. He observed that academic exercise should be put into practice, which was the main objective of

such workshops with multiple of stakeholders. Christoph Woiwode in his concluding remarks suggested reframing the approach comprehensively to include various layers of discussion happening in Sriperumbudur.

Since early 2015, the IGCS is engaged in an exploratory research programme as part of Department of Science and Technology's initiative to develop a Global Technology Watch on Sustainable Habitat. The research goals are to try to understand drivers of landuse change and industrialisation, in particular, but in the process also to understand their complex linkages with labour and migration, housing, water and energy demand, waste production, governance, among others, in Sriperumbudur Taluk.

As the research progresses, it is intended to share through multi-stakeholder workshops and stakeholder workshops to sharpen the outcomes. The IGCS concluded its first such workshop on April 21, 2015.



Rethinking Urban Nature Chennai Workshop

IGCS coordinated and hosted a day long workshop on Tallinn, and Chennai — the project explores how a IIT Madras as part of a research projected carried out courses and recent advances in urban ecology proby colleagues from the University of Cambridge. This vides a vital counterpoint to narrowly reductionist or international workshop forms part of a programme of utilitarian approaches to urban nature. The workshop work led by Professor Matthew Gandy at the Universi- attended by approximately 25 participants touched ty of Cambridge entitled "Rethinking urban nature" upon various issues under biodiversity and water refunded by the European Research Council.

Using four cities as case studies — London, Berlin,

'Rethinking Urban Nature' at the Department of Hu- theoretically nuanced and historically grounded explomanities and Social Sciences on 25th January 2016 in ration of the intersections between critical urban dissources in Chennai.

Symposium "Needs of Sustainable Cities" in Mumbai

IGCS Visiting Professor Dr. Christoph Woiwode was Das from Inclusive Cities Partnership Programme rati Vidyapeeth University in Pune, and Ms. Aparna Mumbai (Germany and India).

one of three invited key speakers at this workshop ICPP, Deutsche Gesellschaft fuer Internationale organised by the German House for Research and Zusammenarbeit (GIZ). The 12th "Stuttgart meets Innovation (DWIH) on January 22nd as part of the Mumbai" took place from 22-24 January. It is an inevent "Stuttgart meets Mumbai". Introductory re- tercultural get-together and wine festival organized marks were delivered by Dr. Hansen, Chairman of by the Indian Honorary Consulate in Stuttgart & Lapp Governing Board of DWIH New Delhi & Director of group. The event served as a meeting point for part-DFG India Office, and Mr. Lanzinger, Counsellor Sci-ners from politics, business, media, tourism, research ence and Technology Section at the German Embas- and development and wine industries of both the sy in New Delhi. The other two speakers were Prof. countries. The event is a platform to make inter-Dr. Shamita Kumar, Bharati Vidyapeeth Institute of esting contacts and to maintain and deepen the 47-Enviroment, Education and Research (BVIEER), Bha- year old city partnership between Stuttgart and

Upcoming Event

Indo-German Exchange "Beyond Disasters in Urban Areas", 7-9 April 2016

IGCS organizes this event in collaboration with the German Consulate General funded by the the International Climate Initiative of the German Foreign Office. It will contribute to the public discourse in the aftermath of the Chennai Flood in 2015. Many lessons have been learnt from floods in India as well as in Germany and have triggered changes towards better disaster management, early warning systems and preventive measures such as river restorations. The impact of this flood on all social strata and diverse economic activities suggests that an analysis of this event must include aspects outside the mere disaster risk management cycle. It must also include all aspects of water resources management, urbanization and development, and climate proofing.

Topics of the panels:

Panel 1: Disaster risk management and climate change adaptation- "Relief measures serving as the next preventive measures or no risk, no life?"

Panel 2: Water Resources Management in urban areas – "Our future water imports and life in sewage?"

Panel 3: Development and urbanization - "Wealth and poverty, development or intact nature, this or that OR BOTH?"

Panel 4: Governance and the role of media - "An apathetic society, saturated scientists, an expecting youth - media and government as messengers?"

A fieldtrip to disaster prone areas of Chennai is organized on April 9.

Further information on venue and a detailed program will soon be made available on the IGCS homepage: www.igcs-chennai.org

16th Conference of Network Association of European Researchers on Urbanization in the South (NAERUS) in Dortmund (Germany) 19-21 November 2015

iting Professor Dr. Christoph Woiwode presented a Global South. macro perspective on the project's research design, objectives, and initial findings in a paper "Peri-urban Dynamics and Sustainability in Chennai: the case of Sriperumbudur", which is co-authored by several

IGCS took part in the conference on the theme members of the project. The three day event fea-"WHO WINS AND WHO LOSES? - Exploring and tured two more panels on "Learning from diverse learning from transformations and actors in the cities experiences beyond 'best-practice'" and "The politics of the South" with two papers presenting work from of knowledge in research and education", and an the peri-urban research project about Sriperum- open space session. It concluded with an excursion budur in Panel 1 "Urbanization beyond megacities: to the iconic urban redevelopment area Lake Phoenew urban patterns – new constellations of actors". nix on the former grounds of a coal mine and steel Chloe Hill (Freiburg University) presented findings of processing plant. Both contributions were selected her master thesis "Social Resilience with Respect to among the ten best papers by the review committee Rapid Urbanisation: A Comparative Study of Employ- and will be published in one joined article in ment Groups within Peri-urban Chennai". IGCS Vis- TRIALOG: A Journal for Building and Planning in the

> The full papers are available online in the conference proceedings from the N-AERUS website: http://naerus.net/wp/?page_id=8



Photo: Presenters during Panel 1 discussion (centre: Dr. Christoph Woiwode, Chloe Hill)

IGCS Research Scholars



studies Cultural and Business iting peri-urban supervised by

Sudhir Chella Rajan and IGCS Visiting Professor Chris- location, a quantitative approach will be followed to toph Woiwode. She arrived at IITM in December 2015 gather primary data on water management practices and will stay until February 2016. Within her thesis and the public health situation on a household level. she aims to find out about the mutual influence of change processes and migration, industrialisation and religion. Furthermore she wants to work out the impact of these on local identity and the residents of Sriperumbudur town and Nemili village.

B. Eng. Henrik Otte currently studies in the Masters Programme "Integrated Water Resources Management (IWRM)" at the Institute for Technology and Resources Management in the Tropics and Subtropics at the University of Applied Sciences Cologne. A cooperation of the IGCS and the Center for Development Research (ZEF), Bonn, Germany laid the foundation for his internship at IGCS/IIT Madras.

During his stay at IGCS (January - March 2016) he will contribute to the ongoing peri-urban research project

Louisa van den Bosch of his supervisors Prof. S. International Chella Rajan and IGCS vis-Prof. Christoph Studies at University of Woiwode through a "Geo-Passau. She is writing Spatial Analysis of Public her bachelor thesis on Health in Sriperumbudur "change processes in Taluk". A survey based cultural heritage and methodology will build the local identity due to linchpin of the chosen rerapid urbanisation in search design and the core Chennai" collection data tool. While Prof. constant plotting of the



After his stay at IGCS he will conduct the interpretation of the collected data at ZEF, Bonn with Dr. Saravanan using advanced software (GIS, r, etc.). Through a geo-spatial analysis including hot-spot mapping, spatial correlation or regression analysis a spatial coincidence of water-management factors and health outcomes shall be revealed. Eventually the compiled results will be published in an international peer review journal.

Convinced of the integrated approach of IWRM, Henrik is eager to extend his rather technical expertise with practical experience in the interrelated sectors of water-management and public health.



Anu Rachel Thomas Niklas sAnu Rachel Thomas joined the IGCS for is currently a PhD two months (Jan Indian Institute of research Technology, Madras. For his master the-She works on the sis, he is collecting **IGCS-DST** project land of sustainable waste distributed points in management of sep- the Chennai Basin tage by composting to

and minimizing GHG emissions" in the area of sustain- perform a land use change analysis of the Chennai pollutants during the treatment. From September 16 Waske (FU Berlin). to December 14, 2015 (3 months) she was an IGCS research scholar at University of Stuttgart, Germany, in order to learn more on composting practices.

Potthoff research scholar in and Feb 2016) as a use titled "Development mation at randomly subsequently



ing urban water bodies and improving public sanita- Basin using multitemporal remote sensing data. He is tion under Prof. Dr. Ligy Philip, Dept. of Civil Engineer- studying "Environmental Hydrology" (M.Sc.) and is a ing, IITM, Chennai, India and in cooperation with Prof. student assistant in the department of Remote Sens-Dr- Ing. Martin Kranert, Institute for Sanitary Engi- ing and Geoinformatics at the Institute of Geographneering, Water Quality and Solid Waste Management, ical Sciences, Freie Universität Berlin. His master the-University of Stuttgart, Germany. In this project, she is sis constitutes a part of the IGCS-DST project working on the application of composting technology "Sustainable water resources management of Chennai for septage treatment and monitoring and minimizing basin under changing climate and land use". It is suthe GHG emissions during the treatment. Her scope of pervised by Prof. Sudheer and Prof. Balaji (IIT research also includes to understand the fate of micro Madras), and by Dr. Paul Wagner and Prof. Björn

Upcoming Event: IGCS Conference

Indo-German Conference on Sustainability "Exploring planetary boundaries and their challenges and opportunities", 27-28 December 2016, Indo-German Centre for Sustainability (IGCS), IIT Madras

This conference proposes to bring together researchers in academia and industry, and policy makers in India and Germany to exchange research findings, discuss and deliberate on these issues, and identify future course of action towards sustainability.

Conference website: http://www.igcs-chennai.org

IGCS Research News

Three masters theses were completed recently in cooperation with Freiburg University. Two were carried out as part of the peri-urban project in Sriperumbudur, another one on non-motorized transport in Chennai. Following are the abstracts:

"Social Resilience with Respect to Rapid Urbanisation: A comparative study of employment groups within peri-urban Chennai" (Chloe Hill)

The creation of Special Economic Zones (SEZs) and recent industrialisation in peri-urban Chennai has resulted in the rapid urbanisation of the region's settlements. While this industrial and urban expansion appears to have enhanced the region's economic development, little attention has been given to the social resilience of local municipalities. This study principally aims to qualitatively assess the social resilience of three defined, occasionally coinciding employment groups: small business owners, agricultural labourers and small landowners. Semi-structured interviews focusing on coping, adaptive and transformative capacities were conducted on the selected employment groups within two municipalities of peri -urban Chennai, namely Molachur and Santhavelur. This allowed the social resilience of two different research locations to also be compared as a secondary research objective.



Previously fertile agricultural area in Santhavelur

Results show that the social resilience of both land and business owners was comparatively high due to their associated financial capital and assets which enhanced their ability to take advantage of the re-

gions urbanisation and subsequently cope with and adapt to potential disturbances. Labourers, on the other hand, tended to have lower social resilience across all three capacities (coping, adaptive and transformative) when compared with business and landowners. The lower social resilience of the labourers reduced their ability to take advantage of the new economic, educational and employment opportunities offered by the urbanisation process and, in some instances, urbanisation was shown to actually worsen the labourer's existing opportunities. Subsequently inequality between the labourers and the land and business owners is predicted to rise in a business as usual scenario; thereby reducing the social resilience of the community as a whole.

"Governance of peri-urban water resources: A case study of the discourse practices around sustainable water management in greater Chennai region, India" (Robert John)

Due to high rates of industrialisation, urbanisation, population growth and irregular weather patterns peri-urban Chennai faces major challenges in managing its water resources sustainably. Sriperumbudur Taluk, the research site of the present study, is the industrial hub of Tamil Nadu. It is characterized by a high diversity of water consumer groups with very different needs and management approaches. This study attempts to understand the debates around water resources in Sriperumbudur Taluk and uncover its management implications by applying a policy discourse analysis. Hence the problem understandings, problem solutions and responsibilities in water resources management were analysed for a wide range of actors, in order to depict the diversity in narratives and strategic practices, as well as the contestations on the local and state level.

Findings of the research indicate that the perception and ideas of the actors are crucial factors that influence the policy development and management decisions. The 'problem' understanding of a 'water safe Sriperumbudur Taluk' influences the very design of

solutions as it delegitimatises any concern regarding cal tool to help conceptualize and distinguish benities and local villages. Third, the rigid governance play in it, above all in the Indian context. system and a strong village-state dichotomy hinders effective communication and participation mechanisms between the population, the leadership and administration, leaving behind disempowered communities and disjoint understandings of problems, solutions and responsibilities. In conclusion, the discourse on water resources management in Sriperumbudur is a highly contested area with diverse and competing interests as revealed by the variety of topics and argumentative strategies applied to pursue specific interests of the agents.

Green Mobility Aspirations in Chennai, India: Civil society's role in the development and implementation of the non-motorized transport policy of Chennai (Radina Vassileva)

In light of growing urban population and deteriorating street infrastructure, the Corporation of Chennai has adopted a non-motorized transport policy to move away from a car-centric approach of street planning. The aim of this thesis is to examine how civil society actors within Chennai have organized to influence the municipality to develop such a policy and to determine how they are involved in the policy's development and implementation. The research method is a single-case study using several concepts to guide the research process and analysis. The concept of multi-level perspective is used as an analyti-

the future water availability and allows for large tween different kinds of actors, while focusing on the scale developments. Other key findings include, first niche level as grassroots innovations and places to that the environmental or ecosystem dimension of experiment with alternatives and solutions. To enwater resources was widely neglected in the dis- sure the applicability to the local context of India, course, outcompeted by the dominant development the notion of what constitutes civil society and the paradigm of the region with a focus on industrial role it plays in municipal governing processes is also growth and infrastructure development. Second, the regarded. The objective is to contribute to the unlocal communities and farmers are commonly pre- derstanding of how civil society actors in Chennai are sented as mismanaging their water resources and organizing and what characterizes the activities they having lost their traditional community management are engaging in to improve their city and immediate system. This narrative is used to approve paternal- surroundings. This contributes to research on how istic solutions and justify the unequal distribution of community and local action can contribute to transiwater resources between industries, gated commu-tion towards change and what role civil society can



Results yielded to an active civil society arena, where numerous actors have engaged in a myriad of activities to raise awareness about the deteriorating street conditions, and the need for more space and better street designs in order to accommodate the needs of various street users. The media has played a key role in continuously reporting on the issue, the different activities, and organizations active in the field. The development and implementation of the policy have indicated that the policy was not an example of public participation, but rather it has been driven by specific civil society actors. As a result, first, the general public has not been taken along the process, second, the policy has been criticized for representing the interests and aspirations of 'Westernized' middleclass citizens neglecting the needs of the people who actually rely on pedestrian infrastructure.

OPINION

The Chennai Flood 2015: Trapped in the Tragedy of the Commons?

Christoph Woiwode IGCS, IIT Madras, Chennai 600 036



The Adyar River on 4th Dec 2015 (photo: C. Woiwode)

The recent floods in Chennai severely interrupted life though they are build right onto natural drainage, by the Chennai Metropolitan Development Authority doorstep. or the Directorate of Town and Country Planning even

of one of the largest metro-cities in India. It affected water catchment areas and lakes. This scenario invirtually everyone who lives and works in the city, cludes vital infrastructures such as Chennai Airport, indiscriminately cutting across social, class, gender, mobile phone towers and power substations, which, age, caste, and religious categories. Of course, not as a result of so much water became soon dysfunceveryone was affected to the same degree. Typically, tional for days. Apparently 'Risk Society', sociologist there are the highly vulnerable and less resilient indi- Ulrich Beck's 1980s analysis of the rise of global viduals like the aged and children as well as those threats that will not stop before the wealthy and groups residing in low-lying areas and along water affluent, has arrived in Chennai. Not enough, one othbodies. Yet to be clear, building structures in such er illustrative argument by him, called the locations range from squatter settlements of the poor 'boomerang effect' which describes a situation where to the high-rise thirty storey luxury condominium on the consequences of environmental exploitation and the city's outskirts and in the peri-urban region. While degradation bounce back to the originators to cause some of these are encroachments or better to say adverse outcomes such as high urban air pollution, unauthorised structures, many are legally approved water scarcity or climate change, is also clearly at the

Already during the event and especially in the aftermath various people and 'the public' was quick to both construct and deconstruct the reasons for this deluge. Climate change was somewhat topping the list - prominently argued for by Prime Minister Modi who at the time (coincidentally or fatefully?) attended the Climate Negotiations at COP 21 in Paris whereas many critics from civil society strongly point towards the rapid urbanisation and industrialisation processes with haphazard development projects and prevalent ignorance of ecological conditions. However, an instructive way to understand some of the comes for society at large on the other side.

Water, and even land, may be seen as such com- Currently, collective irresponsibility has been cultithis commonly available resource. Water is being drawn as a freely available resource at no cost from groundwater resources from within the city, but increasingly being ferried daily by thousands of tankers from far outside the city, diminishing this life giving resource for agricultural purposes. Water is extracted, distributed, and privatised without considering long-term consequences. In particular, water related infrastructure both, for water supply and security as well as sewage drainage and treatment and rain water management are not viewed as a resource of the commons.



obscure drivers that brought about such a devas- It is here that land as a factor is forgrounded and tating situation witnessed in November and Decem- comes into the equation. With high rates of growth, ber 2015 is the way we - as collectives: communities pressure on the housing market and demand for and societies - make use of environmental resources office space, land as a resource is primarily seen as a like land and water in the process of urbanisation. capitalist market asset in the real estate sector. As Ecologist Gerrit Hardin's "Tragedy of the Commons" such land is highly prone to being put to use singularwas published in 1968, arguably bringing forth the ly by applying an economic rationale of profit a decontestations between individual, utilitarian in-velopment project will yield during its lifetime, thereformed rational behaviour to use natural resources a by largely neglecting environmental concerns that la John Locke on one side, and the effective out- are either not considered at all or viewed as an unavoidable obstruction.

mons that assume crucial significance for develop- vated as the order of the day. Everyone who has the ment during rapid rates of urbanisation witnessed in ability (i.e. access by way of owning land or a busi-Chennai and India. Both land and water, being inti-ness) takes a free ride on land and water. Individuals mately connected have been increasingly absorbed as well as builders and multinational companies by market forces and appropriated equally by indi- manage to build on land not asking about its current viduals (residents, farmers), corporates and govern- function – which might be a seasonal lake, or natural ment agencies (Chennai Metro Water) who trade in water catchment area (a flood plain maybe!), marsh-



they would even do away with roads and divide all observe at many places in and around Chennai, and land only into plots. In almost all neighbourhoods on where we need to begin questioning seriously the the outskirts and new residential development areas concept of development and what we mean by the in the periphery (e.g. along the ECR and OMR) the very notion of progress. Eventually, we must also height. Yet the more we build and seal off, the more we will cut down on the available water resources. These activities are not keeping the larger picture in mind of the continuous loss of agricultural and other non-urban land. It is a classic case of the tragedy of the commons whereby each individual agent acts rationally to achieve maximum benefit while at the same time co-producing a collective disaster.



So what happens if a resource like water is a common resource available at no cost to everyone who owns land? What is the outcome of individual behaviour that overrides collective benefit? Coming back to Hardin's thesis, commons can be seen as a good ness of the flood risk and consequences is very high or resource whose characteristics make it difficult to fully enclose and partition, making it possible for non-owners to freeride by enjoying resource benefits while forcing owners to bear the costs. Even though profit seeking individuals (or companies for that matter) strive to make the most of the available resources, this will inevitably lead to environmental destruction thus producing the worst possible outcome for society at large, including depletion of groundwater, open green spaces, water pollution and human-induced flooding (e.g. by converting agri-

land, high quality arable land . If possible, it seems cultural to urban land use). This process is what we roads are so narrow that not even two cars fit next raise the issue as to how this kind of development to each other. This is profit maximization at its improves, stalls or even reduces the quality of life of people in the city.

> Following this analysis, we may argue that currently we see a co-production of irresponsibility as institutions are weak and no one else can be easily blamed. With no one taking the blame, i.e. being responsible, it is naturally tough to take action. Encouragement of a way out comes from the work of institutional economist Elinor Ostrom whose research demonstrates that in order to manage common properties, societies need to craft sustainable environmental institutions based on certain principles that tend to lead to beneficial, sustainable outcomes for all. So it appears one reasonable way out would be to align, strengthen and improve the institutions (legislation, mandates, organisations such as state, local, parastatal agencies and utility services) of governance. Governance in this instance may be seen not only as the role of government, but the linked interplay of civic society, private and public sectors in decision and policy making. Provided there is political will and commitment, collaborative action in combination with enlightened leadership appears to be a promising remedy. This is the opportunity to seize: among citizens, corporate sector, state and urban authorities awarenow, hence the momentum must be utilized to turn relief work into a mid- to long-term development perspective for the entire city region.

> What is essentially needed is to create a systemic awareness and practice of integrated urban-regional development processes by integrating disaster risk management and climate change resilience, i.e. the interlinkages of water, waste, energy, sewerage, natural ecological conditions/requirements, etc. among all stakeholders and create the institutional condi-

tions to recognise and work with these interlinkages/ interdependencies (as much as we noticed them in the negative: too much water on the road resulted in no power any more, no water supply any more, break down of waste collection and communication; so much we have to rethink and re-organise these so that they are resilient in the positive in future!). There is no need to re-invent the wheel! It is worthwhile to dig a bit in the history of establishing a national disaster management approach in India, which began by constituting the High Powered Committee on Disaster Management (HPC) in 1999 as a first attempt towards drawing up a systematic, comprehensive, and holistic approach towards disasters. In its voluminous report published in 2002, the HPC developed a National Disaster Management Policy and stated the importance of reliable and efficient information exchange between all the stakeholders. Central to the HPC report is the identification of the need of "ushering in new cultures" - a culture of preparedness, a culture of strategic thinking, and a culture of prevention - for the holistic development of the country and pro-active action with regard to disaster risk management, which envisage the involvement of Panchayati Raj Institutions (village selfgovernment), Urban Local Bodies (ULBs) and the NGOs for a complete, coordinated effort. Noteworthy is the terminology here, for the use of the word 'culture' was chosen consciously to promote the mainstreaming and institutionalisation of disaster risk management in the country so that it permeates all activities on various levels. The need of the hour would be then, to revisit such documents and the experience gathered over the last decade in other parts of the country in order to identify how a sound mainstreaming of disaster risk management and climate proofing for sustainable urbanization can be envisioned.

Supplementing this essay is a photo report "The Chennai Deluge 2015" by Christoph Woiwode, which can be downloaded here:

http://www.igcs-chennai.org/?page_id=4699

Environment News...

Centre hand-picks 20 smart cities for first phase of plan (excerpts)

The Hindu, Chennai, 29.01.2016

A new chapter in India's urban history has started with the Smart Cities Mission finally taking some material shape. Urban Development Minister Venkaiah Naidu on Thursday announced the list of 20 cities that have qualified to build smart infrastructure with Rs. 200 crore each from the Central government's first phase of funding. The Ministry has given top rating to Bhubaneswar for its robust smart city plan. Chennai and Coimbatore in Tamil Nadu are also among the selected cities of the first round.

The Central government has created an outside agency named Special Purpose Vehicle (SPV), which will be headed by a CEO, and will be given powers to "execute" the proposed developments and projects.

Needed, a comprehensive view on conservation (excerpts)

The Hindu, Chennai, 02.02.2016

Environmentalists decry a keyhole view of conserving wetlands. Protection of any major wetland is possible only if the health of buffer wetlands around it is taken into consideration. Similarly, the pollution levels in the whole region and threat from encroachments have to be factored in. "There is no point of calling a place like Pallikaranai a wetland if no cognizance is taken of the pollution the whole area is subjected to. Instead of simply focusing on the wetland alone, the buffer wetlands around it, which are 32 in number, need to be treated as ecological extensions with equal importance", said Jayashree Vencatesan, founder of Care Earth Trust.

The Trust, which had worked on an adaptive management plan for the conservation of the marsh, stressed on the need of people to be a major part of the process. Even though the northern side of the wetland has become a dumping spot for garbage, the southern side, which has freshwater flowing into it, has been a homefor many rare migratory birds.

The area came into focus, when after being flooded in the first week of December, large tracts of the wet-

Forthcoming Conferences

7th International Sustainability Transitions (IST) Conference 2016: Exploring Transition Research as Transformative Science

6th – 9th September 2016, Wuppertal, Germany

The conference website will be launched early in 2016: www.ist2016.org
For personal inquiries please do not hesitate to contact us:
Karoline Augenstein & Franziska Stelzer, ist2016@wupperinst.org
Submissions should be made electronically via www.ist2016.exordo.com between 15
January and 29 February 2016 according to the guidance below.

Invited are contributions focusing on the conceptual and methodological challenges of transformative science, i.e. research that is actively involved in societal transformation processes. We want to reflect on the challenges and lessons learned in concrete research projects, on theoretical contributions advancing our understanding of transitions, and on the role of science and scientists involved in transitions to sustainability.

Urban Transitions Global Summit 2016

5-9 September 2016 - Shanghai

Workshop proposals are invited by 20 January 2016. Abstracts for oral and poster papers are invited by 3 March 2016.

For more information and to submit abstracts visit: www.urbantransitionsconference.com

EDITORS

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