Global Spotlight Faculty Grants

2012 Cover Sheet — International Research Major Grant

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Project Information

Title of Project	The Great Transformation			
Proposed Start Date	08/15/2012 Mpp mm	Proposed End Date	08/15/2014 MM/DD/YYYY	

Project Abstract (maximum 200 words)

Rapid urbanization across Asia is undergoing a great transformation under the aegis of neoliberal, market-based policymaking emanating from the global North. Privatization of land and basic services is envisioned as capable of enhancing economic competitiveness, the prosperity of all urban residents and urban environmental sustainability, converting cities where much urban living is informal (e.g., land tenure, economic activities, access to amenities) into places where private ownership and formal markets dominate. A four-discipline three-country research team will undertake a relational comparison of two Asian cities experiencing this in distinct ways: Bangalore (India) and Jakarta (Indonesia). Here, and elsewhere, formalization of urban life and economies is accompanied by ongoing, even expanded, informality. In collaboration with local experts, these 'living laboratories' will be studied to understand the processes driving this transformation, their impact on urban residents in formal and informal areas, and how residents negotiate these changes. Core and peri-urban areas will be studied, as urban spaces that are particularly affected by neoliberalization. Utilizing a mixed methods research design (document analysis, surveys, interviews, focus group, participatory mapping), we will examine transformations how cities are undergoing neoliberalization, how articulations of distinct urban lifestyles are shifting, and how we should theorize and intervene in cities.

Financial Information

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U of M Department/Unit to Which Funds Should Be Awarded		Interdiscip. Center, Study of Global Change		
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Signatures

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Global Spotlight Faculty Grants — 2012 Cover Sheet for Major Grants

THE GREAT TRANSFORMATION: URBAN LAND MARKETS, LIVELIHOODS AND THE GROWING ECOLOGICAL CRISIS IN ASIA'S CITIES

GLOBAL SPOTLIGHT INTERNATIONAL RESEARCH MAJOR GRANT, 2012-14

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International Collaborators Carol Upadhya (Professor, National Institute for Advanced Study, Bangalore) / carol.upadhy@gmail.com Jo Santoso (Head, Graduate Program in Urban Planning, Tarumanagara University, Jakarta) / josantosojkt@yahoo.com A market economy must comprise all elements of industry, including labor, land, and money.... But labor and land are no other than the human beings themselves of which every society consists and the natural surroundings in which it exists. To include them in the market mechanism means to subordinate the substance of society itself to the laws of the market.

Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (2001 [1944]: 74-5)

Background

Between 2010 and 2030, the world's population living in cities is projected to double from 2.0 to 4.9 billion people; roughly 95% of this increase will be in less developed countries, more than 60% in Asia. Such massive urbanization is cause for both optimism and concern. Cities are unique sites of creativity, ferment, and action, long having served as crucibles for economic growth and social change. Yet they are also sites where the unequal distribution of wealth, resources, infrastructure, and opportunities can reach dystopian proportions. In megacities across the globe, a highly uneven mix of physical service provision – connection to piped sewerage, access to potable water, availability of latrines and regular garbage collection, and public transportation – has undermined health and livelihoods for the urban poor. There is growing alarm over the social and ecological sustainability of megacities (Freire and Stren 2001, Choe & Roberts 2011, McGee 2009, Pierce et al. 2009, Koonings and Kruijt 2010), invoking the specter of intensifying urban ecological disasters, water and housing shortages, lawlessness and violence.

Diagnoses of the primary source of such crises vary from demographic pressure to regional and inter-sectoral inequities and governance inefficiencies. At the same time, others envision cities as potential crucibles of environmental sustainability (Davis 2006, Glaeser 2011), triggering a war of ideas over remedies in which advocates of "urban

entrepreneurialism" currently dominate policy prescriptions. Their basic proposition is simple: cities must learn to behave more like private, profit-driven entities, embracing an entrepreneurial growth ethos. Deregulation of land and infrastructure, opening cities up to market forces, is a key tenet, along with "fast policy transfers" and "best practices" imported from other parts of the globe. This urban governance revolution, advocates maintain, will attract efficiency-enhancing private capital investment in land and infrastructure, thereby easing urban shortages in housing stock, municipal services (garbage collection, sewage, etc.) and infrastructural goods (roads, electricity, water connections), and reducing poverty. With rising concern about climate change and the environment, urban entrepreneurial strategies have taken questions of urban sustainability on board. Increasingly, urban political leaders see urban entrepreneurialism and sustainability as not necessarily in conflict, but as compatible policy goals. Yet, within an urban entrepreneurial context, policies introduced in the name of environmental sustainability have been limited – promoting small and discrete "light-green" steps, rather than substantive actions to improve environmental quality, social equity, and the urbanwide ecological footprint (While et al. 2004).

Proposed research

Advocates of this urban reform agenda claim that it can simultaneously spur economic growth and improve environmental quality, with better access to sanitation and public health through more efficient distribution of water and waste removal services. Are Asian cities in fact progressing toward these promised outcomes?

In collaboration with local partners, we propose to undertake a comparative analysis of these processes, and their implications for economic, social, and ecological sustainability, in two metropolitan areas: *Jakarta* (Indonesia) and *Bangalore* (India). Jakarta is Indonesia's global hub and center of national power, a rapidly growing metropolitan region of some 10 million residents. Located on Java's north shore, it sprawls southward across a flat, low-lying plain exceptionally vulnerable to sea-level rise. Jakarta's urban morphology is unusual by western standards, dubbed by Terry McGee (1991) as the "*desakota*" urban form of Southeast Asia, with no clear boundary between city and country. In central parts of Jakarta, built-up areas and agricultural land can be found side-by-side. Similarly, its edge is all but impossible to identify: Settlements in rural Java are exceptionally dense, and Jakarta also has become a megalopolis (Gottman, 1964) incorporating three other cities to form *Jabotabek* (Bunnell & Miller, 2011).¹

In contrast to Jakarta, the transformation of Bangalore as a world city has been sudden and stark. Before the 1990s, this southern Indian city was nationally known as the "pensioner's paradise" and "garden city": a secure, sedate middle class government town with temperate weather, fueled by an urban economy producing salaried jobs in prominent defense, space, factory tool, and aeronautic industries (Heitzman 2004, Nair 2005). The city's core was re-designed by British colonialists, first as a military cantonment and then with British neighborhoods of lush garden bungalows and tree-lined streets. Separated by boulevards, walls, and parks were the denser working-class *petes* or markets around which most local Indians (or Kannidigas) lived. Extending from this divided core was a landscape dotted with approximately 80 lakes supplying water to the city's residents, encircled by a thick green belt of forest and rich arable lands producing vegetables, rice, and pulses.

¹ These cities are Bogor, Tangerang and Bekasi.

Since the 1990s, both Bangalore and Jakarta have promoted urban entrepreneurialism as part of their countries' embrace of market-led reforms, recently augmenting these policies to address questions of ecological sustainability. In Jakarta neoliberal reform began in the early 1990s, triggering a massive transformation of its central city skyline. High-rise office towers and Mixed Use Developments (MUDs, combining retail & residential units) now dot the landscape, serving a growing Indonesian middle class. Between the highways and MUDs, traditional settlements known as *kampungs* foster alternative urban livelihoods in low-rise neighborhoods with micro-gardens and no motor traffic, and rural Javanese governance systems (Silver 2008, Kusno 2010, Simone 2010). While far from ideal, these spaces of relatively peaceful and slow living are viewed as prime real estate by commercial developers and land speculators – and are increasingly under threat. Jakarta's peri-urban fringe is meanwhile experiencing massive urban sprawl with indigenous settlements "more and more isolated and marginalized by a number of a new highways, industries, 'walled' housing estates, golf courses, and even by the emerging 'new' informal settlements" (Peresthu, 2005: 49).

In Bangalore, only with the post-1990 IT revolution did the idea emerge to transform this small city into a world-competitive metropolis. A 2007 Master Plan project expanded the city's reach from 226 km² to 696 km², incorporating seven towns and more than 100 villages into Greater Bangalore, with plans to expand eventually to 7,000 km². A series of world-city projects, financed in large part by foreign investors and builders, are transforming the peri-urban green belt into a zone of highly speculative real estate for high-end residential complexes, shopping centers, and business campuses catering to the city's burgeoning professional classes (Goldman 2011a). One project alone, the Bangalore-Mysore Infrastructural Corridor, will eventually displace more than

200,000 rural denizens for a six-lane toll highway and seven private townships (Dubaibased Limitless, LLC. was its largest investor) (Goldman 2011b). At the same time, the city's core is being built up vertically, replacing the older marketplaces with MUDs that effectively crowd out older neighborhoods, threatening working-class economies and social networks with foreclosure and dispossession.

Bangalore and Jakarta are representative of broader trends: across the global South, cities have become the new front line for market experiments and reform. The promarket movement promises "world class" living for all urban residents, and a "great transformation" is supposedly underway. Cities have embraced privatization; domestic and foreign capital flows have risen, in some cases sharply; middle class buying power has soared; and property markets are humming. Land has become the new gold of this transformation, rendered into a liquid asset by expansive de-regulation of housing, construction and real-estate markets; use of "eminent domain" powers to "free" land from customary forms of ownership and use. Pent-up demand for land by investors and consumers has also been unleashed through numerous banking and legal innovations (introducing home mortgages, and forms of institutional lending built on financial derivatives).

But there are troubling signs. Despite, or perhaps *because of*, these transformations, intra-metropolitan gulfs in wealth and access to basic infrastructure continue to widen (Nuttall and Mbembe 2008, Simone 2010, UN-Habitat 2010). In order to build upscale condos and high rises, high-end shopping malls, and toll super-highways for those who can afford private automobiles, domestic and foreign investors have engaged in land grabs and land hoarding within cities and on their peri-urban frontiers, often with the complicity of state authorities. Among newly affluent urban residents, this

has spawned patterns of resource-intensive consumption, generating growing quantities of waste and stressing urban infrastructures. For vulnerable populations with modest ecological footprints, it has triggered widespread displacement, disrupting pre-existing forms of city living and the complex livelihood strategies developed to cope with the transition from rural to urban life; led to a multiplication of new squatter settlements; and aggravated inequities in access to water, sanitation, electricity and reliable transportation.

In short, Asia's urban revolution may be jeopardizing its cities' social and ecological fabric. Residents are enjoined to aspire to western lifestyles that have a potentially considerable ecological impact and are increasingly out of reach of those who live differently—the urban poor. *Are we at a moment when the solution has become the problem*?

Intellectual merit

Our research focuses centrally on the *Impact of Urbanization*. It rides on the crest of and contributes to research on three profound "events" of significant scholarly interest, currently unfolding with respect to the urbanizing global South: three urban transformations. *The first* of these is the neoliberal transformation of cities, with deregulation of land markets, privatization of infrastructure provision, and urban governance reform at its leading edge; the *second* concerns how the urban majority grapple with inadequate access to public goods and resources, and the hybrid urban spaces and social infrastructures they themselves create outside of master plans and governance policies; the *third* has to do with the implications of the foregoing transformations for how we theorize, analyze and plan for cities. Methodologically, we

also seek to contribute to novel approaches to comparative social science—in ways that reflect the deeply interconnected nature of our contemporary world.

Neoliberalization The urban reform agenda seeking to unleash entrepreneurial energies and remake the city is having its most transformative effect in the urban core and periurban frontiers. One of the principal instruments for unleashing this entrepreneurialism is the "freeing-up" of land into markets (through eminent domain; re-zoning and real-estate deregulation; formal titling of and electronic registries for land; financial innovations such as home mortgages and derivatives-based commercial loans; state-private partnerships, and so on), such that the "dormant value" of this land can be tapped for accumulation by conversion to its 'highest and best use'. The neoliberalization of urban governance, including green governance, receives extensive attention in the global North (Brenner & Theodore 2002, Leitner 1990, Lietner & Sheppard 1998, While et al. 2004); but research on Asian cities is of relatively recent provenance, with scant attention to environmental aspects. Our focus on ongoing market-led transformations in the core and peri-urban areas of Bangalore and Jakarta will investigate how urban reform is imagined and implemented; the structural similarities between urban transformations across the global South due to widespread circulation and adoption of "best practices" by urban policymakers; and differences in neoliberalization trajectories due to geographic and historical particularities. Thus, this research contributes to emerging scholarship on fast policy transfer and the geographically variegated nature of neoliberalization (Peck 2010, McCann &Ward 2011).

Hybrid spaces Urban neoliberal reforms have provoked a curious phenomenon in Asian cities, and across the global South. Alongside growth in formal employment and commerce, there has been an explosion of informal economies, ranging from squatter settlements and real estate developments to forms of labor and livelihoods (Roy & AlSayyad 2004). Market transactions based on informal negotiations, extra-legal tactics, and 'black money' or labor arrangements that involve working in unorganized enterprises or households, which were predicted to decline as the formal economy grew in importance, instead have proliferated in cities such as Bangalore and Jakarta. The entanglement of formal and informal economies is a distinctive feature of Asian urbanization (indeed, across the global South). As such, Asian cities may be regarded as "hybrid" spaces, shaped by the interplay between certain universal factors that propagate "sameness" (for example, circulating models of urbanism in the image of the global North), and particular factors and conditions that produce concrete "difference" (such as distinctive forms of human settlement, livelihood practices and urban-rural relations). This interplay can range from mutual accommodation to mutual antagonism or, more typically, a combination thereof (Bayat 2000, Benjamin 2008, Benjamin & Bhuvaneswari 2001, Simone 2004, 2010). How processes of neoliberalization unfold, what negotiations occur, and what outcomes are produced depends on the dynamic inter-relationships of formal to informal, universal to particular. As Leitner et al. (2007) argue, we have much to gain from understanding market-led urban transformations as "contestations" between plural understandings and ways of organizing urban existence. Our research examines these relations in a city that exemplifies the distinctive 'desakota' urbanism of Southeast Asia (Jakarta), and one that exemplifies attempts to leapfrog Asian cities into the digital age (Bangalore).

Retheorizing cities A major debate in urban studies concerns making sense of 'postcolonial' cities, asking questions such as whether the theories and tools developed in western Europe and North America are adequate to understanding and improving cities in Asia, Africa and Latin America. This debate underscores the importance of recognizing multiple "theory-cultures" (MacFarlane, 2008) within the realms of knowledge production and urban policymaking (Robinson 2004, Roy 2009, Roy & Ong 2011, Watson 2009). Our research makes space for such multiplicity by generating "grounded theory" about Asian cities in collaboration with knowledgeable local scholars, assembling an analytical toolkit that bears greater fidelity to urban transformations in non-western contexts. From a practical and pedagogical standpoint, we hope to unearth local knowledge and expertise to identify forms of urban habitation that may offer solutions to the growing problems of socio-economic inequality and ecological degradation afflicting urban Asia. The decisively eastward shifting center of gravity of the global economy, dubbed "the Asian century" by some scholars and journalists, will have profound implications in the future for knowledge production. Our research anticipates such an epistemological shift and emphasizes the potential of the coproduction of knowledge.

Relational urban comparison Comparative social science has long focused on place. Comparative political science, economics, and urban studies sought to isolate and compare different territorial entities in a quasi-experimental design that controlled for some variables in order to focus on variation in others, or compare such entities (typically nation-states or cities) as representative of different place types. Ethnographies had also

long been place-bound, as scholars embedded themselves in local particularity in order to interpret it for others. In our globalizing world, ethnographers have turned to multi-sited approaches and urban studies scholars have called for a comparative approach that eschews both the "case study" as well as the "ideal type," on the grounds that urban transformations are best studied as *relational* (Coleman & von Heller man 2011, Gannets 2003, Nyman 2007, Ward 2010, Robinson 2011). Cities are connected not just by flows of capital, labor, and commerce, but also through "policy mobilities" (Peck & Theodore 2010) of ideas, models, strategies, and ways-of-doing in the domains of government and civil society. The proposed research contributes to the emerging literature on the relational comparisons approach through a multi-scalar research design:

- At the *intra-urban* scale, each team will engage in a relational comparison of transformations in core and peri-urban areas.
- At the *inter-urban* scale, connecting the research teams in each city, we will tease out commonalities and differences between the two (as well as with other cities)

International, Interdisciplinary Partnerships (4 disciplines, 3 countries)

This is an interdisciplinary collaboration involving scholars from 4 disciplines (architecture and urban planning, geography, sociology, and anthropology) in 3 countries (US, India, and Indonesia). Our partners in Bangalore and Jakarta, Professors Carol Upadhya and Jo Santoso, are prominent urban scholars with active research programs involving local students and community organizations. Dr. Carol Upadhya, a social anthropologist trained at Yale University, is currently Professor in the School of Social Sciences at the National Institute of Advanced Study (NIAS), Bangalore. She anchors the Urban Research and Policy Programme at NIAS, and is co-director of an international collaborative research program entitled 'Provincial Globalization: The Impact of Reverse Transnational Flows in India's Regional Towns'. She has contributed new theoretical insights and ethnographic data to the anthropology of globalization through research on Bangalore's high-tech model of urbanization. Our partner in Jakarta, Dr. Jo Santoso, is Head of the Graduate Program in Urban Planning at Tarumanagara University. Trained in Germany, Professor Santoso is a leading figure in Indonesia's urban planning circles. His research on mega-cities seeks to improve the quality of the city as a human settlement not just in terms of its physical-technical, ecological and economic conditions but also as a place of co-habitation between different groups of people. He asks how cities can develop a strong local character even as they enter the embrace of expanding global markets; and how relations between a city and its region can be revitalized for ecological and economic sustainability.

The University of Minnesota co-PIs bring extensive overlapping expertise to this project. Vinay Gidwani has been studying agrarian change and rural-to-urban migration in India for over a decade, and is actively involved with a Delhi-based research and advocacy group (Chintan) that strives to involve informal sector waste recyclers in India's cities in urban waste management. Michael Goldman has studied international finance institutions, urbanization, and development in Asian cities, from the mid-1990s. His current research investigates the links between finance capital and urbanization in Bangalore, as well as connections with Dubai, Singapore, and Shanghai. Helga Leitner and Eric Sheppard have undertaken twenty years of collaborative research into the politics and economics of urban development in Europe, North America, Singapore, and Jakarta, investigating the governance transition from urban management to entrepreneurialism, its contestations, and its implications for urban livelihood

possibilities within and between cities. This proposed research draws on the PIs' extensive prior collaborations. These include three international interdisciplinary conferences co-organized by the PIs, in 2003 and 2008 in Minnesota, and in 2010 in Shenzhen (China), which have helped catalyze a multinational research community working on urbanization in Asia and Africa; a grant awarded to one of the PIs (Leitner) from the *Social Science Research Council*, supporting twelve US doctoral students from six disciplines whose doctoral work examines these issues; and a grant from the *Urban Studies Foundation* to support a fourth conference in Jakarta in March 2012 (see CVs in the **Appendices**). Each of the PIs has worked on collaborative research with scholars from India or Indonesia.

The collaboration also takes advantage of the extensive experience of the Interdisciplinary Center for the Study of Global Change (ICGC) in fostering interdisciplinary, international collaborations. ICGC supports graduate research and interdisciplinary research networks on the global South, involving 75 affiliated faculty members from six colleges across the University of Minnesota. ICGC has a strong track record bringing together scholars to work together as part of thematic research networks, resulting in multiple publications and long-standing collaborations. These networks have included interdisciplinary groups of scholars working on themes of: Gender and Global Change, Water Security and Conflict, Informal Institutions, and Human Rights. ICGC's long history of leadership of consortia and collaborative initiatives includes the Minnesota-Stanford- Wisconsin MacArthur Consortium on Peace and International Cooperation (1994-2004), coordination of the Compton International and Peace Fellows network across several universities (2001-2011), undergraduate honors program partnerships with several U.S. minority-serving institutions, an ongoing collaborative

program of graduate education and faculty research with the University of the Western Cape (Cape Town), and a recently established professional master's degree program for international development practitioners in collaboration with the Humphrey School.

Objectives

In the conventional model of urban transformation, drawn from the historical experience of the global North, slums and associated forms of economy informality (such as street vending) are expected to dissipate as cities develop and markets mature (e.g. World Bank 2009: 212-3). Yet cities in the global South appear to be bucking this trend by displaying the obverse: a concurrent expansion of the informal and the formal.

This empirical puzzle – *the positive correlation of formal and informal* – serves as backdrop for this Global Spotlight International Research Grant application. Using an "urban comparativist" approach (see **Intellectual Merit**) our research will examine, in Bangalore and Jakarta, three interconnected questions that stem from the puzzle at hand:

- *Q1*. What **processes** of neoliberalization are involved in the transformation of core and peri-urban neighborhoods in Bangalore and Jakarta, and how are urban reforms being conceived and implemented?
- *Q2.* What are the differential social and environmental **impacts** of these processes with respect to land and sanitation in core and peri-urban areas? Who are the "winners" and "losers," and why?
- Q3. How are residents in affected core and peri-urban areas negotiating rapid change in their social, economic, and physical environments – particularly in terms of protecting or reconstructing sustainable livelihoods and access to basic sanitation

(drinking water and waste removal)? What happens as different livelihood strategies rub up against one another?

Methods to meet project objectives Our research design demands sites where we can explore the concurrent growth of formal and informal economies, and their dynamic interactions. There is a now burgeoning literature (critical as well as affirmative) on urban entrepreneurialism, sustainability, and informality (Krueger & Gibbs 2007, Roy 2004, Brenner & Theodore 2002, Leitner & Sheppard 1998, Leitner 1990), but a striking paucity of careful empirical scholarship on the *in situ* emergence and articulation of these with one another in cities of the global South. How do these co-emerge and impact each other?

We propose to select two sites each in Bangalore and Jakarta, one in the city "core" and the other at the "peri-urban" frontier, where we can observe the co-evolution and interlacing of urban entrepreneurialism, sustainability and informality. The specific sites, representative of the processes described above, incorporating both formal and informal domains, will be selected in consultation with our collaborators in Bangalore and Jakarta.

In order to answer the three research questions (see **Objectives** above) we will employ a diverse set of methods including document analysis, household surveys, interviews, participatory mapping, and observations. With respect to Q1 (**processes**), we will undertake a textual analysis of local planning, legal and policy documents, reports by various government commissions, as well as reports prepared by private consulting firms. This will be complemented by interviews with key actors (city officials and planners,

local and international consultants, etc.) to trace the origin and inter-urban transfer of neoliberal urban development strategies and models.

With respect to Q2 (**impacts**), we will conduct surveys with 200 households in the four sites – 50 per site (25 in formal developments and 25 in informal developments) to examine the differential impacts of social transformations on land, sanitation, and livelihoods as experienced by the residents. Households will be selected through a purposive sample since we do not know the population from which we can randomly sample. The objective is to capture the variety of populations who reside in these areas, aiming for "saturation" in the information collected. We will collect measurable indicators on costs and availability of water, waste removal facilities (including access to personal sanitation and waste removal), income generating activities, and other livelihoods strategies (such as barter).

With respect to Q3 (**negotiations**), we will investigate the range of strategies and tactics employed by residents in handling the impacts and experience of ongoing transformations. We will examine these through multiple qualitative methods including intensive interviews, observations, and focus groups. Local research assistants will conduct intensive interviews with residents of the same purposive sample selected for the household surveys. These will be complemented by observations of everyday activities, community meetings, and social events at the four sites. Further, in order to identify the changing 'activity spaces' engendered by these transformations, we will conduct two focus groups at each site. Focus groups participants will engage in participatory mapping exercises, mapping out changes in how they use the city, in their access to water, waste removal, personal sanitation, and livelihood spaces (Craig et al. 2002, Harris et al. 1995, Kurtz et al. 2001, Rocheleau 2005, Weiner et al. 1995). The purpose of the information

collected is not only to trace these changes for both the informal and formal domains, but also to show how these domains intersect with and affect one another and the negotiations that ensue. In doing so, we seek to trace both local and non-local aspects of these practices of negotiation—how they also connect local household members with other parts of the city and with rural areas. We plan to overlay maps constructed in the different focus groups and present it to residents in order to stimulate reflections on the differential impact of these transformations on their fellow urban residents and on environmental sustainability.

Data preparation and analysis. ATLAS.ti, a software package for the analysis of qualitative data, will be used to integrate the different sources of information (transcribed key informant and residents interviews, documentation of observations, texts of government and consultancy documents, and the household survey) into a central database, as well as to code and analyze the information.

Assessments

Our evaluation plan includes both internal monitoring and reporting at both sites, overseen from Minnesota, as well as external evaluations and feedback. Web-based technologies will be utilized to make regular reporting from the field available to all team members. The PIs and their collaborators will monitor these, consulting regularly and making course corrections as needed. Research presented and published in academic forums will receive feedback and be refereed by peer scholars. Presentations to communities and other stakeholders will enable feedback from a wide variety of people knowledgeable about local developments. As part of the web site, an online platform will present interim results and seek feedback from research informants and community organizers.

Dissemination of research

The nature and consequences of urban transformations in the global South are of particular academic and public interest. All of the PIs on this grant publish in major scholarly journals, and we plan to publish our outcomes in similar scholarly outlets. We also will disseminate research findings to non-academic audiences, via public forums in Bangalore and Jakarta, reports written for local media, feedback-seeking meetings in communities where research was undertaken, and consultations with local and national officials and in policy forums. Web sites and social media will be utilized to communicate in real time between Bangalore, Jakarta, and Minneapolis as the research unfolds. Research findings will also be utilized in undergraduate courses and graduate seminars in our respective units, creating pedagogical and training opportunities that extend beyond the research.

In particular, we will transfer this unique collaborative opportunity into the classroom by introducing a multi-national, multi-disciplinary course for graduate students from Minneapolis, Jakarta, and Bangalore. Through web classroom technologies, we will co-teach a graduate seminar (cross-listed at the University of Minnesota in Sociology and Geography) on global urbanism that would be based on our collaborative research program and co-taught by the PIs.

Future funding

If this project is funded, we will apply to the National Science Foundation's Office for International Science and Engineering, Partnerships in International Research and Education (PIRE) program, to support a concluding workshop that would convene the co-PIs along with international partners and researchers focusing on comparison across Bangalore and Jakarta. The goal would be to develop broader implications for cities elsewhere. We anticipate that this research will enable us to write competitive large research grant applications to the National Science Foundation (NSF) and the Rockefeller Foundation. This research design aligns closely with NSF priorities of fostering transformative research, interdisciplinary partnerships, and broadened participation. Its thematic focus is suitable for application to the Geography and Spatial Sciences and Sociology programs, and it fits well with several cross-cutting NSF themes: Dynamics of Coupled Natural and Social Systems, PIRE, Partnerships for Enhanced Engagement in Research, and Sustainability Research Networks.

Recently, NSF published the results of a visioning exercise undertaken for the Social, Behavioral and Economic Sciences directorate (National Science Foundation 2011), identifying four priority areas for research. Two of these would be directly addressed in this research program: Population change (i.e., urbanization), and disparities in experience and access to resources. The Rockefeller Foundation has identified urbanization as a priority area for research, "exploring the best models for addressing the health and survival threats of unplanned urban areas"

(http://www.rockefellerfoundation.org/who-we-are/our-focus/urbanization) (see also Pierce et al. 2009), and has a substantial interest in Asia and sustainability. Our colleagues in Bangalore and Indonesia will concurrently apply for research and education

funds from their own national funding bodies, and from granting institutions in Germany and Holland that already have been substantially supporting their research.

Finally, we will leverage this Global Spotlight grant to apply for one of the major multi-year NSF grants: The Integrative Graduate Education and Traineeship (IGERT) Program. We are confident that funding agencies will be keen on supporting the interdisciplinary and collaborative dimensions of our long-term agenda, as well as the specific outcomes we seek for sound policies on urban sustainability, underwriting our broader endeavor to make the University of Minnesota a national center for research into international urban issues.

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