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Background Paper

Integrated Regional Planning for Sustainable Development in Asia: Innovations in the Governance of Metropolitan, Rural-Urban, and Transborder Riparian Regions

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1. Integrated Regional Development Planning (IRDP) and "The Future We Want"

Growing worldwide consensus on the need for sustainable development is leading to new approaches to integrated regional development planning (IRDP). In most of Asia regional planning characteristically has been top-down, siloed in separate sectoral ministries and pursued without significant citizen participation (Laquian 2005). Taking the lead from the UN (2012) Rio+20 resolutions on *The Future We Want*, alternative IRDP initiatives would instead be based on participatory and inclusive processes of planning the can transcend sectors as well as administrative boundaries to pursue "holistic and integrated approaches to sustainable development". Further, to link the life-spaces (Friedmann 1988, 1992) of poorer and marginalized populations with regional levels of planning would require such an integrative approach to be multi-scalar in ways that can consider the needs of a low-income neighborhood while also managing region-wide issues of flooding (Brocks and Schulitz 2006, King et al. 2008).

In other terms, IRDP for sustainable development calls for a process of governance that is capable of reflexively adjusting to the complex interplay of social, environmental and economic dynamics both vertically from smaller to larger spaces and horizontally across sectors and territorial boundaries. The focus on governance, which can be defined as decisionmaking and action in the public domain, is used to bring civil society into regional planning frameworks along with government and the private sector (Friedmann 1987, van de Meene et al. 2011). In reconfirming "the key role of all levels of government and legislative bodies in promoting sustainable development", *The Future We Want* (UN 2012) also states that:

> We acknowledge that democracy and good governance are essential for sustainable development, including sustained and inclusive economic growth, social development, environmental protection and the eradication of poverty and hunger.

Whether subnational or supranational, the regional scale can in many circumstances provide an important scale of planning that is not available through existing territorial systems of governance. In many instances administrative areas are either too small or only occupy a portion of a regional ecology and thus need to be combined at larger regional scales for collaboration. The regional scale can also provide a more efficient level of

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cooperation among development planning units in terms of shared costs of infrastructure and services.

For these and other reasons, such as the need to ameliorate hyper-competitiveness among adjacent jurisdictions, a revival in regional planning has occurred following the first Rio Conference on the Environment and Development in 1992 (Haughton and Counsell 2004, Brocks et al. 2006). This has been reinforced in the 2012 Rio+20 conference, which provides the normative directions for IRDP that point toward environmental and social justice, basic human rights, and forms of social progress that go beyond material measures to enhance human capabilities (Nussbaum 2002) and human flourishing (Friedmann 2011).

Working toward such an adaptive IRDP approach is multifaceted in its institutional requirements. Among the most important are decentralized forms of governance. When defined as devolution of decisionmaking power and fiscal capacity to democratically elected local governments, decentralization in Asia has only begun to make progress over the past two decades in most countries (Bahl 2005, World Bank 2005, Douglass 2013). Nonetheless, decentralization and democratization are among the most prevalent directions of government reforms throughout the world, including Asia (White and Smoke 2005, UCLG 2008). Matching IRDP with devolved forms of governance is thus one of its major tasks.

Given how recent these new directions are in Asia, actual participatory IRDP experiences tend to appear as experiments rather than as practices imbedded in governance routines. Even in countries such as Indonesia, where radical decentralization has occurred, or in the Philippines, which has long been divided into subnational regions for development planning, centralized bureaucratic forms of development planning remain dominant (Mercado 2002, Firman 2010b, King et al. 2008).

To illustrate the need for innovations in integrated regional development planning, the discussion below focuses on three types of regional settings: extended metropolitan regions (EMRs), rural-urban regions, and transborder riparian regions. The case studies for each provide both cautionary stories and potentially new directions for IRDP. The purpose is not to create a template for IDPR for each, but rather to raise awareness of regions critically in need of attention and to identify hopeful directions for taking action.

2. Extended Metropolitan Regions (EMRs)

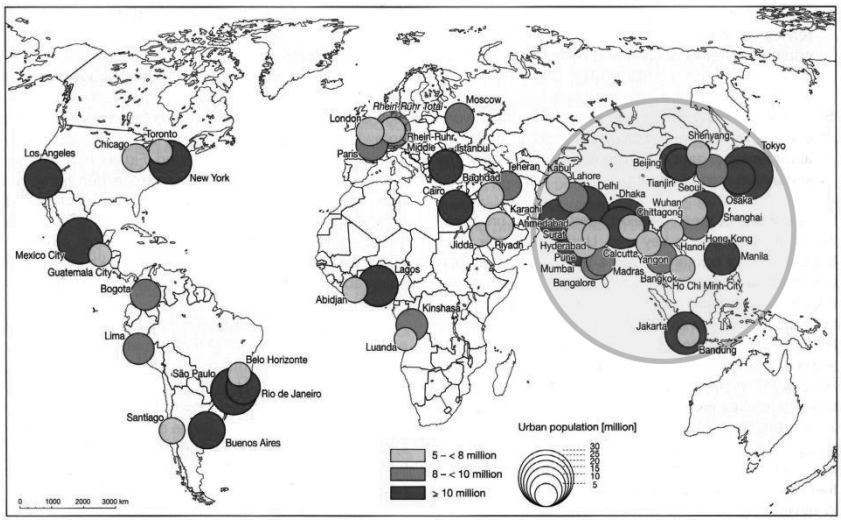
Accelerated urban expansion and environmental crises

As Asia continues its transition toward urban-based societies, the ecological reach of cities

expands ever further into distant hinterlands. Ecological footprints of cities have already reached so far beyond their boundaries that sustainable development initiatives throughout almost all of Asia can now be said to be occurring in an urban matrix of transformations of nature. This is not to say that activities in rural areas are less transformative, but rather to acknowledge that rural areas, too, are organized largely through connections with cities and, in contemporary settings, their global linkages. In Asia the major centers for the organization of national space are extended metropolitan regions (EMRs), or what McGee (1991) has coined "desakota" regions, that are forming vast regions in which peri-urban areas cannot be said to be either urban or rural, but are instead complex mixes of both.

Throughout Asia continuing polarization of population and economic growth into these mega-urban regions continues. As shown in Figure 1, Asia has by far the greatest number of EMRs in the world. [1]

Figure 1 Megacities/EMRs in the World, 2000



Source: United Nations (2002).

These city regions are experiencing multiple challenges for sustainable development (EEPSEA 2009, Alcamo 2009, Bates *et al.* 2008), particularly in terms of flooding due to:

- land subsidence from over drawing of groundwater;
- deforestation in upland areas;
- massive increases in non-porous ground cover;

[1] While the UN (2011) reports that smaller cities are growing more rapidly than larger ones, more detailed studies show that the fastest growing of these cities are part of extended metropolitan regions, which continue to accrue larger shares of national populations (Jones and Douglass 2008).

- tremendously rising human and economic costs of natural disasters impacting high concentrations of people;
- growth of informal settlements along major waterways;
- large-scale landslides from heavy rains; and
- infrastructure failures.

A very large share of EMRs in Asia are located in coastal areas where they face the additional challenges of sea rise, heightened vulnerability to extreme weather events resulting from global climate change, and exposure to devastating tsunami. Flooding is the leading category of disasters globally, and by 2001 its economic costs were more than 10 times their level in the 1960s (CRED 2006). Annual flooding of EMRs in Asia taken together annually displaces millions of people from their homes (Marcotullio 2007, Firman 2010a, Douglass 2010). Poor and deteriorating water infrastructure, inadequate waterway maintenance, and lack of political will to prevent environmentally unsound uses of waterways add to exacerbate flood impacts.

While each of the sources of catastrophic flooding are in urgent need of attention, they all contribute to dynamics at the EMR regional scale that are simultaneously undermining the ecological conditions for water management while widening the social divide in access to land, housing and urban amenities. From the mid-1980s a new era of urban mega-projects begin around the world, including Asia (Flyvbjerg et al. 2003, Altshuler and Luberoff 2004, Jones and Douglass 2008). Appropriating land in prime locations for tall buildings, global business hubs, hotel and elite condominiums, shopping malls, resorts and new towns with gated housing, the new consortia of local-global land developers directly and indirectly began to seriously disrupt water ecologies while also eliminating lower class neighborhoods in the urban core and farmland in peri-urban areas.

Along with mega-projects, high rates of population increases and rapid land development have expanded EMR agglomerations well beyond their administrative boundaries, with some passing 30 million in population. They have also entered into a severe environmental crisis mode of urban growth. Already experiencing among the world's worst levels of air and water pollution and environmentally degraded slums, many are now experiencing a relatively new phenomenon of severe flooding nearly every year. All of these processes sum up to what can be called that advent of an era of chronic urban flooding that most heavily impacts lower income neighborhoods. Pursuing water management improvements alone in such conditions will results in solutions falling further and further behind the increasing scale of the problem. In this context an IRDP approach could contribute to creating governance processes that are better able to comprehend the connections between

flooding, poverty and regional transformations of the built environment. Flooding in Jakarta is a case in point.

Jakarta (Jabodetabek) EMR: Toward Sustainable Ecologies with Poverty Alleviation

The unrestrained growth of Jakarta over the past 4 decades has seen the city region increase from under 5 million in 1970 to nearly 30 million in 2010. By 2020 the number is expected to reach 35 million – an average increase of 500,000 people per year (Kurniawati 2009). Since the mid-1980s most of the residential population growth has gravitated to peri-urban areas of the region beyond Jakarta DKI (Jones and Douglass 2008). Now officially called Jabodetabek-Punjur[2], the EMR emerging with this growth has generated environmental sustainability problems that also continue to increase in scale and impacts (Arai 2001, Firman 2004, Peresthu 2005, Tunas 2008).[3] Flooding has become the most devastating of its environmental problems (Human Rights Watch 2006, Arambepola and Iglesias 2009; Bradshaw *et al.* 2009; Hahm and Fisher 2009).

Located on an alluvial plain with 13 rivers flowing through it, Jakarta has a long history of flooding during monsoon seasons. In the past, however, flooding was not frequent and impacts were substantially less than they are today. The floods of 1996, 2002, 2007 and 2013 were the greatest and most destructive ever recorded in the city's history (WHO 2007). In the 2007 episode as much as 75 percent of the city was flooded, displacing a recorded 430,000 people, mostly poor, from their homes (BBC 2007, Steinberg 2007). Health impacts – diarrhea, skin and respiratory problems, dengue fever – breakdown of basic urban services and loss of livelihoods lingered long after the floodwaters resided (Yuniar 2009). Thousands of homes were totally destroyed, and business losses were estimated to total $1 billion (Rukmana 2011). The 2013 torrential rains flooded more than 100,000 homes, left 47 people dead, and shut down the entire city of 10 million people for several days (*Jakarta Globe* 2013). The estimated economic cost of the flood is more than $3 billion.

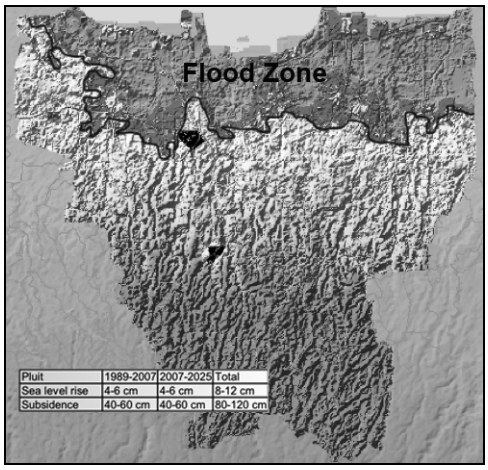
The urban poor are the most affected by floods. Figure 2 shows the combined impacts of sea level rise, land subsidence and poor drainage forming a broad flood zone along the coast. In some areas of North Jakarta rates of land subsidence is 6 cm per year (Hahm and Fisher 2009). Government officials report that 40 percent of Jakarta is below sea level (Jakarta Globe 2013), and the mean sea level rise on Jakarta Bay is predicted to increase at

[2] As the mega-urban region of Jakarta has expanded, so has the name for it, beginning in the 1970s with Jabotabek, then Jabodetabek, and now Jabodetabek-Punjur to signal its expansion toward Bandung.

[3] The gap between low cost housing provision and demand continues to increase and is now reaching a deficit of 800,000 units (Widoyoko 2007).

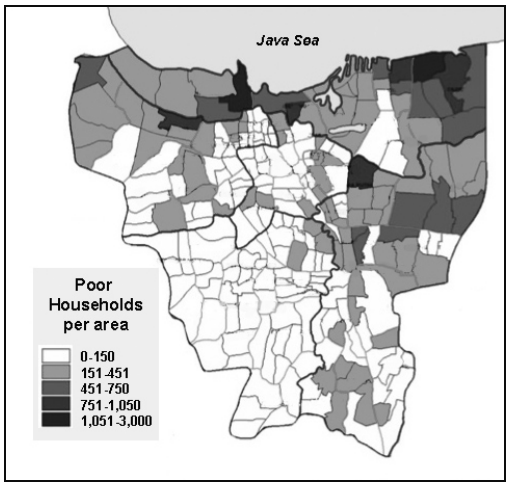
a rate of at least 1 cm per year to the end of century (Meliana 2005 and Hadi 2007 in Pribadi 2008). Projections show that the coast to the existing urban core will be totally submerged by mid-century if ameliorative actions are not taken (Marwati 2010).

Figure 2. Jakarta's High Risk Flood Zone



Source: Hahm and Brinkman (2008).

Figure 3. The Distribution of Poor Households in Jakarta (2008)



Source: After Firman et al (2011), based on the 2008 poverty census.

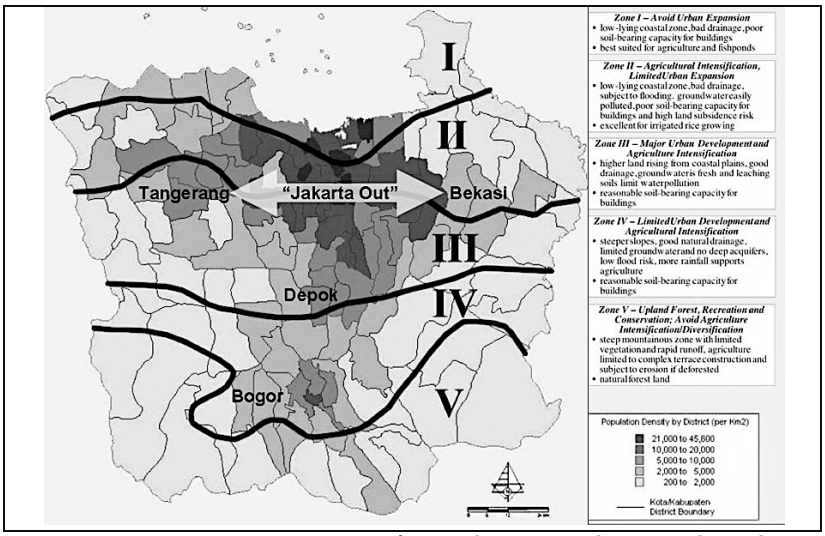
Figure 3 maps the per area number of households with poverty level incomes in Jakarta. A close match can be seen with high-risk flood zones and poverty. Being an area where low wage jobs are most plentiful at the harbor, industrial estates and railway depot, this area of Jakarta is a place to find work and make livelihoods from fishing and other self-

employment. Estimates range from 20 to as much as 30 percent of the Jakarta population lives in slums with significant flood risk (*Jakarta City News* 2011).

Over the past decade huge projects to build theme parks and luxury apartment complexes have entered the coastal zone to further contribute to the flooding risks of the poor, who are pushed into even more marginal areas. As a result, mega-projects projects have become a source of protests and riots that have taken place in this area over evictions, dispossessions and loss of cultural assets. Because most do not have legal title to the land, threats of demolition and removal are also ever present. Annual flooding makes living in these settlements ever more precarious.

Although the urban poor are often blamed as the cause of floods due to their settlement along canals, the more deleterious source is deterioration of the regional ecology from its steep uplands to the rising sea. Awareness of this regional scale of Jakarta's environmental crises first appeared in the late 1970s when the Ministry of Public Works put forth a spatial plan for Jabotabek that was intended to steer land development to the east and west "Jakarta Out" trajectory away from the environmentally fragile coastal areas, the region's uplands and its aquifers (Figure 4).

Figure 4 Environmental Zoning Scheme for Jabotabek, 1980s to present



Source: After Douglass (1991) and Mamas and Komalasari (2008).

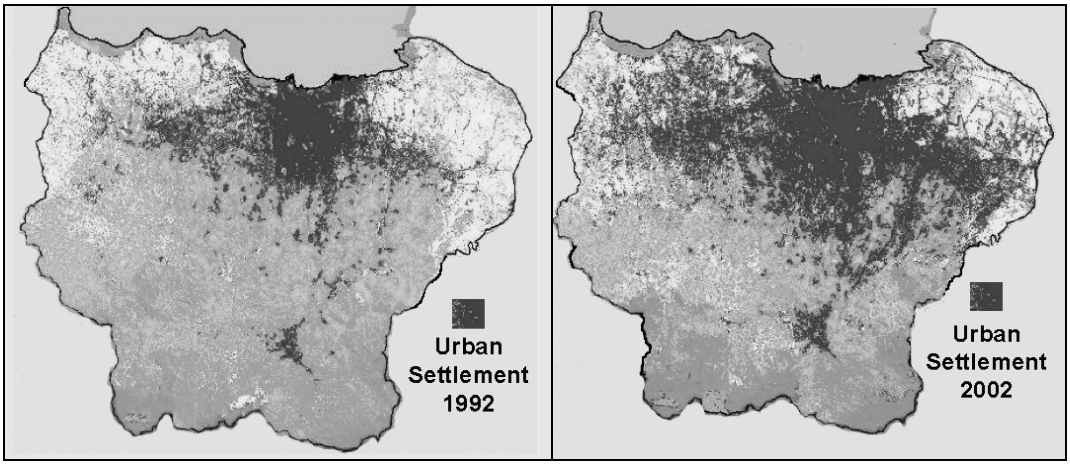
The plan was not adopted by the national planning body (Bappenas), however. Bureaucratic divisions among sectoral planning ministries combined with the territorial division of Jabodetabek into the special province of DKI Jakarta and a portion of the West

Java Province substantially inhibited integrated planning for the region (Kusumawijaya 2001, Silver 2008).

Left to its own devices, Public Works used the tools available to it to effect the plan, namely, the building of infrastructure in the form of highways, a new international airport and export-processing platforms anchored in the east at Bekasi and west at Tangerang. These actions worked well to attract new industries into the preferred development zones, but they did nothing to prevent private sector activities from spreading elsewhere into the region. From 1992 to 2002 the region experienced a massive expansion away from the east-west corridor driven by business hub mega-projects in the urban core and new town and housing estate projects for a suburbanizing middle class in peri-urban areas (Figure 5, Mamas and Komalasari 2008, Firman 2004). From 2000 to 2010 while Jakarta's population increased by just 15 percent, the inner zone around Jakarta in West Java grew by 47 percent and the outer zone grew by 53 percent in population.

In the first decades of the 21st century, chances for pan-government collaboration on IRDP have become even more complicated. Radical decentralization beginning as part of the transition from the New Order Government in 1998 has made efforts for coordination across the numerous smaller regencies (*kabupaten*) more problematic as all these autonomous units now see themselves in high competition with each other (Firman 2010b, *Jakarta Post* 2011b). Equally inhibiting is the lack of regulations to implement environmental zoning being promoted by the national government since 2009.

Figure 5. Expansion of Jakarta EMR (Jabodetabek), 1992-2002



Source: author, based on LandSat images cited in Hahm and Brinkman (2008) and Susanti (2009).

The role of government in planning has also changed over the decades since 1980.

Privatization, state facilitation of corporate projects (called public-private partnerships, or PPP by international organizations) and deregulation of land-use planning all allowed for massive expansion of mega-projects into environmentally unsuited locations such as the region's aquifers and natural drainage sites. Rather than government guiding land development, plans have instead been constantly readjusted to reflect private sector decisionmaking (Kusumawijaya 2001, Steinberg 2007, *Jakarta Post* 2011b). For example, the emphasis on saving the coastal mangroves was substantially abandoned in the 1999 plan that severely reduced protected areas to adjust to resorts and golf that had already been constructed in them. For Jakarta as a whole, its green area was reduced from 40 percent of the city's land area in 1985 to 9 percent in 2002 (Steinberg 2007).

As land use controls were deregulated, between 1995 and 2001 Jabodetabek saw the construction of 25 new town development projects ranging from 500 to 6,000 hectares (Firman 2004). About 1 million people now commute from peri-urban zones in West Java into Jakarta's urban core every day. During the same period, approximately 75 large-scale shopping malls were also built in the region, some of which were permitted to be located near riverbanks and as well as in supposedly protected green areas (Steinberg 2007, *Jakarta Post* 2011a, Firman *et al.* 2011).

When land surfaces are covered by impervious materials such as roads or cement the volume and velocity of runoff increases downstream by as much as 6 times previous rates (Hahm and Fisher 2009). This has meant that in Jakarta today floods have changed from a relatively slow natural process with low frequency to a high frequency process. From these and other combined effects of clogged waterways, lack of maintenance, ground subsidence, and infrastructure blockage of water flows, the 2002 flood marked the beginning of a new era of massive flooding of Jakarta.

Addressing Jakarta's chronic flooding problem calls for initiatives on many fronts. Government is focusing on the immediate concerns of water system management. Crumbling structures and sedimentation of waterways have kept canals operating at just one-third their expected capacities. Nearly three-quarters of the city's river water is heavily polluted, including high levels of E-coli bacteria (*Jakarta Post* 2011b, Steinberg 2007). Progress is being made in dredging, rehabilitating, widening canals and reinforcing dams (Hahm and Fisher 2009, Steinberg 2007, Rukmana 2010). However, in addition to leaving regional ecological problems unattended, a water systems focus does not address the relationship between land development, flooding and the plight of low-income populations who face mounting difficulties in gaining access to housing and basic services. The government housing policy continues to be one of moving low-income households to new

locations far from livelihood opportunities, which results in people moving back into new slum housing in the same high risk areas (Kurniawati 2009a). Even if such relocation were successful, the government's program to provide a million housing units by 2020 far behind schedule and far below the numbers needed (Tunas 2008).[4]

The alternative of working with existing communities to upgrade housing and provide existing neighborhoods with environmental services to reduce flood risk would require a substantial departure from the past by working with neighborhoods where people do not have land titles (Firman *et al.* 2011). Similarly, sustained efforts to regulate and guide land-use decision making for Jabodetabek as a whole would require an unprecedented level of political commitment (Caljouw *et al.* 2005, WHO 2009, *The Jakarta Post* 2011b).

Some positive directions are now appearing. Attempts at guiding land development away from environmentally sensitive and high-risk zones are gaining renewed interest. Along with democratization and decentralization, some local governments are giving attention to public participation in development planning (Nomura 2007). For example, in 2011 the government of Kabupaten Bogor began holding open public consultation meetings on its development projects, with participants including representatives of villages, sub-districts, NGOs, and other non-government public leaders (Srinivasan et al. 2011).

Also over the past few years more attention is also being given to strengthening and clarifying guidelines for new regulations stemming from the 2009 spatial planning law, which includes limitations on development in designated conservation areas. Should the means be found to link regional level land use and construction policies with new ways of gaining coordination across local government boundaries through participatory planning, outcomes might also be more spatially equitable than in the past.

3. Rural-Urban Regions

Linking rural and urban development together *in situ* at the regional scale in a manner that benefits both rural and urban development while reaching the rural and urban poor is a long-held aspiration of regional development planning (UNESCAP 2005, Douglass 2006). Many frameworks have been advocated, with some adopted as policy experiments. Among the most well known are those based on central place theory, which focus on the "role of small towns" in rural development (Johnson 1970, Rondinelli 1979). Others have advocated integrated rural-urban area development approaches with rural towns as political centres for an "agropolitan development" (Friedmann and Douglass 1978), a version of

[4] Government low-income housing programs, which comprise 1.5 percent of national spending, have not been able to keep pace with growing needs (Tunas 2010, Hernowo, 2005). This level is well below Malaysia (23 percent) and Thailand (13 percent) (Tunas and Peresthu 2010).

which is currently being implemented in Indonesia (Soetomo 2003) and Malaysia (Jusoh 2011).

In Asia, some of the more well known experiences include the Bicol River Basin Development Program that focused on small towns, and the PARUL (Partnership in Rural-Urban Linkages) program in Indonesia[5], which focused on a single crop per village and infrastructure linkages such as roads and bridges. China's village-township enterprise programme is also credited with success in fostering rural and urban economic linkages (Song *et al*. 2012).

While such attempts were being made, rural Asia was already experiencing tremendous changes that have made received images of agrarian regions anachronistic. For example, in most densely-settled rural areas today agriculture is no longer the principal source of household incomes. In addition to many forms of local non-farm production, global migration and the cell phone have developed long-distance remittance economies in many poorer rural regions of Asia. In higher income economies, rural areas are in steep decline with chronic population losses. Globalization is bringing industrial agriculture to rural Asia as well, with expensive farm inputs and contract farming linking even small producers to global corporate commodity chains.

All these changes and many more lead to the understanding that rural can no longer be viewed as simply agrarian and towns can no longer be understood as agricultural commodity market centres. Rural services for non-agricultural enterprises are also appearing that can provide alternatives to, for example, work as landless field hands. In some regions craft industries are flourishing along with rural tourism. Thus rural-urban regional development needs to be given a fresh view that is open to many possibilities. As with EMR planning, a regional approach that can be close enough to be able to take advantage of local potential and broad enough to be able to assist in integrating social, environmental and economic dynamics for local benefits could provide a much needed scale for participatory development planning.

A rural-urban program in Asia that comes closest to such an integrated regional development approach is the Rural-Urban Partnership Programme (RUPP) in Nepal.

Nepal's RUPP Programme

[5] Changed in 2002 to the Partnerships for Local Economic Development (Kemitraan bagi Pengembangan Ekonomi Lokal [KPEL] in Indonesian).

Listed among the lowest income countries in the world (World Bank 2013a), Nepal has been a country troubled by government instability and, from 1996 to 2006, widespread insurgencies that led to a reported 2 million people fleeing the country (IFAD 2013). While per capita income has been on the rise since 2008, a major source of this increase has been generated by migrant remittances from abroad, which reached the equivalent of more than 25 percent of the Nepal's GDP in 2011 (Glennie 2012). Agricultural productivity remains low, and official poverty rates show that about one-third of rural people live below the poverty line of US$12 per person/per month (IFAD 2013). Inadequate nutrition, access to primary health care, education, and clean drinking water and sanitation remain high concerns.

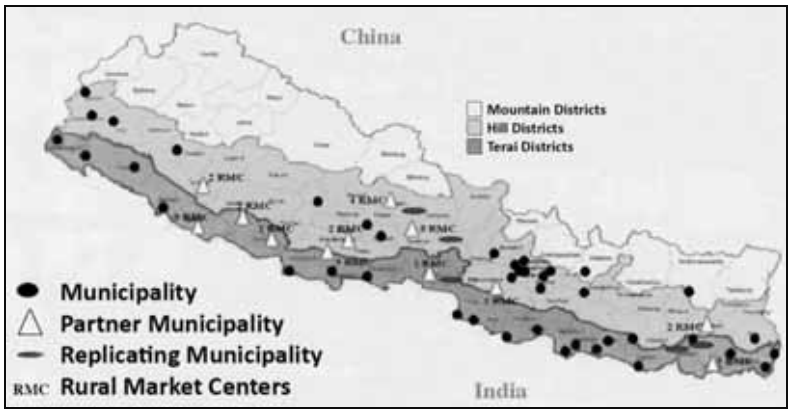
Although agriculture is still reported to be the country's principal source of employment, services and industry accounted for 60 percent of the GDP in 2008, which is evidence of the country's emergent rapid urban transition. In 2010 just 19 percent of the population was living in urban places, but urbanization rates have been accelerating to reach nearly 5 percent per year since the 1970s, reported to be the fastest rate of urbanization in Asia (World Bank 2013b). National spatial polarization in Kathmandu Valley has been the dominant pattern, followed by the growth of trade centers along the border with India. From its share of total urban population at 9 percent in 1971, by 2001 Kathmandu Valley accounted for 31 percent in 2001 (CBS 2003). Under this constant pressure, Kathmandu is being overwhelmed in trying to provide housing and basic services for its rapidly growing population (World Bank 2013b). In this context, and with still high levels of rural populations with poverty level incomes, the setting is appropriate for an integrated regional development strategy to link rural with urban development away from the capital city.

In response to these needs, the Rural-Urban Partnership Programme (RUPP) was launched in Nepal in 1997 through UNDP funding, and it quickly established itself as highly regarded and innovative initiative toward integrated rural-urban regional development. RUPP began as a solution to a paradox in Nepal's local administration. In Nepal municipalities are over-bounded and tend to include numerous agricultural villages in their domain. When villages are classified as being within a municipal area, they are removed from agricultural (rural) support programmes. Thus one justification for RUPP was to link villages with their municipal centers as a way of compensating for villages falling between the cracks of rural and urban development support.

From the beginning RUPP was designed to build rural-urban linkages from the grassroots through participatory planning at the village level and move upward as a multi-level programme linking villages to local market and municipal centers and on to a national level

of interaction. A limited number of municipalities were initially selected for support. By 2003 RUPP was active in 12 out of a total of 58 municipalities and included 33 rural market centers created or expanded as the principal mechanisms for promoting reciprocal rural-urban linkages (Figure 6).

Figure 6. RUPP Municipal Partners and Market Centres



Source: After Munankami (2003b)

As elsewhere in Asia, most development projects and programmes in Nepal have strictly concentrated on addressing either rural or urban development issues separately. RUPP began to close that gap through a number of simultaneous actions. In summary, these included (Munankami 2003a, 2003b; Momen 2006, 2009; UNESCAP 2005):

- training 5-7 community mobilisers (CMs) for each of the 12 partner municipalities.
- training 1 market centre facilitator (MCF) for each Rural Market Center (RMC).
- organizing villages into TLOs (Tole Lane Organizations) for direct civil society participation in village decision-making. Each TLO was asked to make its own list of priorities for action;
- creating a system of TLO and village representation at the municipal level through the Village Development Committee (VDC) composed of one person from each TLO
- providing micro-credit for village enterprises via the TLO Enterprise Development Plan (EDP);
- creating new market centers with spaces reserved for villagers;
- funding small scale infrastructure according to VDC priorities (TLO Development Plan – TDP), including improved sanitation, schoolhouses, bridges to main roads;
- providing greater transparency of public actions through open access e-governance.

RUPP never thought to create master plans. It was instead a series of linked processes that

sought to empower villagers to stand on an equal footing with urban and outside interests through intensive capacity building. To set these processes in motion and ensure synergistic rural-urban relations, RUPP operated at 3 levels: village, municipal and national. At the village level, it established village participation as its foundation.

As noted, this was accomplished by organizing villagers into TLOs, or lane associations of approximately 50-80 households, and forming a Village Development Committee (VDC) to bring the TLOs together as associations of people who are neighbours. Women from lower-income households headed most TLOs. TLOs enhanced community life by engaging people in daily exchanges about RUPP inspired activities. TLOs were also encouraged to raise funds through member contributions and to identify projects for village improvement.

The formation of TLOs was a revolutionary innovation in village governance. It proved to be so successful that the Ministry of Local Development stated its intention to legalize them in all of the other municipalities in Nepal (Karna 2003). The Community Mobilizers (CMs), who were mostly fresh graduates from technical schools and universities in Kathmandu, became a key link between village VCDs and municipal government. This generated an exceptionally high level of enthusiasm to join RUPP, particularly in light of its affirmative action programs in support of women and marginalized social groups. The small size of the TLOs greatly helped to insure mutual responsibility and self-monitoring. Through these organizations a learning-by-doing process of building foundations at the village level to link rural with urban development was advanced.

At the level of the municipality, RUPP created a partnership development committee (PDC) in each municipality comprised of the mayor, the VDCs, the president of the local NGO federation, the president of the local chamber of commerce. The PDC was entrusted with the municipal partnership development fund.

Micro enterprises efforts were put into action through members of TLOs who formed small groups (2-5 people), elected a chairperson and prepared an enterprise development plan (EDP). The groups were provided training in enterprise management skills before they were offered credit, and they were required to generate a certain level of funds as equity. Loans averaged slightly less than Rs 25,000 (approximately US$300), for which groups were collectively responsible to repay.

The enterprises that emerged covered a spectrum of micro-scale businesses, including trading in raw and processed agricultural products, handicrafts; milk vending; metal working, barbers, tailoring and small retail stores. The enterprises were intended as focal

points for generating and locally capturing multiplier effects from connecting rural and urban economies through backward and forward linkages (Momen 2006, 2009).

Small-scale infrastructure projects were made possible by seed grants that were partially matched by TLO funds from village households. These contributed to improving small roads, marketplaces, and mountain trails. In most villages environmental sustainability had more to do with basic sanitation such as latrines than with widespread ecological damage from human settlement.

Within a few years, and even though it did not cover all of the country, RUPP established itself as Nepal's *de facto* integrated rural regional development programme. In helping to establish decentralized participatory urban governance, by 2004 it had many accomplishments (Adhikari and Shrestha 2007):

- 100% of households joined TLOs in 35 municipalities and 50 Rural Market Centres.
- TLOs mobilized Rs. 22 million ($260,000) savings funds for local projects.
- Affirmative action ensured significant representation of Disadvantaged Groups (DAGs) in TLO leadership.
- More than 70,000 people benefited from its training programmes; more than half were women.
- More than 31,000 enterprises were started, with two-thirds of the initiators increasing their incomes and nearly 25% succeeding in lifting their households above the poverty line.
- Enterprises run by underprivileged castes became a major tool for attempts to attenuate inter-caste inequality in Nepal.
- More than 4,000 people were trained in Participatory Municipal Development Planning (PMDP) and Participatory Village Development Planning (PVDP).
- Urban Information Centres (UIC) were established as municipal Data Banks.
- About 640 projects ranging from the construction of link roads and bridges to urban environment improvements and school construction benefitted more than 85,000 households.
- Awareness was created about livelihood options and access to credit for HIV/AIDS to every household of partner municipalities.
- Health improvements were gained from environmental infrastructure.
- Municipalities began broadcasting daily agricultural price information to support low-income enterprises in getting fair prices for their products.

Through all of these successes, RUPP was able to promote good governance and poverty

reduction through direct participation of local people in development projects. Introducing such concepts as public hearings, transparent auditing in municipalities, and other forms of accountability proved to be empowering for especially women and marginalized groups.

RUPP had important limitations as well. The lack of democratically elected national and local governments hindered the full play of participatory planning and the efforts toward accountability (Adhikari and Shrestha 2007). A high level of political instability due to Maoist insurgency in the countryside significantly interfered with routine implementation of RUPP programs. Financially, The relatively small budget for the entire program, which was about $2.6 million from 1997-2002 and increased to about $7 million for the period to 2007, meant that funds were spread thinly among municipalities and projects (Munankami 2007, Momen 2006). RUPP was also unable to expand beyond 35 municipalities due to financial limitations even though many more municipalities requested its programmes.

In addition, the paradox of dealing only with rural areas within municipal boundaries meant that RUPP could not reach the vast rural regions of Nepal beyond in the Hills and Mountain Districts (see Figure 6). Thus while the central government began to rely heavily on RUPP as its de facto rural regional development program, lack of government financial support and on-going Maoist insurgencies limited its scope and potential expansion across the country.

UNDP support for RUPP came to an end in 2007, and with the Nepal government deciding not to take on its funding, the RUPP experience also came to an end. The government did adopt some of its elements, and a number of municipalities continued to support TLOs and the new rural market centres. When elections are eventually held to put democratically elected governments in place as expected, some of RUPP's many contributions might gain renewed commitments and energy. However, with many former RUPP activities have already seriously deteriorated due to lack of skilled staff and senior mentors, and the more time it takes to re-establish the institutional arrangements for the type of capacity-building pioneered by RUPP, the more difficult the continuation of its successes will be.[6]

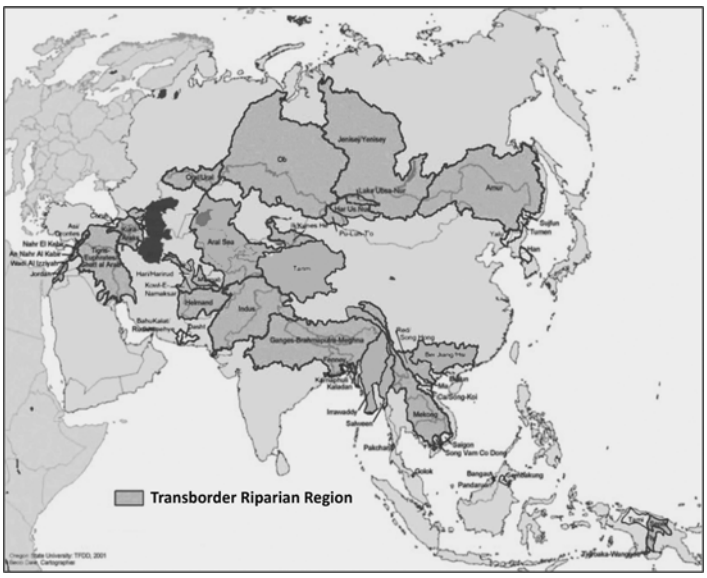
4. Transborder Riparian Regions: The Mekong River Basin Commission Experience

The integrity of transborder riparian regions is among the most critical of all sustainable development issues. The majority of the world's population depends on water from transborder rivers, lakes, and aquifers (UN-Water 2008). With half of the world's

[6] Personal communication from former RUPP staff to the author, May 2013.

population, Asia has less fresh water per capita than any other inhabited world region (Chellaney 2007). Yet its riparian systems are immense. At least 40 major transborder rivers and lakes are in Asia (Figure 7), totaling more than 16 million square kilometers of land area in the basins surrounding these bodies of water.[7] A dozen cross borders of four or more countries.[8]

Figure 7. Transborder Riparian Regions of Asia



Source: UNEP (2007).

Sustaining transborder riparian regions means much more than managing water. Basic human needs, livelihoods, social and cultural practices, regional ecologies, biodiversity, and maintaining political stability all are co-dependent with the integrity of these water systems. Further, each of the transborder riparian regions in Asia is facing crises that are shifting from being experienced as unusual episodes to being chronic patterns with persistent, long-term decline. The major sources of these impacts include Asia's urban transition and associated the globalization of local rural as well as urban economies, which increase the tendency to construct dams for hydropower, water as inputs for industry, and drinking water for cities. Global climate change is also tremendously impacting riparian regions all the way from their high mountain origins to their ocean deltas.

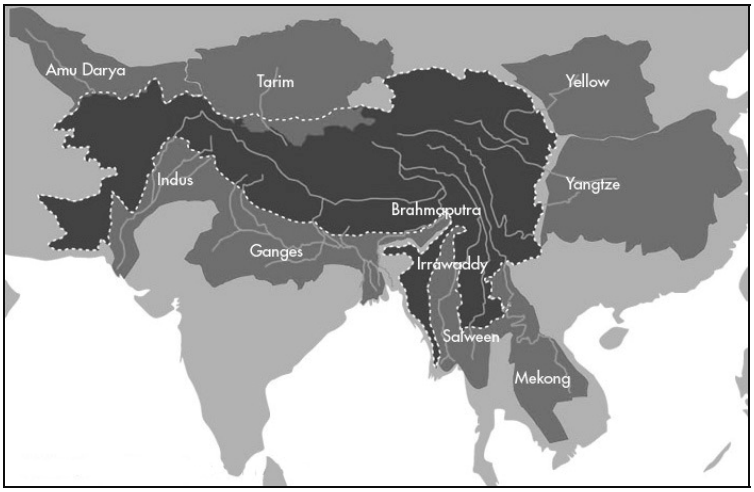
The building of large dams, which divert more than 60 percent of the world's freshwater, is

[7] Not all of the river basins in Figure 7 cross international boundaries, but a vast majority do.
[8] Each of the riparian regions covers from 700,000 to nearly 3 million square kilometers.

illustrative of the need for a more integrated approach toward the planning and development of riparian regions. Research by the World Commission on Dams (2000) concluded that the environmental and social costs of dams have been inadequately accounted; thus their true value and profitability remains unknown.[9] The damaging ecological impacts of the larger dam projects are found to be substantial and, at least in some instances, irreversible (WCD 2000, ICEM 2007). When riparian regions cross national borders, nationalism and lack of incentives for upstream countries to be concerned for downstream impacts of dams and other interventions in water flows has made riparian governance extremely difficult (Ashayagachat 2008, Chellaney 2007; Dinar *et al.* 2007, Gunn and McCartan 2008).[10]

Global climate change is also dramatically affecting riparian regions in Asia. For those that reach the coastal areas, the impending sea rise of just 1 meter will severely inundate the vast deltas of Vietnam, Bangladesh and others as well (UNEP 2006). Typhoons will reach further inland over permanently inundated areas.

Figure 8. Major River Systems Originating in the Himalayas -Tibet Plateau



Source: ICIMOD (2013).

An even more widely impacting outcome of global warming is the predicted permanent

[9] The World Commission on Dams (WCD) was established in 1998 as an independent entity to conduct a worldwide review of the effectiveness of large dams and assess alternatives. Its 2000 report found that dams have displaced tens of million of people, are highly inequitable in terms of beneficiaries, and cause loss of diversity as well as extinction of genetically distinct flora and fauna.

[10] Most large dams are significantly under-performing with reduced holding capacities from silting, and thus power generating ability (Bauer and Rudolph 2001, WCD 2000).

loss of the Himalayan-Tibetan glaciers, which is the source of water for most of the major riparian regions on the Asian continent (Figure 8, UNEP 2006, 2007). For a few decades, the increase rate of glacier melt will be manifested in more frequent flooding; when the glaciers are severely reduced, chronic droughts will follow.[11] At the same time, diversion of water by large dams and deforestation compounds climate change by substantially adding to downstream water scarcities, droughts and flooding.

Taking all the above sources of change and their impacts together, the United Nations Environment Programme (UNEP 2008) warns that for the world as a whole almost 3 billion people will be severely short of water within 50 years, and some observers predict that in this century water wars could become a significant source of hostility involving at least 50 countries (GPF 2009, Leahy 2007, Allouche 2007). Such observations lead to the renewed interest in integrated development for riparian regions. Table 2 summarizes the major elements most commonly advanced as being crucial to effective transborder governance to address questions of local ecological, social and economic impacts of riparian projects.

Table 2. Major Transborder Riparian Region Initiatives

Governance Dimensions	Intention
1. Information gathering, processing and dissemination	To promote common understanding of conditions, monitor changes, share expertise.
2. Transborder treaties, agreements, compacts, commissions	To create political agreements among countries on various aspects of water governance.
3. Civil society participation	To include local knowledge, issues, skills; address unanticipated impacts; build on local institutional capacities
4. Supra-national governance authority	To transfer forms of authority over water governance to entities above and autonomous from the nation-state.

Source: Douglass (2011).

Information gathering, processing and dissemination contribute crucial knowledge

[11] Climatic changes that slow movements of water increase potentials for epidemics of malaria, dengue and cholera (Martens et al., 1999). Increased incidence of diarrhoea and malnutrition are already attributed to climate change resulting in heightened droughts and flooding.

about water systems and can also assist in defusing potential conflicts. They are among the most prevalently pursued and yet illusive dimensions of water governance. Inadequately trained personnel, corruption, underfunded operations, and the absence of dissemination channels are among the bottlenecks. Governments of upstream countries can be unwilling to share information with downstream countries about impending water diversion, dam construction, and waste disposal. Further, expert knowledge of engineers and other technically trained professionals is typically privileged over local, experiential knowledge (Nakayama 2007, Wyatt and Baird 2007). Multiple forms of data are needed from different sources to insure open dialogue and greater trust among stakeholders.

Treaties, commissions and agreements are required to establish the legitimacy that is crucial for long-term transborder cooperation and conflict management. These can take many forms: treaties, compacts, memoranda of understanding, protocols, and others, including personal relations of trust among national leaders. These instruments continues to be bilateral rather than multilateral, with adoption typically sought after projects are initiated.

Civil society participation is among the most prominent innovations called for in governance for riparian regions in Asia in recent years. Involvement is needed in policy deliberations, research and analysis, project design, implementation and monitoring. A central reason for civil society inclusion is the understanding of the need to include social and economic uses of water that are integral to regional cultures and economies. Civil society participation entails several levels – household, community, region, nation and above – of collaboration around "problem sheds" (Allen 1998).

Supra-national governance authority is desired to establish a significantly autonomous and neutral source of information, agreement brokering, and venue for participatory transborder regional governance. Although no such authority has been established in Asia, several forms of partial or de facto supra-national mechanisms are in place. Treaties, for example, are internationally recognized and can be used to settle disputes, as has been the case in the Indus River treaty between India and Pakistan. Another form of supra-national authority is the power of international funders to promote projects, development ideologies, and research and information dissemination for river basin development. Both the World Bank and the Asia Development Bank have been prominent in playing these roles.

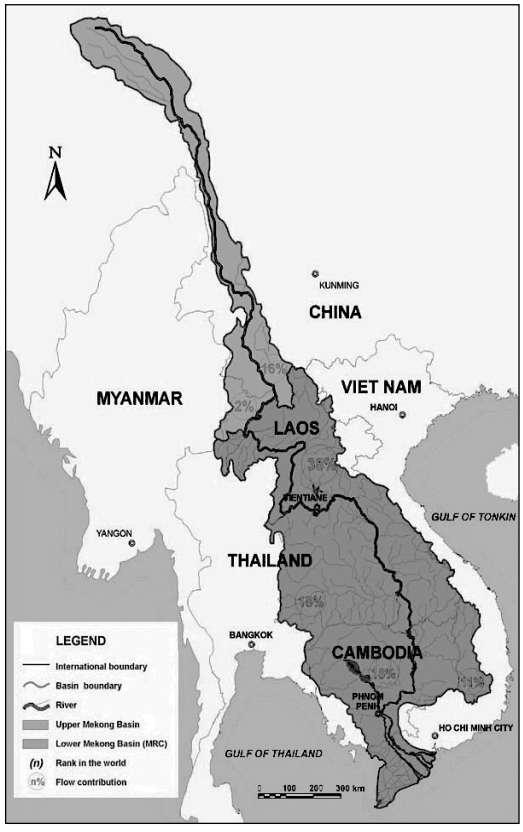
The Mekong River Commission represents a third approach toward creating a supra-national body. It is the only organization that has agreement from national governments to holistically cover a transborder riparian region to include environmental, social and

economic concerns along with water management issues.

The Mekong River Basin and the MRC

Running from the Tibetan Plateau through China's Yunnan province and on to Burma, Thailand, Laos, Cambodia and Vietnam, the Mekong is the 12th-longest river in the world and the 7th longest in Asia. An estimated 4,350 km (2,703 mi) in length, it drains an area of 795,000 km² (Figure 9). Approximately 60 million people live in the Lower Mekong Basin where the river supplies water for drinking, irrigation for food production, hydropower, transportation and commerce. It serves millions more in China and Myanmar. The river basin accounts for half the arable land in Thailand, replenishes Cambodia's Tonle Sap Lake, one of the world's largest freshwater fisheries, and flows on to the Mekong Delta with 20 million Vietnamese and more than half of Vietnam's rice production (UNDP 2006).

Figure 9. The Mekong River Basin



Source: The Mekong River Commission (VNMC 2009)

The Mekong River Basin is also home to almost 100 distinct ethnic groups that are heavily dependent on the river and its natural resources to sustain life and livelihoods. It is also the habitat of rare and endangered species ranging from the Asian elephant to the Mekong giant catfish - the largest freshwater fish in the world - and the last remaining populations of the Irrawaddy dolphin (WWF 2008).

Transformations of the entire basin have intensified in recent decades (ADB 2008, WWF 2008). Almost 70% of the forest cover that once cloaked the greater Mekong is gone. In 2008 over 250 new hydropower dams were being planned for the Mekong River (WWF 2008). Impacts on ethnic minorities that depend upon highland ecologies for the ways of life, increasing pollution of the river system, infectious diseases, and irreparable ecological damage are among the concerns leveled at these projects.[12] Flooding and droughts are becoming more serious. The 2011 floods set new records (International Rivers 2013).

The MRC

In 1957 the United Nations established the Mekong Committee as the first transborder river basin planning initiative for the region (Jacobs 2002). However, war and political instability in the region prevented its activation until 1995 when the Mekong River Commission (MRC) was established. The MRC includes provisions for cooperative natural resource planning, environmental and social cost management, databases and information systems, and organizational management and cooperation. UNDP funds maintain the Mekong Secretariat. Though deciding not to be members, China and Myanmar agreed to become Dialogue Partners of the MRC to further its reach for transborder cooperation.

The MRC was restructured in 2000 with a view toward making it less hierarchical through, for example, more open data sharing protocols. The 2001 Work Programme represented an important change toward creating region-wide approaches rather than discrete project perspectives. It also included the idea of the MRC as a "learning organization" that was to engage people in the region in finding "bottom-up" solutions to river basin planning issues, particularly with regard to livelihoods. This posture of MRC brought it into the realm of advocacy of more participatory approaches to transborder riparian issues, including inclusion of civil society organizations.

[12] In some parts of the river pollution from fertilizers and pesticides have already made water no longer suitable for human consumption. Sedimentation and riverbank erosion due to slowing water flows is the cause of streams and rivers becoming shallow and even disappearing.

MRC is also attempting to turn toward a mode of IRDP through "Integrated Water Resource Management" (IWRM). Defined by Global Water Partnership as "coordination of development and management of water, land and other resources for maximizing of economic results and social welfare with no compromise on environment" (GWP 2003), the central principals of the IWRM are participation, integration of the resources, institutions and stakeholders for sustainable water resources. Whereas in the past such approaches were wholly pursued within national territories (Biswas 2008), now the attempt is to include transborder collaboration across the riparian region. This faces great challenges in trying to avoid being perceived as usurping sovereign powers, and governments have yet to buy into IWRM (Varis *et al.* 2008a, 2008b). In this regard, MRC continues to be largely international lender driven (Hirsch and Jensen 2006). As concluded by Varis et al. (2008:147):

> Without common recognition and ownership of the IWRM concepts at the local level, in local governance, at the government level, and in the international setting, IWRM remains a theoretical concept without much sound scientific background from real-life development projects and without much sustainable impact on the environment, society, and economy. If these water issues can be set in the broad, cross-cutting framework of other development issues, this would provide a way to go toward a better future through successful freshwater management.

A response to these limitations can be seen in MRC's 2010 Strategic Environmental Assessment, which provides alternative future scenarios for impacts of infrastructure projects.[13] In putting such a report forward, MRC can play a vital role as a supra-national provider of analysis on a regional scale that incorporates environmental, social and economic impacts of dams and other infrastructure projects. Establishing a reputation as a neutral but also critical source of research that is transparent and available to all interested parties is an essential component for pursuing sustainable development for the Mekong riparian region.

In the same vein, in calling for greater information sharing for transborder early warning systems, which would require each government to provide frequent updates of water levels in dams and rivers to all downstream countries, MRC has stepped up research and dissemination of technical reports on major trends and issues in the region (MRC 2009).

[13] For example, it warned that if eleven dams were completed, they would turn more than half of the Lower Mekong River into stagnant reservoirs, thereby reducing Mekong fish species by 26-42 percent with annual losses of US$500 million. Further, more than 100 animal species could become extinct, more than 100,000 would lose homes and communities, and the food security of over two million people would be threatened.

Requiring large-scale projects to do environmental impact statements before, during and after construction is also an agreed principle. However, the authority of the MRC remains highly circumscribed and mostly focuses on making recommendations, reporting to member countries, and acting as a forum for information generation, public discussions, and facilitation of dispute resolution (Hirsch and Jensen 2006, Backer 2007, Hensengerth 2009).

Given the often contentious political contexts of transborder riparian planning, and the unlikelihood of supra-national regulatory institutions to appear in the near future, the most promising areas for collaboration remain in the realm of transparency in information analysis and sharing, open fora for discussions and, particularly among powerful international funders, continued openings to 'bottom up' planning from within the regions at very local levels. For further advances, a shift in priorities from hardware projects to institution building is the most pressing priority. Independent research that is at arm's distance from the agenda of any one government is also a high priority. University engagement, which is conspicuously absent, would be a significant advance for MRC and its IWRM program of research.

An integrated regional development planning strategy can build on IWRM to include broader ecological, livelihood and cultural dimensions. In acknowledging that each riparian context requires its own mix of strategic interventions (Babel 2009), the most promising direction for MRC at this juncture is joint research and information sharing. If such efforts were to be inclusive of local communities and non-government organizations as well as government and private sector interests, and if fora for facilitating knowledge sharing were frequent and seen to be fair, other steps toward integrating development planning could become more plausible. With such efforts to build trust and to mutually discover points of concern, a process or IRDP could potentially emerge along with devolution of governance capabilities to localities within riparian regions to enable them to reach across borders to collaborate on shared interests.

5. Conclusions: the Regional Dimension of Sustainable Development

Asia's rapid urban transition, global climate change, and global economic integration are among the on-going transformations that call for new approaches to integrated regional development planning. The reach of many city regions now extends beyond their administrative boundaries, requiring coordination and collaboration across municipal and district jurisdictions. In agrarian settings reciprocal rural-urban linkages can be improved through regional development approaches to generate local multiplier effects through new

forms of non-farm livelihoods to reduce rural poverty. And in Asia's continental riparian regions, integrated transborder regional planning is being approached in many incipient forms to address the challenges of ecological crises and sustaining livelihoods in river basin regions.

In taking these new challenges, regional development planning needs to move toward planning as multiscalar processes of engagement and reciprocal problem solving. This in turn calls for innovations in creating flexible institutional arrangements that can transcend subnational as well as international borders. Decentralization, democratization and participatory planning are intrinsic requirements for any drive toward creating such arrangements that are able work horizontally and vertically over space to link the smaller scales of daily life-spaces with regional level planning processes (Friedmann 1988). Following from the ideas of "The Future We Want," specific attention to the empowerment and effective participation of lower income and marginalized populations is fundamental.

The summaries of the three regional development planning cases presented here are intended to contribute to the understanding of the challenges as well as the positive contributions of an IRDP approach. In the case of Jakarta, attempts at regional scale guidance of land development away from environmentally sensitive areas show a clear understanding of the relationships between sustainability and regional planning. At the same time, barriers to cooperation across local administrative boundaries remain even after a decade of radical decentralization, and cooperation across planning ministries also remains constrained by bureaucratic habits. Nor has a decade and a half of democratic governance led to routine participation in city and regional planning.

As a result, Jakarta appears to have entered into an era of chronic annual flooding that, when treated as a water management problem rather than as a regional ecological crisis, has no apparent turning point toward long-term regional resilience and sustainability. In such a situation, citizen participation remains insurgent, appearing mostly as protests against evictions from flood-prone areas, and regional planning remains an aspiration at the Jabodetabek scale.

However, more positive signs are appearing. Recent elections of new leaders for Jakarta have resulted in tighter regulations of environmentally inappropriate land development schemes and greater conviction to implement and enforce newly created environmental zoning laws. Calls for greater resident participation in planning are also receiving wider support at all levels of society. Whether these changes result in a type of neighborhood-to-region scale of institution building for environmental, social and economic resilience

cannot be easily foretold. What can be said is that given the magnitude of deleterious changes occurring, a race against time is already underway.

In the case of the RUPP program in Nepal, its experiences provided among the most fully conceived and rewarding rural-urban regional planning approaches in Asia. Operating from the village to the city and beyond, its rural-urban linkage strategy had its foundation on empowerment of poor and marginalized people. Its positive impacts went far beyond those that might have been imagined from its modest budgets, and its legacy in institution building continues. That it was able to successfully pursue its many program elements in the face of intense rural insurgencies and violence and in a non-democratic setting is all the more impressive.

Its limitations are also instructive. During its decade of existence, RUPP had become the most extensive integrated rural-urban development programme in Nepal, and it was seen as such by the national government. But its life was almost wholly dependent upon external support, in this case from the United Nations Development Programme. When this support ended, so did the program. How to transfer successful donor programs into nationally adopted ones remains an outstanding question.

The third case of transborder riparian regions presents the most formidable, but also the most important, regional setting in need of concerted attention in Asia. The social and economic life of most of continental Asia depends on the ecological health of these regions. Given the importance of the rise of Asia in the global economic system, the sustainability of these regions affects the entire world. Asia's urban transition figures highly in the matrix of riparian region governance as cities reach ever more deeply into these regions to build dams for hydro-electricity and water for urban and industrial as well as commercial agricultural uses. Local ecological conditions and livelihoods, as well as rare and endangered flora and fauna, have been left out of planning and development of these regions in the past.

The Mekong River Commission provides a revealing case of the many obstacles and contingencies in transborder riparian region governance. Its earlier attempts were ineffective, due, in part, to war and conflict. Reincarnated as the MRC in 1995, it was widely viewed as a donor-driven water management program focused on the construction of dams and access to forest reserves. Around 2002, however, rising criticisms and research by non-government organizations began to document the deleterious impacts of these changes and seriously challenged this mode of riparian management (MRC2011a, 2011b, 2013). This set in motion new trends toward greater transparency in information

across borders, routine intergovernmental gatherings, research on local impacts, and participation of local as well as international civil society organizations as many level efforts to reach toward equivalencies of supra-national regional governance. It has not yet been able to move very far from its previous mode of management, however, and upstream-downstream national borders continue to be formidable constraints on its ability to go beyond national, and mostly urban-global, interests.

None of the experiences presented here can be said to provide a model for IRDP. Rather, they show us instead that while normative principals, explanations of why problems occur, and best practices might be abstracted from them, context matters greatly. In this sense, sustainability is an aspiration of efforts at problem solving that are always in a state of flux and uncertainty about the future. If such an understanding is accepted, then the way forward is to continue to aspire for sustainable development as a social learning process that can develop the capacity for resilience in the face of shifting development parameters. As the three cases show, the regional scale can contribute to creating an important level of social, political and economic engagement for these efforts.

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