



Asta-Ja Policy Briefs

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Inaugural Issue

Message from the President

We are pleased to present to you the inaugural issue of the *Asta-Ja Policy Briefs*. The inaugural issue includes three briefs on three important issues—urban development, air pollution, and entrepreneurship. Management of urban development, control of transboundary air pollution, and development of entrepreneurial echo system require thoughtful policies. The briefs presented in this issue provide some guidance in this respect. We hope to publish policy briefs on issues on a regular basis. However, for this hope to come true we need submissions of policy briefs from experts and scholars interested in the development of Nepal and her people. Our humble request to you: please contribute to make this journey a more meaningful one.

Please visit our website www.astjausa.org for more information.

Durga D. Poudel, Ph.D.
President
Asta-Ja USA

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Asta-Ja Policy Briefs are produced by Asta-Ja USA. Policy briefs are written on any relevant topics pertaining to Asta-Ja resources (*Jal, Jamin, Jungle, Jadibuti, Janashakti, Janawar, Jarajuri, and Jalabayu*) and socio-economic development of Nepal. Upon submission of such briefs, the Policy Advisory Council of Asta-Ja USA reviews the briefs and makes recommendations for publication of selected policy briefs.

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Urban Development in Nepal

Ambika P. Adhikari, DDes., AICP
Phoenix, AZ, USA

Background

Nepal is witnessing an unprecedented growth in the rate of urbanization. As of 2017, there were a total of 293 urban municipalities in Nepal which include six metropolitan cities, 11 sub-metropolitan cities and 276 urban municipalities. A World Bank Report states that Nepal is the least urbanized and with the fastest rate of urban growth in South Asia (Muzzini, E. and G. Aparicio, 2013).

According to the *Economic Survey of Nepal 2015-16*, the urban population in 2011 was 19 percent of the total, which reached 42 percent in 2016, while the average annual rate of growth of urban population was 3.4 percent (Kathmandu Post 2016).

It is estimated that, in 2019, the urban population in Nepal defined as the number of people living in officially designated urban centers is around 45 percent of the total population. However, the urban settlements defined by the government of Nepal may include areas which are not truly urban in character and may lack urban infrastructure. Nepal's urban population as measured by internationally comparative means might be less than the above figures. For example, the World Bank data shows the Nepal's urban population in 2018 as only 20 percent of the total (The World Bank 2018). Thus, the assertion by the World Bank that Nepal is among the least urbanized countries in South Asia.

Policy Options to Enhance Urban Development

It is widely accepted that while a city emerged through an organic process works best, a healthy urban growth is facilitated by a well-thought out and residents-supported planning process. In the absence of comprehensive planning efforts, urban growth becomes haphazard resulting in a mismatch between the needs of the residents and infrastructure capacities, and amenities such as open spaces.

The cities and towns of Nepal exhibit severe problems arising from the lack of good planning while the urban growth continues unabated. This often results in the form of traffic congestion, deficient water supply and sanitation services, air, land and water pollution, severe lack of parks and open spaces and compromised aesthetic character. In addition, the impending climate change impacts will exacerbate the vulnerability of the urban population in Nepal.

The following list provides some policy options that can help improve the planning and manage growth in the burgeoning urban areas in Nepal.

1. Establish Urban Planning Units in each municipality. To leverage the economy of scale, adjacent small towns and urban centers can share a common planning unit.
2. Hire planners, architects, engineers and economists, or retrain existing employees who can be assigned for planning functions. Given the limited financial and human resources in most towns and cities, there could be regional or provincial cells to house such professionals, who can provide service to a number of municipalities.
3. Connect the municipal Planning Units to the counterparts in the provincial and federal governments, and peers.
4. Prepare basic or model planning documents such as Comprehensive Plan, Area Plans, Housing Plans, Infrastructure

Plan and Open Space Plan, and zoning codes. Provinces or new towns and cities can utilize the model documents prepared for large cities such as the cities in the Kathmandu valley as the initial references.

5. Encourage the Federal Government, or the Provincial Governments to create template or model plans for cities and town. The Government of Nepal has numerous well-trained professionals who can provide support for such activities.
6. Organize budget, funding, ongoing trainings and learning opportunities for the staff.
7. Train the Mayors, Council Members and other elected city or town officials to consider planning as an integral function of the urban development.
8. Create new towns or extension where appropriate. For highly congested old towns and cities, this option maybe necessary. Generally, an organic expansion of the cities works better.
9. The municipalities can purchase lands in strategic locations within the jurisdictions to control the planning process (e.g., provide parks and open spaces).
10. Incorporate climate vulnerability and resiliency as a part of the planning process.
11. Incorporate sustainability, social justice and participatory elements in all aspects of planning and development. Refer to the UN's 2015 Sustainable Development Goals, especially goal number 11, which aims to "Make cities and human settlements inclusive, safe, resilient, and sustainable."
12. Devise public-private partnership schemes in planning and urban development programs.
13. Prepare plans for public involvement and participation in the planning and development of their towns and cities.

Recommendations

Except for the towns in the Kathmandu Valley, planning is weak or almost non-existent in the Nepali towns and cities. The following are the priority policy recommendations to improve planning in the urban areas of Nepal.

1. Select a few cities where a two-year pilot program to improve urban planning can be implemented. The lessons learnt and experience gathered in these locations can be utilized to create country-wide programs for enhancing planning functions for all urban centers.
2. Create a model planning document including basic templates for creating General Plan, Zoning Code and Infrastructure Development Plan for all urban centers in the country.
3. Incorporate sustainability, public participation, climate resilience and social equity as integral parts of all of the planning documents.

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Controlling Transboundary Air Pollution: Asta-Ja Framework for Planning and Development

Durga D. Poudel, Professor and Coordinator of Environmental Science, School of Geosciences, University of Louisiana at Lafayette, Louisiana, USA

Summary

The Terai and the mid-hill regions of Nepal, which contain around 93% of 29.7 million Nepalese population, are experiencing thick atmospheric haze during winter months. The presence of this haze should be explained with reference to the “Asian Brown Cloud”, a phrase coined by the United Nations Environment Program in 2002 following an extensive research known as the Indian Ocean Experiment (INDOEX). The findings revealed that there is a three-kilometer-thick man-made pollution, largely from October-November to March-April in the atmosphere over South Asia, East Asia (China), and Southeast Asia. The “Asian Brown Cloud” is mainly due to the presence of anthropogenic aerosols such as soot (mainly black carbon) and dusts produced through industrial and vehicular emissions, thermal plants or burning biomasses. Sulfates and nitrates are other aerosols found in the brown cloud. The “Asian Brown Cloud” has a strong effect on solar radiation, monsoon, precipitation, visibility, agricultural and forest productivity, public health, and ecosystem services. Its radiation effect in the upper atmosphere results in temperature rise of the upper layer causing glacier melt, while there is “dimming” effect on the earth surface with many impacts including a decrease on surface temperature, reduced evaporation and precipitation, decreased monsoon, reduced vegetation growth and increased winter chills. Researchers have reported rising temperatures, emerging diseases and parasites, declining rainfall, invasive plants, dry springs, drought conditions, declining agricultural productivity, and unpredictable weather conditions in Nepal (Poudel and Duex, 2017). Frequent natural disasters are major concern in the country. The 2014 Western Nepal flood that occurred in the month of August displaced more than 20,000 people and destroyed many houses and infrastructures. The 2017 Terai Flood which also occurred in the month of August caused a total loss of more than Rs. 63 billion destroying 41,000 houses and damaging 151,000 houses, and the 2019 July flood killed at least 117 individuals, displaced at least 16,520 households, and damaged infrastructures, food stocks, and crops in 32 districts.

Policy Options

Since the origin of the transboundary air pollutants lies outside the political boundary of a nation, cooperation among the nation states is necessary for controlling transboundary air pollution. The transboundary air pollutants cause degradation of soil and water resources, harm forests and wildlife, damage infrastructures, reduce visibility, and adversely impact public health, tourism, and businesses. Therefore, the issue of transboundary air pollution should reach to the highest political level for its effective solution. Enforcement of rules and regulations to control emissions of gases and particulate matters

from factories, thermal plants, vehicles, incinerators, biomass burning, and activities such as processing and manufacturing is crucial. Airborne dusts and aerosols from chemical sprays and fertilizer applications are additional sources of particulate matters in the air. The ambient Air Quality Standards generally include PM₁₀, PM_{2.5}, SO₂, CO, O₃, NO₂, and Pb. In order to control transboundary air pollution, monitoring of ambient Air Quality Standards across the region is essential. Air quality monitoring networks should have consistent procedures on sample collection, laboratory analysis, location of sampling, and regular data analysis and sharing the results. Measures such as switch to clean energy, economic incentives for pollution control, and use of environmentally sound production and manufacturing technologies will help controlling transboundary air pollution.

Recommendations

Effective control of transboundary air pollution requires a theoretically grounded, grassroots-based, and holistic natural resources planning and development framework that revolves around community awareness, capacity-building, understanding interrelationships and linkages, policy decision making, sustainable technology and practices, and collaborative partnerships. The Asta-Ja Framework (Poudel, 2008) for natural resources planning and development will be an appropriate tool for integrated planning, development, and implementation of a transboundary air pollution control program. Asta-Ja means eight Nepali letter “Ja”: *Jal* (water), *Jamin* (land), *Jungle* (forest), *Jadibuti* (medicinal and aromatic plants), *Janashakti* (manpower), *Janawar* (animals), *Jarajuri* (crop plants), and *Jalabayu* (climate). Nepal can better address its transboundary air pollution problem through Asta-Ja Framework by focusing on stubble and biomass management, emissions control, clean energy, soil conservation, climate change adaptation, and public awareness. Nepal can play a pivotal role in developing collaborative programs with the nation states in the region such as India, Bangladesh, Pakistan, Bhutan, and China in line with the goals and objectives of UN initiatives such as Geneva Action Agenda, Climate Action, SDGs, and Sendai Disaster Risk Reduction in controlling the transboundary air pollution.

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Entrepreneurship for Prosperity

Basu Sharma

Professor, Faculty of Management, University of New Brunswick, Fredericton, Canada

Summary

Entrepreneurship is one of the key instruments for economic growth, employment generation, and prosperity creation in societies around the world. Recently the government of Nepal has set the goal of making the country prosperous. Undoubtedly, entrepreneurship will be the most critical element for achieving this goal. And there are three forms of entrepreneurship—productive, unproductive, and disruptive (Baumol, 1990). Productive entrepreneurship entails innovation and introduction of new goods/services, opening new markets, and implementation of new organizational and managerial strategies. A small number of people is passionate about entrepreneurship, and new ventures that fit the description of productive entrepreneurship are on the rise in Nepal. Engaging in rent-seeking and other redistributive efforts such as seeking subsidies and lobbying legislators for favors are examples of unproductive entrepreneurial activities. Numerous cases of bribery, kickbacks, syndicated business operations in strategic sectors such as education and healthcare, and favoritism in allocation of resources have been brought out by Nepalese media recently. Disruptive entrepreneurial activities include destroying existing resources and productive capacity with a view to increasing ones' own wealth. Groups and political parties that played key roles in bringing the regime change appear to have been engaged in this form of entrepreneurship in Nepal. Of course, societies create institutions to shape the relative payoffs from each of these forms. All three forms of entrepreneurship exist in Nepal. But it appears that unproductive and destructive entrepreneurship far surpass the productive ones. Also, the pace of venture creation has not kept pace with the growth of domestic market and international opportunities available on both sides of the border. The main reason for this gap's persistence is the absence of strong institutions supportive of good governance and property rights, both so essential for emergence of a vibrant entrepreneurial echo system (Sharma, 2014). Hence it is high time for Nepal's government to develop and implement proactive policies for fostering productive entrepreneurship.

Policy Options

A productive entrepreneurial culture is lifeblood of prosperity creation. Following are a set of policy options conducive to creation of such a culture.

The government has plans and programs to promote entrepreneurial activities for youths, women, and people of disadvantaged groups by providing micro-loans. This should be complemented by creating venture capital and/or innovation funds.

Entrepreneurial education can create awareness about benefits entrepreneurship. It can motivate young people to pursue entrepreneurship as a career. Incorporating entrepreneurial courses in the educational system early on will motivate students to develop an entrepreneurial mindset.

Promoting an entrepreneurial culture should become a priority item in the government's policy agenda. Private sector has taken some lead on it already. For example, the E4N (entrepreneurship for Nepal) is an influential platform, dedicated to activities such as mentoring, training, and information sharing. More such platforms as E4N and Samridhhi (www.samridhhi.org) are necessary for creating positive environment for entrepreneurship.

Remittance is the most important source of family finance for many in Nepal. However, most of it is used in purchases of land, housing, and real estates. Policies to divert this resource towards creating new businesses are necessary.

Nepal is blessed with its own unique resources as discussed by Poudel (2008) in his Asta-Ja Framework—Jal (water), Jamin (land), Jarajuri (crop plants), Janawar (animals), Jungle (forest), Jadibuti (medicinal and aromatic plants), Jalabayu (climate), and Janasakti (human resources). Each of these resources can be harnessed to produce competitive product/services for the national and international markets. Policy makers need to promote innovation activities to bring these resources in alignment with other priority sectors.

Creating and supporting infrastructure for innovation and start-up ventures is a crucial element of sustainable entrepreneurship. Partnership among the government, private sector, and academic institution is often necessary for this. The government should create institutional mechanisms to create such an entrepreneurial echo system.

Recommendations

While each policy option is important in its own way, three areas of crucial importance, from the viewpoint of urgency and viability, for creating prosperity are as follows: (1) Creating awareness about the benefits of entrepreneurship. This can be done through creation of platforms like E4N and by incorporating entrepreneurship in the post-secondary curricula. Public-private partnership is required to make it more effective. (2) Encouraging venture capitalists to participate in start-ups. Introduce policies to encourage remittance recipients to start micro-businesses. Remittance is a huge resource for Nepal (Sharma, 2019). In addition, continue with the current policy of providing microloans to potential entrepreneurs. (3) Promoting innovation system and marketing mechanisms. Entrepreneurship cannot succeed without innovation. Create innovation system to explore scope for product development in relation to unique asta-Ja resources. In addition, promote partnership arrangements between business conglomerate, cooperatives, and small businesses for large scale marketing and export.

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Asta-Ja USA

**500 University Ave #1410
Honolulu, HI, 96826
USA**

Phone: (337)-739-3694

E-mail: info@astajausa.com

Website: www.astajausa.org