



DELHI POLICY GROUP

Advancing India's Rise as a Leading Power



DPG Roundtable Reports, Vol. 2, Issue 8 Roundtable on 'Advancing the BBIN Sub-regional Cooperation'

India Habitat Centre | New Delhi | India | December 13-14, 2017



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DPG Roundtable on Advancing BBIN Sub-Regional Cooperation, New Delhi, December 13-14, 2017

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*Abstract of Presentation by Dr. Mahalaya Chatterjee,
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*Abstract of Presentation by Ms. Lydia Powell, Head, Centre
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*Abstract of Presentation by Mr. Shahab Enam Khan,
Research Director, Bangladesh Enterprise Institute (BEI) &
Former Chairman, Dept. of International Relations, Jahangir
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Abstract of Presentation by Dr. Smruti S. Pattanaik, Research Fellow, Institute for Defence Studies and Analyses

Abstract of Presentation by Dr. Chandan Mahanta, Professor, Dept. of Civil Engineering, Indian Institute of Technology, Guwahati

Presentation by Dr. Sanjay K. Bhardwaj, Chairperson, Energy Studies Programme & Ms. Pooja Tyagi, Assistant Professor, Department of Economics, Daulat Ram College

Abstract of Discussant's Comments by Mr. Nitya Nanda, Fellow, Centre for Resource Efficiency and Governance – Integrated Policy Analysis Division and Editor, Journal of Resources, Energy and Development (JREaD), TERI

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Abstract of Presentation by Dr. Constantino Xavier, Fellow, Carnegie India

Presentation by Mr. Needrup Zangpo, Executive Director, Journalists Association of Bhutan

Presentation by Mr. Gopilal Acharya, Independent Journalist, Journalists Association of Bhutan

*Abstract of Presentation by Dr. Dhananjay Tripathi, Assistant
Professor, South Asian University*

Recommendations of Break Out Sessions

**DPG YOUNG SCHOLARS' ROUNDTABLE ON
ADVANCING BBIN SUB-REGIONAL COOPERATION**

Paper by Ms. Shreeja Kundu

Presentation by Mr. C.V. Srikar

Presentation by Ms. Angana Guha Roy

Speakers' Profile and Participants List

Abstract of Proceedings

The roundtable in New Delhi was the tenth and final in a series, organized by the DPG. The roundtable hosted participants from Bangladesh, Bhutan, India, and Nepal. The discussion was thematically divided into 4 sessions dealing with Trade & Economic issues, Transit & Multimodal Connectivity (Roadways, Waterways, Railways, and Aviation), Energy-hydropower & Water Resource Management and People to People Connectivity through multi sectoral engagement.

The first day of the conference focused on challenges and opportunities in the four thematic areas of BBIN sub-regional cooperation, which were addressed from the regional perspective. The second day was dedicated to the breakout sessions in which participants identified three priority areas in each of the four thematic areas, the implementation processes and likely challenges. The participants formulated a comprehensive two-year policy recommendation based on the outcome of these discussions. This time, the conference also included a Young Scholars' Roundtable on advancing the sub-regional cooperation with participation from the Global Youth and the DPG.

The proceedings began with a brief welcome address by Ambassador H.K. Singh, Director General of the DPG. He welcomed all the participants which included a wide pool of academicians, members of the think tank community, officials from the government and more importantly His Excellency Major General Vetsop Namgyel, the Ambassador of Bhutan to India. He recalled past roundtables in the series and urged the participants to chalk out a substantial plan of action based on the policy recommendations.

This was followed by a Special Address by His Excellency Major General Vetsop Namgyel, the Ambassador of Bhutan to India. In it, he offered hope for the sub-regional cooperation owing to the shared history and culture among its members. The strategic location of India and its good bilateral relations with Bangladesh, Bhutan and Nepal were also touched upon. In his speech, he singled out all four countries comprising the BBIN initiative and explained how each country could contribute towards ensuring its success. India was identified as the most important partner owing to its strength and size. On the role of Bhutan, the Ambassador referred to its development philosophy of Gross National Happiness (GNH) and urged the other countries in the region to follow suit. Lastly, Bangladesh's large population and Nepal's hydro-power potential was also identified as an opportunity to provide an impetus to the growing sub-regional cooperation.

Mr. Sudhakar Dalela, the Joint Secretary (North) in the Ministry of External Affairs delivered the next special address in the inaugural session of the conference. He shared the government's perspectives on the BBIN framework for sub-regional cooperation by highlighting the key parameters and stressed the issue of strategic underpinnings and challenges faced by all the countries in the BBIN initiative. During his address, he highlighted India's approach to the BBIN sub-regional initiative and explained why the narrative of advancing sub-regional cooperation in the region was relevant for formulating government policies. He also outlined the sub-groups set up at the official level on trade connectivity and energy-hydropower and gave an outline of the work done so far. In conclusion, he was hopeful that the two-day roundtable would result in positive outcomes in the form of concrete action plans.

The inaugural session was concluded by Ambassador Biren Nanda, Senior Fellow of the Delhi Policy Group who read out the Assam government's perspective on the BBIN sub-regional initiative on behalf of Dr. Ravi Kota, Principal Secretary Finance, Government of Assam who was not able to attend the roundtable discussions owing to a last minute official engagement. Dr. Kota conveyed that recently, both the Central Government and the State Government have been making mutual efforts to find space to work closely. Chief achievements on that front have been the planning of the Global Investors' Summit which will be held in February 2018 and the setting up of an Act East Policy Department within the Commerce and Industry Department of the Government of Assam. The state has the potential of being a hub for the markets of the BBIN countries and ASEAN markets with eight different national capitals falling within a 2-hour flying time from Guwahati. Thus, Dr. Kota was of the view that the development of Assam would serve to transform the state from a geographical "bottleneck" into a "funnel of stimulant" for the development and growth of the BBIN countries.

The first session of the conference was chaired by Ambassador Rajeet Mitter and it focused on the trade and economic issues within the BBIN. The focus of the session was on the softer areas of trade. It dealt with the non-tariff barriers/ measures, customs and electronic data interchange, banking, border trade and border infrastructure, and the BBIN Motor Vehicle Agreement (MVA) amongst other issues. Dr. Selim Raihan suggested that the BBIN could set up an economic community with its four pillars being first, a trade, investment and value chain integration among BBIN countries, second, a competitive and innovative BBIN for greater integration with rest of Asia, third, enhanced connectivity and sectoral cooperation within the region and lastly, an inclusive and people centered BBIN. Similarly, Prof. Prabir De suggested the set-up of a BBIN Secretariat and he discussed the rationale, the broad structure and the required steps in his presentation. Other presenters included Dr. Ramesh Paudel, Visiting Fellow of

the Australia National University, Prof. Amita Batra, Professor of Economics, Centre for South Asian Studies, JNU and Dr. Paras Kharel, Research Director at SAWTEE, Nepal.

Session two dealt with transit and multimodal connectivity (roadways, waterways, railways and aviation) issues and capabilities for the BBIN region. It also focused on ports and shipping, aviation, coastal shipping, particularly container transportation. Ambassador Sanjay Singh, former Secretary (East) in the Ministry of External Affairs chaired the session that included professors and experts across the think tank community. Suggestions to standardize the railway gauge, introduction of the zero-tariff policy and its implications and the potential of air connectivity in the region with hubs in Kolkata and Dhaka were some of the topics that were deliberated in the session.

Session three focused on the energy-hydropower and water resource management techniques and viabilities as part of the sub-regional cooperation within the BBIN. Specifically, the session dealt with hydro-power sharing and transmission, non-conventional energy sources and international energy investment into the region. It was chaired by Dr. Sagar Prasai, country representative of India in the Asia Foundation. He initiated the discussion by presenting the “headline news” on the two sectors – energy and water – within the purview of the topics. Energy and hydro-power are two pillars of the BBIN initiative and the participants focused on the areas where the countries are lacking and ways to fill those gaps in order to advance cooperation in the sub-region.

The last session chaired by Mr. Sabyasachi Dutta, Founder-Director of the Asian Confluence, Shillong focused on the people to people connectivity through multi-sectoral engagement within the BBIN region. The parameters set to be discussed during the session included tourism, higher education, health, cultural heritage, media, film, performing arts, music and visual arts, etc. Participants focused on the concept of Gross National Happiness (GNH) and the need for the BBIN countries to implement GNH. Other major issues identified were the lack of maritime connectivity, lack of rail passenger links between India and Nepal, and an absence of sub-regional flights beyond Kathmandu in Nepal. The participants in the session realized that tangibles needed to be achieved and listed out so that they could serve as a basis for further achievements in the region. This would also help in reviving a sense of regionalism which previously existed and was dismantled in the last 60-70 years because of the reshaping of borders which took place.

The second day of the Roundtable was structured into breakout sessions where participants were encouraged to brainstorm ideas to formulate a cogent plan of action focusing on three priority areas under each thematic grouping. Each

group came up with a concrete Two-year Plan of Action, its implementation process and likely challenges.

The roundtable concluded on a note of optimism and progressed in identifying key issues and recognizing practical solutions to address the same. The core group members were encouraged to stay connected, to strengthen the discussions and mold them into executable recommendations.



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DPG Round Table Discussion on Advancing BBIN Sub-regional Cooperation

Venue: Tamarind Hall, India Habitat Centre, New Delhi

13th-14th December, 2017

Programme

Day I: Wednesday, 13th December 2017

Venue: Tamarind Hall

09.00 - 09.30	Registration
09.30 - 10.30	Inaugural Session
09.30 - 09.40	Welcome Address by Ambassador H. K. Singh, Director General, Delhi Policy Group [10 minutes]
09.40 – 09.50	Special Address by His Excellency Major General Vetsop Namgyel, the Ambassador of Bhutan to India [10 minutes]
09.50 - 10.00	Special Address by Mr. Sudhakar Dalela, Joint Secretary (North), Ministry of External Affairs [10 minutes]
10.00 – 10.10	Special Address by Dr. Ravi Kota, Principal Secretary to the Government of Assam (Finance Department) & Principal Resident Commissioner, Assam Bhawan, New Delhi [10 minutes]
<i>10.10 – 10.30</i>	<i>Coffee/ Tea Break</i>



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10.30 - 11.40

Session I: Trade and Economic Issues

[The session will deal with Non-Tariff barriers/ measures, Customs and Electronic Data Interchange, Banking, Border Trade and Border Infrastructure, BBIN MVA, etc.]

Chair: Ambassador Rajeet Mitter

[10 minutes]

Speakers: [10 minutes each]

1. *Dr. Selim Raihan, Professor, Department of Economics, University of Dhaka & Executive Director, South Asian Network on Economic Modeling (SANEM), Bangladesh*
2. *Dr. Ramesh C. Paudel, Visiting Fellow, Australian National University*
3. *Prof. Prabir De, Research and Information System for Developing Countries*
4. *Prof. Amita Batra, Professor of Economics, Centre for South Asian Studies, JNU*
5. *Dr. Paras Kharel, Research Director, SAWTEE*

11.40 – 12.10

Comments by Discussants followed by Q & A [30 minutes]

12.10 – 13:00

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

[The session will deal with Ports and Shipping, Aviation, Waterways, Road, Railways, Coastal Shipping, particularly Container Transportation]

Chair: Ambassador Sanjay Singh

[10 minutes]

Speakers: [10 minutes each]

1. *Dr. Smruti S. Pattanaik, Research Fellow, Institute for Defence Studies and Analyses*
2. *Dr. Mahalaya Chatterjee, Professor & Director, Centre for Urban Economic Studies, Department of Economics, Calcutta University*
3. *Dr. Nisha Taneja, Professor, Indian Council for Research and International Economic Relations*
4. *Dr. Joyeeta Bhattacharjee, Senior Fellow, Observer Research Foundation*

13:00 – 13:30

Comments by Discussants followed by Q & A [30 minutes]



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Discussant: [8 minutes]

1. *Prof. Prabir De, Research and Information System for Developing Countries*

13.30 - 14.15

Lunch Break

14.15 - 15.30

Session III: Energy-hydropower and Water Resource Management

[The session will deal with Hydropower Power Sharing and Transmission, Non-conventional Energy, and Energy Investment.]

Chair: Dr. Sagar Prasai

[10 minutes]

Speakers: [9 minutes each]

1. *Dr. Arbind Kumar Mishra, Member, National Planning Commission, Nepal*
2. *Dr. Mahfuzul Haque, Former Secretary, Ministry of Labour and Employment, Government of the People's Republic of Bangladesh*
3. *Ms. Lydia Powell, Head, Centre for Research Management, Observer Research Foundation*
4. *Mr. Shahab Enam Khan, Research Director, Bangladesh Enterprise Institute (BEI) & Former Chairman, Dept. of International Relations, Jahangir Nagar University Savar, Dhaka*
5. *Dr. Smruti S. Pattnaik, Research Fellow, Institute for Defence Studies and Analyses*
6. *Dr. Chandan Mahanta, Professor, Dept. of Civil Engineering, Indian Institute of Technology, Guwahati*

15.30 – 16.00

Comments by Discussants followed by Q & A [30 minutes]

Discussants: [5 minutes each]

1. *Mr. Nitya Nanda, Fellow, Centre for Resource Efficiency and Governance – Integrated Policy Analysis Division & Editor, Journal of Resources, Energy and Development (JREaD), TERI*
2. *Ms. Pooja Tyagi, Assistant Professor, Department of Economics, Daulat Ram College, University of Delhi*

16.00 - 16.15

Coffee/ Tea Break



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16.15 – 17.15

Session IV: People to People Connectivity through multi-sectoral Engagement

[The session will deal with Tourism, Higher Education, Health, Cultural Heritage, Media, Film, Performing Arts, Music and Visual Arts, etc.]

Chair: **Mr. Sabyasachi Dutta**

[10 minutes]

Speakers: [10 minutes each]

1. *Dr. Constantino Xavier, Fellow, Carnegie India*
2. *Mr. Needrup Zangpo, Executive Director, Journalists Association of Bhutan*
3. *Mr. Gopilal Acharya, Independent Journalist, Journalists Association of Bhutan*
4. *Dr. Dhananjay Tripathi, Assistant Professor, Department of International Relations, South Asian University*

17.15 - 17.45

Comments by Discussants followed by Q & A [30 minutes]

17.45 – 18.00

Concluding Remarks



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Day II: Thursday, 14th December 2017

Venue: Tamarind Hall

- 09.00 – 09.30** **Registration**
- 09.30 – 09.40 Opening Remarks and Briefing by Ambassador Biren Nanda
[10 minutes]
- 09.40 – 10.40** **Breakout Session I: Participants will discuss the identified issues and themes and frame policy recommendations to address each issue**
- 10.40 – 11.40** **Breakout Session II: Consensus arrived from each policy recommendation will be discussed and put forth in a concrete plan of action**
- 11.40 – 13.00 *Deliberations within Core Groups on the Priorities and Action Plans in each of the Four Thematic areas.*
- 13.00 – 14.00 *Lunch Break*
- 14.00 – 15.00 Presentation by Core Group Mentors [60 minutes]

GROUP MENTORS

- 1. Group Mentor: Trade and Economic Issues**
Prof. Prabir De, Research and Information System for Developing Countries
- 2. Group Mentor: Transit and Multimodal Connectivity**
Ambassador Sanjay Singh, Adjunct Fellow, Delhi Policy Group
- 3. Group Mentor: Energy-hydropower and Water Resource Management**
Dr. Sagar Prasai, Country Representative, The Asia Foundation, India
- 4. Group Mentor: People to People Connectivity through Multi-Sectoral Engagement**
Mr. Sabyasachi Dutta, Director, Asian Confluence, Shillong, Meghalaya

15.00 – 15.20 Discussions/ Q&A [20 minutes]

15.20 – 15.30 *Coffee/ Tea Break*



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15.30 – 16.30 Young Scholars’ Roundtable on Advancing BBIN Sub-Regional Cooperation

Chair: Dr. Selim Raihan

Speakers: [8 minutes each]

1. *Ms. Shreeja Kundu*
2. *Mr. CV Srikar*
3. *Ms. Angana Guha Roy*
4. *Mr. Udayvir Ahuja*

16.30 – 17.00 Comments by Discussants followed by Q & A [30 minutes]

17.00 – 17.15 Closing Session

**DPG Roundtable on Advancing
BBIN Sub Regional
Cooperation, New Delhi,
December 13-14, 2017**

**Summary Note of Recommendations
from Break Out Sessions**

Summary Note of Recommendations

Day II – 14th December 2017

❖ Break Out Session: Trade and Economic Issues

Participants: Prof. Prabir De (Group mentor); Amb Rajeet Mitter, Dr. Selim Raihan, Dr. Paras Kharel, Dr. Ramesh Chandra Paudel

Recognizing 3 Priority Issues

- I. Signing BBIN CEPA
- II. Dealing with NTMs
- III. Building Value Chains

1st Issue: Plan of Action for 2 Years

1. Formation of Joint Study Groups
2. Formation of Joint Working Groups in goods, services and investment

Implementation Process

- a. Identification and mobilization of funds.
- b. Identification of organizations for the study.
- c. Stakeholders Consultation.
- d. Setting up a dispute settlement mechanism.

Challenges to Implementation

- Lack of Political Will/Commitment
- Existence of Special and differential treatments

2nd Issue: Plan of Action for 2 Years

1. Develop and harmonize standards for BBIN sub-region, starting with priority products

Implementation Process

- a. Conduct Joint feasibility studies
- b. Assessment of capacity of officials, conformity of assessment bodies etc.
- c. Requirement of BBIN mutual recognition agreements.
- d. Time bound implementation

Challenges to Implementation

- Funding and technical assistance
- Skill development
- Procedural obstacles including time delays
- Infrastructure issues

3rd Issue: Plan of Action for 2 Years

1. Identify the potential of new value chains in goods and services.

Implementation Process

- a. Formation of BBIN Business Council/Chamber of Commerce.

- b. Stakeholders' consultation
- c. BBIN Trade fairs
- d. BBIN Business Travellers' card
- e. BBIN Trade portals, single window etc.

Challenges to Implementation

- Infrastructure and connectivity.
- Harmonization of Trade facilitation measures.
- Reform of the VISA regime.

❖ Breakout Session: Transit and Multimodal Connectivity

Participants: Amb. Sanjay Singh (Group Mentor), Dr. Smruti S. Pattanaik, Dr. Mahalaya Chatterjee, Dr. Joyeeta Bhattacharjee, Ms. Diya Nag.

Recognizing 3 Priority Issues

- I. Broad based multimodal transport and transit agreement
- II. Mapping of multimodal connectivity networks
- III. Connectivity Master Plan

1st Issue: Plan of Action for 2 years

1. Study of various agreements and arrangements across the globe.
2. National Scrutiny
3. Finalizing of draft
4. Signature and Ratification

Implementation Process

- a) Formation and arrangement of Joint Study Group for studying various multimodal transport agreements
- b) Submission of time- bound report.
- c) Country level consultations with stakeholders
- d) Setting up of inter-governmental negotiation groups
- e) Signing and ratification

Challenges to Implementation

- Lack of common knowledge
- Misuse of the agreement
- Lack of appropriate border infrastructure and facilities like testing labs, etc.
- Synergizing the transport agreement in consonance with trading and other agreements

2nd Issue: Plan of Action for 2 years

1. Identify various elements of mapping + linkages
2. Identify sources of information
3. Identify stakeholders
4. Seek out financing options

Implementation Process

- a) Set up joint inter-governmental working groups
- b) Achieve consensus on the methodology
- c) Writing of report, and then dissemination it.

Challenges to Implementation

- Access to information
- Achieving consensus
- Inadequate financing

3rd Issue: Plan of Action for 2 years

1. Trade and P2P connectivity
2. Identifying efficient and cost effective way to serve above objectives.
3. Support BBIN community to be of utility to all stakeholders
4. Identifying regional interests
5. Identifying software and hardware to support connectivity master plan
6. Addressing environmental concerns

Implementation Process

- a) Study of transit + transport agreement
- b) Study of the mapping report
- c) Inter-governmental study group for the master plan
- d) Achieve consensus on methodology
- e) Securing financing
- f) Consult stakeholders
- g) Finalize master plan

Challenges to Implementation

- Consensus on mode of transport to support implementation
- Access to information
- Agreement on location of various hubs
- Security related and law & order concerns
- Conflict between national and regional interests
- Interests of extra-regional powers

❖ Breakout Session Energy & Hydropower

Participants: Dr. Sagar Prasai (Group Mentor), Dr. A.K. Mishra, Dr. Mahfuzul Haque, Mr. Shahab Enam Khan, Ms. Pooja Tyagi, Dr. Chandan Mahanta and Mr. Udayvir Ahuja

Recognizing 3 Priority Issues

- I. BBIN power-sharing agreement/ arrangement
- II. Integrated water management strategy
- III. Sustainability, climate change and bio-diversity

1st Issue Plan of Action for 2 Years

1. Harmonization of pricing policies across the BBIN region
2. Opening up the BBIN market in a multilateral arrangement
3. Establishing common multilateral guidelines on cross-border electricity trade

Implementation Process

- a) Aligning domestic policies to the common guidelines
- b) Conducting a feasibility study on energy banking and optimum utilization of excess generation (institutions and markets)
- c) Formulating a Transmission Grid Master Plan

Challenges to Implementation

- Pricing is not based on sources (generation)
- Synchronization of demand vs production is missing at the regional level
- Energy banking entities don't exist.

2nd Issue: Plan of Action for 2 Years

1. Framework agreement on BBIN water management and utilization practices is required
2. Action plan for establishing regional multi-disciplinary water management institutions.

Implementation Process

- a) Produce a zero-draft for the government, through civil society institutions
- b) Based on international practices draft a Vision Document for regional institutions

Challenges to Implementation

- The regional Institutions (agencies) are all fragmented
- Approaches and practices are fragmented/ divergent
- The dynamic changes of the ecology/ morphology of Himalayan rivers not accommodated in the outcome (incl. climate change)
- Social accounting missing in technological advancement (methods and practices)

3rd Issue: Plan of Action for 2 Years

1. Promote and scale up innovations on energy efficiency at community utilization levels
2. Formulation, documentation and promotion of a regional strategy for technology transfers, innovations, community based adaptations on climate change.

Implementation Process

- a) Governments in the BBIN region to create R&D platforms on renewable energy, energy efficiency and demand
- b) Form a joint management of trans-boundary ecological landscapes (e.g., Sunderbans)

Challenges to Implementation

- Granular Data and knowledge sharing platforms don't exist
- Adaptation strategies/ practices are not mainstreamed at all levels (incl. the community level)
- Development of community based/ decentralized energy security models
- Trans-boundary strategies/ practices for biodiversity/ wildlife conservation and management is absent

❖ Breakout Session: People to People Connectivity

Participants: Mr. Sabyasachi Dutta (Group Mentor), Dr. Constantino Xavier, Dr. Dhananjay Tripathi, Mr. Gopilal Acharya and Mr. Needrup Zangpo

Recognizing 3 Priority Issues

- I. Creating Sub National and regional policy dialogues on the Quality of Development
- II. Formulate a master BBIN Tourism Framework (Taking from the GNH model)
- III. Initiate a BBIN Exchange Network

1st Issue: Plan of Action for 2 Years

1. BBIN sub-national consultations on quality development
2. BBIN conference on quality based development (Balancing ecology and economy and short term-long term aspirations of the region)
3. BBIN quality development policy paper/document

Implementation Process

- a. Finding right stakeholders in each geographical and regional set ups
- b. Seeking to identify champions and funding sources

Challenges to Implementation

- Short-term political and economic compulsions
- Not being abstract but relevant to the policy makers of industries and governments

2nd Issue: Plan of Action for 2 Years

1. Design & formulation of a regional BBIN Tourism framework on four thematic areas and selected sites for incubation

Implementation Process

Identifying major enablers for formulating a regional BBIN Tourism Framework:

- a. Stakeholder Consultations
- b. Buddhist
- c. Tea
- d. Sports
- e. Cultural Festival

Challenges to Implementation

- Identify right stakeholders across the thematic areas
- Engage local communities at the micro level

3rd Issue: Plan of Action for 2 Years

1. Design and implementation at an institutional level:
 - a. Academia
 - b. Cultural/ CSOs
 - c. Media Organizations
 - d. Social Entrepreneur Organizations
 - e. Youth Organizations

Implementation Process

- a. Partnering institutions for facilitating the process
- b. Virtual Secretariat to coordinate amongst different sectors
- c. DPG and partners to lead in various disciplines/sectors
- d. Governments to work as facilitator of the process beyond the region

Challenges to Implementation

- Type of Resources and requirement of resource generation
- Dissemination of Outputs across the varied levels of disciplines
- Programming

Inaugural Session

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Welcome Address by Ambassador
H.K. Singh, Director General, Delhi
Policy Group**

DPG ROUNDTABLE ON ADVANCING BBIN SUB-REGIONAL COOPERATION

Opening Remarks by Director General Delhi Policy Group

A very warm welcome to participants in this Roundtable on BBIN Sub-Regional Cooperation in Delhi.

The Delhi Policy Group has been engaged in progressing BBIN cooperation at the Track 2 level by engaging academics and experts from all BBIN countries and we have had nine roundtables in different venues so far. These locations have included New Delhi, Guwahati, Kolkata, Kathmandu and Dhaka. This is the tenth and last roundtable in the series on BBIN sub-regional cooperation.

We are delighted to have with us His Excellency Major General Vetsop Namgyel the Ambassador of Bhutan to India, Mr. Sudhakar Dalela, Joint Secretary (North), Ministry of External Affairs and Dr. Ravi Kota, Principal Secretary to the Government of Assam Finance Department who have consented to address this distinguished gathering during the Opening Session of the Conference.

We are equally delighted to have with us a truly outstanding group of policymakers, academics and representatives of civil society from Nepal, Bhutan, Bangladesh and India.

I would like to make special mention of Dr. Arbind Kumar Mishra, Member National Planning Commission of Nepal and our Chairs and Group Mentors Ambassador Rajeet Mitter, Ambassador Sanjay Singh, Dr. Sagar Prasai, Country Representative Asia Foundation, Prof Prabir De from the RIS and Mr. Sabysachi Dutta, Director Asian Confluence Shillong

Our special thanks to Dr. Sagar Prasai, Country Representative, Asia Foundation and Ms. Diya Nag, Senior Project Officer for their sponsorship of the DPG's BBIN project. We are grateful for their unstinted support and advice throughout our endeavors.

The current roundtable in Delhi has a special significance.

The current BBIN roundtable in Delhi is significant in a number of ways: First, it is our final BBIN track 2 engagements in 2017, after holding two roundtable discussions for the first time outside India in Kathmandu and Dhaka.

Second, the Delhi roundtable will give a unique opportunity to review, collate and compare the distinct perspectives of Nepal, Bangladesh and Northeast India on the future directions and priorities of BBIN sub-regional cooperation.

Northeast India occupies the eastern position in the BBIN growth quadrilateral comprising of Nepal, Bhutan, Bangladesh and Northeastern India. It is therefore, uniquely positioned to benefit from all aspects of the BBIN engagement including trade, regional value chains, transit, energy, water, connectivity and growth in people to people ties.

Why is BBIN cooperation acquiring greater salience over time?

Although countries of South Asia are tied by shared history and culture, they are still not well connected with each other and integration remains one of the poorest in the world. The Bangladesh, Bhutan, India, Nepal (BBIN) sub- regional initiative is envisioned to improve economic cooperation and connectivity among these four South Asian countries.

To begin with, these countries trade very little among themselves. The total intra-regional trade of South Asia is 5% of the region's trade. To put such figure in perspective, trade among the countries in the Association of Southeast Asian Nations (ASEAN), for example, is around 25 percent of their total trade.

This low level of regional integration in South Asia, is manifested by poor intra-regional investment and even poorer intra-regional factor movements and connectivity.

The lack of regional integration hurts the region's smaller countries more. Countries such as Nepal and Bhutan are landlocked countries, and their access to regional and international markets is crucial for their development. Their very lack of adequate economic and physical connectivity leaves them with little opportunity to create productive ties and connectivity with the rest of the world, and this renders them highly disadvantaged in a global economy where such connectivity is vital for achieving development goals.

Geopolitical factors have contributed to increased interest in BBIN cooperation. A lack of progress in SAARC has contributed to a heightened interest in BBIN and BIMSTEC. The ADB and JICA have been prioritizing infrastructure development in Northeast India. Government of India has stepped investment in railway, road and waterways connectivity in India's Northeast.

Globally there is an increased trend for participation in production networks or value chains where a number of spatially separated, but linked firms engage in the production of different components of the same product. By breaking up the production process into tasks that require different input combinations or skills, these firms can improve the overall production efficiency by matching tasks with location-specific advantages. Therefore, at a regional level, a group of firms engaged in such production networks can utilise country-specific comparative advantages to lower costs.

Improved connectivity will integrate well with India's 'Act East Policy' and will imply much tighter economic integration between India and other BBIN countries and with the ASEAN. This initiative can also solve India's longstanding problem of locational disadvantage and poor connectivity of its north-eastern states. Besides, since this initiative involves the cooperation of Northeast India with other BBIN countries the issues arising out of the asymmetry of size between India and other BBIN countries is mitigated to a great extent.

The ADB has ambitious plans of trans-Asia road and rail networks, and the BBIN initiative coupled with the India-Myanmar-Thailand Trilateral Highway agreement can fit well into those plans.

During the recent period, significant progress has been made on key regional cooperation issues along the “Eastern Corridor” of South Asia involving the BBIN (Bangladesh-Bhutan-India-Nepal) countries.

In June 2015, the four BBIN countries signed the BBIN Motor Vehicle Framework Agreement, which lifts considerably, past restrictions on cross-border road transit for vehicles, passengers and cargo across the territories of the countries.

The four countries are also in discussions regarding the Multi-modal Transport Agreement, which will encompass cross-border transit by road, rail and inland waterways.

In addition, also in June 2015, India and Bangladesh signed the Coastal Shipping Agreement which allows goods to move by sea from Kolkata in West Bengal to Chittagong Port in Bangladesh, and renewed the Protocol on Inland Water Transit and Trade (PIWTT) for five years with automatic renewal with additional ports of call and routes. They also agreed to seek international financing for development of the entire Bilateral Protocol Routes between the two countries with assured Least Available Depth (LAD) to ensure navigability of the routes year-round and including night-time navigation, as envisaged in the Bilateral Framework Agreement on Trade and Transit. Meanwhile, landlocked Bhutan and Nepal have agreements in place with both India and Bangladesh to use the inland waterways (as well as roads, railways, and ports) in these two coastal countries to transport Bhutanese and Nepalese bilateral, international and transit trade.

These historic agreements have paved the way for the development of a regional integrated multimodal transport network with enormous potential to increase trade, people-to-people contact, and development of economic corridors¹.

For the BBIN initiative to achieve success, it will be important to calibrate the speed and level of its ambitions. It must be recognised that even within the BBIN group there is significant heterogeneity in terms of economic size and level of economic development. Therefore, the political objectives and policy priorities of these countries might be very different. Further, national security issues are increasingly becoming an area of major concern, which can put a brake on regional or sub-regional integration. The long-term acceptability and success of BBIN will depend on how well these challenges are taken up within the framework

What have the BBIN Roundtables achieved so far?

Participants in our roundtables have included eminent scholars, representatives of civil society from all BBIN countries and track 1 participants from BBIN countries.

The BBIN Roundtables have conducted an in-depth examination of the present situation and the potential for regional cooperation in the four thematic areas of Trade and economic issues, Transit and Multimodal Connectivity, Energy, Hydropower and water resource management and People to People Connectivity.

The roundtables held so far have focused on outlining and fleshing out details of a two-year action plan in each of the four thematic areas outlined earlier. Each two-year action plan identifies three priority areas and lists out the implementation process and likely challenges.

What do we propose to achieve in the current Roundtable?

On December 13, participants will present papers or express their views on cooperation in each of the four thematic areas

In the session on **Trade and Economic Issues**: the discussions will cover Non-Tariff barriers/ measures, Customs and electronic data interchange, Banking, Border trade and border infrastructure and the BBIN MVA, etc.

In the session on **Transit and Multimodal Connectivity** (Roadways, Waterways, Railways and Aviation) the discussions will cover ports and shipping, Aviation, Waterways, Road, Railways, Coastal Shipping, particularly container transportation.

In the session on **Energy-hydropower and Water Resource Management**, the discussions will cover Hydropower, power sharing and transmission, Non-conventional energy, and Energy investment.

In the session on **People to People Connectivity** through multi-sectoral Engagement - the discussions will cover Tourism, Higher Education, Health, Cultural heritage, Media, Film, performing arts, music and visual arts, etc

On December 14, participants will join brainstorming sessions to develop a two-year action plan in each of the four thematic areas. So far, we have developed outline action plans in the Kathmandu and Dhaka roundtables and we will be repeating the exercise in Delhi. The objective is to get unique perspectives from each of the three capitals.

Finally, for this roundtable, for the first time we have invited scholars from Global Youth to take part in our roundtable discussions. A warm welcome to them.

Conclusion

With these worlds of introduction, I would like to welcome you and I hope that you will have very productive deliberations over the next two days.

ⁱ Goods can now move by sea or coastal route from Kolkata Port in West Bengal, India to Chittagong Port in Bangladesh, where bilateral and transit goods to Northeast India would travel by inland waterways from Chittagong Port to Dhaka and onwards to Ashuganj Port. At Ashuganj, the goods would be trans-shipped by road or rail to the border crossing at Akhaura-Agartala to Tripura State in Northeast India. Alternatively, the goods that arrive at Chittagong Port, can take the road route to the Ramgarh-Sabroom border crossing, also on the border with Tripura State, Northeast India. The third route would be from Chittagong Port to Thegamukh-Kawrpucchuah on the border with Mizoram State, Northeast India. Goods headed from or for Bhutan can also use these same routes from Chittagong Port through Northeast India.

**DPG Roundtable on Advancing
BBIN Sub Regional
Cooperation, New Delhi,
December 13-14, 2017**

**Special Address by His Excellency
Major General Vetsop Namgyel, the
Ambassador of Bhutan to India**

Inaugural Session

Special Address by His Excellency Major General Vetsop Namgyel, the Ambassador of Bhutan to India

At the outset His Excellency Major General Vetsop Namgyel, expressed his delight in addressing a distinguished gathering of experts on international relations, economics and security issues. He spoke of Bhutan being a small, landlocked country on the South of Himalayas with its access to the outside world only coming through India. Further, he also conveyed Bhutan's gratitude to India in assisting them to achieve socio-economic development. Thus, any initiative by India or other members of the region to increase cooperation was welcomed by the Ambassador. In light of that, he remarked that Bhutan has been the founding member of SAARC in 1985 and joined BIMSTEC in 2004.

Commenting on the slow progress of SAARC, the Ambassador recognized that one way to take the region forward is through a sub-regional cooperation initiative. Referring to the sub-regional initiative of the BBIN, he stressed its positives. The primary positive was that all the four countries shared excellent relations with each other. The biggest asset for BBIN however, is the strategic location and the geography of its most powerful member, India. Explaining further, the Ambassador explained how the Indian Prime Minister Shri Narendra Modi's vision includes not just India's rise as a superpower but the whole region's dominance in the global sphere. He also went on to quote the Prime Minister's speech at the SAARC summit in Kathmandu in which five pillars, particularly, trade, investment, assistance, all-round cooperation and, seamless people to people connectivity were identified as important parameters to achieve development.

Next, the Ambassador explained how not only India but also Bangladesh could play an important role in advancing the sub-regional cooperation. Although, Bangladesh does not have the size of India, it has a large population filled with huge potential which has achieved excellent progress towards graduating as a lower middle-income country. The Ambassador expressed how the development of India's north-eastern states will benefit greatly from cooperation between India and Bangladesh. This would in turn would be beneficial to Bhutan and Nepal, besides providing an impetus to India's Act East Policy. Speaking exclusively of the relationship between Bangladesh and Bhutan, H.E. pointed out that the countries share good bilateral trade with each other.

Subsequently, he also spoke of Nepal and the potential that the region had. Nepal has a green natural beauty, hydro-power potential and most importantly industrious people. Thus, Nepal could contribute in an important manner to the success of BBIN regional cooperation. He expressed his deep underlying pleasure in the friendship that the two countries shared.

Lastly, the Ambassador spoke of the role Bhutan played in the region. Being the smallest country, Bhutan has not able to contribute a lot in monetary terms to the initiative. However, Bhutan has a development philosophy of Gross National Happiness (GNH) which guides the elected governments to ensuring a good quality of life for its citizens. He felt that sub-regional cooperation among the four countries could bring additional substance as well as supplementary benefits to all the bi-lateral relations. Thus, the Ambassador reiterated Bhutan's stance in supporting the sub-regional cooperation.

In conclusion, the Ambassador also commented on the Motor Vehicle Agreement (MVA) which had been ratified by the national assembly in Bhutan where the government enjoyed a majority. However, the Upper House, whose members are not affiliated to political parties voted against the ratification on the grounds that Bhutan's mountain roads would be unable to endure the excessive traffic that the MVA might bring. Therefore, he urged the other countries to go forward with the agreement and assured that Bhutan would join whenever it was ready.

**DPG Roundtable on Advancing
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**Special Address by Mr. Sudhakar
Dalela, Joint Secretary (North),
Ministry of External Affairs**

Inaugural Session

Special Address by Mr. Sudhakar Dalela, Joint Secretary (North), Ministry of External Affairs)

Mr. Sudhakar Dalela Joint Secretary (North), Ministry of External Affairs delivered the second keynote address in the Inaugural Session of the Roundtable. At the outset, Mr. Dalela congratulated the distinguished guests in the audience and Delhi Policy group supported by Asia Foundation, for organizing the expert group meeting/focused group discussions on such a topical issue. Although Mr. Dalela spoke on his personal capacity, he however reflected and shared the Government's perspective of the BBIN framework of regional cooperation. He reiterated the issue of the strategic underpinnings and challenges faced by all the countries in the BBIN regional framework that was previously mentioned. He highlighted the key parameters that mold government decisions with regard to the BBIN framework. He considered People to People Engagement/connectivity theme as crucial to advance cooperation in the BBIN framework.

Mr. Dalela commented on two aspects of the BBIN framework/issue areas. How India approaches the BBIN regional framework of cooperation and how/what the Indian Government has achieved so far? How the discourse/narrative about the BBIN sub regional cooperation is relevant to formulate government policies for advancement/development in this domain.

Mr. Dalela explained the operating framework of the Indian Government wherein India is trying to work together with its neighbors in South Asia and the extended neighborhood, that is evident in terms of commitment to the policy options undertaken by the Government of India such as 'Neighbourhood First Policy' and 'Act East Policy'. Mr. Dalela explained further on, that India seeks to deepen the partnership and cooperation amongst all stakeholder countries in the region, and give shape to the common growth and development vision so as to make it a reality. He was also of the opinion that in order to arrive at a consensus on the terms of cooperation, an inclusive growth and advancement model needs to be based on a fair and equitable framework.

BBIN being a relatively new construct is limited in terms of structural and formal institutions. However, despite these structural limitations a larger consensus among the stakeholders built on this aspect and drives towards forging practical matters of cooperation. Mr. Dalela congratulated Bhutan for setting the tone of cooperation, wherein it has taken a pragmatic and practical approach in terms of allowing other BBIN countries to proceed with the implementation of the MVA agreement.

Mr. Dalela elaborated on the work done at the government level wherein two sub groups have been set up at the level of JS, that had met three times already in the last 3 years. These groups are focusing on two aspects of partnership- Trade and Connectivity, and Energy-hydropower and seek to push forward work in some of the areas. He hoped to benefit from the work that has been done by DPG and take it forward. Mr. Dalela's focus being on the Energy sub group which had discussed the broad principles that should guide the sub group. The government is thus working towards making things more transparent and objective in terms of the power sharing

framework; inter-grid connectivity issues; integrated connectivity in the region in terms of hydropower connectivity etc.

Joint Secretary Sripriya Ranganthan deals with the Trade sub group and has been pushing for the progressing of the MVA agreement, and devising mechanisms and protocols for implementation of the same, running test trials for cargo movement, exploring plausible passenger routes. The government is also exploring possibilities in terms of multimodal transportation, air connectivity as well as digital connectivity.

Mr. Dalela, concluded on an optimistic note, and expressed eagerness towards reviewing the action plans and recommendations that will come out after expert deliberations during the roundtable. He deeply valued the work undertaken by DPG on the BBIN construct, wherein a regional outreach to a large section of experts is bound to create the condensed wisdom of expertise from the region.

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**Special Address by Dr. Ravi Kota,
Principal Secretary to the
Government of Assam (Finance
Department) & Principal Resident
Commissioner, Assam Bhawan, New
Delhi**

Special Address by Dr. Ravi Kota, Principal Secretary to the Government of Assam (Finance Department) & Principal Resident Commissioner, Assam Bhawan, New Delhi

- Till recently, States, especially, Assam and NER have not been playing any role and not even passively, in the international relations- economic, trade, business, educational, cultural and social between countries was seen as Nation to Nation subjects.
- With the new-found spirit of Team India and Cooperative Federalism led by the Prime Minister, both federal government and state governments have mutually been making efforts to find space to work closely.
- Assam Government has now created a separate department called, Act East Policy Department with the Commerce and Industry Department of Assam is heading the department with an Additional Chief Secretary level officer assisting him.
- Assam is in the process of putting an expert group under this department so as to develop people-to-people structures besides G2G, G2B and B2B.
- Assam is organizing first ever Global Investors' Summit in Guwahati on 3-4 February 2018 and Hon'ble Prime Minister will be inaugurating the same.
- Assam realized the fact that it can become the hub with its locally available resources and raw materials for the markets of the BBN and ASEAN markets with 8 different national capitals (Kathmandu, Thimphu, Dhaka, Yangon, Phnom Penh, Bangkok, Vientiane, and Laos) within 2 hours flying time from Guwahati.
- Delegations led by senior ministers have been travelling to important cities in India and abroad to woo the investments keeping the above possibilities in mind and the potential of a market in the Eastern region with more than 80 crore population.
- Thus, any growth of manufacturing, trade and business in Assam and NER for ASEAN countries would naturally overflow the international boundaries and help the BBN countries too by turning the geographical "*bottleneck*" into "*funnel of stimulant*" for development and growth.

- But the relevant policies formulated by Union Government need to:
 - ✓ Closely involve the states as important stakeholders.
 - ✓ Local and regional planning by the individual states for developing infrastructure etc in such a manner that it fits into the overall requirement of the region of ASEAN and BBN.
 - ✓ The international trade routes and points be developed on a massive scale with all pre-export facilities as hub of industrialization rather than mere strategic boundaries and indeed both the interests can go hand-in-hand.
 - ✓ Also the policy of development of international trade points is a case in the point in which so many Ministries of Union Government were involved currently such as DIPP, DI&C, MHA, MEA, and the States concerned do not have any role except in provisioning land and other miscellaneous support.

Session 1: Trade and Economic Issues

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Chair's remarks by
Ambassador Rajeev Mitter**

Session I: Trade and Economic Issues

Chair: Ambassador Rajeev Mitter

Ambassador Rajeev Mitter, former Indian High Commissioner to Bangladesh, recognized that trade and economic issues had been central to the discussion on BBIN over the past year. Among the core area of discourse, Ambassador Mitter shed light on the need to focus on the softer areas of trade. Intra-BBIN trade is still very small and thus focusing on those areas instead of tariff and market access would help move the discussions forward.

**DPG Roundtable on Advancing
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New Delhi, December 13-14, 2017**

**Presentation by Dr. Selim Raihan,
Department of Economics, University
of Dhaka and Executive Director,
SANEM, Bangladesh**

The BBIN Economic Community?

Selim Raihan

Professor of Economics, Dhaka University, Bangladesh
Executive Director, SANEM

**DPG Round Table Discussion on Advancing BBIN Sub-regional Cooperation
13-14 December, 2017, New Delhi**

The current contexts (1)

- All four countries are under SAFTA
- India has bilateral trade treaty with Nepal (a non-reciprocal FTA)
- India has bilateral trade agreement with Bhutan (a non-reciprocal FTA)
- India doesn't have any bilateral trade agreement with Bangladesh
- Bangladesh doesn't have any bilateral trade agreement with either Nepal or Bhutan

The current contexts (2)

- India offers DFQF market access to SAARC LDCs (Bangladesh, Bhutan and Nepal)
- Bangladesh and Nepal maintain very long sensitive lists under SAFTA
- All four countries are under BIMSTEC: Yet no BIMSTEC FTA, and the BIMSTEC progress is not visible
- There are 'small-country-fears' among Bangladesh, Bhutan and Nepal that a full FTA with India might affect their domestic industries

A deeper regional integration among BBIN countries: The **reactive** perspective

- Frustration with the SAARC process has encouraged BBIN
- This means that much of the mobilization of the BBIN process has so far been reactive.
- If it is primarily reactive, then there are problems in its future progress

A deeper regional integration among BBIN countries: The **proactive** perspective

Economic reasons

- Convergence of domestic development strategies
- Market integration: GVC and RVC
- Growth integration
- Investment integration
- Policy integration

Political economy reasons

- Structural
- Institutional
- Political elites

A deeper regional integration among BBIN countries: The **proactive** perspective

Economic reasons

- Convergence of domestic development strategies
- Market integration: GVC and RVC
- Growth integration
- Investment integration
- Policy integration

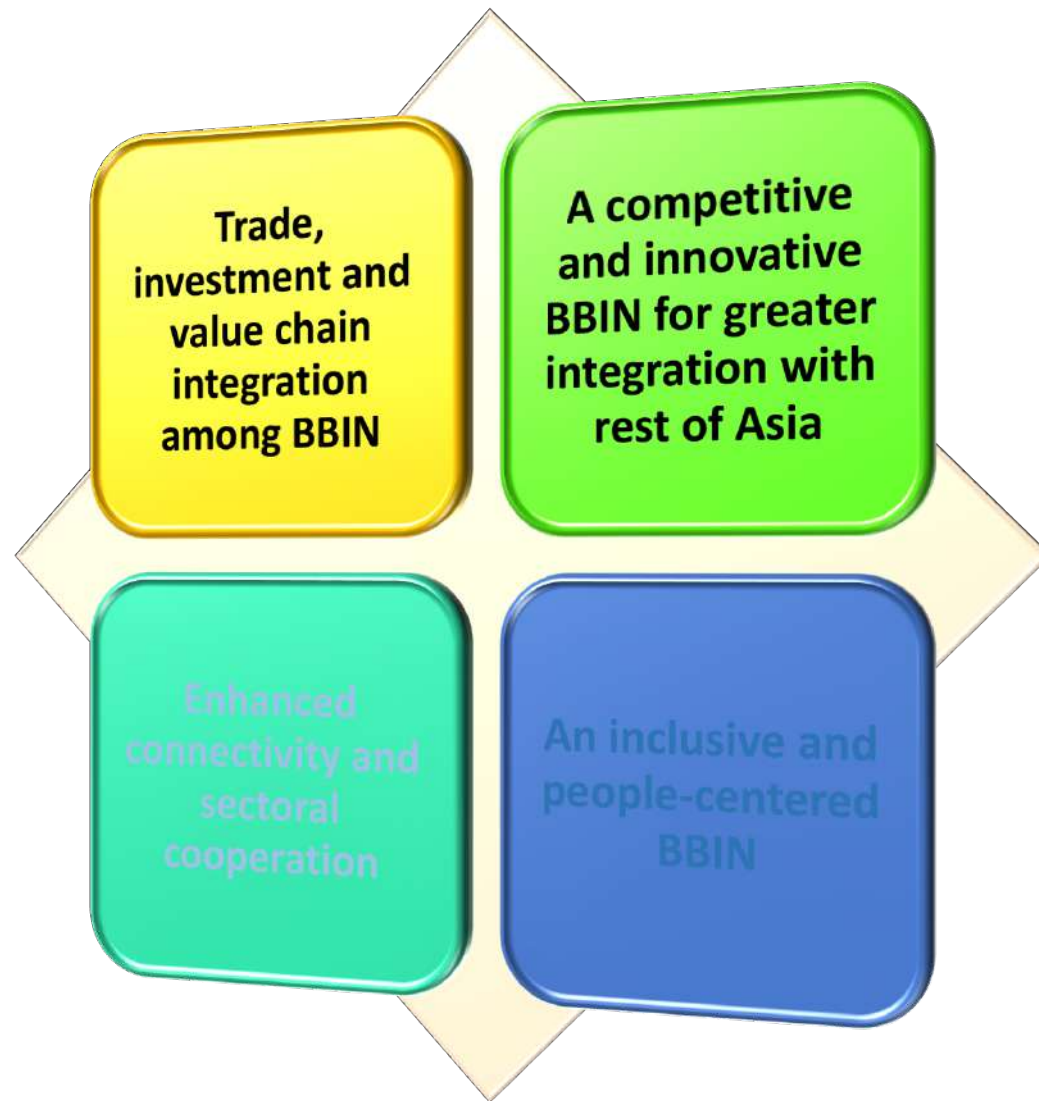
Political economy reasons

- Structural
- Institutional
- Political elites

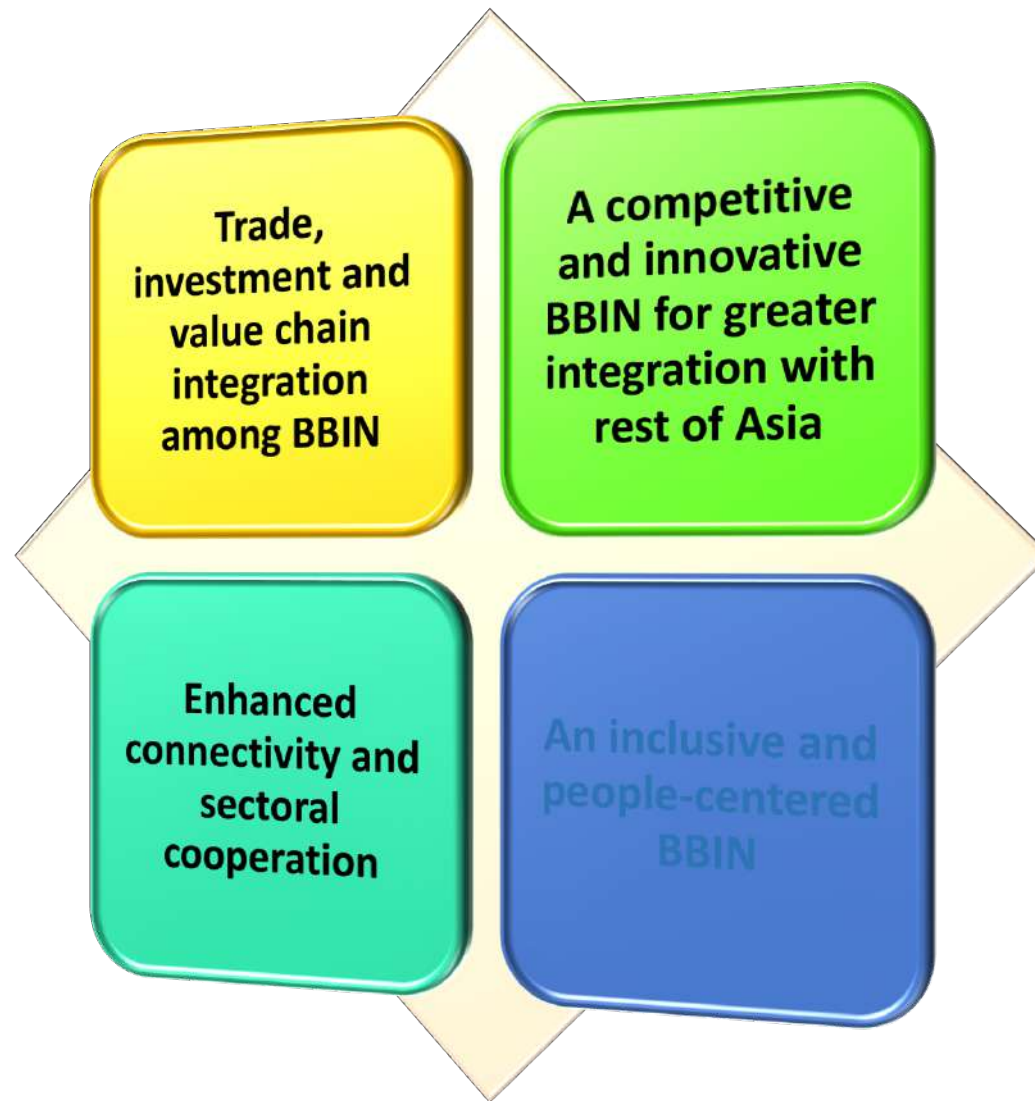
4 Pillars of BBIN Economic Community



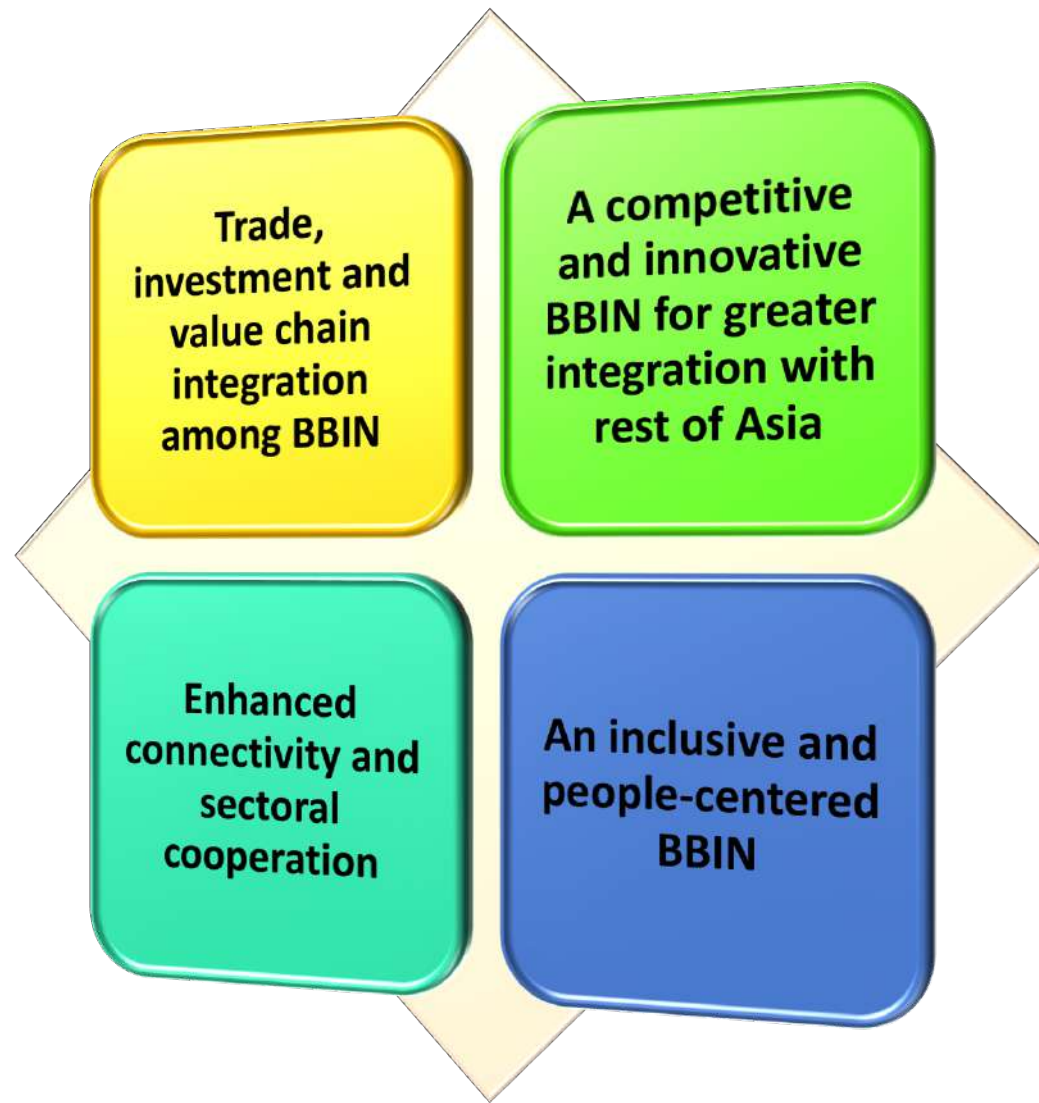
4 Pillars of BBIN Economic Community



4 Pillars of BBIN Economic Community



4 Pillars of BBIN Economic Community



Elements of BBIN Economic Community (1)

1. BBIN-FTA in goods trade

- Extend the JWG to include discussion on FTA in goods
- Make the BBIN a formal regional trading bloc
- Notification at the WTO
- Start from the SAFTA: Bangladesh, Nepal and Bhutan get greater preferences in Indian market
- Rationalize the sensitive lists of Bangladesh and Nepal
- Address the NTMs and NTBs through cooperation among standard authorities in four countries, MRAs, and harmonization of standards. India to take the lead and help capacity building

Elements of BBIN Economic Community (2)

2. BBIN Services trade agreement

- Start from the SATIS
- Expand the horizon beyond SATIS
- Identify priority services area:
 - Transport
 - Electricity
 - Tourism
 - IT
 - Health
 - Education
- Explore the RVC in the services sectors

Elements of BBIN Economic Community (3)

3. BBIN Investment Zones

- BBIN Investment Agreement
- Dedicated special economic zones for BBIN investors. Investment in goods and services sectors.
- Relaxing investment procedures and requirements
- Improvement in domestic business environment

Elements of BBIN Economic Community (4)

4. Greater connectivity

- Operationalization of the BBIN MVA with safety clause for countries with special need
- Collate inventory of all bilateral, multilateral, and development partners' initiatives in connectivity among BBIN
- A BBIN comprehensive connectivity agreement involving road, rail, air, water and IT connectivity
- Forums for people to people connectivity

Elements of BBIN Economic Community (5)

5. Energy cooperation

- Start from the SAARC Framework Agreement for Energy Cooperation
- Moving towards a BBIN comprehensive energy cooperation agreement
- Removing obstacles to energy trade

**DPG Roundtable on Advancing
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**Paper by Dr. Ramesh C. Paudel,
Visiting Fellow, Australian National
University**

BBIN for better mechanism to build trust among consumers in the region

Ramesh C Paudel, PhD¹

Delhi Policy Group
December 12-14, 2017

Abstract

Bangladesh, Bhutan, India and Nepal (BBIN) account 21% of World's population with just 1.8% of the World's export indicating very low per capita export. Notably, BBIN accounts 86% of SAARC population, indicating a closer tie of BBIN facilitates a better South Asian integration too. Thus, BBIN has persuasive merits, not only as sub-regional tie but also as a push factor for SAARC that has been facing an indolent progress for long time. Against this background, BBIN agenda must involve concrete steps to improve the trade facilitation within the region, improving the quality of infrastructure connectivity and governance simultaneously with special focus on vocational education to improve the productivity in the region. More than that BBIN should be able to develop a mechanism to build a trust of quality, price and reasonable process among its people. Indeed, in the background of heavy import, manufacturing sector should go further to identify the consumers' interest and preference seeking the answer on "Why consumers have the least preference of the products manufactured in the Region"? that helps to bring better integration and prosperity.

Context

1. Bangladesh, Bhutan, India and Nepal (BBIN) account 21% of World's population with just 1.8% of the World's export indicating very low per capita trade. As a result, it records only 3% of World's gross domestic products(GDP). Notably, BBIN accounts 86% of SAARC population.

Table 1: South Asia at a glance as of 2015

Country	Land (sq. km)	Population million	GDP US\$ million	Merchandise exports US\$ million	Merchandise imports US\$ million
Afghanistan	652860	33	19331	470	557
Bangladesh	130170	161	195079	32379	3946
Bhutan	38117	1	2058	585	117
India	2973190	1311	2095398	267147	39198
Maldives	300	0	3435	240	187
Nepal	147181	29	21195	720	638
Pakistan	770880	189	271050	22188	4422
Sri Lanka	62710	21	82316	10470	1905
South Asia's share (%) in world	3.68	24	4	2	3

¹ The views expressed are of the author, and not of the Institutions he is affiliated with.

World	1.3E+08	7347	73891889	16482000	1672500
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Source: World Development Indicators, 2016

- South Asia is the region with the lowest intraregional trade share. The largest economy in the region, India, has only 8% of its trade with in the region. What does it indicate? Does not it need a serious attention from the Indian policy makers? In fact, it needs the right political will to improve the trade relationship within the region making some regional specific strategies. We pledged to create a preferential trading bloc (SAPTA) two decades ago, the concept of South Asian customs union by 2015 and an economic union by 2020 are very far from implementation. SAARC summits are always in the dilemma, even the decisions are not implemented, regional centers do not function well, and the secretariat remains weak. So just talking big things has not turn into practical, so let's us focus on a few big things and work to achieve, i.e., regional and sub-regional integrity and integration.

Table 2: South Asia's intraregional trade share %

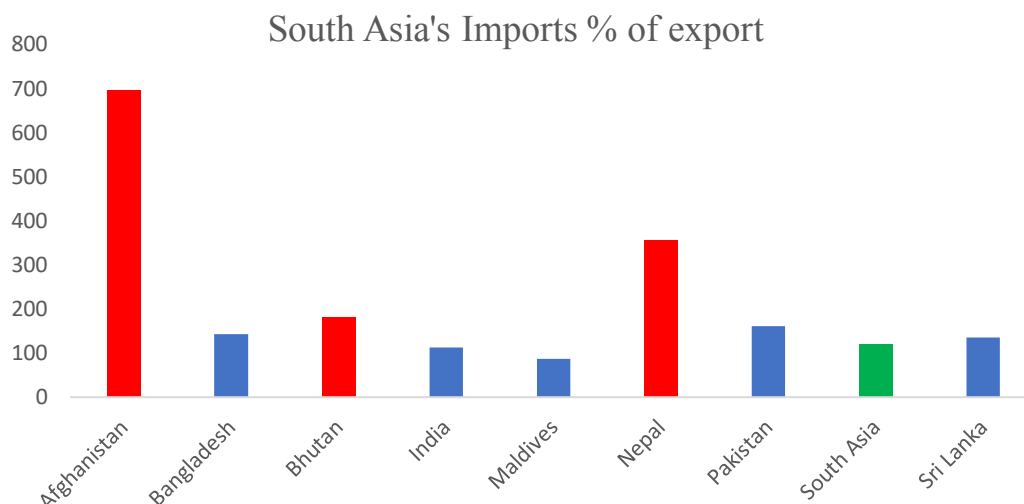
Country	2000	2005	2010	2013	2014
Afghanistan	NA	NA	40.3	32.8	53.1
Bangladesh	12.8	17.0	19.2	NA	NA
Bhutan	NA	83.2	81.0	NA	NA
India	5.8	6.1	5.5	6.3	7.5
Maldives	47.7	40.9	43.6	35.8	38.3
Nepal	88.6	NA	94.6	91.1	91.2
Pakistan	8.5	12.3	17.4	21.1	19.8
Sri Lanka	15.8	30.0	32.8	32.6	34.8

Source: World Bank (2016b)

Note: NA refers data not available

- Figure 1* documents a key message— import trade has a dominancy on region's international trade, mostly fueled by remittances, particularly in the case of Nepal. This shows that what we consume that we do not produce, out manufacturing pattern does not match our needs, neither of others. We do not believe our production; then how advanced countries believe? Yes, partly, it is a case of our consumption pattern has been shifted to more technological products that we do not produce due to lack of investment and technology.

Figure 1: South Asia's Imports % of Exports (Goods and Services)



4. Poor regional integration and connectivity, poor quality of governance, and political turmoil are the leading causes of these worst economic and trade scenarios. These have jointly reduced the international competitiveness, which seems impossible to improve with an expansive notion of regional and sub-regional cooperation. We need to evolve from statements of political solidarity into meaningful economic hubs taking the benefits from demographic dividends and natural resources in the region.
5. If we look the consumers' preference in the region, we clearly see they look for the goods produced in European Union, then the preference is found in the goods produced in developed countries, such as, the United States of America, Australia, Canada, New Zealand, and Singapore. Then, their preference is found in the goods produced in other East Asian countries including Taiwan and China. Then only the consumers' preference comes to the products from South Asia or BBIN region. This preferential order of the consumers in the region is the crucial barrier for the manufacturing sector with in the region.

Roads ahead

6. Infrastructures with the wider connectivity are fundamentals to build various trade blocks in the region. Intraregional trade to be promoted making cheaper with in the region. Very few intercountry connection with in the region are at hand, these should be extended and trade corridors need to be developed aiming to reach into big regional market. As a largest economy in the region, India should lead to invest for such connectivity. At this stage, relative to potential, we have few points of entry between countries that need to be extended

for greater trade diversity. Building the infrastructure to penetrate the regional market will benefit both the host and investor countries in the long run.

7. Education system should be developed linking with production system. The huge investment for general education is unable to produce required manpower to suit the regional manufacturers' needs in one hand, and the other, educated manpower cannot get jobs in the country that has resulted intense outflow of youths every year for unskilled and semiskilled jobs.
8. The quality of the governance builds the confidence of the investors and provides social security to the people. This will improve the delivery mechanism of the government and up lift the living standard of the people. The quality of the governance is possible controlling anarchism, corruption and maintaining rule of the law and contract enforcements. A reform with cautious approach for building institution can help to create the jobs within the region.
9. Various research works have indicated that regional trade agreements, bilateral and multilateral trade agreements have contributed international trade substantially in the past. Noting these experiences, we should be motivated for many Regional and sub-regional agreements as a part of the second and third generation trade reforms. Not just the tariffs, we should remove non-tariffs barriers too and facilitate intercountry trades within the region.
10. Landlocked countries face additional costs for the same technology due to hassles in the customs, borders, transits and routes. BBIN can make a special provision for landlocked countries in the region making an example for the other region. This specific roads and corridors to enhance connectivity and promote fast-track economic corridors for their easy access to the big markets in the neighbors to supplement the additional costs due to the constraints of the landlockedness may help reducing trade costs significantly. The first of such corridors could be the historical link from Kabul to Chittagong, with feeder motorways to Kathmandu and Thimpu.
11. Political economy should support FDI in own country as well as for our neighbors so that investment hubs to revive the manufacturing sectors is possible. Because of the diverse climate, the organic agriculture products, agro-tourism, medical tourism, and educational tourism sectors have the unique to attract the investments in the region. These all should be managed as a part of the trade and investment diplomacy. Greater regional production networks in the manufacturing can contribute the economy substantially and make a better integration.
12. The sub-regional should make specific programs and plans for benefiting from Indo-China prosperity. Language, infrastructure, and logistics should be build targeting the opportunities both in China and India. For example, advanced countries are producing thousands of

Mandarin and other Asian language speaking students every year as an example. They know 21st century is the Asian Century with the rise of India and China.

13. BBIN needs to make a special plan to build trust of consumers towards the manufacturers, and to break the consumers' preferential order as discussed in point 5 earlier. For this, Made in BBIN concept, price and quality harmonization, strong monitoring mechanism for better quality control, and such efforts are needed. We have a huge market within the region, but our manufacturing sector is, up to now, unable to identify the consumers' interest and their preference. More funds to be allocated in Research and Development in these regards.
14. Promoting joint venture investment with specific branches with in BBIN would motivate not only investor, it would help to build trust on goods produced with in the region. Also, it would help to maintain quality and price harmonization connecting manufactures to people in the region.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Paper by Prof. Prabir De, Research
and Information System for
Developing Countries**

Setting up the BBIN Secretariat: A Proposal

Prabir De*

Abstract

Started between Bhutan, Bangladesh and India in late of the last decade, BBIN sub-regional cooperation received further impetus once Nepal joined the group. BBIN is the “Bridgehead” in the Bay of Bengal area, which links South Asia with greater Southeast Asia and vice versa. BBIN is a sub-region where Himalaya meets the Bay of Bengal. It is the Motor Vehicle Agreement (BBIN MVA) that has triggered the BBIN initiative. A secretariat plays an important role in running the regional initiative through setting up rules and regulations, conducting meetings and follow up, monitoring and evaluation of projects, formulating policies in the region. To drive the BBIN subregional integration, setting up of an exclusive Secretariat is essential, but not mandatory always. This brief discusses the rationale, broad structure and required steps for setting up the BBIN Secretariat.

Keywords: BBIN, MVA, Secretariat, Trade, Regional Integration

JEL codes: F10, F13, F15

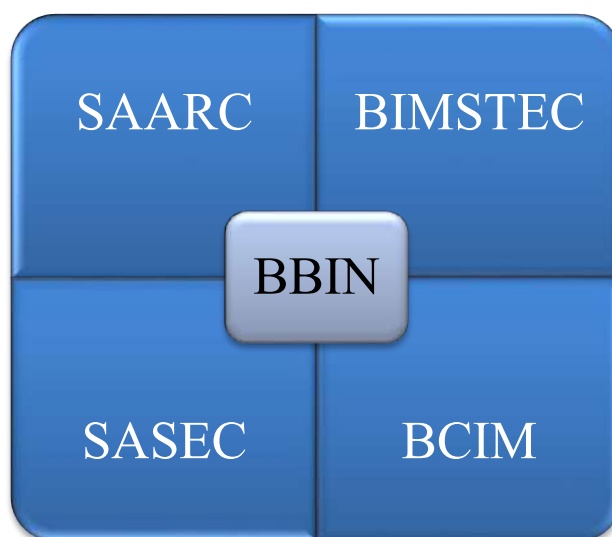
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[An earlier version of the paper was presented at the Delhi Policy Group (DPG) Roundtable on “Advancing BBIN Subregional Cooperation”, held at Delhi on 13 – 14 December 2017. Author is grateful to Amb. Biren Nanda, Amb. Sanjay Singh, Amb. Rajeev Mitter and participants of the DPG roundtable for comments on the earlier version of the paper. Views expressed by author are his personal. Usual disclaimers apply.]

Background

Started between Bhutan, Bangladesh and India in late of the last decade, BBIN sub-regional cooperation received further impetus once Nepal joined the group. BBIN is the “Bridgehead” in the Bay of Bengal area, which links South Asia with greater Southeast Asia and vice versa. BBIN is a sub-region where Himalaya meets the Bay of Bengal.¹ India attaches high important to BBIN sub-regional cooperation initiative, and the Government expects that regional cooperation would advance under both BIMSTEC and BBIN.² BBIN is a pivot to South Asia specific regional integration initiatives (Exhibit 1).

Exhibit 1: BBIN as Pivot



Source: Author

BBIN countries are relatively open economies, where, with the exception of Nepal, trade openness has increased during 1991 to 2016. BBIN countries have witnessed an increase in intra-regional trade in 2016, which was increased from US\$ 21.65 billion in 2015 to US\$ 23.52 billion in 2016.³ India contributes to over 90 per cent of this sub-regional trade⁴. In 2016, India’s total export to BBIN was about US\$ 12.5 billion, of which US\$ 9.5 billion was export and rest

¹ BBIN gained momentum in 2014 when SAARC leaders failed to reach consensus on regional connectivity projects. Refer, De (2015, 2016) for a detailed discussion on BBIN integration process. Also refer, Pal (2016) and Banerjee (2015)

² Refer, External Affairs Minister’s reply to the question raised at Indian Parliament on 8 February 2017, available at <http://www.mea.gov.in/lok-sabha.htm?dtl/28014/question+no94+strengthening+alliances+with+bimstec+and+bbin>

³ Based on ITC Trade Map

⁴ Based on IMF DOTS Online Database

was import. It is expected that intra-BBIN trade would like to cross US\$ 50 billion by 2020.⁵ Driven by India, intra-BBIN FDI has also been growing, mainly driven by India and Bangladesh. In 2016, India's outward FDI in BBIN as about US\$ 750 million.⁶ With improvement in connectivity, value chains between BBIN countries in goods and services have been expanding.⁷

BBIN MVA

It is the Motor Vehicle Agreement (BBIN MVA) that has triggered the BBIN initiative. In a major bid to facilitate transportation and trade, BBIN countries signed the BBIN MVA for the 'Regulation of Passenger, Personal and Cargo Vehicular Traffic' on 15 June 2015. This is expected to significantly reduce trade transaction costs in the subregion. India, Nepal and Bangladesh have ratified the BBIN MVA, while the same is still under consideration in case of Bhutan. Bhutan in its last communication in May 2016 to other BBIN countries has indicated that the country is not yet ready for the MVA. Bangladesh, India and Nepal have, therefore, agreed to complete the formalities required to implement the MVA.

Trade Facilitation

Successful demonstration run of passenger and cargo services have been organised. BBIN countries except Bhutan have signed and ratified the WTO Trade Facilitation Agreement. They are also member of Revised Kyoto Convention (RKC) and taking steps to develop modern and effective customs administration and management. All the four countries have taken steps to streamline and transparent trade processes and procedures, and have been providing improved services and information for traders through trade portals and trade facilitation committees. Some of the BBIN countries such as Bangladesh and India have already synchronized border transaction on 24x7 basis such as at Petrapole and Benapole. Besides, India has approved US\$ 1.08 billion for construction and upgradation of 558 km long roads that join Bangladesh, Bhutan and Nepal.⁸ With reforms in visa between India and

⁵ Based on gravity model assessment, author's own database

⁶ Based on RBI FDI database

⁷ Refer, DPG (2017a, 2017b)

⁸ Based on Asian Development Bank (ADB)

Bangladesh, BBIN subregion has become a free trade zone in terms of trade in goods and services.⁹

BBIN Official Programmes

BBIN as a subregional group has three Joint Working Groups (JWG) on Water Resources Management, Power/Hydropower and Connectivity and Transit. Till 2016, JWGs of BBIN countries met three times (2013 in Dhaka, 2015 in Delhi and 2016 in Dhaka) to review the existing arrangement of cooperation and find out the way to enhance cooperation among the four countries.

Table 1: Basics of BBIN in Comparisons with Other Subregional Initiatives

Particulars	BBIN	SASEC	BCIM	BIMSTEC	IMT-GT	BIMP-EAGA	GMS
Location	South Asia	South Asia	South - South East Asia	South – South East Asia	South East Asia	South East Asia	South East Asia
Members	4	7	4	7	3 ^s	4 ^s	6
Year established	2013	2001	1997	1997	1993	1994	1992
FTA in goods	No	No	No	Yes*	Yes ⁺	Yes ⁺	Yes ⁺⁺
Investment agreement	No	No	No	No	No	No	No
Services trade agreement	No	No	No	Yes*	Yes ⁺	Yes ⁺	Yes ⁺⁺
Connectivity projects	Yes	Yes	Yes*	Yes*	Yes	Yes	Yes
Energy exchange	Yes	Yes	No	Yes*	No	Yes*	Yes
Financial integration	No	No	No	No	Yes	Yes	Yes
Customs cooperation	Yes	Yes	No	Yes	Yes	Yes	Yes
Ratified WTO TFA	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Paperless trade measures (cross-border/regional)	No	No	No	No	No	No	No
Paperless trade measure (national)**	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Initiative type	Track 1	Track 1.5	Track 1.5	Track 1	Track 1	Track 1	Track 1
Secretariat	No	Yes	No	Yes	Yes	Yes	Yes
Summit**	No	No	No	Yes	Yes	Yes	Yes

Note: *Proposed. \$Involves sub-national units. +Part of ATIGA **Both political and business summits *** Measures adopted by one or more members

Source: Author

⁹ BBIN countries have been advocating for CEPA (refer, DPG, 2017b). However, Nepal and Bhutan have larger than FTA scenario with India, whereas India, Bangladesh, Bhutan and Nepal are members of SAFTA.

BBIN has now agreed to work out and explore the modalities of power trade, inter-grid connectivity, transit facilities and multi-modal transport in the region.¹⁰ It was agreed to commence discussion on the possibility of having a BBIN Rail Agreement drawing on the draft SAARC Regional Rail Agreement template. It was also agreed that land ports/ land customs stations crucial for sub regional trade and transit would be given priority attention by all four countries.

Presently, official activities of BBIN countries are driven by nodal ministry of each BBIN country, and it is yet to have a permanent Secretariat.

BBIN Unity

BBIN countries have realised that narrowing the connectivity gaps among countries is must for facilitating regional trade. Not only trade, an improved connectivity is essential to provide cheaper access to goods and services, create more jobs including along trading corridors, and ultimately help reduce poverty at a faster pace. BBIN initiative has emphasised on building connectivity from its beginning. The shared vision of BBIN is to increase trade and cooperation within eastern South Asia, create linkages within and beyond, ensure faster movement of goods and people, sustainable development through water resource management and protection of climate, to mention a few. Illustrated in Table 1, BBIN's prime focus is not only in the trade and investment but also in non-trade issues such as connectivity, energy, etc. As noted in Table 1, most of the Track 1 initiatives have been driven by permanent Secretariats.

Why a Secretariat?

BBIN activities in economic, strategic and political areas have increased by manifolds. A central administrative organ like secretariat will provide for greater efficiency in the coordination of BBIN organs and for more effective implementation of BBIN projects and activities. A secretariat plays an important role in running the regional initiative through setting up rules and regulations, conducting meetings and follow up, monitoring and evaluation of projects, formulating policies in the region. To drive the BBIN, setting up of an

¹⁰ Refer, the Third Joint Working Group (JWG) Meetings on Sub-Regional Cooperation between Bangladesh, Bhutan, India and Nepal (BBIN), January 19-20, 2016, available at <http://www.mea.gov.in/press-releases.htm?dtl/26284/third+joint+working+group+jwg+meetings+on+subregional+cooperation+between+bangladesh+bhutan+india+and+nepal+bbin+january+1920+2016>

exclusive Secretariat is essential, but not mandatory always. At the same time, a Secretariat with sufficient resources would be helpful in conducting day to day affairs for the regional (or subregional) bloc. It is also to be noted that no secretariat is better than a weak secretariat. Setting up secretariat also makes sense when member countries are engaged in multiple regional blocs with limited human resources. A secretariat in that case complements the work loads of nodal ministries of member countries. However, before countries agree to set-up the secretariat, they need to sign an agreement to set up secretariat and agree to abide by rules and regulations.¹¹

Mission of the Secretariat

The BBIN Secretariat's mission would be to initiate, facilitate and coordinate BBIN stakeholder collaboration in realising the purposes and principles of BBIN to be reflected in the BBIN Charter. BBIN Secretariat's first and foremost activity would be to set up some basics of the BBIN in terms of objectives, rules and regulations, charters and structures, etc. It shall also build linkages with external organisations. Secretariat shall initiate, advise, coordinate and implement BBIN activities, and develop and provide the regional perspective on subjects and issues before BBIN.

Role of Secretary General

BBIN Secretariat shall be headed by the Secretary General (SG) to be nominated by member countries for a fixed period of three years on a rotational basis in alphabetical order. SG shall be a senior diplomat. SG will be assisted by a team of professionals. SG will perform such duties and missions as the BBIN Ministerial Meeting or the SOM or Standing Committee may direct. The host country shall grant to the Secretariat, the Secretary General and the Staff such privileges and immunities as may be necessary for the performance of their duties and functions. Some of the major responsibilities of SG would be as follows:

¹¹ For example, ASEAN countries (five members) signed the Agreement on the Establishment of the ASEAN Secretariat at Bali on 24 February 1976. Refer, ASEAN Secretariat (1976). Also refer, SAARC Secretariat (1985)

- SG shall be responsible to the Heads of Government Meeting and to all Meetings of BBIN Ministers when they are in session and to the Chairman of the Standing Committee at all other times;
- SG shall take charge of the Secretariat and be responsible for the discharge of all the duties and responsibilities entrusted to the SG by the Heads of Government Meeting, the BBIN Ministerial Meeting and the Standing Committee; and
- SG shall act as custodian of all BBIN documents;

Size of the Secretariat

In the initial years, BBIN Secretariat may have staff strength of 20 personnel including one SG, four Directors, five programme officers, five administrative officers and five support staff. The resources can be expanded depending on the work load.

Anchoring

The cost of setting up the Secretariat shall be shared by the member countries based on a negotiated formula. India being the lead country may pick up the major expenditures of the secretariat, both fixed and working capital. In past, India has been instrumental in setting up several inter-governmental organisations such as South Asia University (SAU).

Location of the Secretariat

The BBIN Secretariat shall be located in the BBIN subregion, preferably in India. Some BBIN countries have already hosted inter-government organisations such as BIMSTEC Secretariat (in Dhaka) and SAARC Secretariat (in Nepal).

Next Steps

Next step would be to form an expert group, which can deliver a detailed report of establishment of the BBIN Secretariat. In parallel, nodal ministries of BBIN

countries may take up the BBIN Secretariat as an agenda in the forthcoming 4th JWG meeting to be held at India.

The first BBIN Summit may be organised back to back with forthcoming BIMSTEC Summit in the 1st quarter of 2018. A charter of the BBIN subregion has to come in effect, which would then allow the member countries to set-up the Secretariat. Summit will provide the needed political direction, thereby energising the BBIN integration process.

Concluding Remarks

At the DPG Roundtable on BBIN, held at Dhaka in October 2017, it was argued by the participants that BBIN needs a permanent secretariat to effectively handle the activities of the subregion, and accordingly requested this author to prepare a background paper. This brief discusses the rationale, broad structure and required steps to set up the BBIN Secretariat.

Economic ties between India and her eastern neighbours have accorded high priority and have been deepening further. Strengthening BBIN initiative through a permanent secretariat would also lead to provide further momentum to BIMSTEC and SAARC.

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**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Presentation by Prof. Amita Batra,
Professor of Economics, Centre for
South Asian Studies, JNU**

BBIN SCOPE FOR A CEPA

Amita Batra

SUB REGIONALISM

- ◉ Interest in sub regionalism -South Asia
 - Least integrated
 - SAARC -SAFTA: slow progress
- ◉ But elsewhere in the world - why sub regionalism?
 - Gradualist approach
 - Smaller communities developed so as to ultimately contribute to the larger
 - A recognized, agreed upon objective of the sub regional exercise
 - Principle of subsidiarity (Ocheing, IJAD 4(1), 2016)
- ◉ Do we see that logic apply in SA?
 - Need not...in fact has not
 - As many of the sub regional formulations are re-bottled avatars of earlier initiatives
 - BBIN of SAGQ?
- ◉ Need to think of these as independent entities and allow development among the four member nations not as a precursor to SA or drawing from the logic of South Asian integration

FTA IN THE PROCESS OF EI

- The Zero stage in EI (Balassa)
 - Functional cooperation
 - Evolve an endogenous developmental process that is self sustaining
 - Economic growth, progress and peaceful coexistence
- EI-FTA process needs to be supplemented by
 - Human resource development
 - Education
 - Harmonization of processes for economic activities
 - Agriculture
 - Resource development
 - Money and finance
- Long term sustainability of a regional bloc

PROCESS OF EI

◉ Institutional

- A combination of regionalism and regionalization
- Trade flows and institutional coordination
- Permanently establishes common rules among member nations

(Figuière and Guilhot (2006))

◉ Infrastructure

- Network of transport, communication and energy infrastructure
- Sustainability of regional economic zones

◉ Differential developmental levels of member nations

- Induced integration
 - Prior growth has to be ensured
 - Differential abilities and interests

FTA/ CEPA

◎ BBIN FTA/ CEPA

- Need to go beyond trade in goods
- India's df&qf

◎ India's Looking East

- BIMSTEC FTA
 - Supporting instrument?
- Larger context: competing interest: India
 - RCEP

RVCS AND CEPA/FTA

◉ RVC

- Potential? (Plastics, Cement, Textiles-cotton, Silk, handloom, Food processing)
 - ◉ Comparative advantage and Product cycle movement?
 - Joint Study Groups?
 - Research studies
- The current global context and regional dynamics
 - ◉ Shortening RVCs
 - ◉ How is SEA changing in the context of new trade attitudes in the North?

◉ Investment (FDI-led)

- Ease of doing business?
- India (100), Bhutan (75), Bangladesh (177), Nepal (105)

◉ Once potential areas are identified

- The CEPA can be accordingly designed to facilitate
 - ◉ Regulatory coordination
 - Agro processing
 - Small scale enterprises
 - ◉ RoO

TF: CEPA/ FTA

- Relevant TF measures to increase efficiency of trade procedures and reduce trade costs need to be explicitly built-in
 - Are now almost systematically included in bilateral and regional trade agreements
 - A fairly robust and statistically significant relationship between inclusion of TF provisions in RTAs and reduction in trade costs. (Duval et al)
 - Evidence also of trade facilitation provisions in RTAs result in multilateral non-discriminatory trade costs reduction over time
 - While implementation is non-discriminatory -Statistically significant but limited discriminatory effect of the TFinRTA provisions on trade costs of RTA members relative to those with non-members
 - some TF measures as implemented may be more beneficial those that are geographically or culturally closer together.
 - For example, *publication of trade procedures on the internet in a country's national language (as opposed to in English) is not obviously discriminatory, but doing so is likely to reduce trade costs most between countries where traders generally understand each other's language*
 - Among different types of TFA-related measures, the most effective in reducing trade costs are RTA commitments related to
 - Aid for trade facilitation
 - Transit
 - Transparency
 - Targeted approach
 - Voluntary action

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Paper by Dr. Paras Kharel, Research
Director, SAWTEE**

Mutual Recognition Agreement in BBIN: A brief note on issues and challenges

Presented at the Roundtable on BBIN, New Delhi, 13-14 December 2017

By Paras Kharel, PhD¹

1. NTMs/NTBs related to standards and technical requirements and regulations are a major barrier to intra-regional trade in South Asia.
2. This is especially evident in Nepal's export trade with India. Under Nepal-India Trade Treaty, most goods from Nepal are eligible for entry into India free from basic customs duty. Extremely strict testing requirements, arbitrariness in the application of SPS measures and TBT, informal payment and inconsistent classification of products, among others, play havoc with Nepali exports. Nepal's weak regulatory regime on standards and weak conformity assessment ability (testing, certification and inspection) make matters worse. There are gaps between the standards set/developed by the relevant authorities in Nepal and (i) international standards, and (ii) standards in other South Asian countries, including Bangladesh and India.
3. For example, many parameters in Indian food standards are not incorporated in Nepalese food standards, and the testing of many parameters has to be done in Indian laboratories, located at a significant distance from the border.

Despite being certified for ISO: 22000: 2005, sugar confectionary from a particular firm needs to undergo testing in a laboratory in Kolkata. Procedural uncertainty and the need to make informal payments at the Indian customs has forced the firm to stop exporting to India, even as it exports to China and, through distributors, to Europe.

Consignments of textiles and clothing are cleared by the Indian customs only after a sample is tested and certified in a NABL-accredited lab in Kolkata for not containing any hazardous dyes. Nepal does not have a NABL-accredited lab that can perform the test.

Potential Nepali exporters of pharmaceutical products are constrained by stringent TBT requirements and uncertainty: mandatory registration and inspection requirements entail high costs, and the requirement to be tested in an Indian laboratory causes significant delays, while there is no guarantee that products will be allowed entry even after meeting the testing requirements.

Regulations and procedures not being applied uniformly and predictably are a commonly cited problem faced by exporters.

4. Thus, there are three major sets of problems: (i) differences in standards and technical regulations, (ii) weak or absence of institutions (e.g., no separate accreditation body) and poor domestic infrastructure (e.g., absence of laboratories accredited for testing all major parameters; inadequate human resources), and (iii) procedural obstacles (e.g., non-recognition of certification, excessive testing and inspection requirements, administrative procedural delays, arbitrariness of behaviour of officials, informal payments). Development of common standards and/or harmonization/mutual recognition of standards can potentially address the first problem. Technical and financial assistance is required to address the second problem. Even if the conformity assessment bodies are recognized by their counterparts in the importing countries, the importing government, through its customs officials, is not obliged to accept the certificates thus issued. A mutual recognition agreement between the governments

¹ Research Director, South Asia Watch on Trade, Economics and Environment (SAWTEE), Kathmandu. Research assistance from Mr Kshitiz Dahal, Research Officer, SAWTEE, is gratefully acknowledged.

would alleviate the problem of non-recognition of certification and reduce, if not eliminate, others procedural obstacles.

5. Mutual Recognition Agreement (MRA) is a special type of Mutual Recognition². MRA is a legally binding agreement between two (bilateral MRAs) or more governments (regional MRAs) that recognizes the competencies of the specified conformity assessment bodies in the exporting nations with regard to conformity assessment procedures: testing, certification, and inspection, for specific products. It also acknowledges the competency of designated conformity assessment bodies in the exporting country with regard to their knowledge of the standards and technical regulations of the importing nation.

While Mutual Recognition Agreement (MRA) is between the governments, Mutual Recognition Arrangement is between the conformity assessment bodies, acknowledging one another's competence. It is not legally binding as is the case in MRAs between governments. Political commitment is of utmost importance to ensure that the agreement reached at the national government-to-government level is implemented at the customs level.

That a legal text is not a guarantee of successful implementation is evidenced by the US-EU MRA, where "despite major efforts up to the highest level of politics, only two of the six sectorial MRAs are operational today, with only one-fifth of the expected trade value covered. In pharma, medical devices and electrical goods, the MRA does not work." (Bitro et al. 2016)

6. Basis/requirements for MRA

- i. **Institutional:** Since a successful MRA requires tedious work in terms of both time and resources and needs knowledge sharing mechanisms from various stakeholders, a department dedicated to mobilizing administration, coordinating among ministries, private sectors, etc., lobbying the legislature, negotiating with the concerned ministries and departments of other countries etc.

Separate, independent bodies for standardization, certification, accreditation, and monitoring is of great importance to ensure credibility of the conformity assessment bodies. Currently, in Nepal, all these works fall under the responsibilities of a single body, Nepal Bureau of Standards and Metrology (NBSM).

Regulatory reform to reduce gaps in standards/regulations vis-à-vis international best practices through legislative actions. This will aid movement towards achieving, inter alia, farm-to-fork traceability, and making HACCP, GAP and GMP mandatory. While this may not be strictly required for MRAs at the BBIN or SAARC level, it will be immensely helpful while exporting to third countries, particularly developed ones.

- ii. **Harmonization of standards:** Given the gaps in standards/regulations and other SPS/TBT measures between countries, there is a need for harmonization of standards, at least for products with high trade potential.
- iii. **Infrastructural:** Accredited laboratories for testing and calibration over all the essential parameters, notably chemical and microbiological testing.
- iv. **Human resources:** Competent lab technicians for testing and calibration laboratories, competent veterinary officers, competent quarantine officers, competent customs officers, etc.
- v. **Other requirements:** A national quality policy (NQP) could be very useful. An NQP that enhances the national quality infrastructure of the country will put the country in a better position to negotiate MRAs as the NQP can play an important role in strengthening legal/regulatory framework as well as in ensuring adequate institutional and

² Others being Mutual Recognition of standards/rules (the highest level), mutual recognition agreement among laboratories, etc.

infrastructure capacity. The NQP itself could have discussions on MRAs as a way to eliminate technical barriers to trade.

7. Challenges to the pursuit of MRA among BBIN countries

- Countries vary in their levels of technical competency, infrastructural capacity, and human resources, among other things. Example: Nepal and India.
- Countries have to be willing to sacrifice their regulatory powers. All countries may not have the same incentive to do this, as the associated welfare gains differ among them. For example, while Nepal might see a significant reduction in trade costs as a result of MRAs, India may be less eager to sacrifice its regulatory power as its exports to Nepal face little or no punitive SPS/TBT measures and its imports from Nepal are a small share of its global imports. Add to this the weak capacity of conformity assessment bodies in Nepal. The key then is commitment at the highest political level, especially in India, as the BBIN is India's brainchild guided by both economic and geostrategic interests. How much political capital and financial power is India willing to expend on BBIN? Technical and financial assistance to enhance the capacity of conformity assessment bodies is needed. Where will it come from? (a) Develop a BBIN-level project and tap multilateral donors, (b) public-private partnerships, (c) provision of support from India. Closely related to the latter, the trade treaty between Nepal and India (Protocol to Article I) provides for assistance by India to Nepal to improve "technical standards, quarantine and testing facilities and related human resource capacities". While this provision is best endeavours in nature, Nepal has called for its implementation in bilateral meetings. The provision is yet to be implemented.

A costing of the establishment of new laboratories and upgradation of existing ones, in light of products with high trade potential, is needed.

8. Relevance of SAARC framework and SARSO

SAARC has established the South Asian Regional Standards Organization (SARSO) to eliminate technical barriers through greater coordination and cooperation among SAARC Member States. It came into effect in 2011 and is entrusted with works related to conformity assessment, standardization, and harmonization of standards, among others. One of the objectives of SARSO is to promote MRAs on Conformity Assessment procedures amongst the SAARC Member States³.

Recognizing that mutual recognition of conformity assessment could play an important role in eliminating technical barriers to trade, SAARC Member States also signed the "SAARC Agreement on Multilateral Arrangement on Recognition of Conformity Assessment (MARCA)" in 2011. However, it remains to be ratified by the Member States.

Board for Conformity Assessment (BCA), which reports to the Governing Board of SARSO, will be established after the ratification of SAARC MARCA is complete. BCA will be responsible for the planning, coordination and monitoring of conformity assessment-related works, including listing, suspension, and withdrawal of Conformity Assessment Bodies under the SAARC MARCA⁴.

Thus, legislative and institutional mechanism has been put in place for the MRAs of conformity assessment bodies at SAARC level. But the progress has been slow and SAARC MARCA has not been ratified yet. SARSO has published standards for only three food and agriculture products.

³ <http://www.sarso.org.bd/site/page/80a6ce6a-823b-48d3-9832-4a01a186eee8>

⁴ <http://www.sarso.org.bd/site/page/832396cd-63f0-4b09-9f67-dbe342d8d62b>

SAARC MARCA stipulates four phases of conformity assessment. Only in the fourth phase are the inspection and test reports from laboratories in the exporting country accredited from a body that is a signatory to ILAC/APLAC Mutual Recognition Arrangement accepted in the importing country, provided standards have been harmonized.⁵ There is no timeline for the implementation of the four phases. The agreement has a provision for technical assistance by party to another for building or maintaining the technical competence of conformity assessment bodies.

Questions/lessons for BBIN: Why has progress on development of regional standards under SARSO been slow? Why hasn't SAARC MARCA been ratified? Are the reasons for the slow progress also relevant to BBIN? Would progress be faster in the smaller group? Will it be possible to institute a time-bound implementation programme under BBIN?

⁵ From BBIN, Bangladesh's BAB (testing and calibration) and India's NABL (testing and calibration) and NACB (inspection) are signatories to APLAC Mutual Recognition Arrangement. See https://www.aplac.org/aplac_mra.html

**Session 2: Transit and Multimodal
Connectivity (Roadways, Waterways,
Railways and Aviation)**

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Chair's Remarks by
Ambassador Sanjay Singh**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Chair: Ambassador Sanjay Singh

Ambassador Sanjay Singh initiated the discussion by acknowledging the fact that after two years of continued interaction on “Advancing BBIN Sub-regional Cooperation”, The Asia foundation and the Delhi Policy Group have been able to develop considerable equity and a wealth of refined ideas and detailed policy options. He noted that the need of the hour is to push forward the implementation of these ideas, and in doing so, a group of interested think tanks and research organizations in the four countries should initiate and develop amongst themselves a POA with further detailed research that could be done on various aspects of the suggestions.

Furthermore, Ambassador Singh noted that in moving towards this end and setting up a BBIN Secretariat- the most important requirement for the selection of a secretariat location is to identify a champion for the process to take it forward, wherein Asia Foundation and DPG may have a role to play.

During the BBIN discussions held over the last two years, there was recognition of the interest in enhancing regional cooperation in BBIN countries. There is also increasing awareness of enhancing BBIN cooperation and strengthening inter linkages, in order to view the region as a growth quadrangle which could provide an impetus to regional productivity and competitiveness.

Today there is a growing need to re-establish the value chains, which made the region the most prosperous in Asia. There is a need to promote capacity building of ports, inland water transport and rail networks and containerization. Improvement of multi-modal connectivity and creation of trans-shipment or logistics hubs is required. Amb Singh highlighted that although the motor vehicle agreement will be the key to promoting regional cooperation, Bhutan’s reservation about this project must be respected and similarly reservations of other countries, have to be respected. He further stated that the border infrastructure in the region also needs to be improved to make borders ‘connectors’ rather than ‘barriers’ and for bettering land-port connectivity.

Finally, he concluded that there was a need for mapping of networks of roads, navigable rivers and inland water channels and making a connectivity master-plan and entering into a BBIN transit agreement.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Presentation by Dr. Smruti
S. Pattanaik, Research Fellow,
Institute for Defence Studies and
Analyses**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Dr. Smruti S. Pattanaik, Research Fellow, Institute for Defence Studies and Analyses

Dr. Pattanaik began her presentation on a positive note by providing hope for the BBIN sub-regional cooperation as the sub-region had a sense of shared history and culture. BBIN countries also had many transport corridors, railway networks and waterways connectivity which had either already been established or were being established domestically as well as bilaterally. Hence, she reiterated the array of decisions made by various governments of the region to improve the transport connectivity mechanisms. Dr. Pattanaik also provided examples of the India-Bangladesh, India-Nepal and India-Bhutan connectivity projects which are already being studied and implemented.

Second, the existing bilateral railway lines between two BBIN countries were also commented upon. For instance, there are various projects already in place bilaterally for which the feasibility reports have been generated. The rail connection between India and Nepal which is 161 kilometres in length and between India and Bhutan which is 198 kilometres in length are among the projects under implementation. Similarly, Dr. Pattanaik commented on the 5 railway lines which were coming up between India and Nepal. She was of the view that these lines could subsequently be connected to the India-Bangladesh and the India-Bhutan lines to boost connectivity.

Moving on to waterways, Dr. Pattnaik drew attention to the fact that in India, only about 1% of the cargo moves through the sea. This figure is small in comparison to Bangladesh which has around 14% of country's annual passenger volume and 35% of its annual freight movements through the waterways. Hence, she was hopeful of the potential of waterways which will also provide boost to addressing the environmental concerns as the fuel consumption will be significantly less. In lieu of that, she also spoke highly of the India-Bangladesh 5-year inland waterways treaty which has been renewed several times.

Adding to the debate on the Motor Vehicle Agreement (MVA), Dr. Pattanaik hoped that Bhutan would soon join the BBIN MVA. Further, Dr. Pattanaik pointed out to the connectivity projects outside BBIN like the SASEC transport corridor connectivity, the BIMSTEC MVA which is being proposed and the ASEAN highways and networks connectivity. Hence, there is no need to invent the multimodal transport mechanisms as a lot of them are already in place. She remarked that the region merely needs to adapt to the various projects and find a way to allow them to co-exist. That was the major challenge identified in the presentation.

In line with these issues, Dr. Pattanaik also spoke of the need to standardize the railway gauge which would help further connectivity between the BBIN countries. The potential of dredging was also identified. However, the countries must tread cautiously because of the environmental concerns that might arise from dredging. Lastly, she commented on the zero-tariff policy and welcomed the idea that was being floated. However, the discontent among certain countries was also identified as it might hamper the revenue that tariffs can bring. Hence, she suggested levying a very minimal charge which would neither be so low as to reduce the revenue of the countries nor would be so high as to dissuade the private players who will transport the cargo.

In conclusion, Dr. Pattanaik opined that it was not a problem of financing but rather a problem of priorities. Despite all the agreements and the frameworks being in place, the inability to prioritise the potential growth areas has resulted in the poor connectivity of the region.

**DPG Roundtable on Advancing
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December 13-14, 2017**

**Abstract of Presentation by Dr. Mahalaya
Chatterjee, Professor & Director, Centre
for Urban Economic Studies, Department
of Economics, Calcutta University**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Dr. Mahalaya Chatterjee, Professor & Director, Centre for Urban Economic Studies, Department of Economics, Calcutta University

Prof. Chatterjee pointed out the economic feasibility, political will and the need for a marriage between the two in the BBIN region. Also, she remarked as to how it is necessary to look at the informal sector to create a better formal structure. She began by mentioning the recent modification in the transit aspect in the BBIN region. First, the Kolkata-Khulna train was flagged off. Second, the first shipment of containerized vehicles was also transferred from Kolkata to Monglaport by Tata Motors. Lastly, a border management meeting took place in Kolkata in the presence of the Union Home Minister. The meeting focused on exploring possibilities of border fencing between India and Bangladesh and West Bengal was the most enthusiastic state in the meeting.

While the first two pointers were encouraging, Dr. Chatterjee expressed her disapproval in fencing the borders between the two countries. Commenting further, she spoke of the reality of the informal sector in the BBIN countries where there is a lot of illegal trafficking in the form of daily wage workers who come to India for better prospects. Dr. Chatterjee urged the transit experts to explore possibilities into formalizing this sector and focus on reducing the costs of transportation for the sector. She wished that the governments would take notice of the lowest strata of people among the four countries and work towards improving transit for those people.

On economic feasibility, she referred to an ADB report regarding the integration of South Asia. The report entails calculations about the infrastructural needs and the costs associated with it. Dr. Chatterjee opined that the report could be a starting point for BBIN and research could be done on what the actual infrastructural needs including transit requirements for the region were.

Another point that Dr. Chatterjee focused on was to ensure that there is access not only between the BBIN countries but also within the countries. India's decision to transform its policy from 'Look East' to 'Act East' will only be useful when it explores and inquires alternative routes through regional countries like the BBIN.

Also, the readiness of the states to accept all of these comes into the picture. West Bengal plays a very important role as it is contiguous to all the three other countries in the region. This also applies to the North-East India. She opined that the region needs to be infrastructure-ready. Like Assam, which already has a separate secretariat for the 'Act East' Policy, other states like Bihar and UP also need to follow suit.

Lastly, Dr. Chatterjee talked about integrating BBIN projects with the other projects. The Asian highway can be one of the examples. The Asian highway has done a lot in connecting North Bengal with Bangladesh and North-Eastern India and the BBIN region could also benefit via these kinds of connectivity.

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**Abstract of Presentation by Dr. Nisha Taneja,
Professor, Indian Council for Research and
International Economic Relations**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Dr. Nisha Taneja, Professor, Indian Council for Research and International Economic Relations

Dr. Taneja started off the discussion by raising the question of the BBIN motor-vehicle agreement, which envisages a seamless transportation network within the BBIN region, that would essentially do away with the need for cross border cargo trans-shipment. She opined that currently with the protocols for the MVA being charted out, it is prudent to provide appropriate inputs. Wherein the final form of these protocols will determine the quality of the institutional solutions to real life logistical impediments which are encountered in cross-border trade. She added that it is evident that India is the most dominant country amongst the BBIN countries. However, research and consultations prove that the North-East region which is directly connected with Nepal, Bhutan and Bangladesh is unaware about the benefits of the BBIN motor-vehicles agreement, especially the benefits that entail the small and medium firms in this sub-region.

Dr. Taneja highlighted some inputs for the MVA that have been suggested by logistic firms which include, i) The importance of customs rules that would allow point to point movement of seed containers (this facility should be made available for less than full truckloads as well). ii) Allowing multi-country cargo in the same truck is another feature. iii) Encourage the development of data exchange systems between customs IT operating systems of the BBIN countries and also the development of rules that would allow the businesses and transporters to work with all these four custom agencies through a single bond and bank guarantee. iv) Requirement of a transit agreement - the two landlocked countries, Bhutan and Nepal gain access to the rest of the world beyond South-Asia through India. To address the concerns of the smaller countries, it is very important to include this within the ambit of BBIN transit agreement. Also, she deemed Siliguri to be the nerve center and extremely important for the BBIN region because of its connection between north-east India, Nepal, Bhutan and Bangladesh. Thus, it was recommended that Siliguri be developed as a hub for road transport that would provide support services for the movement of cargoes from all the countries.

Furthermore, Dr. Taneja recommended two relevant points- 1) The BBIN countries should accede to international conventions such as the TIR convention. 2) The BBIN countries should adopt a coordinated approach towards implementation of the trade facilitation agreement. Bhutan is in the process of undertaking reforms which will help it to meet the provisions of the trade facilitation agreement. The TIR convention as she explained is a road transport convention that allows member countries to transit seamlessly with a single document and guarantee system in place as the goods transit through different countries. The advantage of adopting these conventions of an independent multilateral agency is that there is adherence to global best practices to make transport protocols efficient and meet the current inadequacies. She added that currently most of the member countries of BBIN are in the process of meeting the requirements of the trade facilitation agreement and many of the reform measures outlined in the action plan for India are TFA+. The TFA has holistic provisions for transit fees formalities as well as transparency. Moreover, the TFR convention follows the WTO agreement that outlines the necessities of fees having to be reasonable and commensurate with the type of service provided, in order to avoid the profit motive. Also, the trade facilitation agreement recommends that members should choose international standards. Therefore, the importance of adopting the TFR convention is reiterated.

Lastly, Dr. Taneja concluded by pointing out that Article 11 of the TFA has very detailed provisions for smooth and efficient cargo movement between member countries. Therefore, while formulating a motor-vehicle transit agreement consideration of these elements of the TFA is significant.

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**Abstract of Presentation by Dr.
Joyeeta Bhattacharjee, Senior Fellow,
Observer Research Foundation**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Dr. Joyeeta Bhattacharjee, Senior Fellow, Observer Research Foundation

Dr. Bhattacharjee's presentation complemented the others in the session in which she spoke on the need to understand the topography of a region before formulating policies and therefore, the potential of air connectivity in the BBIN region.

She recognized that multimodal connectivity should be the way forward in advancing the BBIN sub-regional cooperation. After briefly remarking on the MVA and other forms of connectivity such as inland water connectivity and coastal shipping, she presented her argument on the potential of air connectivity in the region. The BBIN sub-region is at the crossroads of South Asia and East Asia and it must take advantage of its strategic positioning. Dr. Bhattacharjee reiterated the points made by other presenters in remarking that the agreements are already in place and the region must now shift its focus to try to realise those agreements.

She further presented her case for the need to advance air connectivity by remarking that the region is a connectivity hub and although rejuvenating the airline sector might turn out expensive, the region could identify hubs like Kolkata, Dhaka and Sylhet which have strategic importance.

Commenting on the other issues, she pointed out to the poor connectivity that Bhutan, Bangladesh and Nepal shared with each other. If a seamless network is to be achieved, connectivity among these countries must improve. She also presented ideas to create a centre for manpower training, a BBIN association of air service providers and a master plan for the BBIN air services. She concluded on an encouraging note by remarking that if there is a right kind of will, then all the objectives can be achieved.

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**Abstract of Discussant's Comments by
Prof. Prabir De, Professor, Research and
Information System for Developing
Countries (RIS)**

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Discussant: Prof. Prabir De, Research and Information System for Developing Countries

Professor Prabir De, the discussant of the session on transit and multimodal connectivity summarized the presentations of the four panelists. He began by referring to Ms. Joyeeta Bhattacharjee's presentation which focused on air connectivity. Connectivity via air in the BBIN region suffers from a lack of infrastructure as major cities like Guwahati and Imphal have not yet developed supply chains and other necessary means to advance connectivity. He also reiterated the need to have a BBIN Association of Air Service Providers similar to the service providers of other regional initiatives like ASEAN.

Next, Prof. De summarized Dr. Nisha Taneja's presentation which highlighted the trade facilitation agreements besides referring to the United Nations TIR Convention of 1975. The TIR system is a global customs transit system that provides easy and smooth movements of goods across borders in sealed compartments or containers under customs control from the customs office of departure to the customs office of destination. Prof. De suggested that the BBIN can make use of the TIR Convention to enhance connectivity.

On waterways, which was the brief of Dr. Smruti Pattanaik's presentation, Prof. De urged the participants to delve into the potential of the Ashuganj port development. The port is at a distance of 40 kilometers from Agartala and Prof. De opined that the port has a potential of developing multimodal connectivity, besides also exploring tourism as a viable economic opportunity. The other project concerning waterways, which Prof. De spoke about was the dredging of the river which connects the national waterways from Haldia to Sadia through Bangladesh. The Government of India is sponsoring both the projects and they shall result in efficient navigability. Cultural links play a huge role in advancing the connectivity of the region. On inland waterways, he highlighted the coastal shipping agreements, especially between India and Bangladesh which are a highly successful project. Prof. De opined that the coastal shipping agreement could expand beyond India and Bangladesh as it has the potential to include all the other BBIN countries.

India's railway system is one of the most inclusive in the world and the panelists had duly pointed that out. Prof. De, in his summary, referred to examples of the rail connectivity in the country which makes it easy for the economically weaker section of the society to travel to metro cities across India from remote places via the railways. On international connectivity, he was highly optimistic of the trains from Kolkata to Khulna and Dhaka. Similar arrangements could be possible for Bhutan and Nepal as well, but only after their geographical limitation had been negated.

Lastly, he was optimistic on the possibility of a sub-regional arrangement via the roads. The Motor Vehicle Agreement (MVA) which has been ratified by three countries, save Bhutan, could be implemented in the coming months and that would really provide a boost to the sub-regional cooperation.

He concluded by floating the possibility of forming an association within the BBIN initiative. Associations of freight, ports and terminals, transport and logistics service providers, railway organizations and air service providers were suggested.

Session 3: Energy-Hydropower and Water Resource Management

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Chair's Remarks by Dr.
Sagar Prasai**

Session III: Energy-hydropower and Water Resource Management

Chair: Dr. Sagar Prasai

Dr. Sagar Prasai, the Asia Foundation's country representative in India chaired the session on Energy-hydropower and Water Resource Management. He began by remarking that energy is a very large topic and the panel would focus more on the hydropower aspect of it. Outlining his speech, he presented the participants with the "headline news" on the two sectors, energy and water within the purview of the topic.

Energy

Energy has been traditionally the leading sector for collaboration in the BBIN and India has had bilateral arrangements with all three countries of the initiative to either buy or sell energy. Further, there has been growing investment in transmission lines as well with the latest development on that front coming through a recent guideline issued by the Ministry of Power to transmission companies and utilities on how to manage trans-border sale and purchase of electricity. Commenting on the position of the other countries in the region, Dr. Prasai mentioned that both Bhutan and Nepal are looking to develop their hydropower more aggressively. Also, Bangladesh which is a long-term net purchaser of electricity for the region has the desire to multi-lateralise the market arrangements.

Dr. Prasai added that energy mix is a very critical issue. On the generation side, Nepal and Bhutan have a fairly climate friendly setup, assisting predominantly with hydropower. However, both Bangladesh and India have a diverse energy mix and therefore ascertaining the kind of mix needed to create the most desirable output is very important. Further, Bangladesh's position on what kind of energy it wants to buy and at what price is also very important.

He also commented on the struggle that all four countries in the region have had to face because of coal being the major generator of electricity in the region. India has problems with buying more expensive hydropower and would rather prefer to resort to coal fired generating facilities, at least for the near future. Similarly, Nepal is gradually getting addicted to cheaper energy imported from India which is coal generated and almost Rs. 3 cheaper than their own hydro-power generated energy. Bhutan has had to compete with energy prices with coal generated energy and Bangladesh also has an increasing presence of coal in energy mix in design.

Water

On the water side too, there are several issues. One problem that he particularly highlighted was of the "parsimonious" treaties that the BBIN countries have signed with one another. They are parsimonious in the sense that they only deal with very basic division of water and this is not effective enough because of the constant natural disasters that are occurring in the region.

Second, conservation is also an issue and other associated benefits like connectivity through inland waterways has been problematic in the sub-regional cooperation and none of the existing treaties bring these under their purview. Dr. Prasai commented particularly on the India-Bangladesh water treaty where the conversations need a restart to facilitate faster movement.

The third issue identified by Dr. Prasai was the idea of a greater sub-national engagement in international water treaties and water negotiations. Explaining further, he presented the case of Nepal as an example in which all that happens in Nepali waters affects Bihar and Uttar Pradesh but they somehow are not in the forefront of the conversation. Thus, he encouraged the countries to involve their states directly into the conversations for a smoother cooperation.

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**Presentation by Dr. Arbind Kumar
Mishra, Member, National Planning
Commission, Nepal**

Energy Security in BBIN **(Constraints and Way Forward)**

Dr. Arbind Kumar Mishra

Member, National Planning Commission of Nepal

Energy Mix: Factors to be considered

- Limiting GHG
- Climate Change effect and Seasonal variation in generation
- Maximum exploitation of Local resources
- Daily and seasonal variation in national and regional demand
- Declining price for renewable energy technology
- Need to consider both the long term and short term aspects of energy security
- Socio economic status (affordability).

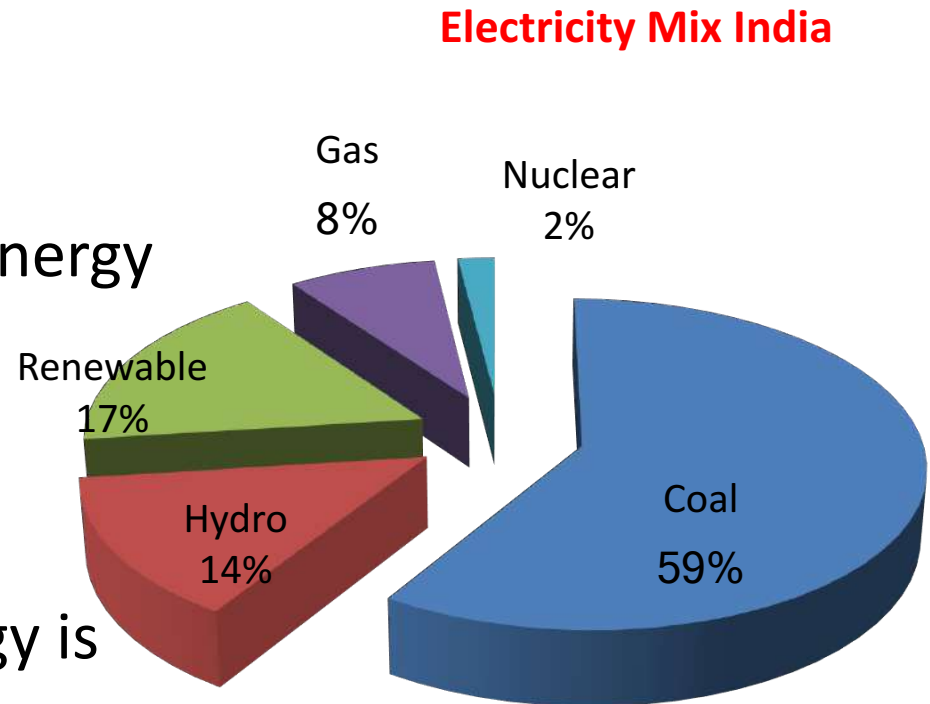
India (320000 MW)

Strength:

- Diverse resource in its own
- Surging demand
- Load curve is becoming smoother
- Huge pace for renewable energy growth

Challenges:

- Share of coal still too large
- Share of intermittent energy is about to outpace the limit
- Peaking plants and grid security



Bangladesh (16000 MW)

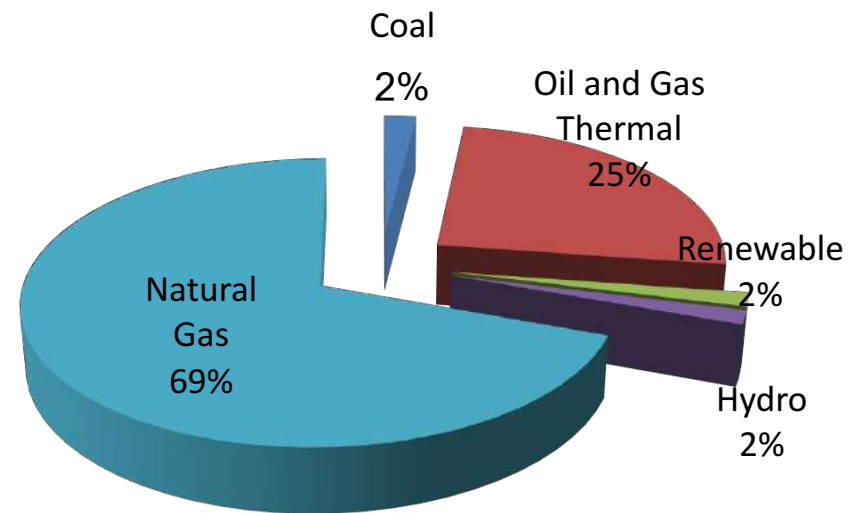
Strength:

- High electricity demand growth
- High Pace for power plant installation
- Managed to implement a large-scale Solar Home System (targeting 2,000 MW by 2021)

Challenges:

- Mix dominated by natural gas (plans to generate 50 % of total electricity by coal-based plants by 2030)
- Importing electricity from neighboring countries (Bhutan, Nepal, Myanmar)

Electricity Mix Bangladesh



Bhutan (1,840 MW)

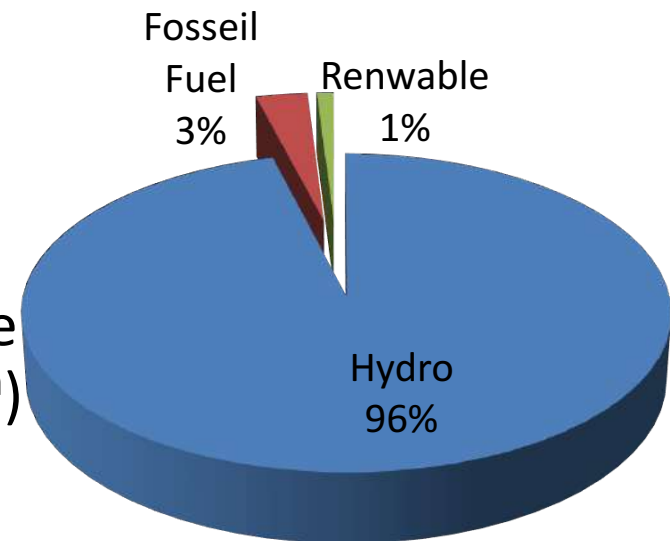
Strength:

- Considerable hydropower potential (around 30,000 MW, of which 23,760 MW has been identified as economically feasible.)
- India's investment in hydropower development

Challenges:

- Fears of the effect of climate change (even today in dry season only 1/5th)
- Less domestic market
- Dependent on
 - only one source need to diversify (some plans)
 - India's import policy

Electricity Mix Bhutan



Nepal (1044 MW)

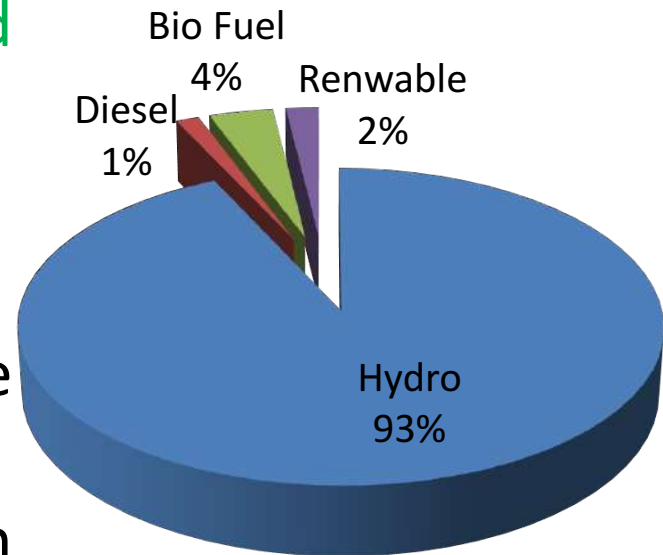
Strength :

- Blessed with significant hydropower resources.
- Declared 2016–26 “National energy crisis reduction and electricity development decade”

Challenges:

- Investors scary about market
- Huge daily and moderate Seasonal variation in load
- Huge seasonal Generation variation
- Export fully dependent on Indian policy

Electricity Mix Nepal

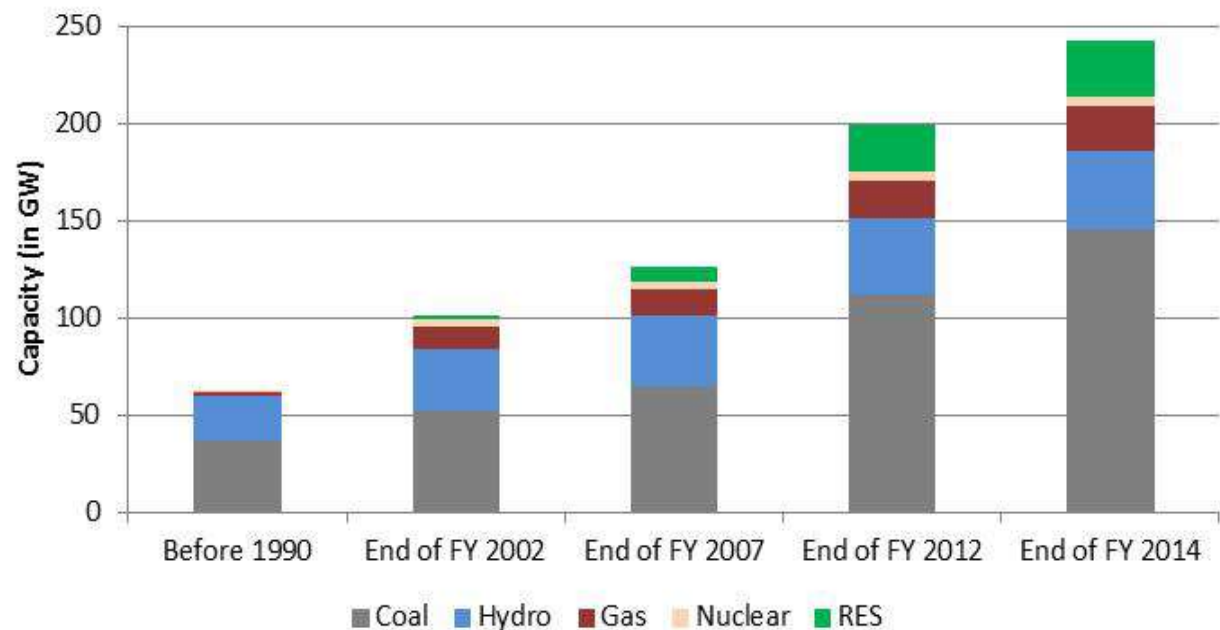


India Energy Market in the Region

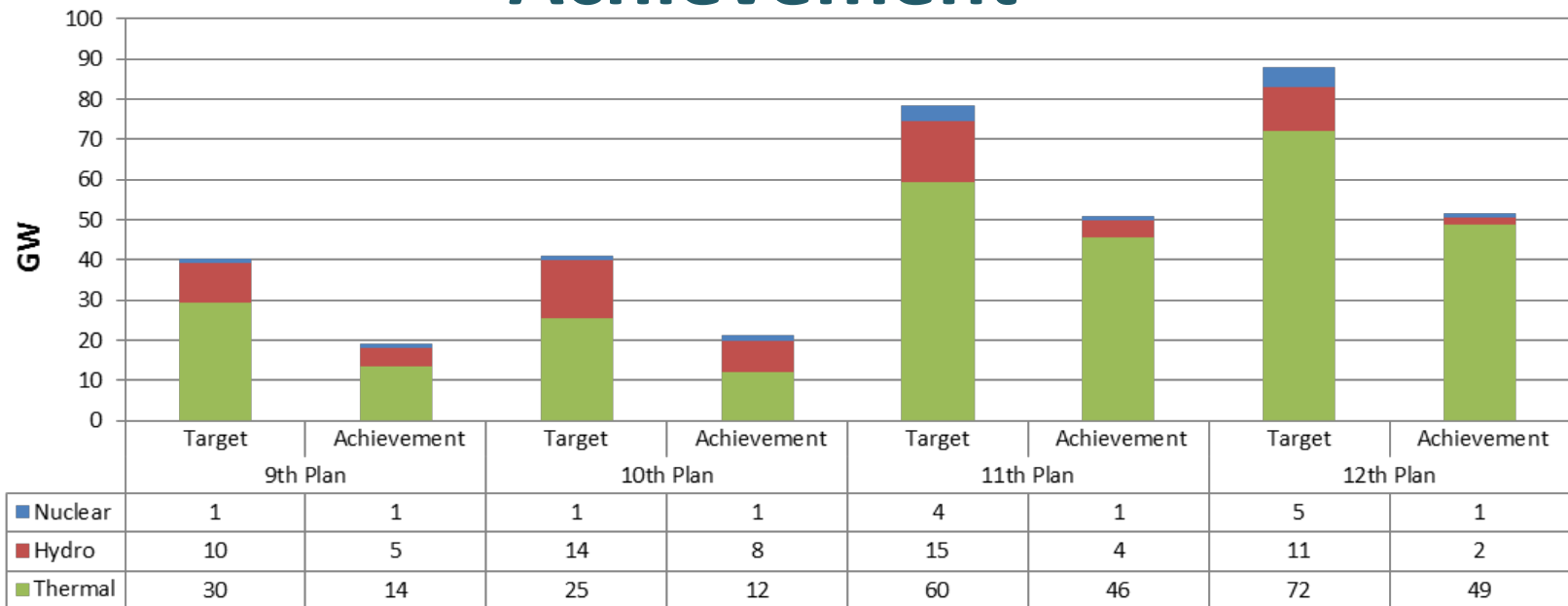
- Out of total, more than 94% electrical energy consumption and generation is in India
- This ratio is merely changing in years to come
- Hence Regional energy balance is highly dependent on India's energy mix scenario and vice versa
- It's Role for Facilitating Regional cooperation vital for regional energy trade and energy security of the region

India Generation trend

- Generation capacity is primarily base load (predominantly coal)
- Share of hydro and gas in generation mix is going down over the years.
- As a result, peak demand is being met through coal based generation running at low PLFs,



India Generation Mix target and Achievement



- Hydro capacity addition has been consistently worsening, with last 12th year plan, only 20% of target achieved
- Nuclear capacity addition has seen similar laggardness
- Energy demand increases but the energy content is becoming with high emissions and ‘intermittent’.

Possibilities For India-Nepal Energy Electricity Exchange

- India:
 - able to meet energy demand by own but peak demand deficit will continue
 - With more renewable capacity in total mix, needs flexible generation like hydro to maintain system stability and reliability
- Nepal: A back-of-the-envelope analysis indicates that at normal pace
 - Nepal will continue to face deficit in dry seasons
 - From 2020/2021 there will be surplus of 900 MW in day time and 200 MW in evening peak in wet season

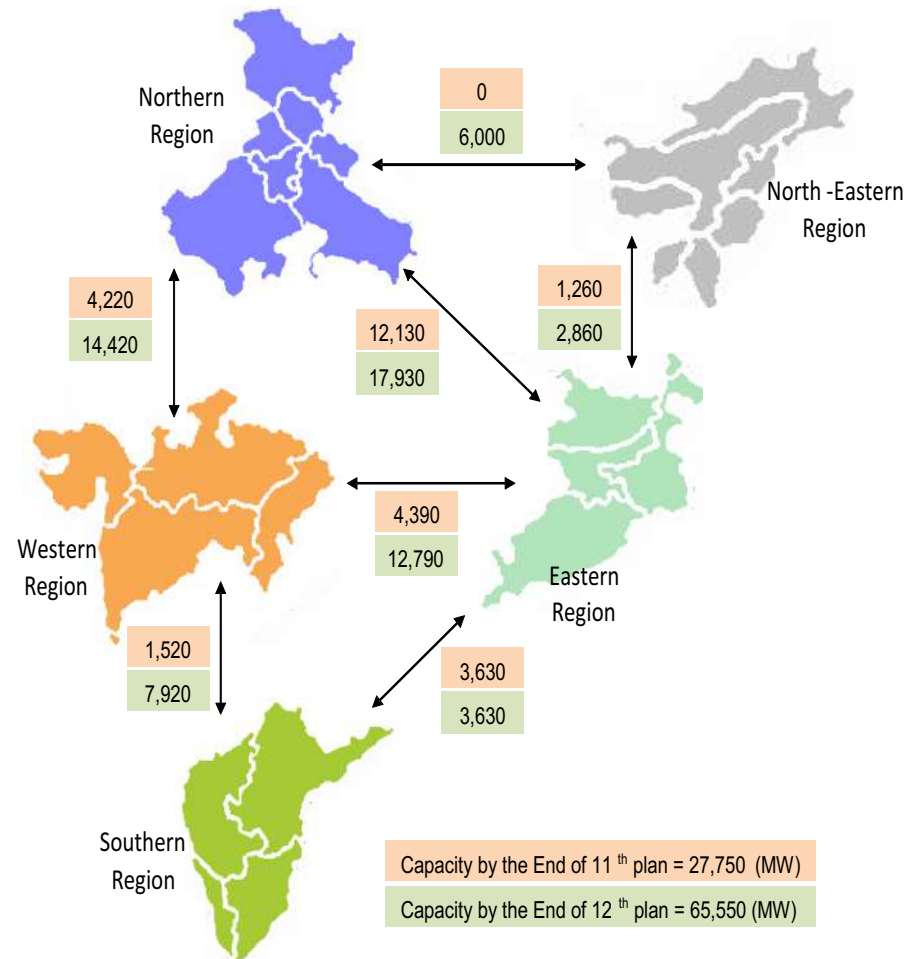
Nepalese Surplus Deficit possible Scenario (base case)

Year	Forecast	Wet Season				Dry Season			
		Off Peak	Morning	Day time	Peak	Off Peak	Morning	Day time	Peak
		0.5	0.7	0.55	1	0.5	0.7	0.55	1
	MW	MW	MW	MW	MW	MW	MW	MW	MW
2018/19	1903.3	311.45	(69.21)	216.29	(449.87)	(536.75)	(872.41)	(586.92)	(913.40)
2019/20	2071.5	758.35	344.05	654.78	(70.25)	(461.55)	(830.85)	(520.13)	(715.15)
2020/21	2,203.80	1,063.90	623.14	953.71	182.38	(416.19)	(811.95)	(481.38)	(943.09)
2021/22	2,378.90	2,087.85	1,612.07	1,968.91	1,136.29	(170.29)	(601.07)	(244.24)	(784.74)
2022/23	2,562.10	2,253.65	1,741.23	2,125.55	1,228.81	(184.67)	(652.09)	(267.78)	(890.72)
2023/24	2,764.50	2,152.45	1,599.55	2,014.23	1,046.65	(285.87)	(793.77)	(379.10)	(1,093.12)

- The peak generation is generally expensive, - **banking of energy is the most optimal approach for both nations (strong grid interconnection needed)**
- Accelerated Nepal Hydro power exploitation can facilitate even better scope for banking

Strong Regional Grid interconnection

- Presently, bilateral cooperation
 - Bhutan-India and Nepal-India are connected through synchronous AC links
 - Bangladesh-India is connected through HVDC link.
- India's NR does not have many of the natural resources to generate its own power and remain dependent on the generation from other regions.



Regional Grid interconnection (contd.)

- In this context Nepal's East-west transmission can enhance the energy security of its own as well of India
- Also IIIrd Meeting of Joint Technical Team on Indo-Nepal Cooperation in Power Sector (20-21 March, 2016) has proposed some cross border transmission links between Nepal and India, out of which
 - New Duhabi-Purnea 400 kV or higher interconnection may be of strategic importance to Nepal
 - When New Duhabi-Purnea line is in place, Nepal may be able to export power to Bangladesh by building interconnection line between India (Purnea) and Bangladesh
 - The other projects of importance New Butwal-Gorakhpur for which India need to build the line when MCC funded Nepal portion is ready by 2023-24.
 - Lumki-Bareilly to evacuate power from projects in Karnali basin.

Nepal's Policy Initiation

- Within the hydro (primarily dependent on ROR currently)
 - Storage/ pump storage : 40-50%
 - PROR: 15-20%
 - ROR: 25-30%
 - Renewable: 5-10%
- Initiation to Pump storage: Begnas-Rupa(150 MW) Sunkoshi (60MW), Andhikhola (60 MW)
- MOU with Bangladesh for development and export its hydro energy to Bangladesh
- Besides cross border interconnection, East-West high capacity lines is on top-most priority for both as a means of developing its resources and also as a means of ensuring its energy security and energy trade (MCC help)
- Combined effort of Massive distributed generation and expansion of grid as a means for local energy security (753 local levels in context of SDG 7 target)

Summary (Way ahead)

- Non-discriminatory open access and inter-Grid connectivity can put a brake on regional or sub-regional integration
- Existing bilateral arrangements are needed to be extended towards regional power market
- The interconnectivity
 - To implement the energy banking arrangement
 - more inertia of regional grid (compared to national grid) and thus more intermittent power sources like solar and wind can be injected in to the grid.
 - Reduce investment in peaking plants in India
- The peaking energy rate should be reasonably defined
- Demand Curve should be analyzed regionally and accordingly resource allocation to meet that demand curve
- Need to identify the entities in India, which will provide banking services, and put in place an institutional mechanism for coordinating the power dispatch
- For effective Nepal and Bhutan's Hydro power development high weighting for flood control and irrigation as a compensation

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Paper by Dr. Mahfuzul Haque,
Former Secretary, Ministry of Labour
and Employment, Government of the
People's Republic of Bangladesh**

*DPG Round Table Discussion on Advancing BBIN Sub-regional Cooperation
India Habitat Centre, New Delhi
13-14 December 2017*

Emerging Challenges for BBIN countries in Energy Hydropower and Water Management

Dr Mahfuzul Haque
Adjunct Faculty, Department of Development Studies
University of Dhaka (former Secretary, Government of Bangladesh)

Abstract

In an Indo-centric sub region, the present paper looks into the emerging challenges, the BBIN countries are expected to face in the field of energy, hydropower and water management. As opposed to current global drive to shift to renewable energy, the BBIN countries continue to have their base on fossil-fuel based energy, mainly coal. Due to change in legal regime, investment climate exists in some of the BBIN countries for PPP and foreign collaboration. A great prospect of hydropower remains present in the two Himalayan countries of Nepal and Bhutan, requiring adequate funding in order to undertake mega projects. Nuclear power is slowly taking it's due share in the region with provision of nuclear waste management and adequate safety measures. Prospect of renewable energy, mainly solar is promising in the region, requiring constant research and development. Water management (including proposed Teesta agreement and Ganges Barrage project etc) is an age-old issue requiring political blessing at the highest level. Prospect of inland water transport and maritime links between Bangladesh and India exists. On disaster risk reduction (floods and cyclones), BBIN countries could play a pivotal role in reducing deaths and damages. Biodiversity conservation is another field for potential sub-regional collaboration. Finally, the article concludes that good energy governance and full political commitment are prerequisites to achieving affordable, reliable and sustainable energy and harnessing hydropower potentials of the region.

Introduction

With launching of a new express train named “Bandhan” connecting Kolkata and Khulna besides inauguration of two railway bridges in Bangladesh on 9 November 2017, India and Bangladesh entered in to a new era of friendship and connectivity. Utilization of long-term credit facilities to Bangladesh by India and implementation of a number of bilateral and multilateral agreements between the two countries and other BBIN countries would further pave the way for a meaningful cooperation between these countries. The paper addressed

the challenges the BBIN countries are likely to face related to climate change; prospects of energy-collaboration in both traditional (coal and nuclear) and non-traditional (solar) sectors; hydropower and water resource management. Other issues addressed are prospect of investment on energy sector; power tariff; and collaboration in the field of biodiversity conservation in the region etc.

Climate Change

Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR4) published in 2007 found that warming in South Asia is projected to be at least 2 to 4 degree C by the end of the century. Among the four BBIN countries, Bangladesh because of its low-lying coast is apprehended to be worst hit by climate change. It is one of the Most Vulnerable Countries (MVCs) of the world to climate change and concomitant sea level rise. Because of its geographical position Bangladesh is regularly visited by devastating cyclones and tornadoes. With a climate change-induced sea level rise a great chunk of coastal Bangladesh would permanently get inundated turning its inhabitants as environmental refugees.

Agricultural sector is one of the sensitive areas which would be influenced by the projected global warming. In spite of the uncertainties about the precise magnitude of climate change on regional scales in India, a study showed that wheat and rice crops in the northwest are vulnerable to the projected climate change. Due to various agro-ecological zones and their agro-climatic conditions, effects of climate change would vary from region to region. In some areas it would be positive as well.

On the other hand, situations of Bhutan and Nepal, although land-locked, are no less different. The warming climate has resulted in rapid shrinking of majority of glaciers in Nepal. The formation and growth of glacier lakes are a phenomenon closely related to the deglaciation in Nepal. Valley glaciers generally contain supra-glacial ponds. Due to a warming climate, these ponds grow bigger and get merged. The dams holding these are structurally weak and unstable. They undergo constant changes due to slope failures, slumping, etc. and possess the danger of catastrophic failure, causing glacier lake outburst floods (GLOFs). There is a clear elevational gradient in warming rates in the Himalayan range (e.g., Bhutan, Nepal, and Himachal Pradesh) similar to that in the observed historical temperature data. Not only agriculture crops, tourism of these countries would be greatly affected.

Climate Change Negotiations: Position of BBIN

In view of different level of GHG emissions, countries of this sub-region are grouping themselves separately with other issue-based groups. India being one of the top five CO₂ emitting countries (1.6 billion tons in 2009) next to China and US, has sided with BASIC Group (Brazil, South Africa, India and China) and her interests are different than other three BBIN countries. Bangladesh, Nepal and Bhutan being members of the LDCs and least GHGs emitting countries, are in line with “Paris Climate Agreement” advocating for 2 degree Celsius temp rise above pre-industrial period. A joint position of these countries

related to climate change is not foreseen. At the recently concluded COP-23 held at Bonn, Germany in November 2017, the countries of the sub-region played their role based on their respective country perspectives. A coordinated regional plan on climate change may not be possible due to different positions of these countries due to their GHG emissions.

Energy Policy

National priorities of the BBIN countries need to be identified, which are reflected in their national energy policies. For example, Bangladesh is yet to finalize its energy policy and the country is heading towards a coal-based energy with eight new coal-fired power plants generating 9,700 MW joining the national grid by 2030. In India 73% of electricity is generated by coal-fired power plants (BPDB, 2015). India is increasing its coal production and becoming the world's third-largest coal producer. By 2020, it is expected to be world's largest coal importer overtaking Japan, the EU and China (IEA 2015). Although, countries are committed to promoting renewable energy, it is found that fossil fuel based energy gaining momentum in BBIN countries.

With an increase in GDP, demand for energy would continue to increase. Based on 7% GDP, Bangladesh Power Development Board in its Power System Master Plan (PSMP)-2016 predicted requirement of 24,000 MW of electricity by 2021 and 40,000 MW by 2030. PSMP predicts switching over country's dependency from gas to coal, meaning by 2030, 50% of the country's electricity would be generated from coal, which is currently less than 2% only (BPDB, 2016a). Similarly, demand for energy would increase in other BBIN countries as well. Challenge is how to meet the demand and from which sources?

Energy-traditional (Coal)

Traditional coal-based economy continues to run high in energy agenda of BBIN countries. Proposed coal-fired "Bangladesh India Friendship Power Company" at Rampal, Khulna generating 1320 MW is expected to be completed by 2021. The plant facing stiff resistance from civil society, NGOs and environmental activists because of its proximity to the largest mangrove forests, the Sundarbans. Likelihood that the raw material, the coal would be supplied by India through the sea. The other eight power plants in the offing would be run by imported coal, as it is understood. There is always a scope between India and Bangladesh to collaborate on coal, no matter a dirty energy.

Coal-fired plants emit greenhouse gases (SO_x, NO_x) and effluents like fly ash, bottom ash etc (Haque, 2013). How to treat them? Rampal power plant, despite having "Ultra Super Critical" devices, GHG emissions will continue to pollute the environment. How to address this pollution of a coal-fired power plant is a big issue.

Coal although "dirty" is being used massively for generation electricity in many developed and developing countries. Coal as a source of energy is being used by the following countries: Poland: 98%; South Africa: 93%; China: 75%; India: 73%; Australia: 65%; Germany: 46%; USA: 40%; Japan: 32%; Bangladesh: 2%; and Global Average: 41% (BPDB 2016b).

In line with global commitment and adherence to **Paris Climate Agreement 2015** (which committed reduction of CO₂ emission to 350 ppm and a temperature rise not more than 2 degree Celsius above pre-industrial level), BBIN countries are to reexamine their respective energy policies and there could be a common position on this issue.

It could be mentioned here that on climate change negotiation process, India is siding with China, Brazil and South Africa (BASIC). India along with China and USA are among the top-five CO₂ emitting countries of the world (IEA 2009).

Energy-traditional (Nuclear)

In Bangladesh, the first nuclear power plant of 2400 MW of third generation to be installed at Ruppur, Pabna by 2025 with Russian assistance. Safety issue of a Nuclear power plant is extremely important because of presence of radio-active waste and spent fuel waste. In India, nuclear power is the fourth-largest source of electricity after thermal, hydro and renewable sources. There could be joint collaboration between BBIN countries on nuclear safety measures and possibility of export to neighboring countries. Prospect for investment in nuclear energy exists.

Energy-nontraditional (Solar)

Bangladesh's progress in renewable energy is rather slow and modest. Out of a power generation of 9,200 MW (BWDB accessed on 27 September 2017), hardly 400 MW is received from renewable energy. There are around 4 million solar home system (SHS) all over the country. Prospect of solar power joining the national grid in a big way is rather bleak.

Prospect of other renewable sources of energy like wind energy, wave energy, biogas plants is rather bleak in Bangladesh. India is known for its thriving solar energy sector. Currently, India's solar-generation capacity raised to 12,289 MW in 2017. Perhaps there could be collaboration between and among BBIN countries on research and development on SHS.

Energy-hydropower

On 4 July 2017, Bangladesh, India and Bhutan signed a trilateral agreement to build 1125 MW hydroelectricity plant in Bhutan to export power to Bangladesh via India. Bangladesh will invest US\$ 1 billion for the power plant in Bhutan.

We are aware of hydropower potential in Nepal to the tune of 83,000 MW, although, by now, Nepal could harness hardly 680 MW of electricity having load shedding during dry season. Another study noted that hardly 0.75% of hydropower potential of Nepal has been tapped (Shreshta and Aryal 2011).

There is always a prospect of hydropower export from Nepal to Bangladesh and in the sub-region provided necessary funds are made available for undertaking mega hydro projects. On the other hand, Bhutan's hydropower potential was assessed at around 30,000 MW with 1480 MW developed so far. Close to 75% of electricity generated in Bhutan is exported to India. Surplus electricity could be shared in the sub-region.

Tipaimukh hydropower plant in north-eastern Indian state of Manipur was expected to generate 1500 MW of electricity and it was understood that power would be exported to Bangladesh as well. Tipaimukh faced resistance from civil society bodies and environmental activists both in Bangladesh and North-eastern India because of likely adverse impacts of the project on the environment. It is learnt that more studies are being conducted to review the project before its commissioning.

Bangladesh's lone hydro plant generating 230 MW (2% of the country's total generation) remains insignificant and may get redundant considering the socioeconomic costs of the plant. Because of flat terrain, there is a poor prospect of hydroelectricity in Bangladesh. A few rubber dams/mini hydro pilot projects are in progress.

In Bangladesh, except hydropower (230 MW), generation of electricity by SHS remained a staggering 125 MW. Contribution of renewable energy to overall electricity generation is hardly 3.3% only.

Energy Markets

Prospect of regional energy market exists, which could be worked out for greater interests of the BBIN countries.

Water Resource Management

Historical hiccups continue to exist between Bangladesh and India in water management sector, starting with Farakka barrage, proposed Ganges Barrage and proposed Teesta river agreement. India's river-linking project is another thorny issue affecting the region.

Construction of Ganges barrage in Bangladesh could have been a welcome move reflecting solidarity and goodwill of the Indian government, especially that of the West Bengal government. Technical and financial studies are done. It is understood that the project would benefit both the region in Bangladesh and West Bengal. An effective and collaborative water resource management require political blessings at the highest political level.

On flood forecasting, research collaboration in the region exists, although in an unstructured form. Flood Warning and forecasting centres and national Met offices of Bangladesh, India, Nepal and Bhutan could play an important role in sharing of data on weather, rain and river flow pattern in order to lessen damages to floods.

Trans-boundary Impacts

For regional projects involving two or more countries, there could be regular assessment of life cycle impacts including that of environmental impacts on the region. A joint biodiversity project in the Sundarban mangrove forests exists, besides some energy projects like Rampal power plant could be examined to assess the their likely impacts on the environment and biodiversity of the regional countries. Atmospheric pollution due to vehicular pollutions taking its toll on the urban air (recent "Delhi smog" could be referred). Trans-boundary effects of atmospheric pollution could be addressed.

PPP and Energy Investment

Prospect of Private-Public Partnership (PPP) exists in energy sector. In Bangladesh, the present government had to go for “quick rental” to solve immediate power crisis as a contingency measure. Agreements were signed with private plants. Contracts were signed by-passing the Public Procurement Act (PPA) 2006 and new Act was promulgated to avoid litigation. Opening up of energy sector in Bangladesh to private companies started attracting local and foreign companies.

Power Tariff

Power tariff among the BBIN countries is an important issue requiring serious attention of the policy makers. There is a cautionary note that because of fluctuation of tariff, cross-border smuggling increases. Currently in Bangladesh, there is an increasing trend of power tariff of gas and electricity, which would affect the domestic market.

Research and Development

Regionally, there could be more research on issues related to energy, water resource management and hydro-power development. Research organizations and academia of this sub-region could play an important role.

Biodiversity Conservation

Targeting forest conservation, Bangladesh and India could play a pivotal role in the conservation of the Sundarbans, the largest mangrove forests in the world. A few joint development projects are in progress including tiger conservation and conducting tiger census. With the other two BBIN countries, similar collaborative projects would be helpful in the field of forest and wildlife conservation. Private sector could get involved in projects linking biodiversity conservation with tourism.

Conclusion

All the BBIN countries are committed to achieving the SDGs. Goal 7 of SDG ensured access to affordable, reliable, sustainable and modern energy for all by 2030. BBIN countries would continue to face a daunting challenge of how to bring all population under electricity coverage. For example, in Bangladesh, 30% population (mainly rural) is without access to electricity. In India, more than 20% of its population lacks access to electricity posing a major development challenge. In another study, it was revealed that in 2015, only 55% of all rural households in India had access to electricity, and 85% of rural households depended on solid fuel for cooking. Accessing affordable, reliable and sustainable energy for all could be a big challenge and the BBIN countries could initiate further discussions and collaboration on how to achieve the SDGs.

There is no denying of the fact that good energy governance, full political commitment and consensus in the parliament is necessary for achieving affordable, reliable and sustainable energy for all.

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**DPG Roundtable on Advancing
BBIN Sub Regional
Cooperation, New Delhi,
December 13-14, 2017**

**Abstract of Presentation by Ms.
Lydia Powell, Head, Centre for
Research Management, Observer
Research Foundation**

Session III: Energy-Hydropower and Water Resource Management

Ms. Lydia Powell, Head, Centre for Research Management, Observer Research Foundation

Referring to the multiple narratives available on hydropower, Ms. Lydia Powell began her presentation by stressing the importance of hydropower in the BBIN sub-regional initiative.

Ms. Powell remarked that the competition in energy is very high and that coal usually offers a cheaper alternative to the other sources. The import of electricity from Bhutan and Nepal that was projected in the past never happened and it is now a case of the energy flowing in the opposite direction.

Regarding hydropower, Ms. Powell was of the opinion that this kind of energy is usually not viewed in a positive manner. In fact, one of the projections has been that the share of hydropower in India's energy basket will fall from the current level of 10 per cent to almost 7 per cent by 2040. Ms. Powell also remarked that the economic efficiency of hydropower compared to the other traditional sources of power like coal, nuclear and other natural gases have been low.

On the topic of regional cooperation through energy, Ms. Powell argued in favor of promoting hydropower with her primary argument being that it could help balance the intermittency of renewable energy, thus making it a storage project.

In conclusion, Ms. Powell posed a couple of questions to the participants. She questioned the importance attached to hydropower and suggested that there should be discussions on how to integrate energy systems of BBIN countries. Next, she asked whether some thought must also be given to joint projects which have multiple benefits such as agriculture, flood control, etc. besides also being state funded. She concluded by stressing on the need to develop a regional security narrative as it would help all the regional cooperation projects to take off.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Presentation by Mr. Shahab
Enam Khan, Research Director,
Bangladesh Enterprise Institute (BEI) &
Former Chairman, Department of
International Relations, Jahangir Nagar
University Savar, Dhaka**

Session III: Energy - Hydropower and Water Resource Management

Mr. Shahab Enam Khan, Research Director, Bangladesh Enterprise Institute (BEI) & Former Chairman, Dept. of International Relations, Jahangir Nagar University Savar, Dhaka

Mr. Shahab Enam Khan started off the discussion by raising a very pertinent question regarding the integration of hydroelectric power within the conventional narratives of electricity and power generation. The prevalence of coal based systems running in parallel with the reeling pressure of global warming and climate change has made quite disturbing conditions. He noted that in the light of the new consumption patterns and a change in the new energy efficient electricity systems - the entire gamut of study for the electricity dispensation should be looked at from a fresh point of view.

He highlighted a few major points with regards to hydro-power cooperation in the BBIN region that needed to be clearly spelled out, - 1. Clarifying and clearly laying down the primary objective for hydro-power generation to strengthen sub regional energy security and stability. 2. The need for an inbuilt mechanism within the BBIN region which will facilitate creating demand for hydro-electricity by lowering the commercial cost for the producer and end consumer, and 3. To facilitate transition in electricity consumption patterns by diversifying the energy mix. The major challenge regarding this is to ascertain if the states have the resources and the wherewithal for setting up such a system 4. Lastly, technological innovation to address the climate change concerns and to reduce the cost of infrastructure.

Furthermore, Mr. Khan pointed out a few key challenges in this field such as, the lack of harmonization of policies and regulations. Also, he pointed towards the issue of the surplus power transmission and the consumer market for hydropower remained a challenge. Moreover, due to the heavily subsidized pricing of grid supplies the tariff rates remained asymmetric. This asymmetry had adversely affected the creation of a stimulated and harmonized market for electricity.

He highlighted the utility and accommodative structure of the SAARC framework wherein he deemed, a similar arrangement on energy cooperation in the BBIN region could be adopted. He raised the issue about the mammoth task of electricity sector reforms wherein power exchanges, grid exchanges across various disciplines in electricity trade as well as tariff determination can gain traction if the government initiates an intervention at the institutional /community or secretariat level. He opined that at the BBIN regional level, it is crucial that a consensus is arrived at with regards to the infrastructural deficiencies, transmission networks and investment mixes.

Due to the lack of direct investments from private sector or foreign direct investments, the transmission and distribution of the state-owned utility enterprises are very poor. He recommended that through a BBIN development fund direct private sector investments should be channelized to create an energy pool that may be effective in mediation among the states and form a synergy for hydropower sensitization within the region. Mr. Khan recommended that at the BBIN regional level, the civil societies and private sector organizations along with the governments need to push for a multilateral institutional arrangement/mechanism and to facilitate competitive market trade in electricity exchange with minimal government intervention. Finally, Mr. Khan concluded by pointing out that in order to formulate this institutional framework of regional cooperation, it is crucial that the legal arrangements in place are clarified beforehand. Also, the varied levels of socio-economic, market, ecological and environmental concerns of each country need to be considered.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Presentation by Dr. Smruti
S. Pattanaik, Research Fellow,
Institute for Defence Studies and
Analyses**

Session III: Energy-hydropower and Water Resource Management

Dr. Smruti S. Pattanaik, Research Fellow, Institute for Defence Studies and Analyses

Dr. Pattanaik based her remarks around the question of sustainable energy security. She believed the BBIN region has been focusing more on hydropower and coal to generate electricity.

The advantage of using coal is that it is much cheaper than other alternatives. However, coal produces fly ash which causes environmental impact and hence, Dr. Pattanaik opined that coal must be used cautiously. She provided the example of the proposed Rampal Power Station between India and Bangladesh which generated controversy regarding the quality of the coal which would be used and the environmental impact it may have on the Sunderbans.

She also remarked on how the BBIN countries, despite their potential, were not able to produce the desired electricity resulting in the lack of power for many hours in a day. This is true especially for Nepal which has been facing an acute electricity crisis all over the country. In that context, Bhutan has been the only successful example owing to its hydropower generation capabilities. Dr. Pattanaik further remarked that out of Bhutan's total exports, 32.4% is electricity. This export amount contributes to 8% of its GDP. Hence, she identified that not only the generation of electricity but also the market demands need to be looked at. Production within a country without having a significant distribution networks in each of the countries is problematic. Further, there is also a potential of cross-border transmission besides trade.

Dr. Pattanaik concluded by identifying certain renewable means to generate electricity. At the same time, she also warned of the high costs that are associated with generating this kind of electricity. Providing examples of India's past attempts in 1997 to generate renewable energy, Dr. Pattanaik focused on the high costs which deterred the country from implementing those projects. Similarly, the talks about again producing electricity in Kutch through renewable means can only be undertaken after the issue of high costs have been addressed. Hence, she remarked that there needs to be a general mix of the energy which produces a win-win result for all factions involved.

**DPG Roundtable on Advancing
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New Delhi, December 13-14, 2017**

**Abstract of Presentation by Dr. Chandan
Mahanta, Professor, Department of Civil
Engineering, Indian Institute of
Technology, Guwahati**

Session III: Energy-Hydropower and Water Resource Management

Dr. Chandan Mahanta, Professor, Department of Civil Engineering, Indian Institute of Technology, Guwahati

Dr. Mahanta, at the outset, remarked on the alleged news that China may be using a secret tunnel to divert Brahmaputra water into a tunnel. He referred to a news piece by Colonel Vinayak Bhatt in which he had shared satellite images of a new dam with an underground tunnel for almost one kilometer.

Commenting on hydropower, he pointed out to a project involving the Power Ministry which is currently suspended. The reasons for the project to be suspended was that there were a lot of gaps in the excavation procedures. Further, there were also concerns regarding the structural safety of the dam along with the issues of the payments made and hence, a promising project had to be permanently closed.

Dr. Mahanta attributed the unforeseen circumstances in hydropower generation to the Himalayan uncertainties wherein even large public undertakings such as the National Hydroelectric Power Corporation (NHPC) have faced problems. Therefore, the “hydro enthusiasm” is now beginning to suffer a kind of roadblock.

Further, he spoke of the issue of the run-of-the-river (ROR) hydroelectricity and dwelt on its advantages as well as disadvantages. Contrary to popular belief, the ROR can only supply six hours of continuous water flow, which isn't enough to allow the ecosystem to function well.

On the BBIN perspective, Dr. Mahanta realized the need for developing a sustainable hydropower design. The region is still focusing on the conventional hydropower projects which have proven to be too weak for the Himalayan challenges. Despite highly qualified designers and advanced technology available, the fact that public sector companies such as NHPC have been facing problems is testament to the opinion that not enough is being done in the field.

Finally, he also urged the participants to consider sustainable navigation systems in terms of protecting fish migration routes and other habitats while also deciding the best possible channels both bathymetrically as well as morphologically. He was optimistic that the BBIN platform is well equipped to resolve these issues.

**DPG Roundtable on Advancing
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New Delhi, December 13-14, 2017**

**Presentation by Dr. Sanjay K.
Bhardwaj, Chairperson, Energy
Studies Programme**

&

**Ms. Pooja Tyagi, Assistant Professor,
Department of Economics, Daulat
Ram College**

Energy Transition : Investment and Cooperation Prospects for BBIN

Sanjay K. Bhardwaj

Chairperson, Energy Studies Program,

Pooja Sharma , Phd Scholar , Energy Studies Program,

School of International Studies,

JNU

Introduction

- A wide variation in commercial energy endowment and demand among BBIN
- A part from conventional energy resources , all the countries have renewable energy potential
- Mutual cooperation in sharing of energy resources , enhanced regional energy transfer through economies of scale
- High capital costs along with low plant load factors are the limitations with RE projects making electricity more expensive
- Low cost capital can be dealt with innovative financing mechanism and also cost based grid feed in tariffs

OBJECTIVES

- ▶ Overview the energy scenario in BBIN
- ▶ To evaluate energy security in BBIN
- ▶ Commitment in Paris Climate Agreement COP21 by each country
- ▶ Evaluate renewable energy potential and energy policy.
- ▶ Explore the newly emerging value chains of renewable energy sources in the energy market.
- ▶ Examine the prospects of Intra-Regional Energy Trade cooperation.
- ▶ Policy Recommendations in context of newly emerged Energy Market

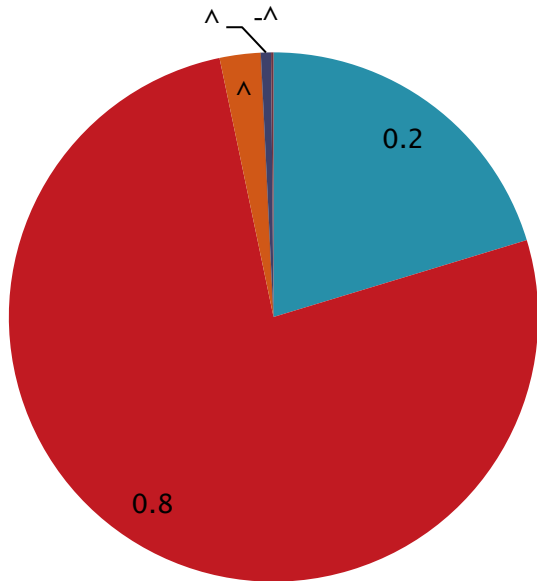
BBIN : Socio-economic Indicators

	GDP growth (%)	GNI per capita growth (annual %)	Inflation, consumer prices (annual %)	Population, total (millions)	HDI index
Bhutan	6.16	5.94	4.37	0.8	0.607
Bangladesh	7.11	5.29	5.51	161	0.579
India	7.10	5.79	4.94	1311.1	0.624
Nepal	0.56	-0.17995	8.790343	28.5	0.558

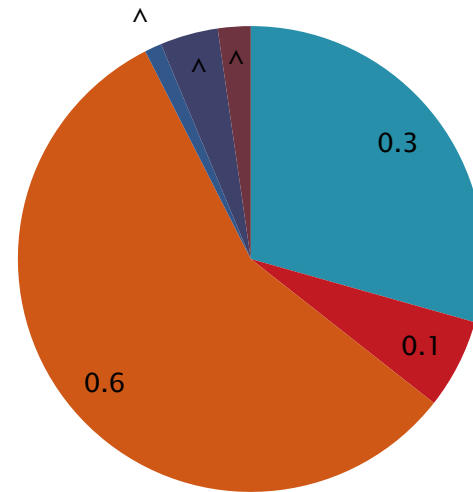
BBIN : Socio-economic Indicators

	Income Gini Coefficient	Life expectancy at birth	Education (expected years of schooling , years)	Environmental sustainability (CO2 emissions per capita , tonnes)	Access to electricity in Rural areas (% of population)
Bhutan	38.1	69.9	12.5	1.2	95.98
Bangladesh	32.1	72	10.2	0.4	51.4
India	33.9	68.3	11.7	1.6	70.028
Nepal	32.8	70	12.2	0.2	81.7

Energy Mix Bangladesh & India

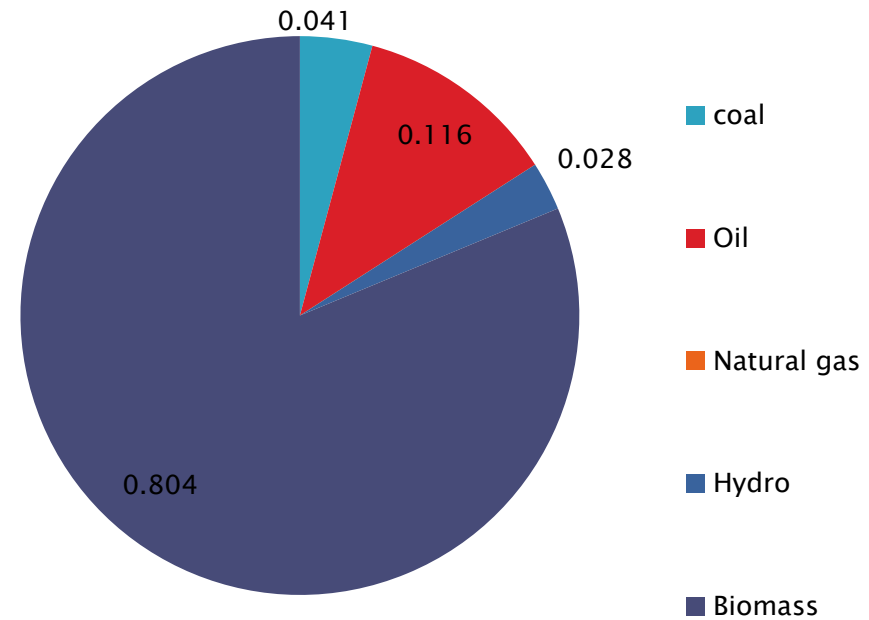
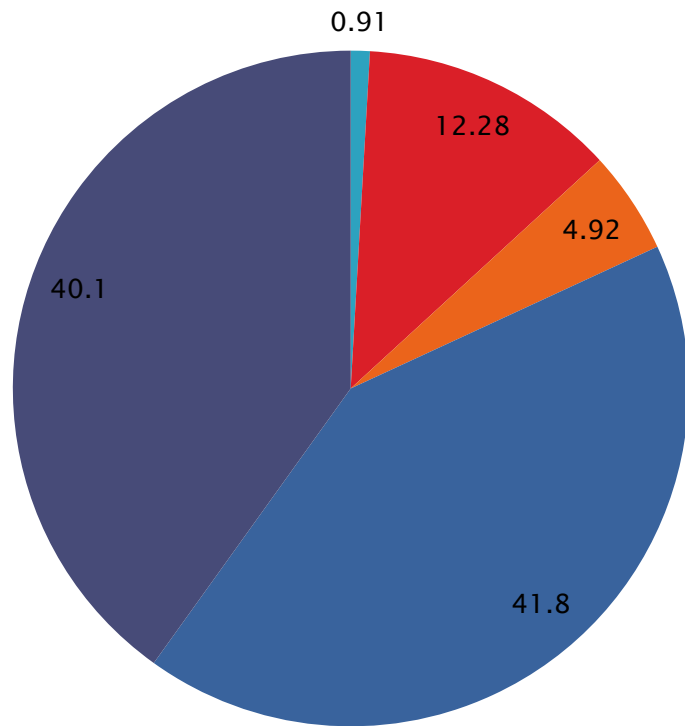


- Oil
- Natural Gas
- Coal
- Nuclear Energy
- Hydro electric
- Renewables



- Oil
- Natural Gas
- Coal
- Nuclear Energy
- Hydro electric
- Renewables

Energy Mix Bhutan & Nepal



Oil Scenario BBIN

Countries	Oil reserves (1000 million barrels)	Reserve and Production (R/P ratio) (1000 bbl/day)	Productio n (in 1000 bbl/day)	Consumptio n in 1000 bbl/day	Refinery capacities (1000 bbl/day)
Bangladesh	0	0	0	131	43
Bhutan	0	0	0	0	0
India	4.7	856 -- 0.9%	856	4489	4620
Nepal	0	0	0	0	0

Sources: BP Statistical Review of the World Energy , June 2017, CIA Country Energy Profile 2017, EIA Energy Profile 2017, IEA Energy profile 2017, Reuters Report (22 September 2017)

Natural Gas Scenario BBIN

Countries	Natural Gas Reserves (in Trillion cubic metres (tcm))	Reserve & Production (R/P ratio) in bcm	Production in million tonnes oil equivalent (mtoe)	Consumption in million tonnes oil equivalent (mtoe)
Bangladesh	0.2	27.5	24.8	24.8
Bhutan	0	0	0	0
India	1.2	50.1	24.9	45.1
Nepal	0	0	0	0

Sources: BP Statistical Review of the World Energy , June 2017, CIA Country Energy Profile 2017, EIA Energy Profile 2017, IEA Energy profile 2017, Reuters Report (22 September 2017)

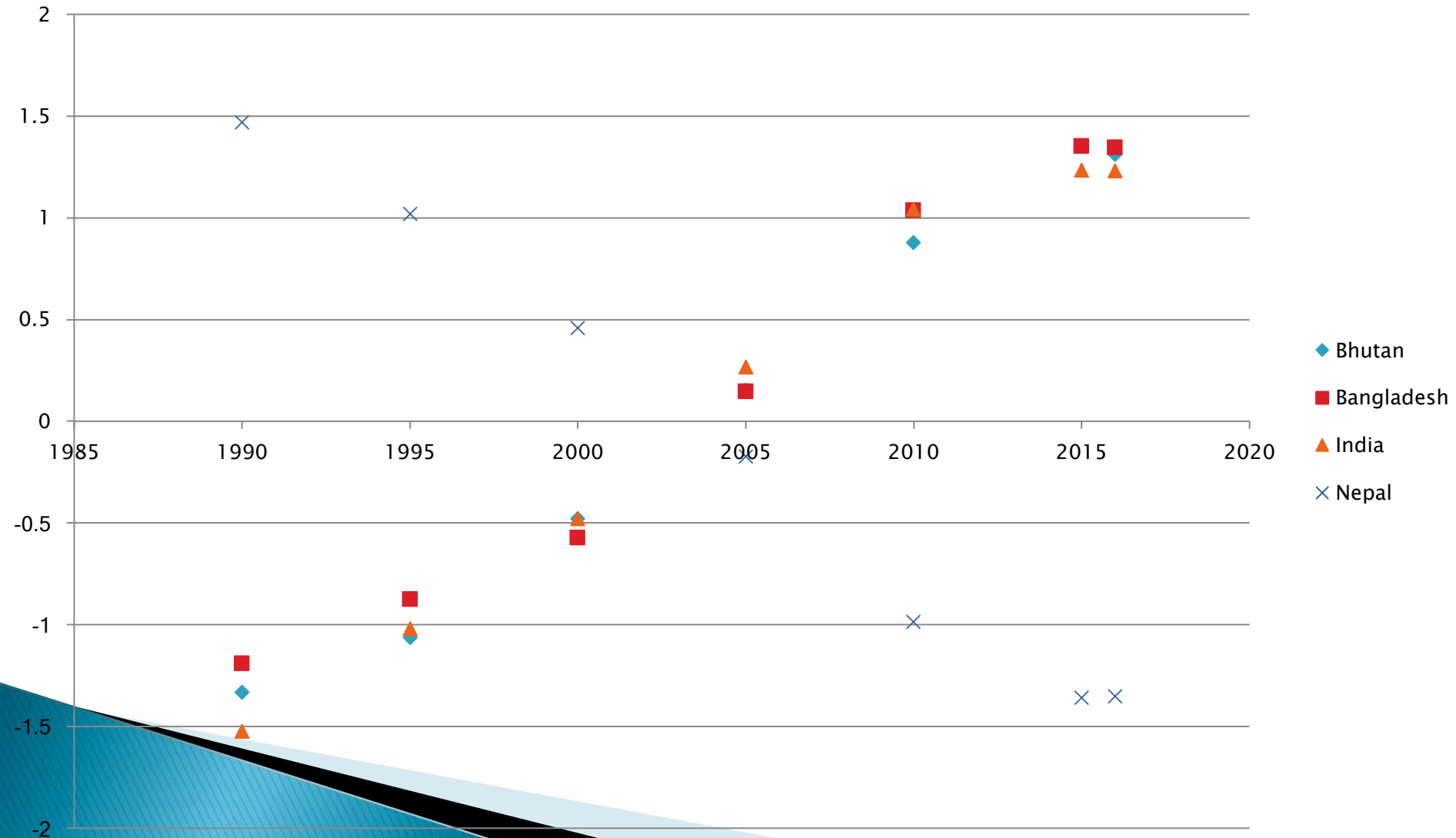
BBIN : Energy Security Index

Variables	Indicators	Symbols	Units
Energy Intensity	Energy intensity level of primary energy	Enerint	(MJ/\$2011 PPP GD
Primary energy prices	Average prices of primary fuel	Prices	US dollars
Energy Import dependency	Energy imports, net	Enerimp	(% of energy use)
Energy Accessibility	Access to electricity, rural	Accelec	(% of rural populat
Access to clean fuel technologies for cooking	Access to clean fuels and technologies for cooking	Accclean	(% of population)
Energy related emissions	Energy related emissions	Eneremi	(% of total)

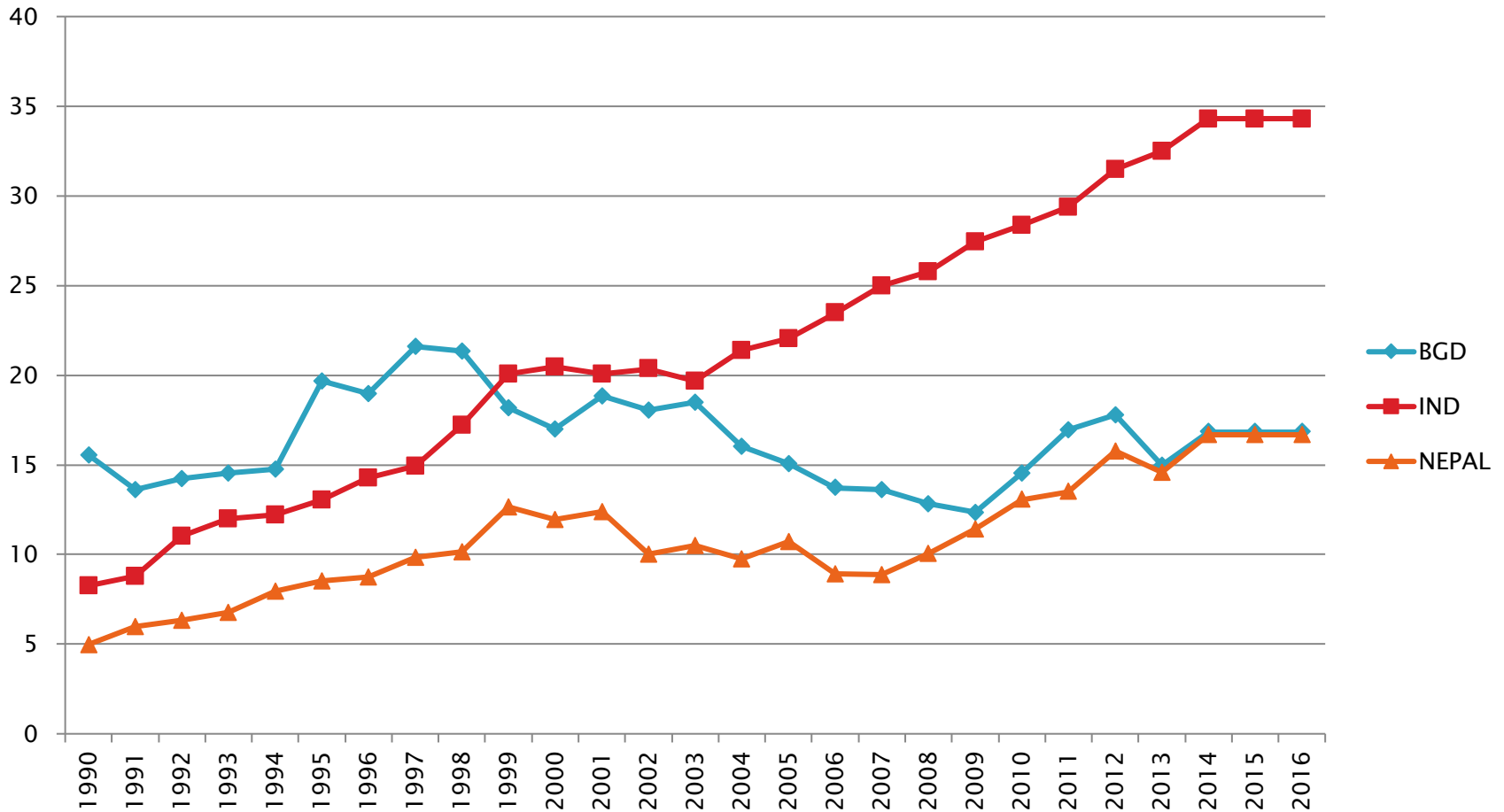
BBIN : Energy Security Index

	Bhutan	Bangladesh	India	Nepal
1990	-1.33223	-1.19115	-1.5236	1.46933
1995	-1.06436	-0.8762	-1.01894	1.01925
2000	-0.47823	-0.57375	-0.4793	0.45865
2005	0.15335	0.14589	0.26694	-0.17292
2010	0.87737	1.03674	1.0422	-0.98553
2015	1.35062	1.35173	1.23519	-1.35903
2016	1.31021	1.34562	1.22969	-1.35358

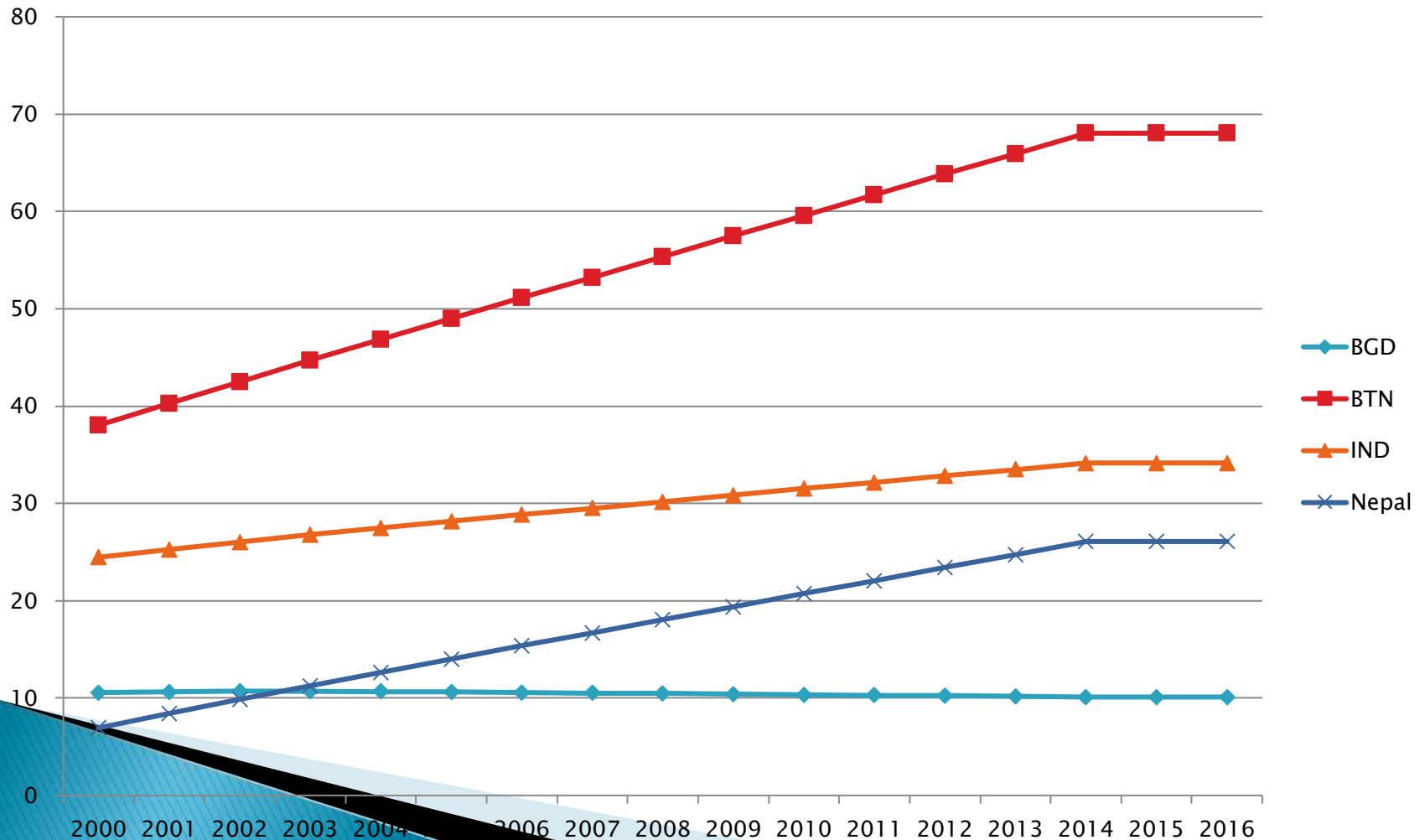
BBIN : Energy Security Index



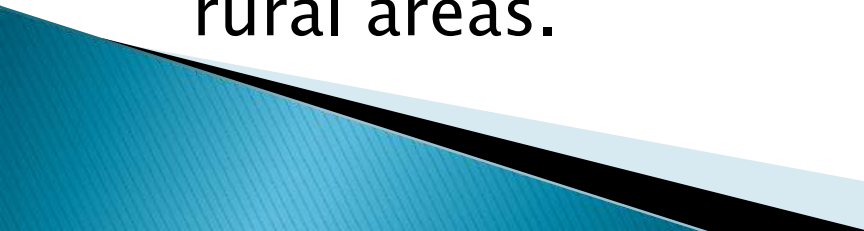
Net Energy Imports as % of Energy Use



Access to clean fuels and technologies for cooking (% of population)

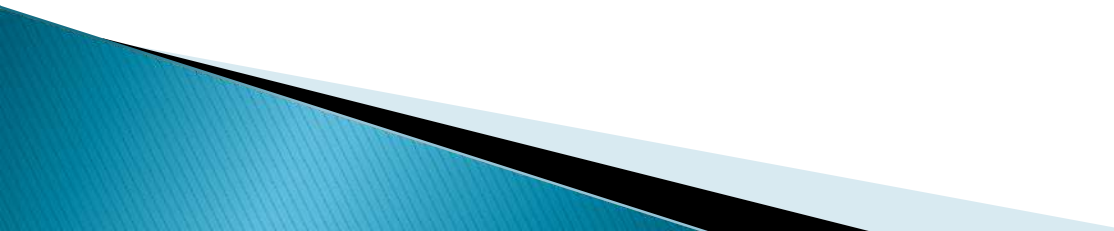


BBIN : Limitations

- ▶ Lack of Research and Development.
 - ▶ Lack of indigenous technology.
 - ▶ Lack of Infrastructure.
 - ▶ Lack of Capital
 - ▶ Multitude problems like poverty , inequality , unemployment etc.
 - ▶ Inadequate access to electricity in remote and rural areas.
- 

BBIN : Paris Climate Agreement COP21

Bangladesh :

- ▶ Signed aiming to take various measures to save the world from disastrous consequences of climate change.
 - ▶ Determined to take initiatives to adapt to climate change in a productive manner promoting international cooperation.
- 

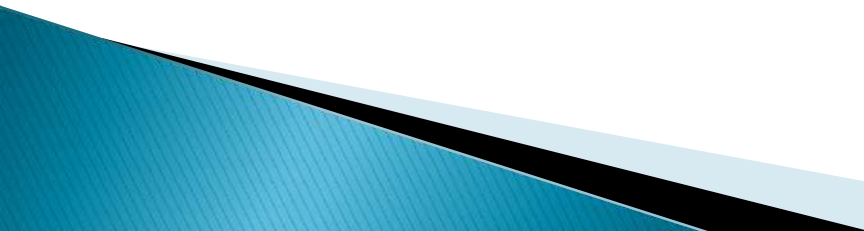
BBIN : Paris Climate Agreement COP2

Bhutan

- ▶ Highlighting Bhutan's vulnerability to adverse impacts of climate change and stated that Paris Agreement provides hope to collectively meet the challenge .
- ▶ Bhutan, a country with negative carbon emissions, Bhutan is determined to fight climate change.
- ▶ Increase resilience through integrated watershed and wetland management, adopting technologies for water harvesting.


BBIN : Paris Climate Agreement COP21

India


- ▶ Key role played at forums like G20 and COP23.
 - ▶ National Solar Mission target of 100 GW of installed solar energy capacity by 2022.
 - ▶ Fourth largest producer of wind energy in the world.
 - ▶ 18% of tax is proposed to be levied on electric cars , 28% tax on conventional cars.
- 

BBIN : Paris Climate Agreement COP21

Nepal

- ▶ Nepal as a Himalayan country is getting more vulnerable to climate calamities such as floods , droughts , glaciers etc.
 - ▶ Nepal contributes 0.027 % of GHGs .
 - ▶ Aims to achieve 80% electrification through renewable energy sources
- 

Renewable Energy Potentials (Bangladesh)

- ▶ More than 15 MW installed capacity .
 - ▶ Potential for wind energy in coastal areas and offshore islands with strong wind regimes.
 - ▶ Strong potential for biomass gasification based electricity, opens potential for large scale electricity generation.
 - ▶ Tens of thousands of households and village –level biogas plants constitute a major biogas potential .
 - ▶ Microhydro and Minihydro have limited potential, with exception of Chittagong and Chittagong Hill tracts
- 

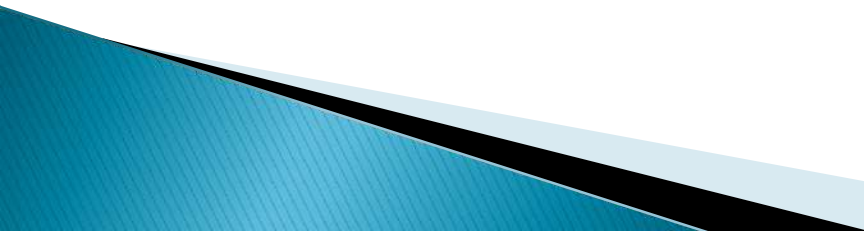
Renewable Energy Potentials (Bhutan)

- ▶ Since entire energy supply is powered by large scale hydropower , RE from solar, biomass and wind is still unexplored. Biomass second largest fuel used in rural areas.
- ▶ Wind energy did not progress well , Bhutan striving to generate an installed capacity of 20 MW indigenous RE mix , solar, wind biomass.
- ▶ High Share of energy demand in transport sector using 100% imported fuel from India as Bilateral Trade Agreement.
- ▶ Electricity supply is 100% renewable from hydropower as main source.
- ▶ Around 4000 household to be electricified by using solar off-grid power supply.
- ▶ Small and medium scale wind turbine has good potential for distributed generation system.

Renewable Energy Potentials (India)

- ▶ The total installed capacity reached 310 GW with Thermal 69.4% , hydro 13.9% Renewables 14.8% and nuclear 1.9%.
- ▶ India has an estimated renewable energy potential of about 900 GW from commercially exploitable sources , wind 102 GW , small hydro 20 GW , Bio energy 25 GW and 750 GW solar power.


Renewable Energy Potentials (Nepal)

- ▶ Biogas estimated between 0.9 m – 1.3 m household system .
 - ▶ 80% population relying on biomass for cooking . Nepal announced a target of 3million household by 2017.
 - ▶ Micro and mini-hydro estimated around 100 MW.
 - ▶ Commercial potential for solar energy is 2100MW
 - ▶ Potential for wind energy 3000 MW
- 

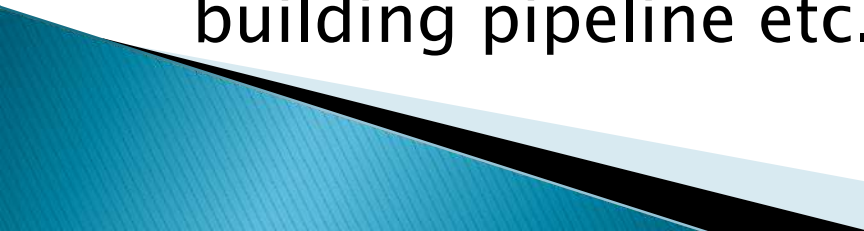
BBIN : Energy Policy (Bhutan)

- ▶ Electricity Act of Bhutan , 2001
 - ▶ Economic Development Policy of Kingdom of Bhutan , 2010
 - ▶ Sustainable Hydropower Development Policy , 2008
 - ▶ Alternative Renewable Energy Policy , 2013
 - ▶ Foreign Direct Investment Policy , 2010
 - ▶ Domestic Feed in Tariff policy
- 

BBIN : Energy Policy (Bangladesh)

- ▶ The fuel mix of Bangladesh power plant is heavily based on natural gas. Government of Bangladesh plans 50% of total electricity using coal based power plants by 2030.
 - ▶ Other policy is to import electricity from neighbouring countries , importing LNG , expanding use of renewable resources solar and wind.
 - ▶ 55% of domestic natural gas supply , 80% Bangladesh installed gas - fired power generation capacity.
- 

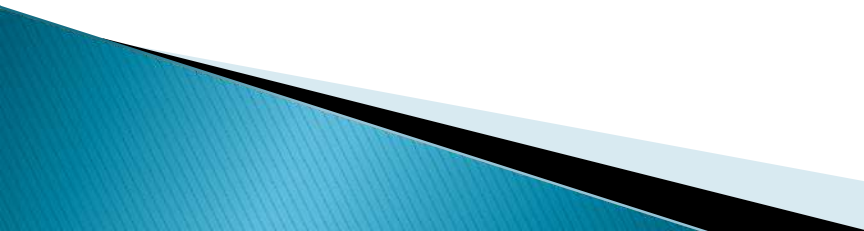
BBIN : Energy Policy (Bangladesh)

- ▶ Leading sub-sectors LNG imports : first floating storage and regasification units .
 - ▶ Solar Power : Successfully implemented a large - scale Solar Home System project with over three million SHSs installed nationwide and targeted installation base of six million.
 - ▶ Expansion of RE targeting 2000 MW by 2021.
 - ▶ Offshore deep-water exploration , possibilities for developing onshore gas fields, waterways , infrastructure to facilitate fuel transport , building pipeline etc.
- 

BBIN : Energy Policy (Bangladesh)

- ▶ Incentives for foreign investors tax exemptions
- ▶ Huge scope for solar microgrids .
- ▶ BERC license required to sell electricity from renewable energy projects.
- ▶ electricity distributors may offer green energy tariffs to co-finance through electricity bills and RE.
- ▶ RE project investors both in public and private sectors shall be exempted from corporate income tax for a period of 5 years
- ▶ An incentive tariff 10% higher than highest purchase price of electricity for electricity generation.

BBIN : Energy Policy (Nepal)

- ▶ Energy Demand $>$ 1200 MW exceeded power supply.
 - ▶ Encounters severe energy shortage.
 - ▶ Rural areas not grid connected.
 - ▶ Owing to high cost involved in diesel generators and petroleum shortages , households turned to solar energy.
 - ▶ Opportunities opened up for Solar panels , invertors, batteries , solar water heaters .
- 

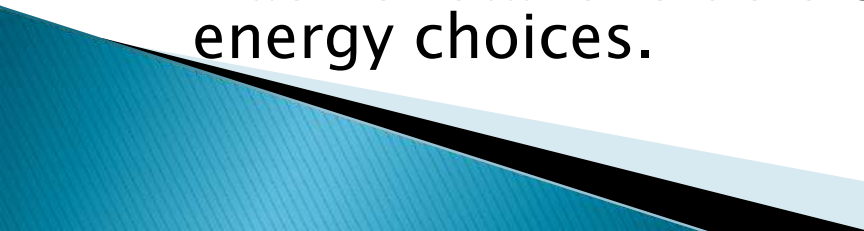
BBIN : Energy Policy (Nepal)

- ▶ Technology targets are
 - Mini and Micro Hydropower : 25MW
 - Solar Home System : 600,000 systems
 - Solar PV and solar pumping system : 1.500 systems
 - Improved Water Mill 4000 number
 - Improved Cooking Stoves 475000 stoves
 - Biogas 130,000 household ,
1000 institutional & 200 community biogas plants
- ▶ Renewable energy equipment sales for more than eighty solar equipment supply companies in Nepal.
- ▶ More opportunities to introduce enterprise solar system to businesses and factories .

BBIN : Energy Policy (Nepal)

- ▶ Rural electrification as major national energy policy concern . The subsidy rate aims to cover 40% of total costs of installation from subsidy.
- ▶ Level of subsidy should be made dependent on technology type , economically desirable to install wind turbines where there is ample wind supply.
- ▶ 12 % of Nepali population has access to electricity from renewable energy sources. With 23 MW of electricity is generated from micro hydro schemes, 12 MW from Solar PV system and less than 12KW from wind energy.
- ▶ Priority to adopt renewable technologies to improve rural technologies .
- ▶ Subsidies should be revised to increase with size of technology benefiting from economies of scale.

Energy Policy Drawbacks

- ▶ Lack of information dissemination and consumer awareness about energy efficiency.
 - ▶ High cost of solar & other RE as compared with conventional energy, but failed to incorporate
 - ▶ Inadequate financing options
 - ▶ Inadequate workforce skills and training
 - ▶ Lack of adequate standards, codes, interconnection , infrastructure , net metering guidelines.
 - ▶ Lack of stakeholders & community participation in energy choices.
- 

Intra- Regional Energy Trade & Cooperation Opportunities.

Hydropower

- ▶ Bhutan : 23,000MW, developed 5% of its hydroelectric potential
- ▶ Nepal : 42,000 MW, developed 1.5% of its hydroelectric potential.

Oil & Natural Gas

- ▶ No adequate oil & gas reserves , Bangladesh and India have proven gas reserves.
- ▶ Due to financial constraints , exploration & seismological surveys take time.

Coal

- ▶ Bangladesh set up first coal based power plant. India quality of coal with 35%

Intra- Regional Energy Trade & Cooperation Opportunities.

Renewable Energy Resources

- ▶ Biomass, solar and wind energy potential is enormous.
- ▶ Biomass meets large part of energy demand, solar and wind energy not exploited.
- ▶ India fourth largest wind power producer in the world. Manufacturer of wind turbines and equipments.
- ▶ Solar energy used in small scale in rural areas, need to enhance cooperation for improvement in technology. Similarly , efficient technologies for use of biomass. Bio-fuel another option for promoting more cooperation.

New Value Chain Opportunities

- ▶ Electric cars hit the new record in 2016 , over 750 thousand sales worldwide .
- ▶ Norway achieved the most successful deployment of electric cars in terms of market share 29%. The largest electric car market was China , 40% electric car sold to China.
- ▶ Solar installations 54MW to 2,632 MW in India by March 2014.. Solar Project Developers like Tata Power, Adani, NTPC , Greenko , Renew Power.
- ▶ Multiple products and services in solar PV value chain, opening opportunities for both large and small enterprises.
- ▶ Crystalline – Silicon value chain offers variety of opportunities than Thin – Film in terms of manufacturing process , can be divided into sub- products that can be supplied by different vendors.

New Value Chain Opportunities

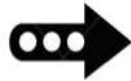
- ▶ India targets to turn all cars electric by 2030 and reduce oil imports .
- ▶ Tata Motors to supply 10,000 Evs, Mahindra
- ▶ A clean energy technology breakthrough in transport vehicles is G-Volution , allowing diesel engine to co-combust with natural gas and other alternative fuels , would help India reach Bharat VI
- ▶ This technology already successful in UK, USA and Africa deployed in commercial vehicles

Emerging Value Chain in EV (Transport)

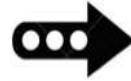
Extended Value Chain Elements					
Electric Vehicles and Transportation Infrastructure	Electric Vehicles	Battery Technology	Charging Technology	EV Transportation Infrastructure	Hazardous Waste Management
Energy Management Demand Tailment	Energy Efficiency	Home Energy Management	Load Management	Load Curtailment Programs	
Energy Storage	Battery	Capacitor			
Distributed Generation		Individually owned generation Grid			

Value Chain parts of EV

Raw material
mining



Battery cell
manufacturing



Battery pack
assembling



EV
manufacturing



EV component
recycling

EV services

EV sales and
dealership

Emerging Solar Value chain

Publishing , Trade & Industry Organisations,
Education

Financing , Consulting , Testing

Manufacturing Equipment

Materials & Chemicals

Polysilican

Silicon
Wafers &
Ingots

PV Cells

Crystalline
Module

Mounting
BIPV
Tracking

Electric
Compon

Wholesale
Distribution

Project
Development

Design
Engineering
Construction

Operations &
maintenance

Emerging Solar Value chain

Manufacturing

Raw material

Polysilicon

Ingot & Wafers

PV Cells

Intermediates

Solar glass

Finished products

Crystalline Modules

Thin – film Modules

Inverters

Monitoring Systems

Mounting Structures

Services

- Utility Scale Solar Plants

- Engineering , Procurement and Construction

- Independent Power Production

- Rooftop Solar Plants

- System Integration

Policy Recommendations

- ▶ RE technologies are innovative , opens the scope for virtual design and construction technologies.
- ▶ Considering resource endowment and availability, subsidies should be dependent on technology
- ▶ Installation Costs of new technologies have fallen dramatically which should be reflected in level of subsidy.
- ▶ Access to credit and cheap loans to finance technology installations in rural areas. This requires financial sector reforms , policy -level coordination between financial and energy sector.
- ▶ Community based financial arrangements such as cooperatives , policies to tackle corruption issues, adopting lessons from Peru, Chile , South Africa, Thailand can provide subsidy delivery mechanism.

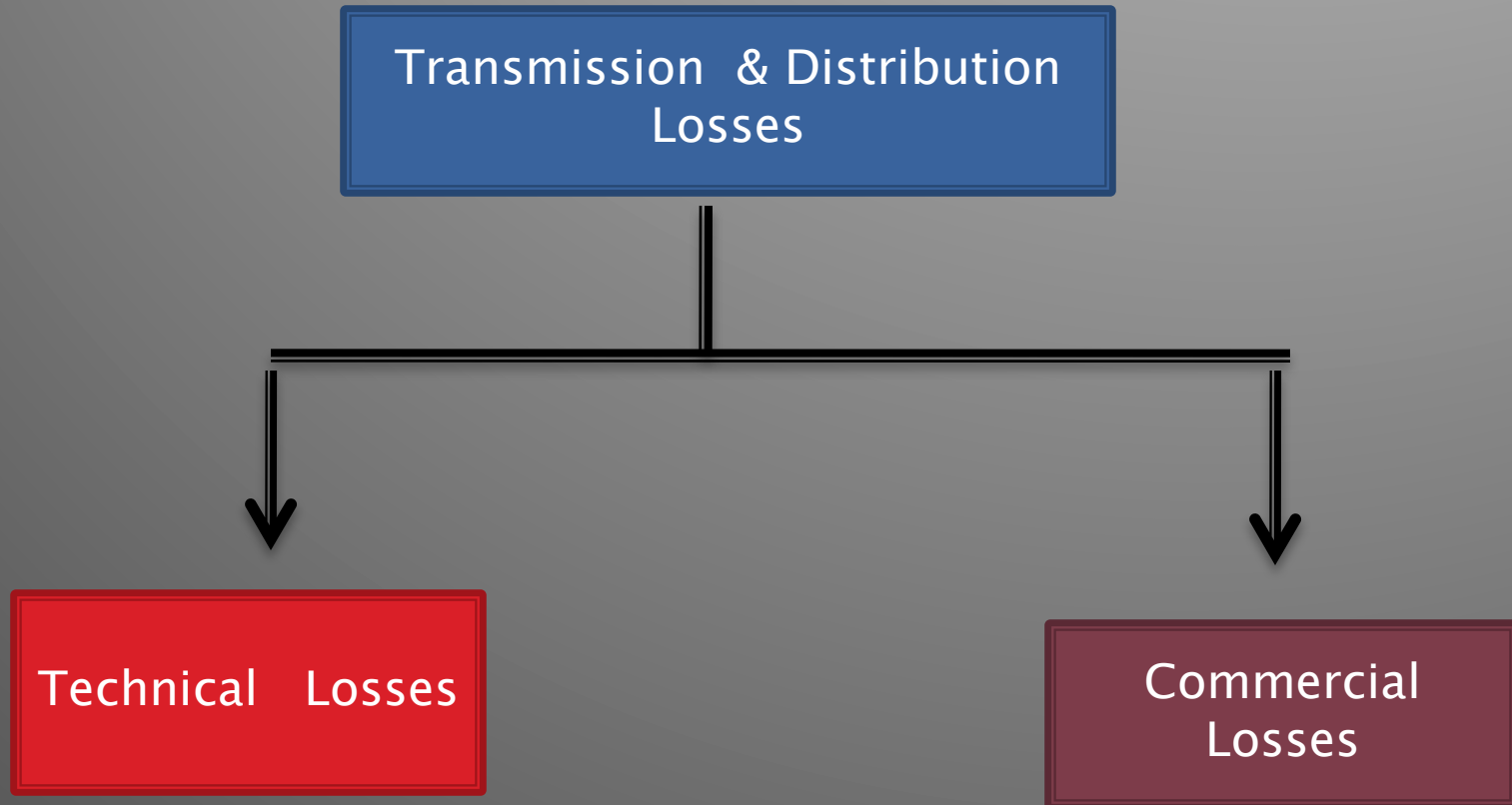
Policy Recommendations

- ▶ Public policy which encourages public private partnership retirement savings , microfinance , economic development and health.
- ▶ Policies favouring more attractive tariff for grid - injected RE electricity , providing incentive for RE development. , more stable wind based power generation technology , developing RE fed local power grids. Cost - based , technology -neutral tariffs encourage small power producers.
- ▶ A collective effort involving stakeholders at regional /local ,national and international level is required for policy restructuring .
- ▶ Diversification of domestic energy source, training and exchange of technological know how among each other.
- ▶ Amendments required at Energy Charter Treaty in context of preserving patents and intellectual property rights , training contracts while setting rules of game

Policy Support for RE technology

- ▶ Electric cars are exempted from acquisition tax, Evs are considered tax deductible investment for companies.
- ▶ By 2030 ., EV will become fully cost competitive , where fuel taxes are estimated to be high
- ▶ EV deployment requires local policies complementing national EV policy schemes.
- ▶ Deployment of public charging infrastructure like publicly accessible charging outlets .
- ▶ Resort to public – private partnership, EV supply chain segment point to the raw material supply anraw material suppliersd battery recycling segment being worth further consideration. Li-ion battery technology may also shed light on
- ▶ A uniform Policy incorporating range of tariffs and subsidies for BBIN
- ▶ Purchase tax exemption , VAT exemption, waiver on road tolls and ferry fees.

Energy Security and Centralization



Transmission and Distribution Losses :

Reasons

1.

- Inadequate investment on T&D
- Improper load management
- Unmetered Supply

2.

- Poor Quality of equipment used in agriculture pumping in rural areas.

3.

- Poor quality of coolers , air conditioners and industrial loads in urban areas.

Commercial Losses

1.

- Unauthorized extensions of loads
- Tampering the meter readings by mechanical jerks

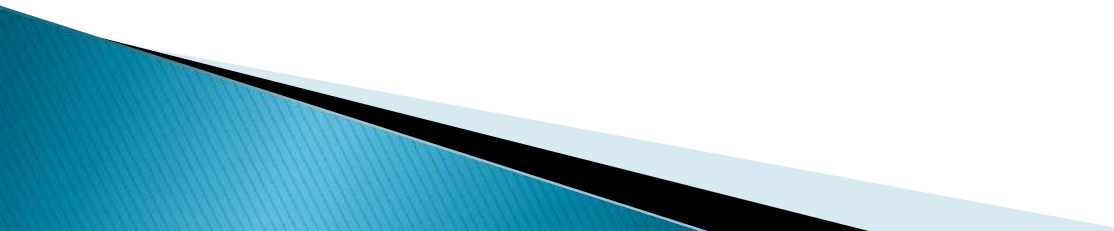
2.

- Stopping the meters by remote control improper testing
- Calibration of meters

3.

- provides disincentives for private sector participation in power distribution.
- Agricultural tariff based on low load declaration but consumers increase the connected loads without applying for sanctions.

Energy Security and Centralization


- Energy transition under centralised framework would only lead to competition over new technology both at national and international levels , ignoring the roots and elements of corporate social responsibility.
 - Finally , a centralized system delivers an inefficient energy system , severely trapped in the nexus of political economy leaving a large proportion deprived of energy access.
- 

Corporate Social Responsibility

- Concept of Corporate Social Responsibility (CSR) incorporates economic , social and environmental dimensions.
- Business integrates core operation through value chains both at national and global levels.
- Value chains refer to widespread range of cross border value added business activities involving stakeholders both locally and globally.
- In the scenario when the renewable energy technology in globalized world is surviving on the global value chain , managing CSR through out the value chain becomes a challenge.
- In fact CSR becomes more challenging than governance , assessment and information management.

Decentralized System

Examples of decentralized systems are :

- ▶ Family – size biogas plants
 - ▶ Solar lanterns solar home lighting systems
 - ▶ Solar water heating systems
 - ▶ Solar cookers
 - ▶ Standalone solar / biomass based power generators
 - ▶ Akshay Urja/ Aditya Solar Shops
 - ▶ Wind pumps
 - ▶ Micro- Hydal plants
- 

Energy Security and Decentralization

- A system generating energy source near the place it would be used instead of getting generated by a large plant far from the area that requires energy access and it is grid connected.
- All the plants are connected to distribution network rather than transmission network.
- Such a system reduces transmission losses and strengthens energy security by supplying electricity to places not grid connected.
- Despite of high initial cost , in the long – run decentralized energy set up can prove to be more competitive leading to stable prices.
- Amendments in policy for regional Electricity Trade . More freedom to establish independent decentralised energy regime.
- A consensus based system , empowering local communities and governance , a decentralized energy system

Session III: Energy- Hydropower and Water Resource Management

Discussant: Mr. Nitya Nanda, Fellow, Centre for Resource Efficiency and Governance – Integrated Policy Analysis Division & Editor, Journal of Resources, Energy and Development (JREaD), TERI

Mr. Nanda highlighted the relevant issues raised during the course of the presentations made during the session. He elaborated that solar power has a competitive edge owing to its cheap rates in contrast to all other sources of energy, except coal. He explained that the real challenge lies with the storage cost that remains quite high and is varied according to each country peak requirements of electricity. Thus, requires a coordinated mix of energy generation and distribution within the region based on the varied peak requirements of electricity.

Mr. Nanda insisted that there is an absolute need for a nuanced perception in understanding of energy security, as there are different sources of energy tapping. He raised the issue of a lack of provision of energy for cooking purposes in the national discourse that is a serious issue.

Mr. Nanda also brought up the issue of hydropower being expensive and lacking in standardization due to differential terrain, seasonal flow, rehabilitation cost of people; artificial increase. For instance, in Bhutan, the cost is much lower as it is a sparsely populated country thus it is not necessary to displace many people, and the rehabilitation cost is almost negligible. He concluded by saying that as long as a shift is not made in the paradigm from water exploitation to water management, water resource management in the BBIN framework will remain exploitative.

Session 4: People to People Connectivity through multi-sectoral Engagement

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Chair's Remarks by Mr.
Sabyasachi Dutta**

Session IV: People to People Connectivity through Multi-sectoral Engagement

Chair: Mr. Sabyasachi Dutta

Mr. Sabyasachi Dutta, founder-director of the 'Asian Confluence' chaired the final session of the day on people to people connectivity through multi-sectoral engagement. He began by highlighting a common theme of the need to realise tangibles from the roundtable conferences. He was of the view that the BBIN has been a "low hanging fruit" compared to the other regional initiatives and it has a huge potential for concentrated work to be done to achieve results.

Subsequently, he urged the participants to adopt a bottoms-up approach and focus on the smaller things which can realistically be achieved through the initiative. As far as people to people connectivity is concerned, tangible achievements, even if small, are important. That is because when people feel that something is happening, it will result in a groundswell of support for the BBIN initiative.

The BBIN region is essentially connected in the sense that there are common threads at so many levels. But, unfortunately because of the history, Mr. Dutta felt that it is a case of so near yet so far. The gap in the mind is more prominent than the physical divide and so perceptions and creating success stories, and then highlighting those success stories probably is as important as actually doing things.

**DPG Roundtable on
Advancing BBIN Sub
Regional Cooperation, New
Delhi, December 13-14, 2017**

**Abstract of Presentation by Dr.
Constantino Xavier, Fellow, Carnegie
India**

Session IV: People to People Connectivity through Multi-Sectoral Engagement

Dr. Constantino Xavier, Fellow, Carnegie India

Dr. Constantino Xavier initiated the discussion by sharing his research on regional connectivity in the larger Bay of Bengal region wherein he concentrated on the issue of revival, rather than invention of the BBIN sub- regional cooperation by studying the long roots and history of the South Asian Growth Quadrilateral.

Dr. Xavier explained the abysmal conditions of Connectivity in the region at present time. He provided examples through facts and figures to illustrate his argument, wherein he said, presently its cheaper and quicker to ship a container to Singapore from Kolkata than from Kolkata to Dhaka. This speaks volumes about the lack of maritime connectivity. Furthermore, until recently there was no rail passenger link between India and Bangladesh, there used to be 11 till 1965. However, there are two now between India and Bangladesh, one of them was recently inaugurated by Prime Minister Modi. There's one flight daily between Kathmandu and Dhaka and very limited connectivity between Nepal and Bangladesh by air, there are no sub regional flights beyond Kathmandu, between the other cities of Nepal with the larger region. Moreover, in this larger Bay of Bengal region it is difficult to gain visa access, wherein its quicker and cheaper to apply for visa in the BBIN countries by the Chinese than for Indians travelling amongst these countries.

Dr. Xavier thus opined that such abysmal conditions opened up a lot of avenues for work in different sectors, particularly in terms of establishing people to people contacts. In terms of understanding the modalities of operation, in order to establish people to people contacts, Dr. Xavier stressed that the objectives needed to be clearly specified and acknowledged. This objective entails not 'inventing connectivity', but 'reviving connectivity' at the sub regional level through establishing 'inter' and 'intra' social links between societies through non- governmental and in particular people to people linkages. This will help in facilitation, visa cost reduction, creation of incentives for people to travel, the pooling the drivers, i.e., local people, particularly from sub-national cities, provinces states, etc.

While elaborating on the economic and strategic dimensions of this objective, Dr. Xavier reiterated the significance of reviving the strong cultural ties that India shares naturally from time immemorial with the region and expand it beyond the BBIN sub region and transcend connectivity, in order to assume a greater role in the region. The idea of the strong sense of 'Region-ness', which existed previously and was dismantled in the last 60-70 years because borders have come to mean barriers. This needs to change and an acceleration and re-start of mobility has to come about. He took the example of Sujiv Sakia's concept (Nepal) called 'East South Asia' which really forces us to look at the BBIN Sub –region as a region in itself, in its own right.

Dr. Xavier recommended concrete, tangible policy options in order to push forward.

- i) He underlined the importance of flexibility and non- governmental organizational engagement - bringing in all stakeholders, maintaining greater flexibility in organizational terms, wherein he opined that the BBIN region will gain much more by deepening the dialogue on the non-governmental side than on the governmental side.

- ii) In terms of outreach and exchanges India has a lot of incoming scholars/students coming from the BBIN countries. It is also very important for Bhutan, Nepal, Bangladesh to take the initiative to bring Indian students to their countries and to change this incoming direction. BBIN could serve as a platform to facilitate more dialogues amongst young emerging thinkers, entrepreneurs in these other three countries.
- iii) In terms of mobility, with the dismantling of borders that really acted as barriers to mobility- borders will not seek to be non-existent. However, there will be flows across the border that need to be monitored, facilitated and incentivized at all levels. As porousness is increased, there is also a need for stronger dialogues and structures and methods in order to leverage this mobility in terms of the interests of various countries.
- iv) People who are engaged at the lower level, in specific sectors developing interesting, innovative solutions in science and technology, digital economy and development of local governments. To promote three possible levels of champions and revival through remembrance, investing in research on a specific book project or a larger project of reviving and reminding us what connectivity on various levels used to be.
- v) Involvement of various media, news agencies from the 4 countries in term of sharing and aggregating various resources and also investing in fellowships for young emerging journalists, digital journalism on ground, informed reports on ground work at various connectivity levels and between Nepal Bhutan, India, Bangladesh in order to promote sense of regional identity.
- vi) Finally involvement of cities, states or provinces, and let them assume the leadership role through sister city projects. Investment on variety of NGOs working on environment and resources, cross border rivers etc. Dr. Xavier concluded by saying that involvement of these local stakeholders and champions at the city and cross border regional dimension will go much farther than routing people to people connectivity projects through the main capital.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Presentation by Mr. Needrup Zangpo,
Executive Director, Journalists
Association of Bhutan**

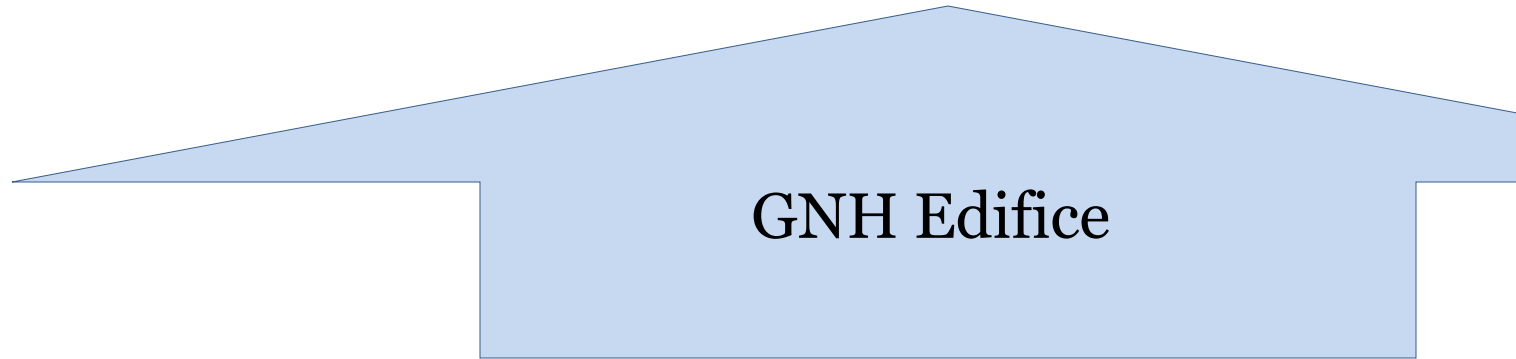
Gross National Happiness (GNH)

Needrup Zangpo
needrup@gmail.com

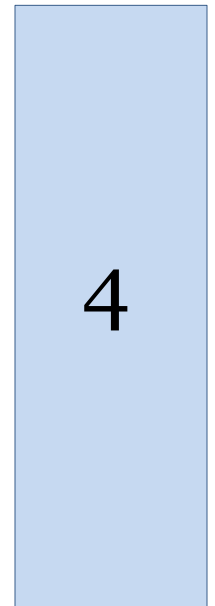
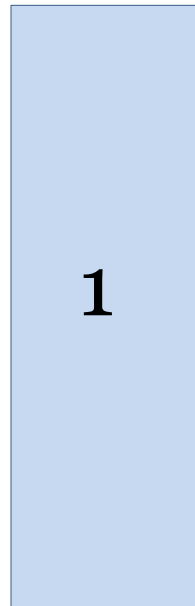
What is GNH?

- ❖ Man cannot live by bread alone
- ❖ Development with values
- ❖ Development should be a means to an end

Four pillars of GNH



1. Sustainable, equitable economic development
2. Preservation of culture
3. Conservation of the environment
4. Good governance



Nine domains



The diagram consists of two overlapping circles. The larger, bottom circle is dark red and contains the text 'GNH'. The smaller, top circle is olive green and overlaps the top of the red circle. It contains the text 'Psychological Wellbeing' and a bulleted list of four items: 'Life satisfaction', 'Positive emotions', 'Negative emotions', and 'Spirituality'.

Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
- Spirituality

GNH

GNH

Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
- Spirituality

Health

- Mental health
- Self reported health status
- Healthy days
- Disability

GNH

Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
- Spirituality

Health

- Mental health
- Self reported health status
- Healthy days
- Disability

Time Use

- Work
- Sleep

GNH



Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
- Spirituality

Health

- Mental health
- Self reported health status
- Healthy days
- Disability

Time Use

- Work
- Sleep

Education

- Literacy
- Schooling
- Knowledge
- Value

GNH

```
graph TD; GNH((GNH)) --- PW[Psychological Wellbeing]; GNH --- H[Health]; GNH --- TU[Time Use]; GNH --- E[Education]; GNH --- CDRC[Cultural Diversity and Resilience]; PW --- PW_L[Life satisfaction]; PW --- PW_P[Positive emotions]; PW --- PW_N[Negative emotions]; PW --- PW_S[Spirituality]; H --- H_MH[Mental health]; H --- H_SRHS[Self reported health status]; H --- H_HD[Healthy days]; H --- H_D[Disability]; TU --- TU_W[Work]; TU --- TU_S[Sleep]; E --- E_L[Literacy]; E --- E_S[Schooling]; E --- E_K[Knowledge]; E --- E_V[Value]; CDRC --- CDRC_SNL[Speak native Language]; CDRC --- CDRC_CP[Cultural Participation]; CDRC --- CDRC_AS[Artistic Skills]; CDRC --- CDRC_DN[Driglam Namzha];
```

Psychological Wellbeing

- Life satisfaction
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Health

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Time Use

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- Sleep

Education

- Literacy
- Schooling
- Knowledge
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Cultural Diversity and Resilience

- Speak native Language
- Cultural Participation
- Artistic Skills
- *Driglam Namzha*

GNH

```
graph TD; GNH((GNH)) --- PW[Psychological Wellbeing]; GNH --- H[Health]; GNH --- TU[Time Use]; GNH --- E[Education]; GNH --- CDRC[Cultural Diversity and Resilience]; GNH --- GG[Good Governance]; PW --- PW_L[Life satisfaction]; PW --- PW_P[Positive emotions]; PW --- PW_N[Negative emotions]; PW --- PW_S[Spirituality]; H --- H_MH[Mental health]; H --- H_SRH[Self reported health status]; H --- H_HD[Healthy days]; H --- H_D[Disability]; TU --- TU_W[Work]; TU --- TU_S[Sleep]; E --- E_L[Literacy]; E --- E_S[Schooling]; E --- E_K[Knowledge]; E --- E_V[Value]; CDRC --- CDRC_SNL[Speak native Language]; CDRC --- CDRC_CP[Cultural Participation]; CDRC --- CDRC_AS[Artistic Skills]; CDRC --- CDRC_DN[Driglam Namzha]; GG --- GG_GP[Govt. performance]; GG --- GG_FR[Fundamental rights]; GG --- GG_S[Services]; GG --- GG_PP[Political Participation];
```

Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
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Health

- Mental health
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Time Use

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- Sleep

Education

- Literacy
- Schooling
- Knowledge
- Value

Cultural Diversity and Resilience

- Speak native Language
- Cultural Participation
- Artistic Skills
- *Driglam Namzha*

Good Governance

- Govt. performance
- Fundamental rights
- Services
- Political Participation

GNH

Psychological Wellbeing

- Life satisfaction
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Health

- Mental health
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Education

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- Schooling
- Knowledge
- Value

Cultural Diversity and Resilience

- Speak native Language
- Cultural Participation
- Artistic Skills
- *Driglam Namzha*

Good Governance

- Govt. performance
- Fundamental rights
- Services
- Political Participation

Community Vitality

- Donations (time & money)
- Community relationship
- Family
- Safety

GNH

Psychological Wellbeing

- Life satisfaction
- Positive emotions
- Negative emotions
- Spirituality

Health

- Mental health
- Self reported health status
- Healthy days
- Disability

Time Use

- Work
- Sleep

Education

- Literacy
- Schooling
- Knowledge
- Value

Cultural Diversity and Resilience

- Speak native Language
- Cultural Participation
- Artistic Skills
- *Driglam Namzha*

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Ecological Diversity and Resilience

- Ecological Issues
- Responsibility towards environment
- Wildlife damage (Rural)
- Urbanization issues

GNH

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- Ecological Issues
- Responsibility towards environment
- Wildlife damage (Rural)
- Urbanization issues

Living Standards

- Assets
- Housing
- Household per capita income

Nine domains are further broken
down into 33 indicators (124
variables)

Tashi Delek

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Presentation by Mr. Gopilal Acharya,
Independent Journalist, Journalists
Association of Bhutan**

Right and Obligation to Happiness

Gopilal Acharya

Mad Monk Consulting

madmonkconsulting@gmail.com

**“If the government
cannot create
happiness for its
people, then there is
no purpose for
government to exist”**

- Legal Code of Bhutan (1729)

What next for GNH?

- **Operationalization: issues of measurability and quantification**
- **First of a series of international conferences in Bhutan in 2003 – followed by Canada, Thailand, Brazil, Bhutan**
- **CBS & GNH Research – development of a GNH Index**

What next for GNH?

- **GNH Index**

- “Explores each individual citizen’s life in nine domains”

- Gauge an individual’s

- ‘WELLBEING & HAPPINESS’

- Make call for public action to create conditions for happiness:
ex. through new policies and plans

GNH as policy-screening tool

- **GNH as a multidimensional framework for development planning**
- **All government policies & plans go through a process of GNH screening**
- **All development projects/activities are also screened**

GNH as policy-screening tool

- **Minimum score of 72 points required for a policy or plan to be endorsed for adoption or implementation**
- **Quarterly review conducted to measure progress and status**

Perfecting the index

- **Periodic (5 years) GNH surveys conducted; results are factored in to improve the GNH Index.**
- **GNH Index classifies the population on the degree of happiness:**
 - ✓ **Deeply happy (>77%)**
 - ✓ **Extensively happy (66% - 76%)**
 - ✓ **Narrowly happy (50% - 65%)**
 - ✓ **Unhappy (0 %– 49%)**

Results of 2015 GNH Survey

- **8,000 people interviewed on nine domains, 33 indicators, and 172 questions**
- **Deeply happy – 8.4%**
- **Extensively happy – 35.0%**
- **Narrowly happy – 47.9%**
- **Unhappy – 8.8%**

Results of 2015 GNH Survey

- Overall, the index in 2010 GNH survey was 0.743
- In 2015, the index was 0.756
- Men happier than women
- Urban residents happier than their rural cousins
- More educated people happier

Results of 2015 GNH Survey

- **2015 GNH Survey to provide inputs to 12th FYP**

- **Identify priorities for action and engagement:**

Farmers, youth, psychological wellbeing, education, political engagement, rural-urban migration, new challenges

What next for GNH?

GNH for Business

- **Brings the private sector under the GNH framework**
- **Attempts to steer companies away from short-term benefits and towards long-term values to nurture responsible and sustainable businesses.**

GNH for Business

- **Going beyond CSR**
- **Introduced a GNH Certification Tool for Business**
- **More than 200 participants from over 30 countries attended the launch of the certification tool at a “GNH for Business Conference” in November 2017**

GNH for Business

- **A survey of 540 employees and 41 companies in September 2017 showed that virtually all Bhutanese companies could fail to secure a future “GNH certification”**
- **The tool will be introduced to companies within and beyond Bhutan in 2018**

World Happiness Report 2017

Six factors: **GDP per capita, healthy years of life expectancy, social support** (as measured by having someone to count on in times of trouble), **trust** (as measured by a perceived absence of corruption in government and business), **perceived freedom to make life decisions, and generosity.**

- **Bhutan - 97**
- **Nepal - 99**
- **Bangladesh - 110**
- **India - 122**

BBIN's Moral Obligation?

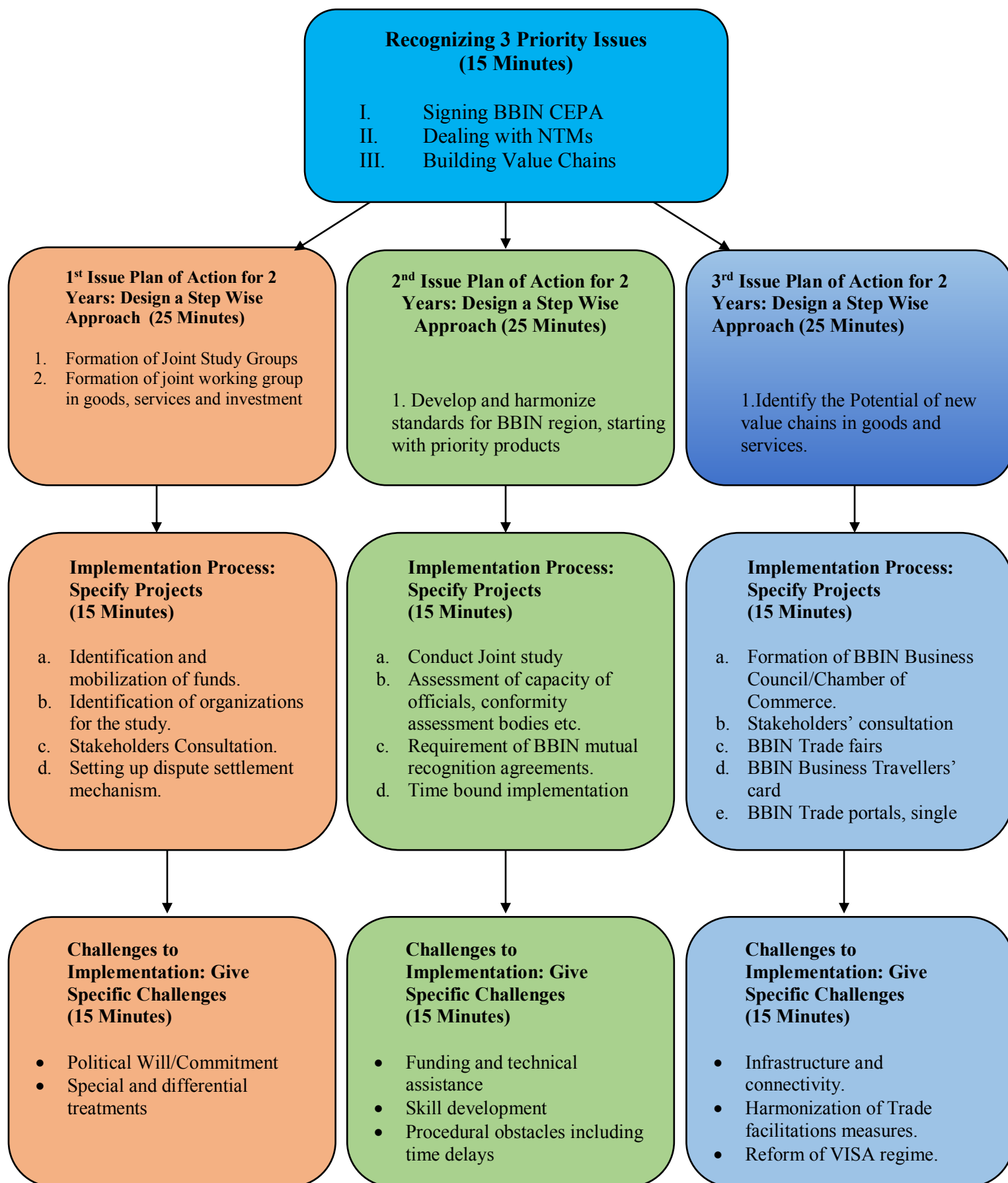
- **Can we make wellbeing and happiness of our people a common agenda in BBIN?**
- **Can we, right in the beginning, work on developing a BBIN Happiness Index to measure the wellbeing of the people in these four countries?**

Breakout Session: Trade and Economic Issues

Policy Recommendations for 2 years Plan of Action

Day 2 – Break Out Session: Trade and Economic Issues

Participants: Prof. Prabir De (Group mentor); Amb Rajeev Mitter, Dr. Selim Raihan, Dr. Paras Kharel, Dr. Ramesh Chandra Paudel

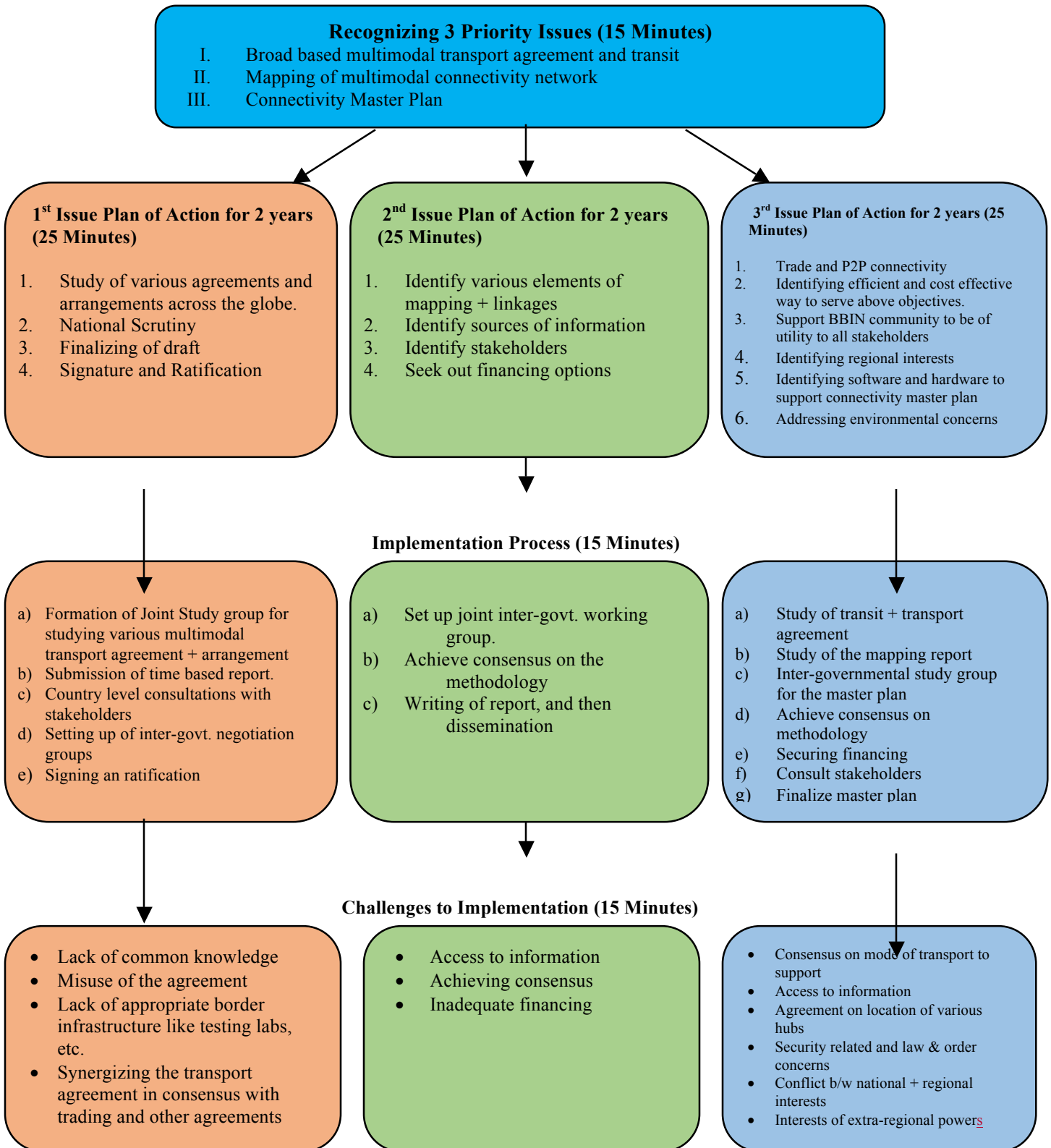


**Breakout Session: Transit and
Multimodal Connectivity (Roadways,
Waterways, Railways, Aviation)**

**Policy Recommendations for 2 years
Plan of Action**

Day 2 - Breakout Session: Transit and Multimodal Connectivity

Participants: Amb. Sanjay Singh (Group Mentor), Dr. Smruti S. Pattanaik, Dr. Mahalaya Chatterjee, Dr. Joyeeta Bhattacharjee, Ms. Diya Nag

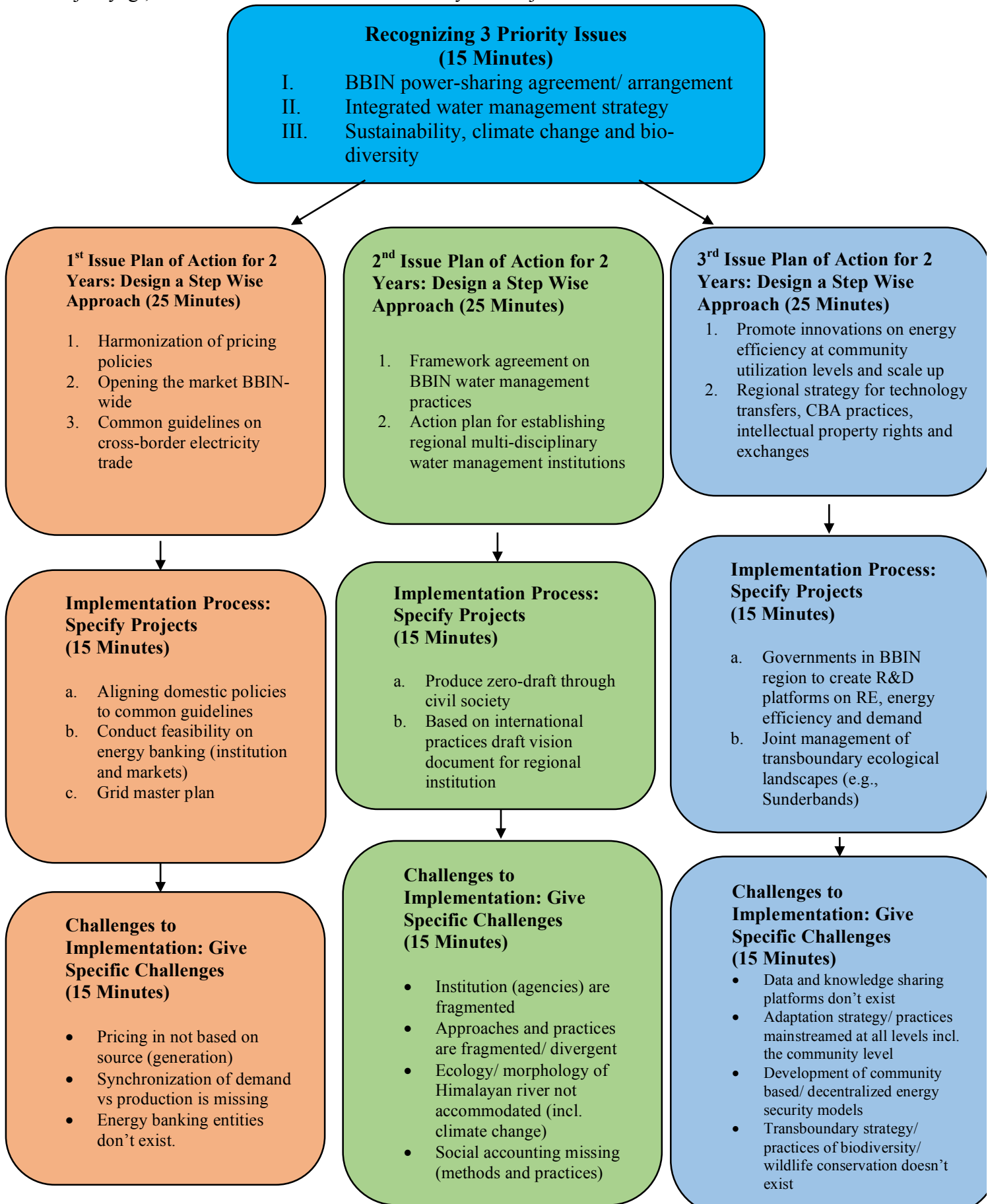


Breakout Session: Energy-Hydropower and Water Resource Management

Policy Recommendations for 2 years Plan of Action

Day 2 - Breakout Session: Energy & Hydropower

Participants: Dr. Sagar Prasai (Group Mentor), Dr. A.K. Mishra, Dr. Mahfuzul Haque, Mr. Shahab Enam Khan, Ms. Pooja Tyagi, Dr. Chandan Mahanta and Mr. Udayvir Ahuja

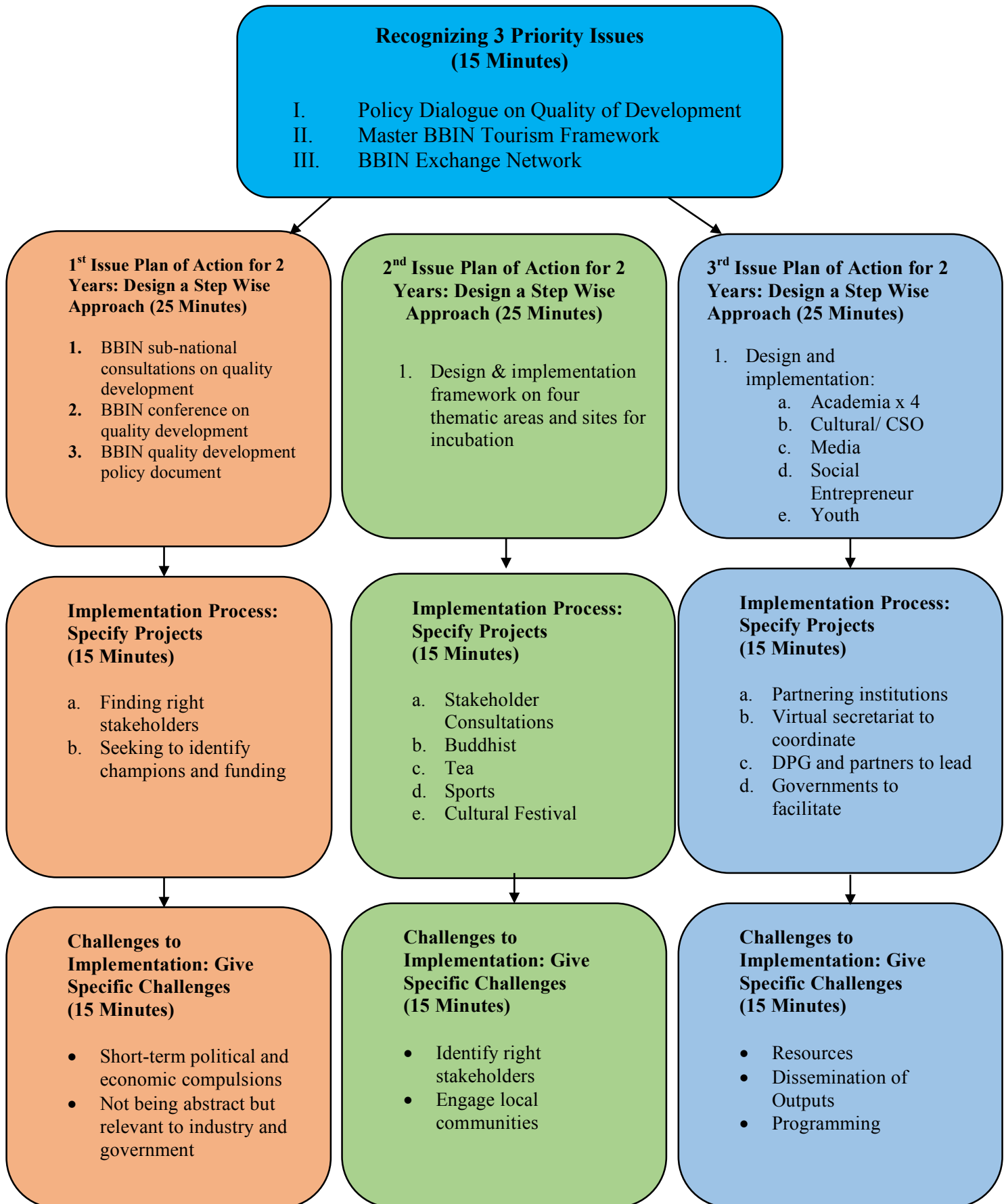


**Breakout Session: People to People
Connectivity through multi-sectoral
Engagement**

**Policy Recommendations for 2 years
Plan of Action**

Day 2 - Breakout Session: People to People Connectivity

Participants: Mr. Sabyasachi Dutta (Group Mentor), Dr. Constantino Xavier, Dr. Dhananjay Tripathi, Mr. Gopilal Acharya and Mr. Needrup Zangpo



**DPG Young Scholars'
Roundtable on Advancing BBIN
Sub Regional Cooperation, New
Delhi, December 13-14, 2017**

Paper by Ms. Shreeja Kundu

Advancing the BBIN Sub-regional Cooperation Agenda – Perspective drawn from Trade and Economic Sector

As a follow up to India's 'Look East Policy introduced in the early 1990's , PM Modi has made the 'Act East' policy as a launchpad for energetically engaging with the East Asia .One of his core policy commitments has been to prioritise forging stronger bonds with India's immediate neighbourhood for promoting regional stability . In this regard the BBIN Initiative is a great start as a sub-regional integration initiative . It integrates well with Modi's 'Act East ' doctrine. Where the SAARC at present is off and on, and in limbo, where it does not have the capacity to devise instruments for developing itself into a conflict-mediating forum for resolving both bilateral and multilateral issues , notably the India-Pakistan hostility . This in turn had constrained the functioning potential of the SAARC as a forum . Moreover the forum also witnesses a steady increase in Chinese influence in it. South Asia provides both economic and strategic benefits especially during a time when China seeks greater role in the India Ocean region. This had enabled China to develop both economic and political linkage with SAARC member states .

In this regard the BBIN as a sub-regional mechanism has some compelling merits for India. Firstly, the initiative sets the stage for greater symmetry and reciprocity with the economic sub-unit of the North East as the lynchpin . Secondly this association is more favourable to India's Act East policy which is conspicuous by China's presence that makes it palatable to India's economic and military security considering the contiguous geographical landmass and close historical and cultural ties that the countries share with each other .

The most favourable outcome has been the BBIN MVA as clearly illustrated both in the official proclamation and the pragmatic opportunities of the BBIN. In this regard through an appraisal of the trading relation among India and the three nations which are Bangladesh, Bhutan and Nepal there exists a clear positive trading relation but not without challenges .

So for the BBIN initiative to achieve success it would be important to calibrate the speed and level of its ambitions . It must be recognised that even within the BBIN group there is significant heterogeneity in terms of economic size and level of economic development . Therefore political objectives and policy priorities of these countries might be very different . Long term acceptability and success of BBIN will depend on well these concerns and sensibilities are taken into account within this framework .

Introduction

The India-ASEAN meeting that had been concluded recently witnessed a reiteration of Modi's 'Act East policy'. Although the term 'Look East' policy was initially coined by Gujral whose objective was to forge social, economic and cultural relations with the countries of east Asia, the Modi government's foreign policy actualises it in the strategic aspect. One of the important tenet of Modi's foreign policy is that he has captured the imperatives of the geo-economics and had begun laying down a strategic geo-economics vision for India. A classic example of the initiative is his 'neighbourhood first' policy that was evident in his objective to pursue both bilateral and regional tracks with equal vigour. However an exception to his above policy has been the case of the SAARC where the constant conflict between India and Pakistan had resulted in constraining the functional potential of the regional mechanism.

In this regard, the failure of the past SAARC summit coupled with the imperative of the rising spectre of Chinese influence in the region notable through China's association with SAARC nations including Pakistan, Sri Lanka, it appears that Modi has veered towards establishing stronger bilateral relation with other SAARC countries. A good and effective initiative under this is the Bangladesh, Bhutan, India, Nepal (BBIN) initiative, a sub-regional coordinative architecture of countries in South Asia. Further the project is seen in complementarity with the South Asian Growth Quadrilateral (SAGQ) whose formation came into existence in 1997 that was conceived as the most practical solution of the region's socio-economic problems. BBIN operates through Joint Working Groups (JWG) comprising official representation from each member state to formulate, implement and review quadrilateral agreements. Areas of cooperation include water resources management, connectivity of power grids, multi-modal transport, freight and trade infrastructure. Focused on the subcontinent's north east, it endeavours to cooperate on trade, investment, communication, tourism, energy and natural resources development. Its objectives have been expanded over the years to incorporate substantial land and port connectivity.

A pragmatic consideration for this project was that it had allowed to bypass some of the more complex issues like the India-Pakistan political hostility that confined SAARC and the landlocked nature of Nepal and Bhutan to be able to integrate effectively into the South Asian domain. One of its major tasks was to identify cross-border initiatives that could be undertaken between the member countries of BBIN towards attaining economic synergy through putting in place arterial channels of trade. The political economic drivers of the initiative includes the SASEC (South Asian Regional Economic Cooperation Program), Asian Development Bank (ADB), and other international donor agencies which provides the platform for the BBIN nations to forge greater partnerships to promote regional prosperity by improving cross-border connectivity, boosting trade among member countries and strengthening regional economic cooperation.

However it becomes imperative to underline India's trading relation with the member nations of the BBIN in order to grasp the possible potentiality of this relationship. While the escalation of the India Pakistan conflict had rendered the SAFTA (South Asia Free Trade Agreement) almost void where the trade volume and percentage had been dismal in terms of global trade, statistics show that India has a trading surplus with countries including

Bangladesh, Nepal among others. This has important implications for the BBIN project that holds promise in the context of sub-regional cooperation .

India's regional initiative :-

India had taken a step forward to strengthen the relations and thereby improve connectivity with the countries on her eastern side. Highlighting the importance of Bangladesh , PM Modi in December stated that ‘India’s ‘Act East’ policy starts with Bangladesh ‘ Moreover he followed up with simultaneous visits to Nepal and Bhutan . In short Modi’s visit to the three BBIN countries played an instrumental role in strengthening the sub-regional cooperation .An apt manifestation of this is the historic Motor Vehicle Agreement Bid (BBIN-MVA) signed in June 2015 where its objective was to provide seamless people-to-people contact and enhance economic interaction by facilitating cross border movement of people and goods . As Mr. Gadhkari emphasised in the agreement the need for infrastructural building and upgrading them so as to ensure ‘ smooth cross border flow of goods, services, capital, technology and people ‘ that would provide opportunity for integration and development of the region . To reiterate the plausibility of the MVA , he continued stating that the aspect of ‘transforming transport corridors into economic corridors could potentially increase inter-regional trade within South Asia by almost 60% and with the rest of the world by over 30 % ‘ . In this regard it is important to examine India’s bilateral trade with the three nations which are Bangladesh, Bhutan and Nepal to underscore the above position .

India's trade with Bangladesh – In recent years Bangladesh has adopted an outward-oriented growth strategy which aims at reducing anti-export bias prevalent in the economy and improving competitiveness while keeping in view medium-term imperatives and long-term development agenda. India’s trade with Bangladesh is given below from where it could be deduced that its exports over the years have improved significantly .

Values in US \$Million

Year (April-March)	Exports to Bangladesh	Imports from Bangladesh	Total Trade between India & Bangladesh
2011-12	3789.21	585.73	4374.94
2012-13	5144.99	639.33	5784.32
2013-14	6166.97	484.34	6651.30
2014-15	6451.48	621.37	7072.85
2015-16 (P)	5695.78	660.65	6356.42

As per the Directorate General of Commercial Intelligence and Statistics (DGCI &S) data ,

Source- *10th Meeting of India-Bangladesh Joint Working Group on Trade (Held in New Delhi on 8-9 June , 2016) .*

However despite the growth of the bilateral trade where India shows a trade surplus there is still room for optimising trade potential vis-à-vis significant bilateral cooperation .

Challenges – Three primary challenges identified for the slowdown of the trade potential :-

- Poor and costly trade logistics

- Inadequate containerisation of road cargo that undergoes repeated loading and unloading operations at the border
- Improper border infrastructure that often leads to congestion .

Opportunities :-

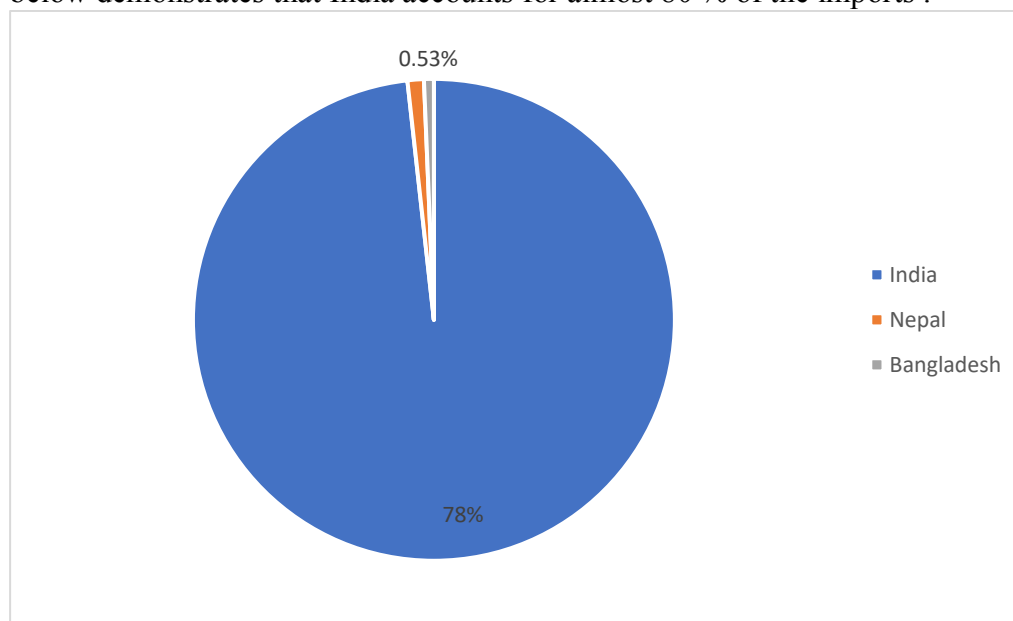
1. The MVA would allow vehicles to enter each other's territory and eliminate the need for transshipment of goods from one country 's truck to another at the border , thereby eliminating a time-consuming and costly process . This is not only going to reduce trade costs between nations and facilitate smoother transactions and boost trade , but it will also reduce some of the informal trade that happens among countries.
2. Secondly an added benefit of the MVA would be that it will promote support for containerised movement for cargo . Containerisation of trade has lowered the cost of trade across the world significantly and it is likely that trade costs among South Asian countries will be drastically reduced when containerisation gains more popularity .
3. Moreover an important component of the BBIN is to develop infrastructural facilities at the Border. This was visible during the joint statement issued by the Prime minister of India and Bangladesh where both the leaders emphasized the non-trade barriers , that acted as major irritants to the exchange of goods to and called for an upgradation of the Land Custom Stations (LCS) and Post Check Posts in a coordinated manner to facilitate the flow of goods and people. Another important aspect is that due to the increased sub-regional trade it has also given a boost to the various SME's where both the leaders have proposed for an increase in the operation of the Border haats along with revamping the existing ones . A leading example is Bangladesh's export garment industry .
4. The MVA through its initiative to develop border infrastructure will also significantly ease the movement of goods from mainland India to its northeast economic centres namely Agartala, Guwahati which have been constrained by poor infrastructure, difficult terrain , insurgent politics and geopolitical situation. Through an acceleration of the development of the Northeast through an expansion of the regions in terms of the bamboo, rubber and food processing industries would forge greater economic engagement and linkage with mainland India and neighbouring countries.

India's Trade with Bhutan : According to the World Bank report Bhutan has maintained a solid growth and macroeconomic stability . As one of the fastest growing economies the country has clocked an average growth between of 7.5 % between 2006 and 2015 which far exceeds the global growth of 4.4 %. The following table demonstrates the review of the bilateral trade between India and Bhutan which shows a positive trade relation between the two countries .

Year	Exports	Imports	Total trade
2011-12	229.86	202.55	432.41
2012-13	233.22	164.00	397.22
2013-14	355.60	152.17	507.77
2014-15	333.94	149.87	483.81
2015-16	468.95	281.27	750.22

Source-- *India -Bhutan Bilateral Meeting on Trade and Transit at Commerce Secretary Level (18-19 January 2017)*

Further India also remains the major import partner for Bhutan where the pie chart below demonstrates that India accounts for almost 80 % of the imports .



Source- *Trading economics. Com : Royal Monetary Authority of Bhutan (Updated December 2017)*

Through an appraisal of the above data there has been a positive co-relation in the bilateral trade between India and Bhutan.

Benefits of the BBIN MVA for Bhutan : -

- BBIN MVA would benefit Bhutan as transportation time of goods would be decreased and costs saved which is important for the landlocked nature of country as it exports perishable commodities to Bangladesh
- Another benefit is the inclusion of the clause that would allow more Bhutanese vehicles travel to India that would provide an improved market access to as landlocked country like Bhutan both in terms of export and import. This enhanced regional connectivity will allow it to link their least developed region with commercial capitals like Kolkata, Dhaka among others. This will enable them to exploit vast rich natural resource like fertile soil , water , mineral and energy sources where Bhutan has mostly relied on hydropower electricity as its prime economic contributor . This will substantially contribute to their economic growth.
- As demonstrated from above Bhutan which is a major producer of hydropower faces the challenge of having a only single bilateral buyer India . A regional market could ensure that Bhutan has the option of selling its power to Bangladesh and Nepal .

Challenges and opportunity

- Non-Tariff Barriers or NTB's act as major irritant to cross border exchange of people and goods , where high trade transaction costs coupled with cumbersome trade procedures causes delays and augments the growth of informal trade . Informal trade that leads to a significant loss of custom duties could be prevented through the BBIN MVA that is expected to not only provide seamless connectivity but would also see trade facilitation reducing significant trade costs involved in import-export procedures. Thus the BBIN MVA which at present is a framework agreement needs to be operational that should be equipped with implementation tools like single guarantee system, standard and mutually recognised procedures, standardised transit documents and uniform IT risk management tools .
- Another major impediment facing Bhutan in terms of ratifying the BBIN MVA is there have been fears of vehicular pollution and environmental degradation of trucks from neighbouring countries for Bhutan , a country that prides itself on its 'carbon neutrality ' and preserving the environment which have stalled the procedure of ratification. In this regard a sub-regional cooperation mechanism by the four nations both on an individual and on a collective level to tackle the problem of vehicular pollution could be initiated. An optimal solution would be to incorporate a regulatory mechanism under the framework that would involve individual governments undertaking charges against vehicles emitting pollution , specifically the one with higher cargo capacity.

India's trade with Nepal :- Nepal has been passing through a transition following a 10 year conflict , destructive earthquake in 2015 ,trade disruptions and local level elections. However the year 2017 saw a broad based recovery as economic activity rebounded , inflation moderated, government revenue and revenue spending picked up and remittances grew according to the World Bank Report in 2017.The economic activity which was expected to progress well in FY2018 was affected by the floods that saw a rise in in food inflation . With increased government spending due to the new federal structure and in response to the earthquake and flooding the fiscal deficit is expected to widen. The current account turned into a marginal deficit in FY2017and is expected to widen as import growth remains high and remittances and exports grow slowly.

In this aspect the following table lays out the trade statistics between India and Nepal

Year	Export to India	Import from India	Total Trade
2014-2015	3491.5	30728.4	53750.1
2015-16	2468.3	29825.7	52732.2
2016-17	2590.5	39604.3	66447.6

Source- *Trade and Commerce : Embassy of India , Nepal*

This outlines that Nepal's trade and competitiveness has worsened dramatically . The export to import ration is dismal at almost 1:10 . as could be understood from the above table .

Hurdles to Nepal's trade opportunity with India :- As demonstrated from above there have been various instances responsible for the poor performance of Nepal's exports to India which includes supply side constrains, low productivity and lack of competitiveness .

Through an assessment of surveys and statistical depictions captured in a field study conducted by a research team at Tribhuvan University submitted to the Nepal Rashtriya Bank puts forth the major bottleneck in Nepal 's export relation with India which are – NTB's and Customs .

1. An examination of price differentials in an array of consumer goods across borders shows significant wedges due to the presence of NTB and customs.
2. These barriers span across various ones in terms of procedural, institutional , policy and structural ones , where almost 50 % of the respondents or stakeholders experienced the procedural barriers .
3. Institutional Barriers were perceived by around one third of the respondents. Intensity of these barriers is perceived to be low by exporters and clearing agents , however quarantine officials perceived high intensity of institutional barriers .
4. Around 60 Percent of the respondents perceived some form of policy barrier. The intensity of policy barrier is reflected in low and moderate . the severity of policy barriers seems to be low .
5. Further all respondents reported the highest level of barrier on structural aspect . Structural barriers are the most critical barriers to export trade to India in terms of intensity and severity of barriers .

India's course of action regarding the BBIN project

Notwithstanding , the challenges if China could have its One-Belt-One-Road Project (OBOR), India too can have its own One Road-One rail project (OROR) . Where Delhi is pulling all stops to expedite the South Asian Sub regional economic cooperation (SASEC) road connectivity project , against China's massive connectivity and infrastructural project . The BBIN is a great start . To corroborate, the SASEC operational plan from 2016-25 had designated ' nine projects worth \$2.4 billion ' which includes two rail projects in Bangladesh, two economic corridor initiatives , bridge project in India worth an aggregate of \$1.2 billion, trade facilitation and airport projects in Bhutan worth \$27 million and key SASEC road and energy projects in Nepal worth \$302 million . All these projects are aligned with the SASEC OP 's thrusts of developing road and rail links aligned closely with trade routes towards the east, streamlining trade procedures and improving energy infrastructure .

Conclusion :-

Prospects for facilitating the BBIN MVA :-

- Harmonisation of procedures and mutual recognition of custom controls at border crossing , create the required infrastructure , transit facilitation , education of drivers and transport operations regarding traffic regulations put in place the system of dual driver operation system to facilitate the smooth cargo movement
- A harmonised fee structure including customs fee, visa fee, permit fee should be initiated
- Promotion of off-border as opposed to on-border customs clearance. A good example is the E-trade facility featured in the Annual Ministry of Commerce

report 2016-2017. In this, the dept. of commerce is pursuing the e-trade project called the Mission Mode Project (MMP) the purpose of which is to facilitate the foreign trade in India by way of promoting effective and efficient delivery of services by various regulating agencies involved in foreign trade so as to enable trade to avail services from various agencies. The major stakeholders include the Custom Directorate General of Foreign Trade (DGFT), seaports, Container corporation of India, Integrated Container depots (ICD's) etc.

- As customs form the major bottleneck of this project following from the above scenarios there is a need to develop a robust customs guarantee mechanism. This could be done by working towards the goal of end-to-end paperless operations which would ease the entire process flow of international flow of international trade.

Hence the BBIN which can act as a fodder to India's of accessing transnational multi modal connectivity to articulate its presence in the proposed transportation architecture, it would do well to incorporate certain recommendations that would induce other member nations to not miss this splendid opportunity for both regional development and work towards closer economic integration at the sub-regional level.

**DPG Young Scholars'
Roundtable on Advancing BBIN
Sub Regional Cooperation, New
Delhi, December 13-14, 2017**

Presentation by C.V. Srikar

A presentation on BBIN Trade-Where in the world?



GDP Comparisons-

- ASEAN GDP- \$2.4 TRILLION
- SAARC GDP- \$2.9 TRILLION (WITHOUT INDIA-\$580 BILLION)
- BBIN GDP-\$2.5TRILLION (WITHOUT INDIA- \$228 BILLION)



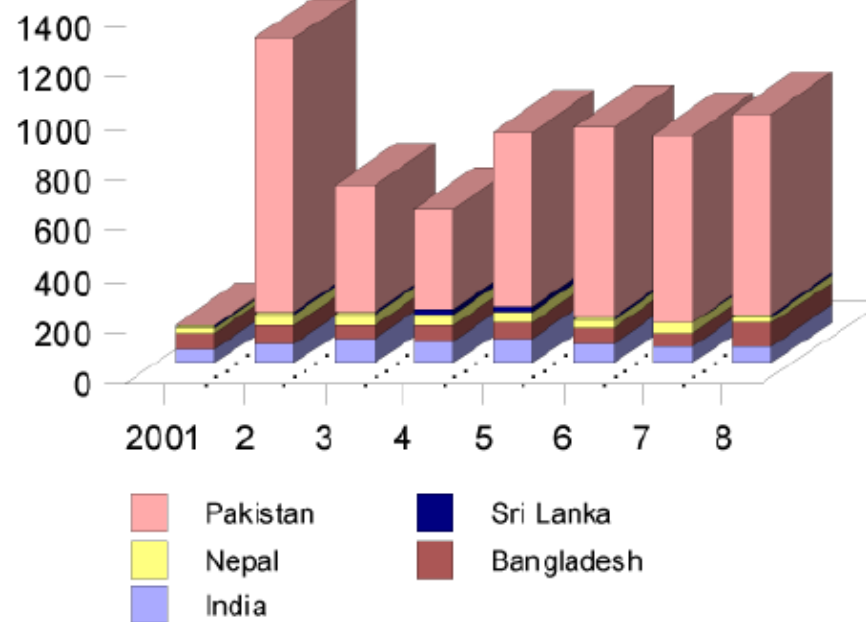
FOR EUROPEAN RECOVERY

**SUPPLIED BY THE
UNITED STATES OF AMERICA**



US assistance to most south Asian countries

**Figure 7. U.S. Assistance to South Asian Countries
(excluding Food Aid), 2001-2008 (\$million)**



Japanese aid in South Asia

- Bangladesh- 600 billion Yen
- Nepal- 3.5 billion Yen
- Bhutan- 1.7 billion Yen
- India- 3.5 trillion Yen

Indian Aid to neighbours

- Total India aid was US\$ 1,149 million in 2015-16.
- Out of India's total foreign aid budget in 2015-16, about 74.6 percent was pledged for Bhutan,
- This was followed by 9.1 percent for Afghanistan;
- 6.6 percent for Sri Lanka;
- 4 percent for Nepal and,
- 2.8 percent each for Bangladesh and Maldives.

What we need- The Penta

- India
- Japan
- US
- Australia
- EU

Thank You

**DPG Young Scholars'
Roundtable on Advancing BBIN
Sub Regional Cooperation, New
Delhi, December 13-14, 2017**

Presentation by Angana Guha Roy

BBIN and India's Act East Policy:

**How BBIN Sub regional cooperation is
fundamental to India's Act East Policy?**

Angana Guha Roy

Research Associate, Delhi Policy
Group

Introduction

- Highlighting the importance of Bangladesh, in December 2016 Honorable Prime Minister Shri Narendra Modi stated that India's Act East Policy starts with Bangladesh.
- It is important to mention here that in the context of BBIN, the Northeast India is the most fundamental.
- India has started emphasizing the importance of Northeast in India's Act East policy.

Primary Arguments

- India's Act East policy follows a layered approach towards diplomacy i.e. bilateral, regional and sub regional. BBIN is the sub regional pillar of India's Act east which compliments other multilateral initiative in various capacities.
- BBIN initiatives is still in the process of conceptualization. There is no super government to monitor it. Bilateral relations between the four countries are the foundation of the broader goals of BBIN.

BBIN Complements India's Act East Policy

- It is apparent that India has been trying to strengthen its relationship in the eastern gateway through the Act East Policy.
- In pursuing its Act East policy India has traversed a long road since 1991 and India certainly with its current focus on commerce, connectivity, culture and security can and should do more integrate itself effectively. BBIN initiative complements its ambition.

Act East And BBIN Sub Regional Cooperation

BBIN is an initiative to enhance a smaller 'eastern' sub regional grouping with the potential to act as a link between South and Southeast Asia. It has few benefits:

- It will help India in strengthening trade relations with other SAGQ countries.
- Improve sub-regional connectivity in order to realize regional connectivity with Southeast Asia.
- Help in developing the soft and hard infrastructures in the region which would also help in strengthening the potentials of Northeast region of India.

The SAGQ and SASEC Initiative in BBIN Countries

- The SAGQ is in fact seen as a practical solution to the sub-region's socio economic problems which does not force the practical solution to curb the region's socio economic problems which does not force the participants to change their macroeconomic policies and institutional approach to wider issues of governance.
- ADB mooted the development plan of SASEC to promote sub-regional economic cooperation among the four SAGQ countries for transforming the region from low growth high poverty sub region to high growth low poverty sub region.

BBIN Connectivity Initiatives as a Subset of BIMSTEC

BBIN is the core of BIMSTEC. The rising salience of BIMSTEC in India's economic and political calculus is helping BBIN in diversifying connectivity to Southeast Asia.

Strengthening the nodal points of inter connectivity in BBIN countries will in fact contribute to two major BIMSTEC projects:

- Kaladan Multimodal project connecting India and Myanmar.
- Asian Trilateral Highway connecting India and Thailand through Myanmar.

How BBIN connectivity initiatives are working out at this stage?

Air connectivity

- India has proposed 'open sky' agreement with Nepal which is working on new air routes with India. Although Nepal has now delayed the proposal, PM Narendra Modi said, India's initiatives for 'open sky' and cross-border connectivity "would directly benefit Nepal and help strengthen our economic partnership." India already has 'open sky' agreement with Bangladesh and Bhutan.
- According to the MEA official, "Sylhet airport in Bangladesh and Guwahati in Dhaka can emerge as regional hubs for air connectivity to promote tourism. Future cooperation may see travelers from North-East India using Sylhet airport for international travel instead of flying via Kolkata or Delhi.

Maritime Connectivity

- Delimitation of the Indo-Bangladesh Maritime Boundary in July 2014, welcomed by both countries.
- Agreement on the Coastal Shipping in June 2015 and Standard Operating Procedure (SOP) signed in November 2015.
- Coastal shipping started from March 2016. Earlier freight charges (via Colombo or Singapore) between USD 1,700 to USD 2,400 (per container of 4,000-5,000 tonnes) with transit time of around 30 to 40 days, expected to be reduced to around USD 400 and 8-10 days respectively.
- MoU between India and Bangladesh on the use of Chittagong and Mongla Ports to majorly benefit Nepal and Bhutan as well via transit.
- Letter of Exchange between Nepal and India to provide for transit facilities for Nepal through the Vishakhapatnam port.
- India launched the Sagarmala project in July 2015 comprising of 150 projects with plans to invest Rs. 12 lakh crore under various programmes.

Roadways Connectivity

- BBIN Motor Vehicle Agreement. Bhutan is yet to ratify it.
- Bharatmala project, around 2,000 km with an outlay of Rs. 25,000 crore are earmarked to connect India's major highway corridors to international trade points will facilitate BBIN.
- The SASEC Road Connectivity Investment Project aims at upgradation of road infrastructure in Bangladesh, Bhutan, Nepal and India (BBIN) in order to improve the regional connectivity among BBIN nations. The project corridor is also a part of the Asian Highway No. 01 (AH01) and acts as India's Gateway to the East. Thus trade, commerce and tourism in the region will get a boost.
- Nepal securing Kakarbhitta (Nepal) and Banglabandh (India) corridor and Vishakhapatnam Port as a transit point for trade with Bangladesh.
- Bridge on river Feni to connect Sabroom of Tripura with the Chittagong Sea Port.
- Kaladan Multi-Modal Transit Transport Project .

Railways Connectivity

- Letters of Exchange between Nepal and India on Rail Transport
- In addition to Dhaka-Kolkata, a second railway line between Khulna and Kolkata has been planned
- Bangladesh, Bhutan, India and Nepal (BBIN) Railway Agreement, being explored
- Indian Government investing INR 7,000 crores in rail projects in North East to connect all seven NE states with 18 already ongoing projects in the region covering 2,254 km and likely completion between 2016-17 to 2019-2020
- India also working on Jiribam-Moreh and Tamu-Kaley rail links, which will connect India to Myanmar, respectively, and will also be part of the TransAsia Railway network
- Bangladesh Railway is looking to revive five routes to India. The routes are Benapole-Bangaon, Birol-Radhikapur, Akhaura-Agartala, Banglabandha-Shiliguri-Nepal and Khulna-Kolkata
- Bangladesh is converting the Dinajpur-Birol-Radhikapur tracks from meter gauge to broad-gauge

Institutional Connectivity

- Establishment of South Asia Regional Standard Organisation (SARSO) which started functioning from April 2014 and has now developed regional (SAARC) standards on six products that are of interest to regional trade
- Bilateral Cooperation Agreement between the Bangladesh Standards and Testing Institution (BSTI) and Bureau of Indian Standards (BIS)
- MoU between Council of Scientific and Industrial Research (CSIR), India, and University of Dhaka, Bangladesh for Joint research on Oceanography
- MoU between India and Bangladesh on Blue Economy and Maritime Cooperation
- MoU between the Coast Guards of India and Bangladesh to ensure jointly marine security and prevent crimes at sea
- Inauguration of Muzaffarpur-Dhalkebar transmission line (Initial supply of 80 MW, to be augmented to 200 MW by October 2016 and 600 MW by December 2017)

Inland Water Connectivity

- Protocol on Inland Waterways Transit and Trade (PIWTT) between India-Bangladesh, renewed a new provisions for automatic renewal every 5 years.
- India plans to invest INR 25 lakh crores in a phased manner to improve Inland Waterways and to
- increase the share of coastal/ IWT mode in the country's total transportation volumes from 6-7% to
- 10% by 2019-20
- Bangladesh Regional Inland Water Transport Project initiated to improve the navigability of 900 km of
- Inland Waterways along Dhaka-Chittagong and Dhaka-Ashuganj river corridors

Energy and Power Cooperation

- At present there are two interconnections, through which 660 MW of power is transferred from India to Bangladesh. NTPC has plans to set up 1320 MW coal-fired thermal power plant at Rampal in Bangladesh. India will construct a 135 km long pipeline from Assam to supply oil to Bangladesh.

People to People Connectivity

- Ratification of the Land Boundary Agreement on 6th June, 2015
- MoU and mode of operation of Border Haats with Bangladesh for setting up Border Haats on India-Bangladesh Border.
- MoU between India and Bangladesh on the prevention of human trafficking
- MoU between Jamia Milia Islamia, India and University of Rajshahi of Bangladesh to develop academic and cultural exchanges
- Agreement between the Bharat Sanchar Nigam Limited (BSNL) and Bangladesh Submarine Cable Company Limited (BSCCL) to boost the signal strength of Internet available in the North-East of India
- MoU- Nepal Academy of Music and Drama & Sangeet Natak Academy

What is the way ahead?

- The BBIN initiative focuses on building connectivity. Its vision involves ensuring seamless movements of goods and people, building sustainable development thereby enabling trade and cooperation in the eastern flank of South Asia.
- One of the most severe barriers is that trade in the region involves a high number of procedures and documents in all three BBIN corridors, requires multiple and complex obligations and compliances to product standards, and countries have yet to align customs procedures and recognize each other's services. To meet global, regional and sub-regional obligations, BBIN countries need enhanced trade facilitation measures. BBIN countries need to work on strengthening the soft infrastructures.
- It is important to mention here that the vision of seamless movement of people, vehicles, goods and services may involve challenges like trafficking, infiltration and smuggling across the borders. Among the four SAGQ nations only India has signed an agreement on border control management with Bangladesh. There is a serious necessity to address this.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Abstract of Presentation by Dr. Dhananjay
Tripathi, Assistant Professor, Department of
International Relations, South Asian University**

Session IV: People to People Connectivity through Multi-Sectoral Engagement

Dr. Dhananjay Tripathi, Assistant Professor, Department of International Relations, South Asian University

Dr. Dhananjay Tripathi began his presentation by reiterating Dr. Constantino Xavier's comments on BBIN being referred to as Eastern South Asia. He was optimistic in remarking that the BBIN group of countries have shown a tremendous potential in the last decade in terms of growth in GDP. The literacy rate among the children enrolled in primary school amount to 95 per cent which, in hindsight, is a positive figure. However, South Asia has traditionally been the least integrated region in the world and it continues to be so. Even though the region has a positive economic growth, the growth has not been able to trickle down on the integrational aspect. Dr. Tripathi further provided reference to research done by scholars like Ashish Nandi and Professor Muni who help reiterate the problem.

He also brought up initial discussions of the conference on the need to have a BBIN Secretariat. Dr. Tripathi was of the opinion that an institution such as the secretariat is an imperative as it ensures that agreements reached on a political level shall be implemented. He stressed on the need for a regional bureaucracy with people to people cooperation by deliberating on the possibilities of smoother cross-border linkages.

He further referred to 'Positioning Theory', an academic work by the United Nations Centre for Regional Integration, which describes perceptions and how those perceptions assist in regional integration. Dr. Tripathi urged the participants to read the theory and make an attempt to apply it in the BBIN region as well.

In conclusion, Dr. Tripathi added that the idea of "regions" existing has been present for a long time but by the creation of nation-states, the importance of regions has dwindled. He highlighted the need to revisit history and try to re-link with the concept of regions to allow regional integration to take place.

**DPG Roundtable on Advancing
BBIN Sub Regional Cooperation,
New Delhi, December 13-14, 2017**

**Speakers' Profile and Participants'
List**

DPG Round Table Discussion on Advancing BBIN Sub-regional Cooperation

Venue: India Habitat Centre, New Delhi
13th – 14th December 2017

Profile

Delhi Policy Group Faculty:



Ambassador Hemant Krishan Singh

Director General, Delhi Policy Group

Ambassador Hemant Krishan Singh served in the Indian Foreign Service from 1974-2010 and is a distinguished former career diplomat with extensive experience of geo-strategic and geo-economic issues as well as multilateral institutions, which underpin international law and commerce.

He has been India's longest serving Ambassador to Japan (2006-2010), Ambassador to Indonesia and Timor Leste (2003-2006), Ambassador to Colombia, Ecuador and Costa Rica (1999-2002), and India's Deputy Permanent Representative to the UN in Geneva (1995-1999). He has held several significant assignments during his career, dealing with the United States, West Europe and the European Union and India's immediate neighbours.

Ambassador Singh has contributed to the forging of the India-Japan strategic and global partnership, the intensification of India's relations with Indonesia and ASEAN, the evolution of India's revitalised Look East Policy and the shaping of India's policy towards key neighbours and strategic partners.

From 2011-2016, Ambassador Singh was Professor for Strategic Studies at ICRIER, a leading think tank in New Delhi, and has been associated with several public policy initiatives and Track II / Track 1.5 strategic dialogues involving major Think Tanks of India, Japan, Asia and the US. He has written and worked extensively on the on-going transformation of India's relations with the United States and Japan and their growing convergences in shaping Asia's emerging economic and security architecture. He serves on statutory and advisory corporate boards and has been Senior Advisor at Dua Consulting since 2013.

In June 2016, Ambassador Singh assumed responsibilities as Director General, Delhi Policy Group, which is among India's oldest independent think tanks focused on strategic issues of critical national interest.

An alumnus of St. Stephen's College, Delhi, where he studied (1967-72) and later taught (1972-74), Ambassador Singh holds an M.A. degree from the University of Delhi. His varied interests include civilisation and culture, the natural environment and sports.



Ambassador Biren Nanda

Senior Fellow, Delhi Policy Group

Ambassador Biren Nanda served in the Indian Foreign Service from 1978 to 2015 and is a distinguished former career diplomat with extensive experience of working in East Asia.

He has been India's High Commissioner to Australia (2012-2015); Ambassador to Indonesia, Timor Leste and the ASEAN (2008-12); India's Deputy Chief of Mission in Tokyo (2000-2004) and Consul General in Shanghai (1996-2000). Ambassador Nanda has also served in Indian Missions in Beijing, Washington DC and Singapore. He spent a total of ten years in China during his three terms as a diplomat in that country. His entire career as a diplomat was spent in East Asia with the sole exception of his Washington posting.

During 2004-2008 Ambassador Nanda was posted in the Ministry of External Affairs in New Delhi as Joint Secretary (South) and was responsible for India's relations with Southeast Asia and the Pacific. Ambassador Nanda contributed to the strengthening of the strategic partnership between India and Indonesia, the strengthening and diversification of India's relations with Australia and helped reinvigorate India's Look East Policy and the intensification of India's ties with ASEAN and Pacific countries.

Ambassador Nanda retired from the Indian Foreign Service in January 2015. He has since participated in several Track 2 dialogues involving major Think Tanks of Japan, Australia and China.

In July 2016, he joined the Delhi Policy Group as a Senior Fellow. The Delhi Policy Group is amongst India's oldest independent think tanks focused on strategic issues of critical national interest.

He was the co-Chair of the India Indonesia Eminent Person's Group which prepared a report and a Vision Statement 2025 for the Strategic Partnership between the two countries.

An alumnus of the St Stephen's College, New Delhi, (1971-74) Ambassador Nanda holds an MA degree from the Delhi School of Economics (1974-76). His interests include travel, listening to Indian Classical Music and reading.



Angana Guha Roy

Research Associate, Delhi Policy Group

Angana Guha Roy did her Bachelor of Arts in Political Science from Presidency College, Kolkata. After completing Master of Arts in International Relations from Jadavpur University, she worked as an Assistant Professor in colleges affiliated to University of Calcutta and Kalyani University in West Bengal. She did her M. Phil in foreign policy with a scholarship from Ministry of External affairs, India. She has studied French, Russian and Korean. In 2013, she received the Shinan Bank Dream Foundation Scholarship from Shinan bank. Presently she is pursuing her Ph. D in University of Delhi and working with Delhi Policy Group. She has published research papers and articles and has presented papers in various national and international conferences in India and abroad.



Shulagna Pal

Research Associate, Delhi Policy Group (BBIN)

Shulagna Pal holds a Master's in Politics with a specialization in International Relations from Jawaharlal Nehru University, New Delhi and a Bachelor's in History from Jadavpur University, Kolkata. She has previously worked as Research Assistant and Program Officer at the Forum for Strategic Initiatives, New Delhi. Recently, she was part of the Indian delegation of Young scholars in the NGO exchange program of the BRICS sponsored by Chinese People's Association for Peace and Disarmament, Beijing, China. In the past, she has actively worked and organized national and international seminars, workshops and was also granted the Ryoichi Sasakawa Young Leaders Fellowship.

The Asia Foundation



Dr. Sagar Prasai

Country Representative, India
The Asia Foundation

Sagar Prasai is The Asia Foundation's country representative in India. He was formerly the deputy country representative in Nepal. His current work involves regional cooperation in South Asia with focus on water, trade, and migration; transnational political economy; urban governance and women's security.

Prasai has worked with governmental as well as multilateral organizations on urban management, local governance, conflict, and political processes. He previously served as a programming advisor to the National Planning Commission of Nepal, and as a district development advisor to the United Nations Development Program in Nepal.

He has led several political economy analysis studies for The Asia Foundation including Drivers of Legitimacy in Nepal (2007), Political Economy of Local Governance in Nepal (2012), and Political Economy Analysis and Stakeholder Mapping of the Teesta Basin (2012). His articles have appeared in South Asian and global journals, portals and blogs. He is the author of the book Revisiting Transnational Migration-Development Nexus: Using Capability Approach in Migration Research.

Education: Bachelor's degree in Architecture from Nagpur University; master's degree in Urban and Regional Planning from the University of Hawaii; and doctor of philosophy degree in Regional Planning from the University of Illinois at Urbana-Champaign.



Ms. Diya Nag

Senior Program Officer, India
The Asia Foundation

Diya Nag came to The Asia Foundation in 2009 as a junior associate with the Governance, Law, and Civil Society Program in San Francisco, and then joined as a program officer in the India office in 2012, working on regional trade, and managing grants in the areas of women's security and open and accountable governance. She rejoined the Foundation once again in 2015, focusing more deeply on women's security and regional trade.

Prior to this, Diya worked with the United Nations Development Program (UNDP), engaging closely with the Department of Justice in India, on strengthening justice delivery and access to justice for marginalized groups. She has also spent three years working with the Commonwealth Human Rights Initiative (CHRI), an international human rights organization based in New Delhi. Her work at CHRI involved advocating for police reforms and increased police accountability in South Asia. Before relocating to India, Diya practiced consumer law in New York City.

Education: Bachelor's degree in Human Rights and Sociology from Barnard College, Columbia University; Juris Doctor with a specialization in Global Law and Practice from the Syracuse University College of Law. Diya is a member of the New York Bar, First Appellate Division.



DELHI POLICY GROUP



The Asia Foundation

Day I: Wednesday, 13th December 2017

Venue: India Habitat Centre, New Delhi

Welcome Address: **Ambassador H.K. Singh,**
Director General, Delhi Policy Group

Special Address:



H.E. Major General Vetsop Namgyel

The Ambassador of the Kingdom of Bhutan to India

Ambassador Major General Vetsop Namgyel was born on 15th August 1952 in Pangbisa Village in the District of Paro, Bhutan. He completed his Senior Cambridge from St. Joseph's College, North Point, Darjeeling in West Bengal, India in 1969. After enrolling for a Degree Course in St. Joseph's College, North Point, he was called upon to join the Royal Bhutan Army and was commissioned from the Indian Military Academy in December 1972. He was selected for the Royal Body Guards in 1973 and was appointed as Aide-de-Camp to His Majesty Jigme Singye Wangchuck, the Fourth King of Bhutan during the Royal Coronation in June 1974. Since then, he worked as a member of the Royal Secretariat as well as an officer of the Royal Body Guards. After his promotion to the Rank of Colonel in 1989, he functioned both as Military Secretary and Principal Aide-de-Camp to His Majesty the King.

Major General Vetsop Namgyel has accompanied His Majesty Jigme Singye Wangchuck on all His official and state visits to India from 1974 to 2006. He has also been a member of Bhutan's delegation to all the Summits of the Non-Aligned Movement from 1976 to 1989 and the Summits of the South Asian Association for Regional Cooperation from 1985 to 1997. As a senior member of the Royal Secretariat, he worked closely with all the Secretaries and Ministers of the Royal Government of Bhutan, in particular with the ministries of Home and Foreign Affairs. In his capacity as Military Secretary, he coordinated all important security related activities and operations by the Royal Bhutan Army. He was awarded the highest military decoration, the Druk Yugyel Medal on 17th December 2004 and promoted to the Rank of Major General on 4th November 2005. He was conferred the prestigious national award, the Druk Thuksey Medal, on 17th December 2010 by His Majesty the King.

Major General Vetsop Namgyel presented his credentials as Ambassador of Bhutan to India on 16 January 2009.

Major General Vetsop Namgyel is married to Daw Zam and they have one son and two daughters. His favourite hobbies are reading, listening to music and playing golf.



Shri Sudhakar Dalela

Joint Secretary (North), Ministry of External Affairs

Sudhakar Dalela joined the Indian Foreign Service in 1993.

He is trained in Hebrew language in Tel Aviv as part of Indian Foreign Service's language specialization requirement. After completing his language training in 1996, he continued to serve in the Indian Mission in Tel Aviv focusing on trade, business and economic relations. From 1998-2001, he served in Brazil as First Secretary looking after political and economic work.

He moved as First Secretary in India's Permanent Mission to the WTO in Geneva in 2001. He returned to New Delhi in 2005 and served as the Director in the Department of Commerce, looking after WTO related matters. As part of India's negotiating team, he attended the WTO Ministerial Conference in Cancun (2003), Hong Kong China (2005) and Nairobi (2014).

He later moved as the Director in the Ministry of External Affairs focusing on India's relations with Bhutan and Nepal. In 2007, he was posted to the Indian Mission in Dhaka as Economic Counselor, where he worked on India's economic relations and connectivity projects with Bangladesh.

He returned to New Delhi in early 2009 to take up assignment as the Director in the Prime Minister's Office, where he dealt with India's engagement with its South Asian neighbors, China, Asia-Pacific region, Gulf, Middle East, Indian Ocean and the African region.

He joined the Indian Embassy in Washington D.C. in 2011, and served as the Head of the Political Affairs Wing. Subsequently, he served as the Deputy Permanent Representative of India to the WTO in Geneva during 2014-2016.

In August, 2016, he assumed the charge of the post of Joint Secretary (North) in the Ministry of External Affairs, New Delhi, dealing with India's relations with Bhutan & Nepal.

He holds a Bachelor's degree in Electronics Engineering. He is married to Namrata, who is a textile conservator, and they have a son and a daughter.

Dr. Ravi Kota, IAS

Principal Secretary to Government of Assam (Finance Department) & Principal Resident Commissioner, Assam Bhawan, New Delhi

Chairs:

Session I: Trade and Economic Issues

Ambassador Rajeet Mitter



Ambassador Rajeet Mitter was educated at the Universities of Calcutta and Cambridge, and joined the Indian Foreign Service in 1977. His early career included postings in the Indian diplomatic missions in Iraq, UK, Yugoslavia and Singapore. He also served as Director, Department of Economic Affairs, Joint Secretary (Gulf), Ministry of External Affairs and Joint Secretary (Trade Policy), Department of Commerce. He was appointed High Commissioner to Botswana in 1998, Ambassador to the Philippines in 2006 and High Commissioner to Bangladesh in 2009. He retired from the IFS in 2011 and now lives in Delhi.

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)

Ambassador Sanjay Singh



Sanjay Singh is an alumnus of Delhi University, from where he obtained a Masters in Physics. He joined the Indian Foreign Service in 1976 and served in Indian Missions in Mexico, Germany, Ghana and France and in the Ministry of External Affairs, New Delhi. He was Director in the Office of the External Affairs Minister and Joint Secretary and Head of Division dealing with Latin American Countries. From October 1997 to June 2001, he was India's Consul General in Ho Chi Minh City and from July 2001 to August 2004, Deputy Chief of Mission in Paris. He held charge in the Ministry as Joint Secretary and Additional Secretary (Gulf) from March 2005 to March 2009. He was India's Ambassador to Iran from March 2009 to March 2011. He took over as Secretary (East) in the Ministry of External Affairs in March 2011 and retired in April 2013.

Session III: Energy-Hydropower and Water Resource Management

Dr. Sagar Prasai

Session IV: People to People Connectivity through Multi-Sectoral Engagement



Mr. Sabyasachi Dutta

Sabyasachi Dutta is the Founder-Director of the ‘Asian Confluence’, India East Asia Centre. Born in Shillong, a social entrepreneur, educationist, artist and a student of Indian history and international relations, Sabyasachi has had a successful career spanning 12 years in the Silicon Valley, California USA in cutting edge technology, innovation and entrepreneurships in large corporations such as SONY Corp as well as several successful start-ups, and holding several patents. He left that to start several social innovation projects in India. He pioneered a unique leadership program for rural youth of India; a unique model of youth led rural development which was lauded by the World Bank; set up a chain of eighty primary schools using the model of community participation propelled by youth leadership and introduced several innovations in the education.

In his current avatar, Sabyasachi continues to facilitate cultural programs, exchange programs, talks, discussions and symposia with scholars and leaders of culture and thought, from India and abroad. He holds a Master’s Degree in Electrical Engineering with special paper in Media and Communication from Arizona State University, USA.

Session I: Trade and Economic Issues:

Dr. Ravi Kota, IAS

Principal Secretary to Government of Assam (Finance Department) &
Principal Resident Commissioner, Assam Bhawan, New Delhi



Dr. Selim Raihan

Professor, Department of Economics, University of Dhaka and Executive Director, South Asian Network on Economic Modeling (SANEM)

Dr. Selim Raihan is Professor at the Department of Economics, University of Dhaka and the Executive Director of the South Asian Network on Economic Modeling (SANEM). He holds a PhD from the University of Manchester, UK.

Dr. Raihan possesses vast expertise in research on international trade and trade policy issues related to the WTO, regional trading agreements and domestic trade policies. He has worked quite extensively on applied economics, especially assessing impacts of trade and economic policies, using country specific Computable General Equilibrium (CGE) models, GTAP models, Social Accounting Matrix (SAM) techniques, WITS/SMART partial equilibrium models, and dynamic stochastic general equilibrium (DSGE) model.

He has the experience in research on poverty and labour market dynamics using household survey data and micro- and macro econometric modeling and estimation techniques. His research interests also include analysis of economic growth and political economy analysis of growth and development. He has a long experience in teaching international trade, economic modeling, quantitative economics, econometrics, development economics and poverty dynamics at the Dhaka University. Dr. Raihan has worked for several national and international organizations including the Asian Development Bank, the World Bank, UNDP, UNESCAP, UNCTAD, IFPRI, the Commonwealth Secretariat, FAO, European Commission, ILO, IDRC, DFID.



Dr. Ramesh Chandra Paudel

Visiting Fellow, Australian National University

Ramesh Paudel obtained his PhD in Economics from The Australian National University, Canberra and Master by Research in Economics from the University of Wollongong.

His research interests relate to development economics, international trade, trade and financial reforms, landlockedness, energy and economic growth in South Asia, foreign direct investment in the Sub-Saharan African (SSA) region, and remittance flow into South Asia.

Current research projects deal with the reform's impact on economic development, international trade patterns of landlocked countries, and determinants of FDI in the SSA, trade facilitation in South Asia, structural transformation of Nepal, and economic policy of Nepal.



Professor. Prabir De

Research and Information System for Developing Countries (RIS)

Prabir De is a Professor at the Research and Information System for Developing Countries (RIS), New Delhi. He is also the Coordinator of ASEAN-India Centre (AIC). De works in the field of international economics and has research interests in international trade and development. He was a Visiting Fellow of the Asian Development Bank Institute (ADBI), Tokyo; and Visiting Senior Fellow of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Bangkok. He has been conducting policy research for the Government of India and several international organisations.

De has a PhD in Economics from the Jadavpur University, Calcutta. He has contributed several research papers in international journals and written books on trade and development. His recent publications as an editor and author include "ASEAN-India Development and Cooperation Report 2015" (Routledge, New Delhi, 2015) and 'Celebrating the Third Decade and Beyond: New Challenges to ASEAN-India Economic Partnership' (Knowledge World, New Delhi, 2016). He is also the Editor of the South Asia Economic Journal, published by Sage.



Professor Amita Batra

Professor of Economics, Centre for South Asian Studies, School of International Studies, JNU

Professor (Dr.) Amita Batra is Professor of Economics in the Centre for South Asian Studies, School of International Studies, Jawaharlal Nehru University (JNU), New Delhi. Previously, she Senior Fellow, Indian Council for Research on International Economic Relations (ICRIER), New Delhi, and prior to that, Reader, University of Delhi.

Prof Batra was the first holder of the ICCR Professorial Chair in Contemporary Indian Studies at the Centre for South Asian Studies & Edinburgh-India Institute, University of Edinburgh (January-May 2013). In 2008, Prof Batra was Visiting Professor at the Indian Institute of Management (IIM)-Ahmedabad, where she taught a course on 'International Economic and Political Environment'. She has worked extensively in the area of regional trade and economic integration with a special focus on Asia.

Her most recent Book on the subject is titled '*Regional Economic Integration in South Asia: Trapped in Conflict?*' (London: Routledge, 2013). She also has to her credit two other books – '*Preferential Trading Agreements in Asia: Towards*

an Asian Economic Community (ed), 2008 and *India and the Asian Corridor* (Co-authored, 2007) – and several research papers published in national and international refereed and other journals, books etc. She has also worked as consultant on research assignments including for the Sigur Centre for Asian Studies, George Washington University, Washington DC; Samsung Economic Research Institute, Seoul, Korea; and the World Bank’s New Delhi Office, among others. Prof Batra is M.A., M.Phil., Ph. D. in Economics from the Delhi School of Economics, University of Delhi, India.



Dr. Paras Kharel
Research Director, SAWTEE

Paras Kharel is an economist with a decade-long experience in policy-relevant research in the areas of international trade and development. He has been with South Asia Watch on Trade, Economics and Environment (SAWTEE)—a Kathmandu-based think tank known for its research, advocacy, capacity building and sensitization activities in Nepal and the rest of South Asia—since 2007 and is currently its Research Director. He has a PhD in Economics (University of Melbourne) with specialization in international trade and applied micro-econometrics. Kharel’s research interests and publications span regional integration, gains from trade, application of structural gravity models, World Trade Organization issues, export competitiveness, aid for trade, linkages between trade policy and industrialization, structural transformation, and trade and development issues of least-developed and landlocked countries, with a focus on Nepal and South Asia. He has consulted for national and international organizations. Earlier, he worked as a journalist for five years.

Session II: Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)



Dr. Smruti S. Pattanaik
Research Fellow, Institute for Defence Studies and Analyses

Dr. Smruti S Pattanaik is a Research Fellow at the Institute for Defence Studies and Analysis (IDSA), New Delhi. She joined the IDSA in 1998. She holds PhD in South Asian Studies from the School of International Studies, JNU. Her area of specialization is identity politics, security issues and civil-military relations in South Asia. Her current research focuses on India’s Neighbourhood Policy: Role of States.

She received Asia Fellowship and was a visiting Asia Fellow at the Department of International Relations, Dhaka University in 2004. She also received follow up grant from Asian Scholarship Foundation in 2007 to research the Jamaat Islami and the politics of identity in Bangladesh. She was earlier a Kodikara fellow at

the Regional Centre for Strategic Studies; Colombo, postdoctoral fellow at Centre for International Relations and Research (CERI) in Paris in 2008 and visiting fellow at International Peace Research Institute Oslo (PRIO) in 2011. She was Visiting Professor on ICCR's India Chair in the Centre for Contemporary Indian Studies, Colombo University in 2013. She has lectured on India's foreign policy and South Asia at the Colombo University, Sir John Kotelawala Defence University, Asia Centre in the University of Melbourne, University of Karachi, University of Peshawar, Jahangirnagar University and University of Dhaka. She was a member of IDSA taskforce on neighbourhood.

Dr Pattanaik has published more than 50 articles in various journals, has contributed more than 40 chapters in edited books, and delivered lectures on security issues both in India and abroad. She is the author of "Elite Perception in Foreign Policy: Role of Print Media in influencing Indo-Pak relations, 1989-99" (RCSS and Manohar, 2004) and has edited two books, "South Asia: Envisioning a Regional Future" (2011), "India-Bangladesh relations: Historical Imperative and Future Direction (2012).



Dr. Mahalaya Chatterjee

Professor at Centre for Urban Economic Studies, Calcutta University, Kolkata

Dr. Chatterjee is Head, Department of Economics, Calcutta University (from February 2012). She specializes in Urban Economics, Urban Planning, Managerial Economics, and Development. She has written Economics of Urban Land Use: A study of Calcutta Metropolis, VDM Verlag (March 2010) and Environmental Management in India – A Study of Industrial Pollution Control in Kolkata Metropolis, VDM Verlag, Dr. Muller, (August 2010). She is Life member of Indian Association for Research in National Income and Wealth, Life Member of Indian Society for Environmental and Ecological Economics, and Member of Urban Economics Association, USA.

She holds a PhD (economics) from Calcutta University. She has done MSc (Economics) from Calcutta University and BSc (Honours in Economics) from St. Xavier's College, Calcutta University.



Dr. Nisha Taneja

Professor, Indian Council for Research on International Economic Relations

Nisha Taneja is Professor at Indian Council for Research on International Economic Relations. Her broad areas of interest include WTO issues, regional trade, industrial economics, and institutional economics. In recent years, she has worked on tariffs, non-tariff barriers, and transport issues related to India-Nepal, India-Sri Lanka, India-Pakistan, India-Bhutan, India-Korea, India-Japan, India-China and sub-regional cooperation between India, Bangladesh and Myanmar.

She has served on committees set up by the Government of India on Informal Trade, Rules of Origin and Non-Tariff Barriers and was recently appointed as Transshipment Adviser to the Government of Nepal. Her research papers have been published in several journals and have been disseminated widely in India and abroad. She has worked as a Consultant with the Asian Development Bank, The United Nations and The World Bank on a range of issues which include supply chain analysis, regional integration in South Asia, informal trade and non-tariff barriers in South Asia.



Dr. Joyeeta Bhattacharjee

Senior Fellow, South Asia Programme, Observer Research Foundation

Dr Joyeeta Bhattacharjee is a Senior Fellow at the South Asia Programme of Observer Research Foundation (ORF), New Delhi. Her research interest includes-India’s neighbourhood policy, and especially the eastern arch; Bangladesh’s domestic politics and foreign policy; Border Management, Conflict resolution, ethnic conflict and security scenarios in India’s northeast.

Dr Bhattacharjee joined ORF in October 2006 and has been pursuing research on South Asia. Dr Bhattacharjee regularly contributes op-ed articles in major daily newspapers in India like- The Pioneer, The Financial Express, The Hindustan Times, The Economic Times, The Hindu Business Line on issues including India’s relationship with Bangladesh, state of politics in Bangladesh, terrorism in South Asia, ethnic conflicts, sub-regional cooperation etc. She has also presented papers in national and international seminars and published articles in many academic journals.

Dr. Bhattacharjee holds a Ph.D. from Assam University, Silchar. The title of her Ph.D. thesis is “Conflict Resolution and Peace: New Dimensions in Applied Ethics”. She completed her Master of Arts in Philosophy from the same University in 1999. She was awarded a Junior Research Fellowship by the Indian Council for Philosophical Research.

Session III: Energy-Hydropower and Water Resource Management:



Dr. Arbind Kumar Mishra

Member, National Planning Commission, Nepal

Arbind Kumar Mishra is a Member of the National Planning Commission (NPC) in the Government of Nepal, ranked at par with an assistant minister. In his portfolio covering Energy and ICT, he advises on the formulation of national strategies, coordinates policy across the public sector, and monitors major projects. He graduated from A.M.U., Aligarh, India with first class honors in

B.Sc. in Electrical Engineering and obtained his Master of Engineering degree in electrical power system from the University of Roorkee, India (presently IIT, Roorkee), ranked first in class. Dr. Mishra completed his PhD in Electrical Engineering from Doshisha University, Kyoto, Japan, and has been a post-doctoral fellow at UPV, Valencia, Spain.

Dr. Mishra began his academic career as a faculty member of Nepal's most popular engineering institute, IOE (Pulchowk), of Tribhuvan University (TU) in 1997. In addition to teaching and research, he held key academic and managerial responsibilities, as chairman of the electrical engineering subject committee, faculty board member, and founder coordinator of M.Sc. (Power system) program. He also served as the Chief of the IOE (Pulchowk) central campus, and as a standing committee member of the central executive and implementation committees of TU's Institute of Engineering. Beyond TU, he has been a member of the electrical engineering subject committees for Kathmandu University, Pokhara University and Purwanchal University.

Dr. Mishra is the vice chairman of Alternative energy promotion center, Nepal governing board. He has worked as a senior consultant in electrical engineering in Nepal and has served in several technical committees of the Nepal Electricity Authority. He was also the advisor for National Association of Community Electricity Users Nepal. He has also served in many high-level committees of Nepal Engineers Association. He is an international resource person for utilities engineers in the field of electrical transmission and distribution planning including protection coordination and renewable energy technologies.

Dr. Mishra is widely published in renowned journals in the field of electrical engineering, including IEEE, IET, IEE Japan, among others. He has received several medals and notes of commendation for his contributions in the field of electrical engineering and engineering education.



Dr. Mahfuzul Haque

Former Secretary, Ministry of Labour and Employment, Government of the People's Republic of Bangladesh

Dr. Mahfuzul Haque, a former Secretary of the Government of Bangladesh has been teaching for a decade and half in different public and private universities taking courses on environment and development; sustainable development; natural resource management; climate change; biodiversity conservation; natural disaster management; and environmental impact assessment.

He joined civil service in 1981. During his decade-long stint at the Ministry of Environment and Forests, he received on the job training home and abroad on environmental conservation, natural resource management and environmental laws and compliance. He led official Bangladesh delegation at the Conference of Parties of various conventions, including UNFCCC, CBD, Montreal Protocol, Ramsar Convention etc. He was elected as the President of Montreal Protocol

Implementation Committee; and Vice President of CBD Bureau based in Montreal, Canada.

He is a prolific writer and has extensively contributed in various journals. He has authored books on ethnic issues in South Asia, Climate Change, and Street Children. He also contributed articles in peer-reviewed journals on issues related to sustainable environment, natural resources management, bio-diversity conservation, global warming, ozone layer depletion, desertification and environmental laws. His latest book on “Environmental Governance, Emerging Challenges for Bangladesh” published in 2013 looked at the crises of environmental governance in Bangladesh. Recently published book by Routledge, UK in 2016 titled, “Governance in South Asia” carried his article on “Shipbreaking Industries in Bangladesh”. His contribution on “Environmental Governance” has been published online by Springer in June 2017 in “The Global Encyclopedia of Public Administration, Public Policy, and Governance” both in print and online versions. He is currently teaching at both post-graduate and undergrad levels at the Department of Development Studies, University of Dhaka as an Adjunct Faculty.

Ms. Lydia Powell

Head, Centre for Research Management, Observer Research Foundation



Ms. Powell has been with the Observer Research Foundation for over 16 years working on policy issues in energy, water and the environment in the Indian context. Her current interests include energy security, energy access, carbon constraints and its impact on India’s energy security, clean coal for energy and environmental security, regional cooperation for environmental security (India and Bangladesh) and Federalism and its impact on Indian energy policy. She contributes commentary and analysis on the Indian energy sector regularly. Her most recent paper was a book chapter on India’s Energy Transitions. Ms. Powell has also worked for Norsk Hydro and for Orkla, two of Norway’s largest conglomerates whose interests include energy. Ms. Powell has three Post Graduate Degrees - two on Energy from Norway and one in Solid State Physics from India.

Mr. Shahab Enam Khan

Research Director, Bangladesh Enterprise Institute, Dhaka, Bangladesh



Mr. Shahab Enam Khan is Associate Professor in International Relations at Jahangirnagar University and Research Director at the Bangladesh Enterprise Institute. Mr. Khan’s research portfolio includes Security, Regional Cooperation and Trade, and National Integrity Institutions and Public Policy. Mr. Khan has closely worked with various international organizations and development agencies, i.e. IUCN, UN Women, IFC, RCSS as advisor and/or senior consultant. He has been involved in drafting several key public policy documents for the Government of Bangladesh including the National Broadcast Policy 2014 and counter terrorism strategy. He also serves as Board Member of various NGOs and

companies in Bangladesh. He received education from the Harvard University, University of Manchester, University of Delaware, and University of Birmingham. Mr. Khan is a NESAC Center Alumnus. He is also a scholar at Jawaharlal Nehru University, New Delhi, India and a Senior Fellow at the Hainan Institute of World Watch, Hainan, China.

Dr. Smruti S. Pattnaik

Research Fellow, Institute for Defence Studies and Analyses

Dr. Chandan Mahanta

Professor, Indian Institute of Technology, Guwahati, Assam



Prof. Chandan Mahanta Dean, Students' Affairs and Professor, Centre for the Environment Professor, Department of Civil Engineering Indian Institute of Technology – Guwahati Dr. Chandan Mahanta is currently the Dean of Students' Affairs and Professor in the Centre for the Environment at IIT Guwahati. He has served as the Head of the Centre for the Environment. He is also a BOG member of NIT Nagaland and Khelhoshe Polytechnic at Zunheboto, Nagaland. He has been an ASCE-EWRI visiting fellow at the Utah Water Research Laboratory of the Utah State University, USA and has been EurIndia visiting fellow to the University of Applied Sciences, Karlsruhe, Germany; he was in the Monash Sustainability Institute of Monash University under the Australian Leadership Award Fellowship Programme.

He was part of a Hydro Diplomacy programme jointly hosted by MIT, Harvard University and Tufts University in 2014. Prof Mahanta has served in various national and international committees including the Planning Commission of India. Prof Mahanta has carried out projects funded by national bodies and international agencies including MHRD, MoUD, MoEF, DST, SIDA, EURINDIA, UNICEF and IUCN. Prof. Mahanta has authored more than fifty technical publications in peer reviewed journals, proceedings and books.

He has organised trainings, workshops, conferences and has lectured to a cross section of professionals in USA, Australia, Canada, France, Italy, Germany, Sweden, Netherlands, China, Taiwan and Southeast Asian countries including Nepal, Bangladesh and Sri Lanka and had collaborations with several US and European universities. He has been advisor to eighteen PhD and more than fifty Masters Students. One of his major projects on Digital Brahmaputra has attempted to leverage IT applications in building robust hydrological information system. Several of his current research engagements are focused on sustainable drinking water and sanitation, and urban river restoration and management. Prof Mahanta has been part of past TERI events including DSADS.



Prof. (Dr.) Sanjay K Bhardwaj

Professor for South Asian Studies and Director, Energy Studies Programme, School of International Studies, Jawaharlal Nehru University

Prof. Sanjay Bhardwaj is the director in the Energy Studies Programme at School of International Studies, Jawaharlal Nehru University. His area of specialisation includes India's Foreign Policy, Water and Energy Cooperation with South Asian States, Religion and Politics, Identity, Politico-Security, Economic and Foreign Policy issues of Bangladesh. He has also extensively worked on Religious and Nationalistic Construct and Its Impact on Inter-State Relations with special reference to Bangladesh. He is recipient of Sir Ratan Tata Fellow 2009-10, and has worked on Contesting Identities in Bangladesh: Secular and Islamic Frontiers. He was also recipient of ASIA Fellows Awards 2010-11 (ASIA Scholarship Foundation, Bangkok), University of Dhaka, Dhaka, Bangladesh, and worked on Bangladesh Perspective on India: A Study Water Sharing issues since 1996'. He has also been 'Chinese Academy of Social Science-ICSSR Fellow-2013', Beijing, China and worked on 'China's South Asia Policy'.

He has been nominated as a Fellow 2018 to Study US Institution on National Security Policy Making at University of Delaware, USA. Mr. Bhardwaj is currently pursuing three research projects, namely, India's Energy Security: Inter-regional Cooperation to Energy Security Society (Major Project, funded by FIPI, New Delhi); India's Neighborhood Policy (Majorly Funded by ICSSR, New Delhi); and Identity Politics in Bangladesh: Implications for India (Minor, UPE-UGC, JNU).

Apart from those, he has authored over three dozen articles and research papers on contemporary socio-political, economic issues including water sharing, border and energy cooperation of Bangladesh and South Asia.



Mr. Nitya Nanda

Fellow, The Energy and Resources Institute (TERI)

Nitya Nanda is a Fellow with The Energy and Resources Institute (TERI), New Delhi, and an adjunct faculty with Teri University, and currently, he also heads the Centre for Resource Efficiency and Governance at TERI. Nitya has about two decades of experience in research, consulting and teaching on international trade, investment, regulation and development issues. Among other important assignments, he was the lead researcher of some major projects spanning different countries in Asia and Africa.

An economist by training, he has more than 120 research publications including 12 articles in peer-reviewed journals, 30 in other journals, 35 book chapters in edited volumes, 28 monographs/briefing papers, and 12 conference papers. His current areas of interest are: international trade, energy, environment, resources and regulatory issues including the relevant legal and political economy dimensions. He also has keen interest on issues related to the global economy and

Indian economic development.

He has authored two books (one co-authored) and has written several articles for newspapers and magazines as well. Currently, he is also the editor of TERI's flagship academic journal, Journal of Resources, Energy and Development. Among his books, "Expanding Frontiers of Global Trade Rules: The Political Economic Dynamics of the International Trading System, Routledge, London & New York, 2008" has received wide acclaim. Currently, he is working on a book on industrial policy and performance in India.

Apart from several research projects, he also worked on consulting assignments of organizations like United Nations Conference on Trade and Development (UNCTAD), United Nations Development Program (UNDP), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), World Health Organisation (WHO), World Bank, the European Commission (EC), and Oxfam.



Ms. Pooja Tyagi

Faculty at Department of Economics, Daulat Ram College, University of Delhi.

Ms. Pooja Tyagi is an Assistant Professor in the Department of Economics at Daulat Ram College. She specializes in environmental economics and her area of interest is energy economics. Ms. Tyagi possesses a research experience of two years at Institute of Economic Growth (IEG) and a teaching experience of fifteen years at the undergraduate level. She has also successfully finished an innovation project on air pollution "DR-309: Identifying the monetary benefits that can be achieved by individuals of Delhi from health damages avoided as a result of reductions in air pollution" which was funded by the University of Delhi. Presently she is pursuing her PhD in the Energy Studies Program, School of International Studies at the Jawaharlal Nehru University.

Session IV: People to People Connectivity through Multi-Sectoral Engagement



Dr. Anupam Khanna

Member, Board of Directors, IndiGo

Dr. Anupam Khanna is a Non-Executive Independent Director of the Company. Dr. Khanna holds a Ph.D. and a master's degree in electrical engineering and management science/engineering economic systems from the Stanford University, California. Dr. Khanna has a Bachelor of Technology degree from Indian Institute of Technology, Kanpur. Dr. Khanna joined the World Bank in December 1980. From September 2000 till March 2003 Dr. Khanna was the

Chief Economist for Shell International, London where he was also a core member of the Global Scenarios Team. He again joined World Bank in September 2003 Dr. Khanna joined our Board on March 27, 2015.



Dr. Constantino Xavier
Fellow, Carnegie India

Constantino Xavier is a fellow at Carnegie India, based in New Delhi. His research focus is on India's foreign policy, with emphasis on relations with its neighbouring countries and South Asian regional security.

Previously, he worked at the Brookings Institution, in Washington DC, as a media correspondent in South Asia, and as an adviser to the Embassy of Portugal in New Delhi during the presidency of the European Union. He contributed to the Oxford Handbook of Indian Foreign Policy (2015) and his comments on South Asian strategic affairs have been published in Foreign Policy, the National Interest, and various academic journals and media outlets.

He held fellowships at the Institute for Defence Studies and Analyses and the Observer Research Foundation in New Delhi, and his research was funded by awards from the United States Fulbright program and the Indian Council for Cultural Relations.

He holds a Ph.D. in South Asian studies from the Johns Hopkins University, School of Advanced International Studies.



Mr. Needrup Zangpo
Executive Director, Journalists Associations of Bhutan

Mr. Needrup Zangpo is the executive director of Journalists Association of Bhutan. He is a former editor of Bhutan Observer newspaper, a former researcher in the civil service of Bhutan, and a former communications manager. He read Delhi University's BA English and Indian literature and later studied journalism and media in India, Singapore, and Denmark. As the editor of Bhutan Observer, Mr. Needrup wrote extensively on Bhutan's transition to a parliamentary democracy and challenges and opportunities it presented. Mr. Needrup is also a writing/editing/translation consultant and the editor of several books and magazines. He regularly writes for Kuensel, Bhutan's biggest circulated newspaper, and two magazines.



Mr. Gopilal Acharya

Independent journalist, Journalist Association of Bhutan

Gopilal Acharya is an independent consultant and freelance journalist. He was educated in Bhutan and Sweden. He is an award-winning journalist with a career spanning 17 years in media and communication industry. He has worked in Bhutan, Nepal, Singapore, and India. He worked as Chief Editor of Bhutan’s first English language private newspaper, *Bhutan Times*, and later founded a weekly newspaper, *The Journalist*. Most recently he worked with the International Centre for Integrated Mountain Development in Kathmandu as Communication Specialist.

He has taken up several consulting assignments, working for the Royal Government of Bhutan, UNDP Bhutan, UNICEF Bhutan, Danida Bhutan, Asian Development Bank, International Finance Corporation, and the Community of Evaluators in Sri Lanka. He is also a member many local and international professional societies and volunteer organizations.

He is the author of *Bhutanese Folktales (From the South and the East)* and *Dancing to Death* (a collection of poems). The manuscript of his debut novel *With a Stone in My Heart* was long listed for the 2009 Man Asian Literary Prize. His latest book is about Denmark-Bhutan bilateral development relationship. He is a contributor to the *Asia Literary Review* and *Himal South Asian*. Gopilal Acharya’s journalistic works have appeared in *The Straits Times*, *The Telegraph*, *Kuensel*, *Druk Journal*, and *The Third Pole*. He has authored (as well as co-authored) papers on disaster management, climate change, Gross National Happiness, Bhutan’s media landscape, mountain forestry, and population studies, among others.



Dr. Dhananjay Tripathi

Assistant Professor, Department of International Relations, South Asian University

Dr. Dhananjay Tripathi is assistant professor in the department of International Relations of the South Asian University (SAU), New Delhi, India. SAU is an international university established by eight member countries of South Asian Association for Regional Cooperation (SAARC). He has authored a book on ‘Development Role of the European Union in South Asia (2011)’ and contributed in edited volumes and peer-reviewed journals including -Journal of Borderlands Studies, Economic and Political Weekly, Eurasia Border Review, Quarterly of International Sociology, USI Journal, YILDIZ Social Science Review etc. His research interest includes, Regional Integration Process (Europe & South Asia), Border Studies and International Political Economy. Latest publication is an edited volume on Afghanistan- Harshe, Rajen & Dhananjay Tripathi (eds) (2016) *Afghanistan Post-2014: Power Configurations and Evolving Trajectories*: Oxon, New York & New Delhi: Routledge Publication. He is also the member of Board of Directors of Association for Borderlands Studies (ABS) for the period of 2015-2018.



Amb. Sudhir Vyas

Former Secretary, Ministry of External Affairs, Government of India
Ambassador Sudhir Vyas retired in 2013 as Secretary in the Ministry of External Affairs, Government of India, after over 36 years as a Diplomat with the Indian Foreign Service.

Born on 24 September 1953, Ambassador Vyas graduated with a B.Tech degree in Engineering from the Indian Institute of Technology, Kanpur in 1975, and was selected to join the Indian Foreign Service in 1977. In the course of his career, he has served as Ambassador of India to Germany (2009-2011), to Bhutan (2005-2009) and to the UAE (2003-2005); as Deputy High Commissioner in Pakistan (1999-2003) and Tanzania; and in various other positions at the Permanent Mission of India to the United Nations at New York; as well as in the Indian Missions in Nepal, Algeria and Egypt.

At the Ministry of External Affairs in New Delhi, he has held Secretary-level positions dealing with India's bilateral relationships with Europe, Canada, Africa and Latin America, and India's Economic Relations; and earlier, at Head of Division Level, with SAARC and India's northern neighbours.



DELHI POLICY GROUP



The Asia Foundation

Day II: Thursday, 14th December 2017
Venue: India Habitat Centre, New Delhi

**Opening Remarks
and Briefing on
Breakout Sessions:**

Ambassador Biren Nanda
Senior Fellow, Delhi Policy Group

**Presentation by
Core Group Mentors:**

GROUP MENTORS

Group Mentor: Trade and Economic Issues
*Prof. Prabir De, Research and Information System for
Developing Countries*

Group Mentor: Transit and Multimodal Connectivity
Ambassador Sanjay Singh, Adjunct Fellow, Delhi Policy Group

**Group Mentor: Energy-hydropower and Water Resource
Management**
*Dr. Sagar Prasai, Country Representative, The Asia Foundation,
India*

**Group Mentor: People to People Connectivity through
Multi-Sectoral Engagement**
*Mr. Sabyasachi Dutta, Director, Asian Confluence, Shillong,
Meghalaya*

**Young Scholars'
Roundtable:**

Chair: Dr. Selim Raihan

- 1. Ms. Shreeja Kundu*
- 2. Mr. CV Srikar*
- 3. Ms. Angana Guha Roy*
- 4. Mr. Udayvir Ahuja*

List of participants in the Young Scholars' Roundtable on Advancing BBIN Sub-regional Cooperation

S. No.	Name	Designation
1.	Ms. Jhoomar Mehta	Global Youth
2.	Mr. Udayvir Ahuja	Global Youth
3.	Mr. Shubham Singal	Global Youth
4.	Ms. Pragya Bhargava	Global Youth
5.	Ms. Devika Chopra	Global Youth
6.	Ms. Harleen Minocha	Global Youth
7.	Mr. CV Srikar	Global Youth
8.	Ms. Shreeja Kundu	Global Youth
9.	Mr. Shreyas Deshmukh	Delhi Policy Group
10.	Ms. Antara Ghosal Singh	Delhi Policy Group
11.	Mr. Mohit Musaddi	Delhi Policy Group

DPG Conference Reports, Vol. 2, Issue 8

Roundtable on Advancing the BBIN Sub-regional Cooperation

India Habitat Centre | New Delhi | India | December 13-14, 2017



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