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SCOPING PAPERS

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Identifying Development Dividends along
the Belt and Road Initiative:
Complementarities and Synergies between the BRI and the SDGs

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**Executive summary**

The Agenda 2030 was chosen in a consultative and collaborative process with over 100 country consultations facilitated by the United Nations Development Group, direct inputs from citizens namely through the MyWorld survey, and ultimately adopted by UN Member States in September 2015. This global agenda takes a comprehensive approach, including the three aspects of sustainable development (economic, social, environmental), as reflected across the Sustainable Development Goals (SDGs). Its realization depends on integrated approaches that account for the connections across the goals, forceful national action, but also international collective action that generates global public goods. Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Over the past decade, the world has witnessed the rise of China—the world’s most populated country, second largest economy and powerful engine of global growth and trade—to become a strong player in advancing sustainable development. Consequently, the direction of the country’s future development and the degree of its commitment to the provision of global public goods will have a significant impact on the entire international community.

This paper argues that the alignment of China’s Belt and Road Initiative (BRI), an economic framework covering more than 70 countries, with the 2030 Agenda and the implementation of the SDGs holds the promise to confer substantial development benefits and to position BRI as an accelerator for the SDGs and the expansion of global public goods. The paper highlights areas where tangible opportunities for gains exist from aligning BRI and SDG implementation, and mentions where UNDP can effectively assist, including through the use of data to provide observable information for monitoring and evaluation of BRI implementation, based on the 2030 Agenda architecture of goals, targets, and indicators.

The five priorities of BRI have a marked overlap with the global sustainable development framework, and the associated set of SDGs. Moreover, the 2030 Agenda complements the BRI by highlighting sustainability—a critical aspect for BRI’s credibility, which will be boosted by being seen as an important instrument for furthering sustainable human development across a range of countries. Aligning the 2030 Agenda and the BRI can generate many strengths and opportunities, most notably by enhancing the recognition of China as a critical player in global development cooperation, strengthening the ability of the BRI to address environmental and social risks, building policy coherence and social cohesion along the BRI, facilitating effective dialogue among stakeholders, and bolstering monitoring and evaluation.

In short, the synergies and complementarities between BRI and SDGs can help create a win-win outcome. Filling the SDGs with local content and enhancing their coordination
will open the way for BRI projects positively impacting critical social issues such as inequality and inclusiveness. This linkage can also move BRI toward attaining a critical mass by encompassing all key aspects of human development, ensuring that it is seen by all partners to transcend short-term commercial or political interests, helping it ‘win the hearts and minds’ of other countries. Implemented this way, the BRI can also enhance China’s image as a leading country in South-South Cooperation.

UNDP can play a strategic role in SDG implementation as a reliable partner for BRI countries. The UN system, and in particular UNDP in collaboration with other members of the UN Development Group, has been supporting China for more than three decades in its endeavors to achieve its development aspirations. This collaboration has brought some good results, and forms the basis for expecting the alignment of the BRI with the SDGs to not only accelerate the implementation of the SDGs but also to maximize the BRI’s positive impact and long-term success.
Introduction

Global governance towards inclusive and sustainable development remains a core issue of the international agenda. In 2015, UN Member States reached major agreements which set the course of global development for a generation – across the 2030 Agenda, the Paris Climate Agreement, the Sendai disaster risk reduction framework, and the Addis Ababa Action Agenda on financing for development. Different players from across the world demonstrated their commitment to the Sustainable Development Goals. In this context, China has increasingly emerged as a responsible player in global development cooperation and governance, whose future development and the degree of commitment to the provision of global public goods will have a significant impact on the entire international community.

The world has increasingly recognized China’s rise—the world’s most populated country, second largest economy and powerful engine of global growth and trade. Having registered annual GDP growth of nearly 10% for many years, it contributed 12% to global GDP in 2013 (UNDP, 2015). In the same year, it became the world’s largest trader, with total value of imports and exports reaching $4 trillion. Accompanying its rapid economic ascendance, China has achieved remarkable development progress as well, attaining major Millennium Development Goals (MDGs; UNDP, 2015). Most notably, 439 million poor were lifted out of poverty between 1990 and 2011 in China (calculated at the World Bank’s poverty line of $1.25/day).

China’s economic status is complemented by its commitment to international development and common prosperity. Having earlier benefited from large inflows of foreign direct investment (FDI), China now is a net exporter of FDI and an emerging donor of development aid. Between 2010 and 2012, China provided $14.4 billion foreign aid—just over a third in grants, the rest in concessional loans—to 121 countries (Xinhuanet, 2014).

South-South Cooperation (SSC) is gaining prominence in China’s development agenda. Multi-cooperation mechanisms such as G77, BRICS, and FOCAC; South-South summit diplomacy (APEC, ASEAN plus three, or the CELAC-China Forum), and more recently, the China-led establishment of multilateral institutions, such as the BRICS New Development Bank (NDB) and the Asian Investment Infrastructure Bank (AIIB), demonstrate China’s long-term pledge to advance sustainable development.

China has committed to advance global governance. Its G20 Presidency placed the issue of development and enhancing development policy coordination in a prominent position in the G20’s global policy framework. It is the first time that G20 members have jointly drafted a collective action plan on the 2030 Agenda, injecting political impetus into its implementation.

With the Belt and Road Imitative, the country has proposed an ambitious and innovative development framework with intra-regional features and a wide-ranging coverage. A remaining challenge, however, is to ensure and maximize BRI’s long-
term positive development impact, raising the question how sustainable development outcomes can best be ensured. In China’s National Plan on the Implementation of the 2030 Agenda for Sustainable Development, China is advancing the “Belt and Road” Initiative. It also calls for supporting efforts by regional commissions and specialized agencies of the United Nations to formulate actions plans for the goals and targets that fall within their respective regions or fields.

This paper emphasizes that tangible opportunities for gains exist from aligning BRI and SDG implementation, and draws attention to where UNDP can effectively assist, including through the use of SDG indicators to provide observable data for monitoring and evaluation of BRI implementation. It argues that aligning the BRI, an economic framework covering more than 70 countries, with SDG implementation can confer substantial development benefits and position BRI as an accelerator for the SDGs and for the achievement of global public goods.

1. The 2030 Agenda for Sustainable Development and the SDGs
   1.1. Sustainable development as a global policy framework
   Since the Millennium Declaration and the adoption of the Millennium Development Goals in 2001, the world has made significant progress in terms of poverty reduction, access to education, reduced child and maternal mortality, and access to basic sanitation. To a considerable extent, that progress has reflected development gains achieved in China. However, food, health, energy, environmental issues and geopolitical tensions have highlighted the challenges of interconnectedness and systemic weaknesses in the world economy, culminating in the global financial crisis of 2008-2009. It has become clear that making progress sustainable in all aspects of human development is a critical plank that needs emphasis.

   The United Nations 2030 Agenda for Sustainable Development has been developed to provide such sustainability to the way countries of the world address global challenges. It is a broad, overarching framework, with the Sustainable Development Goals (SDGs)—pragmatic, transformative goals in key areas of sustainable and inclusive human development—at its core. The Agenda defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It calls for achieving SDGs in each of the three core dimensions of sustainable development: economic, social, and environment. All are crucial for the well-being of individuals and societies, and are intimately interconnected in the sense that failure to achieve sustainability in any one dimension will trigger failure in the others.

   Social and environmental sustainability are core features to global societal wellbeing. This is captured by prominent scholars over the years, such as Joseph Stiglitz and Thomas Piketty who make a compelling case that non-inclusive growth is socially corrosive and hence undermines long-term sustainability. Thomas Piketty analyzes the evolution of inequality, its main driving forces, the negative socioeconomic
impact, and examines the evidence. He covers inequality stemming from the
distribution of income between capital and labor, and also that within labor income.
His main point is that the former is on a fundamentally skewed path: as long as the
rate of return on capital exceeds the rate of growth, the income (and hence wealth) of
the rich will grow faster than the typical income from work. Joseph Stiglitz argues
that inequality in the US and elsewhere is not an inevitable consequence of market
outcomes, globalization and technological progress, but a choice that follows from
policies.\(^2\) Stiglitz notes that 91% of income growth between 2009 and 2012 was
enjoyed by the wealthiest 1% of Americans. He argues that reining in inequality must
start with curbing rent-seeking—the practice of increasing wealth by taking it from
others rather than generating any actual economic gain—and must follow through
with policy changes in taxation, expenditure policy, corporate and financial
regulations, and retirement savings.

While Stiglitz and Piketty make their case for developed countries and advocate the
necessity for income distribution as a path towards improved development outcomes,
Amartya Sen links human development to people’s capability to lead the kind of lives
they have reason to value. In his view, human development involves attaining a
growing range of freedom in economic and political choices and protections, social
opportunities, transparency guarantees, and protective security. While he sees free
markets as essential for achieving economic freedom, he calls for policies that look
beyond raising average per capita income and aim to also reduce deprivation and
enhance individuals’ ability to help themselves. In his view, therefore, initiatives that
underpin progress in not just the economic dimension are more conducive to
sustainable human development. This approach goes beyond the focus on income
distribution advocated by Stiglitz and Piketty. Sen’s capability framework
underscores that income distribution can be variable and conditioned by different
circumstances, such as personal heterogeneities; variations in social climate;
differences in relational perspectives; intra-household distribution of income within
the family; and environmental diversities, such as climatic conditions.

Finally, the Stern Review underscores that addressing climate change is a prerequisite
for sustainable economic growth. It characterizes climate change as the greatest,
widest-ranging market failure ever seen, which threatens the basic elements of human
life around the world—access to water, food production, health, and use of land and
the environment. Business-as-usual emission paths imply serious, irreversible impacts,
with the poorest countries and people suffering earliest and most. The Report calls for
a prompt transition to a low-carbon economy to avert escalating future costs and
social disruptions and for coordinated policies at the level of individual countries, as
well as at regional and global levels. Such a balanced approach is feasible and
compatible with continued growth if it comes with adaptation policies for dealing
with the unavoidable impacts of climate change, a broadly similar carbon price signal

\(^2\) He cites weak worker protections and family support systems, a tax system that rewards short-term gains over
long-term investment, lenience toward too-big-to-fail financial institutions, and policies that shift income away
from labor toward capital.
around the world, and suitable carbon finance to accelerate action in developing countries. This would cause substantial structural changes in the world economy—posing major challenges, but also offering opportunities for growth. Kenneth Arrow adds that despite uncertainty, the need for insuring humanity against the risk of catastrophic outcomes justifies prompt action.

When it comes to developing countries, economic growth and material improvement of well-being alone is not sufficient for resolving persistent inequalities. To comprehensively address these inequalities, income inequality has to be addressed alongside other core social challenges, such as health, nutrition and education, which could be tackled through effective public spending, governance and the reduction of prejudice, discrimination and social exclusion (UNDP, 2013). A powerful point in UNDP’s 2013 Humanity Divided report is that development paradigms should incorporate deeply intertwined material inequalities with relational ones. In practical terms, development policy must address equally the inequality of opportunities and the inequality of outcomes, responding to the specific needs and circumstances of each country. (UNDP, 2013:18).

### 1.2 The guiding principles of the 2030 Agenda

The 2030 Agenda was adopted after a highly consultative and collaborative process with over 100 country consultations facilitated by the United Nations Development Group. This global agenda takes a systems approach, capturing all aspects of human development, accounting for connections among SDGs and aiming to generate global public goods. The approach reflects national, regional and global externalities—both in the form of gains in technological and management know-how, improved access to seamless transport infrastructure, and learning by doing; but also, on the downside, in the form of biodiversity loss, rising greenhouse gas emissions, or intensified cross-border social pressures.

SDGs reflect three broad principles, building on lessons learnt from MDG implementation:

- **Universality.** The SDGs are applicable to all countries, while allowing for nationally adapted approaches for delivering on common and collective responsibilities.

- **Integrated approach.** SDG implementation needs to consider constraints and linkages—including synergies and trade-offs—across targets; to ensure policy coherence through cross-sectoral collaboration, rather than pursuing SDGs on a goal-to-goal basis; and to cover all three main sustainable development dimensions: social, economic and environmental. The 2030 Agenda calls for transformative changes that will also require a commitment to addressing shared global challenges.
• **Leaving no-one behind**: Emphasis is on covering the ‘last mile’ through SDG targets that aim for full attainment of goals. Eradicating poverty in all its forms and dimensions is an indispensable requirement for sustainable development. To this end, there must be promotion of sustainable, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems.

SDGs can be achieved with strong national leadership backed by global solidarity and collective action. Building a more peaceful, inclusive and sustainable world requires a whole-of-government approach with coordinated action at local, national and global levels. To make the global agenda work, SDGs need to be incorporated into national and local plans, policies, and budgets. This in turn relies on stakeholders recognizing that development pursued through policies that damage the natural environment or widen inequality is unsustainable. International—including South-South—cooperation through sharing best practices, knowledge and technologies will play a key role.

Government action needs to be complemented by support to SDG achievement from Parliaments, civil society, and media to make development inclusive and sustainable. Government also needs to maintain a conducive environment for the private sector and effective channels of interaction with it. In addition, all available sources of finance—domestic and international, public and private—must be optimally drawn on for attaining the SDGs.

2. **Linking the Belt and Road Initiative to the SDGs**

2.1 **The BRI’s potential**

Chinese President Xi Jinping presented the Belt and Road Initiative during visits to Central and Southeast Asia in September-October, 2013. The Government’s “Vision and Actions” document in March 2015 spelled out the initiative’s aim to create shared growth around the world based on the broad concept of connectivity as epitomized by the ancient Silk Road. It defined five priority areas—policy coordination, facilities connectivity, unimpeded trade, financial integration, and people-to-people linkages—and provided implementation details. Conceptually, BRI aims at linking different geographical regions through infrastructure construction (e.g., transport/economic corridors), and bridging China with the rest of the world in varied ways; physically,

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3 The Belt and Road Initiative aims to connect Asia, Europe and Africa along five routes. The Silk Road Economic Belt focuses on (1) linking China to Europe through Central Asia and Russia; (2) connecting China with the Middle East through Central Asia; and (3) bringing together China and Southeast Asia, South Asia and the Indian Ocean. The 21st Century Maritime Silk Road, meanwhile, focuses on using Chinese coastal ports to: (4) link China with Europe through the South China Sea and Indian Ocean; and (5) connect China with the South Pacific Ocean through the South China Sea. The Belt and Road will encompass international transport routes, core cities and key ports to further strengthen collaboration and build six international economic co-operation corridors: the New
financially, digitally and socially. Bilateral cooperation mechanisms include MoUs, implementation plans and roadmaps.

BRI implementation has been progressing well. Outbound direct investment made by Chinese companies to BRI countries reached $12 billion in the first three quarters of 2015, growing by 66% from same period a year earlier (Zhong 2015). Trade (exports plus imports) between China and the BRI countries reached about $1.1 trillion in 2014, a quarter of China's total foreign trade. The BRI will be the world's largest economic corridor covering a population of 4.4 billion and an economic output of $21 trillion in more than 70 countries (Xinhua Net, 2015).

Table -1. Potential Geographical Scope: Countries Interested in Joining the BRI

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asia:</td>
<td>Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam</td>
</tr>
<tr>
<td>South Asia:</td>
<td>Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri-Lanka</td>
</tr>
<tr>
<td>Central and Western Asia:</td>
<td>Afghanistan, Armenia, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, Uzbekistan</td>
</tr>
<tr>
<td>Middle East and Africa:</td>
<td>Bahrain, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi-Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, Yemen</td>
</tr>
<tr>
<td>Central and Eastern Europe:</td>
<td>Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Ukraine</td>
</tr>
</tbody>
</table>

These developments reflect the emergence of China as a major actor in finance and investment. Financial backing of BRI is over US$90 billion, of which US$40 billion alone are from the Government’s Silk Road Fund (SRF). Other institutions include the Asian Infrastructure Investment Bank (AIIB), the New Development (BRICS) Bank (NDB), amongst others. The Asian Development Bank may also support the initiative (Gu, 2015).

A key strength of BRI is that it strategically targets recipient countries’ development gaps. Total demand for infrastructure investments in agriculture, water management,
electric power, communications, transport, buildings, industrial facilities and forestry will reach US$5 trillion through 2020 (WEF, 2013). In the Asia Pacific Region alone, annual low-carbon infrastructure investment needs will reach US$80 billion (World Bank, 2012).

Thus, BRI is a globally important initiative that has the potential to substantially shape the landscape of international cooperation. In addition to direct demand and supply effects, the BRI can contribute to economic growth by acting as an enabler of key gains for partner countries stemming from more actively participating in the global division of labor. These include strengthened backward and forward linkages within the partner country and across borders, enhanced network effects, greater access to supply chains and alleviated financing constraints, complemented by returns to scale driven by access to the much larger global markets, and by benefits associated with inflows of technical and management know-how.

2.2 Main risks associated with the BRI

Managing risks is vital for BRI to achieve sustainable development objectives. BRI-related projects encounter political, regulatory, macro-economic, social and environmental risk factors throughout their lifecycles, which encompass planning, development, construction, operation and termination phases. Risks can materialize at local, regional, national and transnational, but also sectoral level:

<table>
<thead>
<tr>
<th>RISK</th>
<th>SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political/regulatory risks</td>
<td>Political instability; absence of or uncertainty about a legitimate, coordinated institutional, political, legal and regulatory framework with sufficient capacity</td>
</tr>
<tr>
<td>Social risks</td>
<td>Lack of social acceptance or inclusiveness of the project; inadequate regard for labor and working conditions, community, health, safety, and security, indigenous peoples’ rights, cultural heritage, land property rights and rules of voluntary resettlement</td>
</tr>
<tr>
<td>Environmental risks</td>
<td>Environmental degradation, loss of biodiversity, lack of sustainability or efficiency in natural resource management, in adequate pollution prevention</td>
</tr>
<tr>
<td>Macroeconomic risks</td>
<td>Financial instability such as inflation, exchange rate and interest rate volatility; growing financial imbalances; fragility of financial systems</td>
</tr>
<tr>
<td>Reputational risks</td>
<td>Adverse reputation or perception of China and its motives; concerns about international partners’ role</td>
</tr>
</tbody>
</table>

BRI-related activities in recipient countries could lead to the materialization of adverse environmental, social, reputational or sustainability risks. Managing these risks requires coordinated action. Governments need to act in line with recipient countries’ sustainable development needs, generate national and international public goods, and foster a conducive environment for private sector activity to do the same. Responsible business conduct, actively engaging in domestic or regional supply
chains, and reliably creating stable, decent jobs are pivotal for the private sector to contribute significantly to minimizing risks. All stakeholders need to pre-emptively and effectively identify, assess, and contain risks.⁶

To achieve a low-risk environment and act as described above, the BRI can draw on studies on Special Economic Zones (SEZ)⁷ to help realize their potential to play a catalytic role in industrialization, diversification and trade integration in partner countries. A road map to transform Jilin City in northeast China to the first low-carbon SEZ shows how decision-making with a sustainability focus can bring long-term socioeconomic, environmental, health and climate benefits.⁸ BRI projects firmly linked to social and environmental frameworks from the outset can effectively contribute to mitigating risks while delivering positive development outcomes, upgraded infrastructure and structural transformation.

The development impact of investment will depend on both its quality and quantity. In this regard, the role of environmental and social safeguards for infrastructure projects is pivotal for securing the overall vision of BRI. Using the Environmental and Social Framework recently adopted by the Asian Infrastructure Investment Bank (AIIB)⁹ in conjunction with the overall framework provided by SDGs, China could make sustainability a core focus of the BRI. This would have clear benefits for competitive advantage, the initiative’s reputation, and substantially boost the integration of sustainable thinking into the decision-making processes of all BRI stakeholders.

### 2.3 Connecting BRI and SDGs

The BRI is intended as a commercial, rather than geo-political, framework relying primarily on the private sector and reflecting comparative advantages under market rules and international laws. Yet, its success will critically depend on the ability of projects undertaken to bring broad, sustained improvements in economic, social and environmental aspects of human development. It is in this sense that the BRI holds the promise of serving as a platform for sustainable economic growth, enhanced regional cooperation and coordination, and as an accelerator for achieving the SDGs. It represents an opportunity to generate development dividends tied to market-based investments and economic growth initiatives, while promoting inclusiveness and win-win cooperation. It can help create sustainable development gains in the social and

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⁶ For further references on cross-border investments an intra-regional connectivity, initiatives such as the Master Plan on ASEAN Connectivity (MPAC) or the ‘African Strategic Infrastructure Initiative Managing Transnational Infrastructure Programmes in Africa – Challenges and Best Practices’, by the World Economic Forum can provide further input.


⁸ To improve development outcomes, SEZs must be embedded in a broad development framework that optimizes connectivity to the rest of the national economy without imparting negative externalities on it; and envisages unified treatment for the entire country in the long run.

⁹ AIIB has confirmed its commitment to international standards in financing and social and environmental safeguards. It signed cooperation agreements on this with the World Bank, Asian Development Bank, European Investment Bank, and the European Bank for Reconstruction and Development in 2016. It envisages applying common social and environmental standards and safeguard policies and ensuring common access to accountability mechanisms with these institutions in co-financing.
environmental spheres, and generate global public goods, thereby strengthening the quality and sustainability of growth.

The five priorities of BRI have a marked overlap with the global sustainable development framework, and the associated set of SDGs. Moreover, Agenda 2030 complements the BRI by highlighting sustainability—a critical aspect for BRI’s credibility, which will be boosted by being seen as an important instrument for furthering sustainable human development across a range of countries. In today’s globalized world, economic and social linkages inevitably transcend individual countries, and environmental sustainability is by definition a regional and global, as well as national, issue. SDGs inherently encompass all these aspects. Thus, they naturally round out the long-term vision of sustainably enhancing integration of economies and societies along the ancient Silk Road.

The BRI’s intrinsic alignment with Agenda 2030 can make it more than an initiative. It can be a crucial coordinating device for drawing up infrastructure development plans—critical, because the cost of misallocating resources in infrastructure investment can be huge. BRI can provide the framework for a large set of countries to organize trade, investment, social and environmental interaction with the greater good and long-term human development in focus. The SDGs are a succinct statement of these overarching objectives that need to be coordinated, since single-country optimization of interrelated goals is suboptimal, and at times impossible. Such coordination is also a centerpiece of BRI implementation.

In sum, linking BRI and SDGs is a win-win strategy. It holds the promise of filling SDGs with local content and enhancing their coordination, opening the way to BRI projects positively impacting critical social issues such as inequality and inclusiveness. This linkage can also move BRI toward attaining a critical mass by encompassing all key aspects of human development, ensuring that it is seen by all partners to transcend short-term commercial or political interests, helping it ‘win the hearts and minds’ of other countries. Implemented this way, the BRI can also enhance China’s image as a leading country in South-South Cooperation that places partner country development above other considerations and supports countries in adapting to the shifting patterns of multilateral development financing, ODA, and other funding sources.

3. Tangible opportunities offered by aligning the BRI and SDGs

Aligning the 2030 Agenda and the BRI can generate many strengths and opportunities, most notably in the following areas:

- **China as a responsible player in global development cooperation**

China is a rising power, reflected in its increased global engagement at various levels. Throughout its various bilateral and multilateral activities, China has strategically aimed at filling existing gaps within intergovernmental structures in a wide range of policy areas, guiding the international development architecture toward finding durable
solutions. However, China’s increasingly proactive international role has elicited criticisms and at times led to tensions. The BRI as a key China-led initiative has also created enthusiasm as well as some concerns. The alignment of the 2030 Agenda with the BRI can contribute to building China’s profile as a leading and responsible player in global development cooperation, with the United Nations as a partner. This would help alleviate geopolitical tensions and strengthen international cooperation.

- **Enhanced ability of the BRI to address environmental and social risks**

  Environmental and social risks can arise at the community level, including the vulnerability of individuals and social groups, but also at country, regional or global level, notably in the case of climate change and other transnational or global issues (e.g., violent extremism). Large BRI infrastructure projects will need to be implemented using a risk-informed decision-making process to contain social and environmental risks which could impact disproportionately on disadvantaged or vulnerable groups. The SDGs can serve as a framework of orientation and evaluation to BRI-associated decision making at all levels, by providing orienting principles to planning, implementation, monitoring and accountability. Proper evaluation can help ensure that adverse social and environmental impacts are minimized and beneficial opportunities for human development are utilized.

- **Policy coherence along the BRI, with strengthened institutions and governance**

  The BRI aims for win-win situations, engaging with different stakeholders at bilateral, multilateral and local levels. Strong institutions and mechanisms informing sound political decision-making in all BRI countries are fundamental to guarantee a mutually beneficial outcome. Aligning the BRI and SDGs can enhance the cross-regional coherence of BRI initiatives with the locally adapted SDG agenda while improving institutional capacities to maximize the BRI’s sustainable development impact.

- **Effective dialogue facilitated among stakeholders to enhance communication**

  Formal and informal arrangements for dialogue between governments, as well as among private and public actors representing central government and local communities are critical for effectively engaging stakeholders. As a global, multilaterally adopted agenda, the SDG policy framework can facilitate dialogue and enhance communication on the BRI, and can also help effectively align different national development strategies with global and regional development goals. Building strong ties in and among BRI countries ensures buy-in and commitment to common sustainable development objectives.

- **Building social cohesion: addressing risks of migration flows, demographic changes**

  Social cohesion depends on the nature and extent of social and economic divisions within society at both the micro and macro levels. It is a fundamental indicator of social integration both in the national context and on a regional scale. Throughout the recipient countries, BRI implementation can significantly affect host societies’ social
structure. The SDGs can provide a framework for shaping interventions to enhance the benefits of the BRI by contributing to sustainable improvements in equity and social sustainability.

- **Monitoring and evaluation**

  Monitoring and evaluation provides feedback on progress, results and lessons learnt. As an innovative and ambitious regional development strategy, BRI offers the opportunity to maximize development outcomes. But policymakers and the public will need to assess whether, to what extent, and at what cost the BRI is meeting its stated objectives. This is where a suitably chosen subset of SDG indicators can play a particularly useful role. Since these were designed for covering all main aspects of sustainable human development, they can help monitoring, evaluation and assessment of the effectiveness and efficiency of BRI implementation in the human development space. They can also provide a rich and timely evidence base for making further refinements in BRI strategy and implementation modalities, and for informing the public of progress under the BRI in a credible manner.

4. **The way forward**

4.1 **Facilitating BRI implementation through UNDG’s MAPS approach for SDGs**

   The support offered by the UN development system to countries’ SDG implementation efforts is guided by the UNDG MAPS (Mainstreaming, Acceleration and Policy Support) approach. It aims to help governments anchor the Agenda at national and local levels in their plans and strategies (‘mainstreaming’); target resources at root bottlenecks and interventions that leverage progress across the SDGs (‘acceleration’); and make the thematic expertise housed in different UN entities available in an effective and coherent way (‘policy support’). MAPS is an approach which can be adjusted to each development context and set of challenges faced. Supporting partnerships, the availability of quality data and analysis, and accountability are themes which cut across all three components.

   A number of tools are available to support Member States to put MAPS into action, notably general and country-specific guidelines, methodologies for in-depth analysis of bottlenecks and for adapting SDGs to national circumstances, as well as descriptions of financing opportunities, risk mitigation, institutional dynamics, and crisis response.

4.2 **UNDP’s strategic role in SDG implementation as a reliable partner for BRI countries**

   China has been championing the voluntary national reviews process, and was one of the 22 countries that participated in the first round of discussions in July 2016.
Moreover, China’s G20 Presidency this year put development at its core, marking a crucial achievement with the adoption of the Action Plan to further align G20 work with the 2030 Agenda for Sustainable Development. This signifies an unprecedented long-term commitment to advance sustainable development.

The UN system, and in particular UNDP working with others in the UN Development Group, has been supporting China for more than three decades in its endeavors to achieve its development aspirations. This collaboration has brought some great results, and forms the basis for expecting the alignment of the implementation of the BRI with the SDGs to not only accelerate the implementation of the SDGs but also maximise the BRI’s positive impact and long-term success.

UNDP is mandated to support the implementation of the 2030 Agenda. It has the analytical capability, the conceptual framework, and substantive presence on the ground in over 170 countries to make it happen. UNDP has ample experience in policy formulation, implementation, and monitoring of progress toward attaining global development goals. It is also among the leading players in implementing projects financed by environment-related vertical funds such as GEF, GCF, etc.

More broadly, the UN system can bring the necessary depth, global viewpoint, and practical knowledge to facilitate effective and efficient SDG implementation, as well as play an international coordination role. The UN supports national and global efforts to achieve the SDGs, notably in aligning national plans with SDGs; localizing SDGs in sub-national plans and budgets; supporting national level monitoring and reporting; and assessing gaps in data availability and statistical capacity. Finally, the UN system can play a productive complementary role in the social and environmental area to that in financing played by global and regional IFIs and bilateral Chinese aid.

### 4.3 Specific policy recommendations for China and the other BRI countries

Based on the considerations outlined above, this scoping paper puts forward the following specific policy recommendations for implementing the BRI:

- **Seize the synergies stemming from aligning the BRI and SDG implementation to reap substantial development benefits.** Devise a transparent governance mechanism for implementing BRI to reassure all stakeholders and the rest of the world that the key objective is furthering sustainable human development.

- **Work on adapting SDGs to national needs early on in each partner country, keeping the context of BRI implementation in mind.** This will help identify (i) prioritization; (ii) groups of Goals that substantially interact/affect each other: (iii) optimal sequencing.

- **Acknowledge that a “dirty development pathway”—involving high pollution, carbon emission and biodiversity loss in the initial stage followed by cleaning up later—is not simultaneously available for newly emerging/developing countries, and adapt policies accordingly.** The ethical imperative to allow these countries to...
enter a phase of sustained development implies that more developed countries need to ensure that advanced technologies and know-how is made available to countries now catching up. This needs to happen in a market-conform manner, without creating disincentives for invention and innovation. One way to do this is to assign a significant part of available development aid to cost-effectively purchase rights for these technologies, and make them available on a concessional basis, with the degree of concessionality inversely related to the attained level of development (as measured by the Human Development Index, or per capita PPP GDP levels).

- Identify and quantify the impact of joint effects (stemming from externalities, public goods, network effects, increasing returns to scale) at country, regional and global levels—including dynamic feedback loops set in motion by BRI activities that amplify either positive or negative aspects of development. Define a way for keeping these in focus and for jointly dealing with them in a timely manner by devising channels and measures that can reinforce or contain them, as needed for ensuring sustainable development. This involves:
  - Timely monitoring through relevant indicators to “know where we are”;
  - Finding the binding constraints—which may differ across countries/regions;
  - Harnessing geographical flows of knowledge, technology to apply efforts to those that offer the highest returns if eliminated;
  - Identifying instances where technological leapfrogging is feasible and brings substantial net benefits; then find ways to make it happen in a market conform way that does not create adverse incentives, adverse selection or moral hazard. Financing to facilitate this should involve a blend of loans and grants, recognizing that this can be a better investment of aid resources than some traditional ODA uses. Private companies’ corporate social responsibility aspirations can also provide a notable positive contribution.

- Recognize and capitalize on the direct synergy between SDG 17—calling for international cooperation to realize Agenda 2030—and the BRI. BRI is a framework for international cooperation for (currently) about 70 countries. It naturally lends itself to collective action and cooperation on jointly implementing activities that hold the promise of significantly furthering human development. Efforts to concretize the synergies at the level of individual BRI activities and to inject sustainability into those activities can have large payoffs.

- Identify key avenues for South-South Cooperation (SSC) in BRI implementation. Focus should be on prioritizing aspects that best further SSC. Specific examples include:
  - Harmonization and coordination of regulation and policies with a view to lowering risks for foreign investors while reducing their rent-seeking behavior through the elimination of regulatory/policy arbitrage opportunities,
and allowing capital to be allocated to activities offering the highest long-run returns.

- Make BRI a credible and effective framework for common carbon pricing reflecting true costs of carbon emission for mankind. A commitment from BRI countries as a block could provide the critical mass for reaching a tipping point on this. It could significantly contribute to reversing the global dynamics of containing climate change and markedly tip the balance toward sustainable development.

The points above are in line with the Addis Ababa Agenda for Action’s call for placing the private sector at the center of efforts to attain sustainable development and marshal affordable financing for it. In particular, getting carbon pricing right in a credible manner, expected to remain effective for good would (i) rapidly reduce waste; (ii) considerably reorient investment and financing flows away from sectors and activities known to harm the planet; and (iii) would add a strong self-reinforcing element to quantitative targets that rely on governments to enforce them and lack micro-level enforcement mechanisms.

These steps jointly would contribute greatly to fulfilling the Agenda 2030 promise of leaving no one behind. They would also position the BRI as the framework for many countries adapting to the “new normal”: developing through adapting their structure of production to gain efficiency and productivity in a sustainable manner. BRI would contribute by setting incentives right; eliminating infrastructure bottlenecks that contribute to waste and blocked opportunities; creating regional/global public goods that the private sector tends to undersupply; helping countries capture gains from enhanced infrastructure corridors and from trade; and opening up opportunities for and fostering lucrative inventions and innovative activities while enhancing social stability and environmental sustainability.

5. Conclusion

The role of China in development governance is the subject of intense debate. Today, the country is an increasingly responsible player and performs a major role in actively supporting, participating and shaping the Agenda 2030. Without any doubt, the direction of its future development and the degree of its engagement to sustainable development outcomes will have a significant impact on the entire international community.

The Belt and Road Initiative has emerged as an innovative and ambitious regional development strategy and could be a powerful platform for economic growth. The BRI offers the opportunity to maximize development outcomes, but it has to ensure that its impact is positive and fosters long-term sustainable outcomes. Managing risks is vital for BRI to achieve sustainable development objectives.

How to ensure and maximize the positive impact of BRI? The paper highlighted areas where tangible opportunities for gains exist from aligning BRI and SDG implementation,
and mentioned where UNDP can effectively assist, including through the use of SDG indicators to provide observable data for monitoring and evaluation of BRI implementation.

In sum, the role of BRI and SDGs as mutual accelerators in implementation holds the promise of attaining inclusive and sustainable development outcomes along the BRI. It also represents a chance to generate greater development dividends tied to market-based investments and economic growth initiatives.

Therefore, the synergies stemming from aligning the BRI and SDG implementation provide the opportunity to:

- Enhance the full recognition of China as an increasingly responsible player in global development cooperation,
- Contribute to the ability of the BRI to address environmental and social risks,
- Strengthen policy coherence along the BRI countries,
- Further effective dialogue facilitated among stakeholders and intra-regional cooperation,
- Enhance communication and the exchange of knowledge and ideas,
- Build social cohesion and human development, and
- Bolster development planning, implementation, monitoring and accountability.

Looking ahead, this alignment would mean a global step toward achieving sustainable human development, and help position China as global reference in ensuring innovative development outcomes along a development path of mutual benefit.
References


SCOPING PAPER II

Building a shared vision for the BRI and the SDGs

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Executive Summary

Asia is one of the most prosperous regions in today’s world in terms of economic outlook, yet is still highly heterogeneous with regards to socio-economic development. This can be partly explained by variations in infrastructure development, which is considered an effective means to sustainable development by driving economic growth and its spill-over effects in public welfare. One of the major challenges faced by the growing demand for infrastructure development is financing, on which China has played a very proactive role in seeking possible solutions. More recently, China initiated the Belt and Road Initiative (BRI), which building on China’s experience, provides additional opportunities to boost cross-regional economy by bringing infrastructure development and possible financing.

International experiences have shown that policy/developing finance institutions play a vital role in financing infrastructure development. This is the same case with China, where developing finance institutions (DFIs) – through its innovative financing modalities (e.g., “packaged loans”) and in response to the call of the top-level development planning (e.g., 13th Five-Year Plan) – has made significant contributions to China’s infrastructure development.

Meanwhile, the BRI has fully recognized the great potential and demand for infrastructure investment in Asia by advocating infrastructure connectivity as a priority area. It provides an inclusive platform for coordination mechanisms that bring together multiple stakeholders in joint financing beyond traditional means. Through attempts to achieve connectivity physically, economically, socially, and digitally, the BRI holds substantial prospects to provide positive public goods in Asia.

Thus, the BRI – through its approaches and operations - attempts to promote win-win outcomes for both China and other participating countries in infrastructure, but much more. Broadly speaking, the BRI is in line with the purposes and principles of the UN Charter. Through the BRI, more comprehensive, integrated regional plans will be developed that are fully aligned with the 2030 Agenda for Sustainable Development. In this regard, BRI not only embraces and echoes the Sustainable Development Goals (SDGs), but also works very much in line to implement areas that the SDGs prioritize.

In this context, the BRI has achieved a series of important early-stage results since its official announcement two years ago. However, major challenges and risks facing the implementation of the BRI exist, consisting of political risks, economic and financial risks, environmental and social risks.

To tackle these, several suggestions are proposed. First, it is strongly encouraged that relevant countries strengthen partnership and policy coordination with a view to consult and coordinate their development visions/strategies through seeking complementary advantages and interest of convergence. Second, to promote varied modalities of co-financing is vital to ensure sustainable infrastructure financing across the BRI countries, and will also create a multi-participatory atmosphere for enjoying shared interest. Third, to make infrastructure investment more sustainable, green finance and corporate social
responsibility can be promoted to look out for project impacts particularly in social-environmental domains and through engagement with local communities – two indispensable pillars of sustainability.
Introduction

Asia is one of the most prosperous regions in today’s world in terms of economic outlook, with significant contributions from major emerging economies globally\(^\text{10}\). The continent, however, is still highly heterogeneous with regards to socio-economic development, with major differences in economic growth patterns, processes of industrialization, natural resource management and social welfare. This remains a core challenge to further development of the entire region.

Variations in infrastructure development may help explain in part the unbalanced development in Asia. Many Asian economies lack sufficient infrastructure. As projected by the Asian Development Bank (ADB), East Asia and the Pacific needs a total of US$4,670 billion for infrastructure between 2010 and 2020 (Asian Development Bank Institute: 2009). Therefore, significant infrastructure spending will be needed to fund projects that aim at unleashing the full growth potential of the region, such as those that target clean-energy technologies, transportation, housing, communications and water facilities. The contribution of infrastructure to development has been well-documented. Infrastructure can both raise production capacity and overall productivity of a country, contributing to a higher GDP. Calculation has been done, suggesting that 10% more infrastructure could lead to 0.9% more output in the long run with an overall economic return of 17%\(^\text{11}\) (Swiss Re & Institute of International Finance: 2014). This relates to both direct and indirect benefits. The latter refers to household welfare, for instance, as infrastructure may impact the demand and supply of public services (e.g., education, healthcare), makes available alternative sources of livelihoods.

One of the major concerns surrounding the growing demand for infrastructure development is financing. There is a growing gap in infrastructure investment, particularly in emerging and developing economies, which has been estimated to reach at least US$ 1 trillion annually\(^\text{12}\). Confronted with this challenge, China has played a very proactive role in seeking possible solutions. By experimenting with a number of different financial modalities, China has been able to foster domestic infrastructure development with leaps and bounds in recent years. Moreover, China is taking a lead in financing infrastructure projects beyond China, through newly-established multilateral financial institutions, such as the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB). This, undoubtedly, will supplement existing sources of finance for infrastructure and sustainable development in general.

Adding to the pool of resources, the Belt and Road Initiative (BRI) initiated by China, provides additional opportunities to boost cross-regional economy by bringing infrastructure development and possible financing. More importantly, the BRI serves as an important platform for south-south cooperation, one crucial aspect of which points to policy coordination that can have far-reaching consequences in joint financing efforts.

\(^{10}\) Major emerging economies such as China, India, Indonesia, Saudi Arabia etc.


Against this backdrop, the paper attempts to provide a better understanding of the BRI in terms of its operations and mechanisms, through insights and lessons learnt from infrastructure development – one of the five priorities of the BRI. In this regard, we analyzed experiences of China and the world in terms of infrastructure development trajectory, as well as policy and financial frameworks, with the hope to provide useful information for overall BRI implementation moving forward. Ultimately, to promote sustainable growth and financing in a more effective way requires an overarching framework of commonly accepted principles, such as the Sustainable Development Goals (SDGs). Such anchoring could help fully realize the development gains of the BRI, including economic growth, social inclusiveness, cultural exchange as well as environmental protection, through both bilateral and multilateral channels.

1. Infrastructure investment as an effective means to Sustainable Development: experiences of China and the world

This chapter argues that investing in infrastructure construction, which is not only highlighted by China, but also by other major economies (both developed and developing) around the world, is and will be one of the most effective means to promote sustainable development through economic growth and other spill-over benefits.

1.1. International Experiences of Policy/Developing Finance Institutions and Infrastructure Investments

International experiences have shown that policy finance institutions play a vital role in financing development. According to a study of the World Bank (José de Luna-Martínez & Carlos Leonardo Vicente: 2012), development banks (DBs) have been established in former socialist economies, advanced capitalist countries and emerging economies to finance the construction of roads, highways, energy plants, dams, and telecommunication infrastructure; foster incipient industries and small and medium enterprises (SMEs); and provide financial services to low-income households. In emerging market economies, for instance, DBs usually constitute the main source of long term credit, loan guarantees, and other financial services in the infrastructure, housing and agriculture sectors. Even in some advanced economies, where private financial institutions and capital markets satisfy the financial needs of firms and individuals, several DBs continue to play an active role in providing financial services to the strategic sectors of the economy. DBs have been an important instrument of governments to promote economic growth by providing credit and a wide range of advisory and capacity building programs to households, SMEs, and even large private corporations, whose financial needs are not sufficiently served by private commercial banks or local capital markets. More remarkably, during the global financial crisis of

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13 Also according to the study, 53% of DBs surveyed are institutions with specific policy mandates. They include institutions that were specifically established to support the agriculture sector (13% of all DBs), SMEs through their lending, guarantee or advisory services (12%), export and import activities (9%), housing (6%), infrastructure projects (4%), local governments (3%), and other sectors (6%).
2008-2010, most DBs played a countercyclical role by providing credit to private firms that were temporarily unable to access funding from private commercial banks or capital markets. Between the end of 2007 and the end of 2009, the combined loan portfolio of DBs increased from $1.16 trillion USD to $1.58 trillion USD. In nominal terms, this 36% increase, in just three years, is well above the 10% increase in private bank credit for the countries surveyed during the same period.

Globally, DBs play a very critical role in making up for market failure, coordinating between the government and the market in allocation of financial resources, and improving efficiency of financial operations. This implies that coherence between development planning and investment outcomes determines long-term benefits that can be derived from infrastructure projects (Rothengatter: 2000). Strategic guidance for development objectives and resource allocation has to be aligned with the decision making parameters and coordination mechanisms for public investment selection and prioritization (Charbit: 2011; Mizell & Allain-Dupre, 2013). As demonstrated by the examples below, diverse institutional frameworks and policy coordination mechanisms act as key catalysts for infrastructure development that are targeted at priority sectors. It is worth noting that Infrastructure investments require different levels of governance and coordination, ranging from local, national, regional to international, which is particularly applicable to cross-regional infrastructure projects. This implies that the planning process needs to undergo different legal authorities, political structures, public accountability, as well as fiscal responsibilities and leverage (CHARBIT & GAMPER: 2014).

Infrastructure investment is in the spotlight of major developed and developing economies around the world. The U.S. government attaches great importance to infrastructure investment with a special focus on improvement of social economy and environmental protection, especially during when Democratic Party is in office. In its early stage of the Westward Movement, both the federal government and state government focused on development of transportation. In Canada, infrastructure investment accounts for around 30% in total investment in development of new districts, and special attentions are given to economic practicality of the projects and other supporting development. The Japanese government attaches great importance to infrastructure development, making it a national policy. Rural infrastructure of South Korea was very backward and income gap between urban and rural residents was quite large, and the country has implemented mass construction of rural construction since 1970s and successfully reduced urban and rural income gap. Recognizing its extensive infrastructure needs, India government has called for $1 trillion in infrastructure spending from 2013 to 2017. Priorities include three airports, two ports, an elevated rail-corridor in Mumbai, and almost 6,000 miles of new roads. Plans for $120 billion worth of road-widening projects are also outlined, together with $60 billion to be invested in India’s ports by 2020. PWC:2013
1.2. China’s experience: Basic industry and infrastructure investment as key drivers for economic growth and national development

China's basic industries and infrastructure\(^{14}\) have been significantly and rapidly strengthened through large-scale investment and construction, which provides a solid foundation for the development of national economy and improvement of people's life. According to a report by China’s National Bureau of Statistics (China’s National Bureau of Statistics: 2008)\(^{15}\) in 2009, in the past 60 years, investment in basic industries and infrastructure construction in China has witnessed rapid growth. From 1954 to 2008, total investment in national basic industries and infrastructure investment reached 5,452 billion USD (36.5304 trillion RMB)\(^{16}\), with an average annual increase of 13.7%; 2.4 % higher than the average annual increase of GDP during the same period.

Major progresses are highlighted as:

- The supply ability of agriculture, energy, raw material has risen to a new level.
- Nationwide network systems have been formed in transportation, post and telecommunications sectors.
- Infrastructure in water conservancy, environment, education, culture, health and sports facilities have been significantly strengthened.
- A large number of major projects have been completed or pushed forward, including but not limited to: Three Gorges Project, Natural Gas Transmission from West to East China, South-to-North Water Diversion Project, Qinghai-Tibet Railway, Beijing-Shanghai High-Speed Railway, etc (see ANNEX I).

\(^{14}\)According to website of China’s National Bureau of Statistics, basic industries and infrastructure include agriculture, energy industry, basic raw material industry, transportation, post and telecommunications, water conservancy, public facilities management, education, culture, health and sports. Basic industries and infrastructure are lifeblood of national economy. These industries and infrastructure support operation of social economy and provide public service facilities for social production and people’s life, which play an important role in raising a country’s social and economic development level and competitiveness.


\(^{16}\)Exchange Rate: 1 USD=6.7 RMB
### Table 1. Gross Statistics of Basic Industries & Infrastructure Investment from 1954 to 2008

<table>
<thead>
<tr>
<th>Sub-Industries</th>
<th>Total Investment Volume (Trillion RMB)</th>
<th>Average Annual Increase Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Water Conservancy</td>
<td>2.0531</td>
<td>10.6%</td>
</tr>
<tr>
<td>Energy</td>
<td>10.0945</td>
<td>14.7% (15.8% in electricity sector)</td>
</tr>
<tr>
<td>Transportation</td>
<td>8.9988</td>
<td>13.4%</td>
</tr>
<tr>
<td>Postal &amp; Telecommunications Services</td>
<td>2.2535 (from 1979-2008)</td>
<td>26.7%</td>
</tr>
<tr>
<td>Environment &amp; Public Facilities Management</td>
<td>4.8567 (from 1979-2008)</td>
<td>31.5%</td>
</tr>
<tr>
<td>Education, Culture Health, Sports</td>
<td>2.8938</td>
<td>11.4%</td>
</tr>
</tbody>
</table>

According to data released by China’s National Commission on Development and Reform (NDRC), in 2015, the growth rate of infrastructure investment in China totals 17.2% (with a year-on-year growth of 6%), and contributes 29.4% of total growth in national investment sector. Infrastructure investment and construction are also highly prioritized in the country’s 13th Five-Year Plan endorsed in March 2016, and the fundamental guideline is to make infrastructure the leading pillar in economic and social development, through expanding the space of infrastructure and improve infrastructure network that is safe and efficient, smart and green, as well as interconnects with each other. During the first half of 2016, China’s investment volume in infrastructure totaled 732.6 billion USD (4908.6 billion RMB) (National Development and Reform Commission of China: 2016) with a year-on-year growth rate of 20.9%, 3.7% more than growth rate of last year (National Development and Reform Commission of China: 2016)

Basic industry and infrastructure investment have acted as the key driving force for China’s rapid economic growth and social development, through critical aspects as suggested below:

- promoting market integration through improving transportation connectivity;
- accelerating rural development, industrialization & urbanization, especially in under-developed region in the country’s central, western, northeast regions;

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17 Same as Note 6

✓ creating investment opportunities and attracting domestic and foreign capital;
✓ upgrading economic structure by optimizing traditional industries and developing new & high-end industries;
✓ mobilizing human resources and creating employment opportunities by extending industrial chains, and developing small & medium enterprises;
✓ improving people’s livelihood by improving public services.

1.3. Building on lessons learnt: The role and “packaged loans” approach of China’s Developing Finance Institution

What are the lessons that can be shared from China’s domestic infrastructure financing policies? The example of China’s developing finance institutions points to the potentials of policy financial institutions in fostering development outcomes and bridging development gaps.

China’s developing financial institutions provides medium to long term financing facilities that serve China’s major long-term economic and social development.

One of the most effective and innovative approach in China’s developing finance institutions financing is the model of “packaged loans” in infrastructure and public utility projects, which are usually characterized as long in construction cycle, low in return and insufficient in repayment cash flow. They makes use of “packaged loans” by re-integrating the future cash flows of loans to different projects, which therefore have different terms, risks, cash flows and returns. Such approach expands their products from infrastructure and utility construction to broader fields of business in China’s urbanization process.
BOX 1 – Developing finance institutions’ role in promoting development in Jiangsu Province

Development financial institutions’ role in the Suzhou Industrial Park of Jiangsu Province, also as cooperation between Chinese and Singaporean government, is a case of successful use of packaged loans. Developing finance institution started financing the Park’s construction in 1999, and its first loan went to dredging project of Jinji Lake within the Park, rather than any other industrial projects. They believed that although Jinji Lake’s dredging project would produce no direct economic returns, it would improve landscape and environment both on land and in water, so as to optimize the Park’s soft investment environment to attract more capital in the long term. Subsequently, they continued to finance the Park’s construction. Jinji Lake’s dredging project produced positive spill-over effects on real-estate market around the lake by increasing its price and sales volume. Besides, a Central Business District around Jinji Lake is taking shape as more and more domestic and international enterprises settle in the Park, making it outstanding in the Yangtze River Delta.

To sum up, China has made remarkable progress in infrastructure investment during the past several decades. This is attributed to a variety of factors, including the substantial support provided by policy or development financial institutions. In fact, the proactive role played by these institutions responds actively to the call of the top-level policy planning; namely the 13th FYP, which identifies priority areas for development and investment, as well as resource mobilization strategies that also sketch the engagement of diverse stakeholders. These inter-related causes have shaped China’s trajectory of infrastructure development. It also has implications for the implementation of the BRI, where cross-border infrastructure construction would, in many ways including financially and institutionally, need more coordinated efforts to deliver development outcomes.

2. What is BRI and how does it work?

Through infrastructure connectivity, the BRI can offer much more, by integrating the region not only physically, but also economically, socially and digitally. Meanwhile, the BRI provides a variety of mechanisms to achieve such outcomes.

First, the BRI provides an encompassing platform for coordinating development strategies of the participating countries. The primary purpose is to seek complementary advantages, interests of convergence and common visions on the basis of voluntary participation, equal consultation, as well as full understanding of national development visions of countries along the BRI. This can be achieved by strengthening bilateral cooperation through multi-level and multi-channel communication and consultations, e.g., the signing of cooperation Memorandum of Understandings (MOUs) or plans. Moreover, bilateral projects can be set up through
joint working mechanisms that require drawing up joint implementation plans and road maps, and additionally, making use of existing bilateral coordinating mechanisms (e.g., joint committees) which take charge of project implementation.

Second, in addition to bilateral collaboration, the BRI is an inclusive, open and multilateral process involving diversified stakeholders of the region, including major powers and international and regional institutions. Instead of establishing any extra or alternative regional/multilateral mechanisms, existing multilateral cooperation mechanisms can be further applied to facilitate easy entrance to the BRI. It is also encouraged to give full play to the role of existing international forums and exhibitions at regional and sub-regional levels to promote exchanges and communications. Moreover, the BRI highlights the role of the market and welcomes participation of economic agents, including the private sector and the general public, who are willing to be part of the regional economic cooperation and exchanges.

Third, the BRI creates additional financing opportunities for development in strategic sectors, including infrastructure and industrial upgrading, through varied means of co-financing on infrastructure projects (e.g., bilaterally or multilaterally). According to research by the Asia Development Bank (Asia Development Bank: 2009), from 2010-2020, 8.28 trillion USD is needed for infrastructure investment in Asia in order to support the current level of economic growth. However, such needs could not be met alone either by financing individual states, or through individual existing multilateral development institutions. Cooperation, especially co-financing on infrastructure programs/projects among the United Nations, World Bank, Asia Development Bank, European Bank for Reconstruction and Development, Asia Infrastructure Investment Bank, as well as any other development financial institutions, will generate and enlarge shared interests among international communities.

3. Sustainable Development: A common vision aligning SDGs and the BRI across Asia and beyond

Through its approaches and operations, the BRI attempts to promote win-win outcomes for both China and other participating countries in infrastructure, but much more. Broadly speaking, the BRI is in line with the purposes and principles of the UN Charter. It upholds the Five Principles of Peaceful Coexistence: mutual respect for each other's sovereignty and territorial integrity, mutual nonaggression, mutual noninterference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence. Moreover, through its approaches to prioritized development areas, the BRI has a lot of potentials to contribute to the SDGs (Table 1).

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19 Such as the Shanghai Cooperation Organization (SCO), ASEAN Plus China (10+1), Asia-Pacific Economic Cooperation (APEC), Asia-Europe Meeting (ASEM), Asia Cooperation Dialogue (ACD), Conference on Interaction and Confidence-Building Measures in Asia (CICA), China-Arab States Cooperation Forum (CASC), China-Gulf Cooperation Council Strategic Dialogue, Greater Mekong Subregion (GMS) Economic Cooperation, and Central Asia Regional Economic Cooperation (CAREC), etc.
As addressed by Ms. Shamshad Akhtar (Shamshad Akhtar: 2016), Executive Secretary of UNESCAP, through the BRI, more comprehensive, integrated regional plans will be developed that are fully aligned with the 2030 Agenda. In this regard, BRI not only embraces and echoes the SDGs, but also works very much in line to implement areas that SDG prioritizes, as discussed in previous chapters. BRI and the SDGs work towards the sharing vision that greater economic integration, trade and investment facilitation, infrastructure connectivity will bring about positive social-economic and environment outcomes, thus contributing to sustainable development along the BRI countries.
Table 2 BRI\textsuperscript{20} and the SDGs: Shared Visions and Interests

<table>
<thead>
<tr>
<th>Principles</th>
<th>Belt and Road Initiative</th>
<th>Sustainable Development Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underscoring the mindset of peace, inclusive development and common prosperity</td>
<td>BRI is inclusive and advocates tolerance among civilizations, respects the paths and modes of development chosen by different countries. The BRI supports dialogues among different civilizations on the principles of seeking common ground while shelving differences and drawing on each other's strengths, so that all countries can coexist in peace for common prosperity.</td>
<td>SDGs are determined to foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.</td>
</tr>
<tr>
<td>Inclusive process involving multi-stakeholders, rather than exclusive and zero-sum way; transnational partnership among governments, enterprises, civil society, multilateral and regional organizations as an indispensable tool for implementation</td>
<td>BRI is open for cooperation. It covers, but is not limited to, the area of the ancient Silk Road. It is open to all countries, and international and regional organizations for engagement, so that the aim is to ensure that concerted efforts and outcomes will benefit wider areas.</td>
<td>SDGs propose that all countries and all stakeholders, acting in collaborative partnership, will implement this plan, and is determined to mobilize the means required to implement this Agenda through a revitalised Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people.</td>
</tr>
</tbody>
</table>

\textsuperscript{20} See Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road released by Chinese National Development and Reform Commission, Ministry of Foreign Affairs and Ministry of Commerce on March 28th 2015 for details
To approach economic growth & regional economic cooperation;

BRI is designed to uphold the global free trade regime and the open world economy in the spirit of open regional cooperation. It is aimed at promoting orderly and free flow of economic factors, highly efficient allocation of resources and deep integration of markets; encouraging the countries along the Belt and Road to achieve economic policy coordination and carry out broader and more in-depth regional cooperation of higher standards; and jointly creating an open, inclusive and balanced regional economic cooperation architecture that benefits all.

The SDGs place great emphasis on sustained economic growth, through cooperation and partnerships.

To enhance and prioritize social concerns and people’s wellbeing;

BRI is committed to meeting the interests of the world community, and reflecting the common ideals and pursuit of human societies, and support localized operation and management of Chinese companies to boost the local economy, increase local employment, improve local livelihoods.

SDGs are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment.

To address environmental concerns and climate change.

BRI calls for conducting investment and trade, increasing cooperation in conserving eco-environment, protecting biodiversity, and tackling climate change, and joining hands to make the Silk Road an environment-friendly one. It also, and proposes that efforts should be made to promote green and low-carbon infrastructure construction and operation management, taking into full account the impact of climate change on the construction.

SDGs are determined to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent actions on climate change, so that it can support the needs of the present and future generations.

<table>
<thead>
<tr>
<th>Goals and Approaches</th>
<th>Reduction of poverty through economic growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRI seeks to increase exchanges and cooperation between nongovernmental organizations of countries along the Belt and Road, organize public interest activities concerning education, healthcare, poverty reduction, biodiversity and ecological protection for the benefit of the general public, and improve the production and living conditions of poverty-stricken areas.</td>
<td>Goal 1. End poverty in all its forms everywhere; Goal 10. Reduce inequality within and among countries</td>
</tr>
</tbody>
</table>
### Infrastructure connectivity

BRI recognizes that facilities connectivity is a priority area for implementing the Initiative. On the basis of respecting each other's sovereignty and security concerns, countries along the Belt and Road should improve the connectivity of their infrastructure construction plans and technical standard systems, jointly push forward the construction of international trunk passageways, and form an infrastructure network connecting all subregions in Asia, and between Asia, Europe and Africa step by step.

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

### Energy modernization

BRI advocates promoting cooperation in the connectivity of energy infrastructure, work in concert to ensure the security of oil and gas pipelines and other transport routes, build cross-border power supply networks and power-transmission routes, and cooperating in regional power grid upgrading and transformation.

BRI also advocates to increase cooperation in the exploration and development of coal, oil, gas, metal minerals and other conventional energy sources; advance cooperation in hydropower, nuclear power, wind power, solar power and other clean, renewable energy sources; and promote cooperation in the processing and conversion of energy and resources at or near places where they are exploited, so as to create an integrated industrial chain of energy and resource cooperation. We should enhance cooperation in deep-processing technology, equipment and engineering services in the fields of energy and resources.

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all.

### Focus on green and low-carbon development

BRI is committed to promoting green and low-carbon infrastructure construction and operation management, taking into full account the impact

Goal 6. Ensure availability and sustainable management of water and sanitation for all;
of climate change on the construction, and promoting ecological progress in conducting investment and trade, increasing cooperation in conserving eco-environment, protecting biodiversity, and tackling climate change, and join hands to make the Silk Road an environment-friendly one.

| **Goal 12.** Ensure sustainable consumption and production patterns; |
| **Goal 13.** Take urgent action to combat climate change and its impacts; |
| **Goal 14.** Conserve and sustainably use the oceans, seas and marine resources for sustainable development; |
| **Goal 15.** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. |

**Focus on people's livelihood through economic growth: employment, health, education, etc.**

**Personnel exchange**

BRI works to promote extensive cultural and academic exchanges, personnel exchanges and cooperation, media cooperation, youth and women exchanges and volunteer services;

**Education**

BRI is committed to promoting cooperation in jointly running schools (China provides 10,000 government scholarships to the countries along the Belt and Road every year), and increasing personnel exchange and cooperation between countries along the Belt and Road;

**Health**

BRI seeks to strengthen cooperation with neighboring countries on epidemic information sharing, the exchange of prevention and treatment technologies and the training of medical professionals, and improve our capability to jointly address public health emergencies, and provide medical assistance and emergency medical aid to relevant countries, and carry out practical cooperation in maternal and child health, disability rehabilitation, and major infectious diseases including AIDS, tuberculosis and malaria;

| **Goal 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture; |
| **Goal 3.** Ensure healthy lives and promote well-being for all at all ages; |
| **Goal 4.** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; |
| **Goal 5.** Achieve gender equality and empower all women and girls; |
| **Goal 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; |
| **Goal 11.** Make cities and human settlements inclusive, safe, resilient and sustainable; |
| **Goal 16.** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. |
BRI works to integrate existing resources to expand and advance practical cooperation between countries along the Belt and Road on youth employment, entrepreneurship training, vocational skill development, social security management, public administration and management.
4. Recent Progress of the BRI

Under the principle of *mutual discussion, mutual construction, mutual privileges*, and the prospects to align BRI and the SDGs, the BRI has achieved a series of important early-stage results (Chinese Ministry of Foreign Affairs (MOFA), Ministry of Commerce (MOFCOM), State Council Information Office: 2016) since its official announcement two years ago (Table 2).

Table 1. Recent progress of the BRI

<table>
<thead>
<tr>
<th>BRI priorities</th>
<th>Recent progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate connectivity</td>
<td><em>Railways, trains and economic corridors</em></td>
</tr>
<tr>
<td></td>
<td>✅ Constructions of railway between Hungary and Serbia, and High-speed railway in Indonesia have started.</td>
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<td></td>
<td>✅ Construction of railway networks connecting China and Laos, China and Thailand have been launched, as well as a number of other high-way projects.</td>
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<tr>
<td></td>
<td>✅ So far more than 1500 trains have successfully traveled between China and Europe.</td>
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<td>✅ Only in 2015, 815 trains were launched between China and Europe, which is 2.7 times the number of 2014.</td>
</tr>
<tr>
<td></td>
<td>✅ Ten cities in China are launching trains with 7 countries along the line as destinations, with the system of regular transportation forming up.</td>
</tr>
<tr>
<td></td>
<td>✅ China, Mongolia and Russia have reached consensus in building economic corridor and are working quickly to formulate plans and outlines.</td>
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<tr>
<td></td>
<td>✅ China-Pakistan economic corridor started early and developed fast, with a number of major projects launched.</td>
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<td>✅ New eurasia continental bridges corridor, China-Bangladesh-India-Myanmar economic corridor is steadily developing.</td>
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<tr>
<td></td>
<td><strong>Industrial capacity cooperation</strong></td>
</tr>
<tr>
<td></td>
<td>✅ China has signed agreement with more than 20 countries to initiate industrial capacity cooperation.</td>
</tr>
<tr>
<td></td>
<td>✅ Many of important projects took roots in different countries. So far, various bilateral and multilateral industrial capacity cooperation fund built by the Chinese side have amounted to more than 100 billion U.S. Dollars.</td>
</tr>
<tr>
<td></td>
<td>✅ China and Kazakhstan are pioneers in industrial capacity cooperation, with 52 projects in early-stage harvests, which amount to more than 27 billion USD of investment.</td>
</tr>
<tr>
<td></td>
<td>✅ In 2015 a total of 75 economic cooperation zones with BRI countries have been in progress with total investment volume of 7.05 billion USD, in which more than half are processing and</td>
</tr>
</tbody>
</table>
manufacturing park that are closely related to international capacity cooperation. 1209 enterprises (in textile, clothing, light industry, household appliances, etc.) have entered economic cooperation zones, with a total production volume of 42.09 billion USD and tax 1.42 billion USD paid to host country.

| Unimpeded trade | ✓ Ever since BRI was proposed by Chinese leadership in 2013 till July 2016, Chinese investment to countries along the BRI region has totaled $51.1 billion RMB, and its bilateral trade volume with BRI countries in 2015 has exceeded 1 trillion RMB.  
✓ Chinese enterprises made direct investment in 49 countries along BRI region, with total volume of 14.82 billion USD on a year-on-year increase of 18.2% in 2015;  
✓ In 2015 Chinese enterprises signed 3987 foreign contracted projects in 60 countries along BRI region, with total volume of 92.64 billion USD, accounting for 44% of new foreign contracted projects in the same period, in 2015;  
✓ In 2015 Chinese enterprises investment to BRI countries (transportation, electricity, telecommunications, etc.) totaled 11.66 billion USD on a year-on-year increase of 80.2%;  
✓ In 2015 Chinese enterprises investment to BRI countries in equipment manufacturing industry totaled 7.04 billion USD on a year-on-year increase of 154.2%; |

| Financial integration | ✓ Asian Infrastructure Investment Bank (AIIB) started to operate at the beginning of 2016 (See Box: Essential and visible progress of AIIB achieved).  
✓ Silk Road Fund formally launched its first batch of investment projects.  
✓ Countries along BRI are actively discussing the establishment or the expansion of bilateral cooperation funds of all kinds. |

| Policy coordination | ✓ More than 70 countries and organizations expressed their support and willingness to join, exceeding the traditional area of BRI.  
✓ 34 countries and international organizations signed inter-governmental cooperation agreements with China on BRI, on the basis of which detailed cooperation plans will be formed.  
✓ United Nations Development Programme (UNDP) and Chinese government a Memorandum of Understanding (MOU) on cooperation on the Belt and Road Initiative (BRI) during the 71st United Nations General Assembly. The MOU is a strategic cooperation framework that aims to enhance collaboration between UNDP and the Chinese government for the |
implementation of BRI and the 2030 Agenda for Sustainable Development (UNDP: 2016)

✓ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) endorsed the resolution during its 71st Commission Session, on strengthening intraregional and interregional connectivity in Asia and the Pacific (UN: 2016), ESCAP recognizes the importance and value of new financing mechanisms to complement existing international institutions for promoting connectivity and infrastructure development in the region and the world, and is to actively participate in cooperation among members and associate members for effective implementation of relevant initiatives, including the Silk Road Economic Belt and 21st Century Maritime Silk Road, etc. In April 2016, Chinese MOFA and ESCAP secretariat signed a letter of intent, aiming at giving full play to the professional advantages of the secretariat and working together to promote regional connectivity and BRI for the benefit of people.

<table>
<thead>
<tr>
<th>People-to-people bond</th>
<th>China founded Silk Road Chinese Government scholarship, held culture year, art festivals with BRI countries.</th>
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<tbody>
<tr>
<td></td>
<td>The implementation of &quot;Silk Road Movie Bridge Project&quot; and &quot;Silk Road Book Project&quot; all yielded positive results.</td>
</tr>
<tr>
<td></td>
<td>Silk Road joint application for the List of World Heritage has been a success.</td>
</tr>
<tr>
<td></td>
<td>Maritime Silk Road joint application for the List of World Heritage has been launched.</td>
</tr>
</tbody>
</table>

**BOX II: AIIB progress**

The first annual meeting of the Board of Directors of AIIB was held in Beijing in June 2016. AIIB’s Board of Directors has approved a total of 509 million USD in loans to the first four projects of the bank, covering energy, transport and urban development in Bangladesh, Indonesia, Pakistan and Tajikistan, all in Asia. Three of the first four projects were co-financed with other multilateral development agencies, reflecting the spirit of openness and cooperation that AIIB had been advocating since its establishment, as a way to complement strengths of other multilateral development institutions.

✓ Electricity transmission upgrades and expansion projects in Bangladesh: 165 million USD;
✓ Indonesian National Slum Upgrading Project: 216.5 million USD;
✓ Pakistani M4 National Highway project: 100 million USD co-financed with Asia
5. Challenges and risks facing the BRI

Major challenges and risks facing the implementation of BRI consists of political and security risks, economic and financial risks, environmental and social risks.

Development Bank

- Road improvement project connecting Dushanbe, capital of Tajikistan to border of Uzbekistan: 27.5 million USD co-financed with European Bank for Reconstruction and Development.

AIIB’s annual loan target for 2016 is between 500 million USD and $1.2 billion USD. In the second half of 2016, more loan projects will be submitted to the Board of Directors, and management is preparing for support program for next year.

Most of AIIB’s core institutions, rules and regulations for financing and operating have been completed, specific operating rules are being completed and a series of internal management rules are taking shape to ensure the smooth operation of the bank. Management framework of risk control is also under construction.

AIIB has three main requirements for financing projects: sustainable in operation, environmentally friendly and widely accepted by public society.

With a view to ensure the smooth progress of loan projects, AIIB Board of Directors approved the establishment of special funds of AIIB to support members with project preparation, especially to support the less developed and low-income member countries to carry out infrastructure projects in preparing for sovereign loan projects. China has become the first donor to the fund, and will donate 50 million USD paid within 3 years. The agreement was signed between Shi Yaobin, Vice Minister of China's Ministry of Finance on behalf of the Chinese government, and JinLiqun, President of AIIB. The move is aimed at implementing the commitments made by Chinese leaders at AIIB opening ceremony.

There are now 24 new countries applying for AIIB membership. AIIB will open for application for new membership before Sep. 20th in 2016. New members are expected to formally join AIIB in early 2017.

Under the Charter of AIIB, membership of AIIB is open to members of the International Bank of Reconstruction and Development and Asia Development Bank. New members will join as ordinary members. At present, in Latin American only Brazil became the member. AIIB will also support infrastructure projects outside Asia.

At present, AIIB’s senior management team is taking shape, and middle management team under recruitment. Currently, AIIB has altogether 39 employees for both staff and management team. It is expected that the number of employees will reach 100 by the end of 2016. (Xinhua & Huanqiu: 2016)
<table>
<thead>
<tr>
<th>Political Risks</th>
<th>Political Instability:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓ Domestic turmoil in Middle East: Egypt, Turkey, Iraq, Libya, Syria, Yemen, Saudi Arabia, etc; Power change in Southeast Asia and South Asia: Myanmar, Thailand, Cambodia, Sri Lanka, etc.</td>
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<td></td>
<td><strong>Political Intervention on commercial projects:</strong></td>
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<td>✓ Suspension of Colombo Port City project in 2015; Suspension of Myitsone hydropower station project in 2011.</td>
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<tr>
<td></td>
<td>Risk of infection: risk of a country's unfavorable situation leading to declines in the ratings of other countries in the region or a credit crunch, although these countries do not experience these unfavorable conditions, and their credit conditions have not deteriorated.</td>
</tr>
<tr>
<td></td>
<td>Currency risk: risk that the domestic currency or cash flow held by the debtor is not sufficient to cover its foreign currency debt due to adverse exchange rate movements or currency devaluation.</td>
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<td></td>
<td>Macroeconomic risks: The debtor is exposed to high interest rates as a result of the measures taken by the government to maintain the value of the national currency.</td>
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<td>Transfer risk: the borrower or the debtor cannot obtain the required foreign exchange to repay its overseas debt risk, due to their foreign exchange reserves or foreign exchange control and other reasons.</td>
</tr>
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</table>

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<thead>
<tr>
<th>Environmental &amp; Social Risks</th>
<th>Stricter environmental standards in international investment regulations: Global Compact (the UN), Responsible Investment Principles (UNEP), Social and Environmental Sustainability Performance Standards (IFC), Guidelines for Transnational Corporations (OECD), the Extractive Industries Transparency Initiative Plan, etc.</th>
</tr>
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<td><strong>Social Risks:</strong> resettlement, health, labor policy, land policy etc</td>
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</table>
6. Policy recommendations and conclusions

Based on the analyses above, several suggestions could be considered by policy makers of the BRI countries, and related multilateral organizations in facilitating BRI implementation and its alignment with the SDGs more comprehensively.

First, it is strongly encouraged that relevant countries strengthen partnership and policy coordination with a view to consult and coordinate their development visions/strategies through seeking complementary advantages and interest of convergence. Making full use of existing coordinating mechanisms (visits by top leadership, bilateral dialogues/forums/exhibitions, joint committees between governments/business communities, MOUs, etc.) could help relevant parties to identify their areas of common interests and determine bilateral/multilateral cooperation projects feasible to be implemented through joint efforts. Such multi-level and multi-channel communications should not only involve government bodies, but also enterprises/industries, as well as research think-tanks, media, and people-to-people links. Besides, communications at existing multilateral mechanisms, led by United Nations bodies and other regional organizations/platforms could also create multi-participatory atmosphere.

Second, to promote varied modalities of co-financing is vital to ensure sustainable infrastructure financing across the BRI countries, and will also create a multi-participatory atmosphere for enjoying shared interest. Encouraging trends are already emerging. For instance, three of AIIB’s first four infrastructure projects were co-financed with other development financial institutions, and such model of openness and cooperation could be expanded to give full play to complementary advantages of different DFIs. In addition relevant parties should consult to create a better environment for PPP model to be implemented in financing of a number of infrastructure projects.

It should be reminded, however, that existing institutions that finance BRI projects, including but not limited to AIIB, Silk Road Fund, BRICS New Development Bank, SCO Development Bank, regional organizations, are not yet sufficient to meet the substantial needs for infrastructure financing in Asia. Social and private capital could play a crucial to supplement finance, through Public-Private-Partnership, and via multiple choices of financial products (e.g., sovereign funds, equity funds). This, in turn, requires refined risk management to ensure long-term success. Moreover, demonstration of “early harvest” – through its linkage to the SDGs and the corresponding monitoring and evaluation framework – will be helpful to further facilitate policy coordination and financing.

Third, to make infrastructure investment more sustainable, green finance and corporate social responsibility can be promoted to look out for project impacts particularly in social-environmental domains and through engagement with local communities – two indispensable pillars of sustainability. Green finance, as defined by financial services that address environmental protection, climate change and resource conservation and efficient use, are faced with challenges of maturity
mismatch, information asymmetry, lack of products, among others. In this regard, governments play a key role in tackling environmental externality by means of policy tools that properly incentivize, as well as encourage innovation in financial instruments and services (e.g., green debt, green development funds, green insurance).

Governments could also designate policies that navigate enterprises to fully understand and abide by environmental laws/regulation and related environmental and social responsibility guidelines of host countries, as well as learn from best practices in its own industry. Enterprises could make endeavors to strengthen the awareness of CSR, improve CSR implementation, and enhance their capacity to communicate and engage with local stakeholders (e.g., local communities, media, labor organizations, environmental organizations), through open, regular, transparent information sharing and disclosure.

Strengthening infrastructure investment in Asia could be considered an effective means to sustainable development through driving economic growth, providing spillover effects in public welfare and attaching great importance in addressing socio and environmental concerns. The BRI is in line with the purposes and principles of the UN Charter, and also works very much in line to implement areas that the SDGs prioritize. As a positive public good initiated by China, BRI attempts to promote win-win outcomes for both China and other participating countries, including their business communities in infrastructure, as well as in other domains, through providing an open inclusive platform for formulating partnership and strengthening policy coordination. Joint-financing among multiple stakeholders beyond traditional means, rather than through any single entity, has achieved a number of early-stage results, and is critical in ensuring the sustainability of infrastructure investment.
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List of Acronyms

ASEAN Plus China (10+1)
Asia Cooperation Dialogue (ACD)
Asia Development Bank (ADB)
Asia Infrastructure Investment Bank (AIIB)
Asia-Europe Meeting (ASEM)
Asia-Pacific Economic Cooperation (APEC)
Belt and Road Initiatives (BRI)
Central Asia Regional Economic Cooperation (CAREC)
China-Arab States Cooperation Forum (CASCF)
Conference on Interaction and Confidence-Building Measures in Asia (CICA)
Corporate Social Responsibility (CSR)
Developing Finance Institutions (DFI)
Development Banks (DBs)
European Bank for Reconstruction and Development (EBRD)
Greater Mekong Subregion (GMS) Economic Cooperation
Memorandum of Understandings (MOUs)
Ministry of Commerce (MOFCOM)
Ministry of Foreign Affairs (MOFA)
National Development and Reform Commission (NDRC)
New Development Bank (NDB)
Policy Finance Institutions (PFI)
Public Private Partnership (PPP)
Shanghai Cooperation Organization (SCO)
Small and Medium Enterprises (SMEs)
Sustainable Development Goals (SDGs)
United Nations (UN)
United Nations Development Programme (UNDP)
United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
United Nations Environment Programme (UNEP)
World Bank (WB)
Annex I. Selected Examples of Projects/Programs from 1954 to 2008

<table>
<thead>
<tr>
<th>Time and Status</th>
<th>Selected Examples of Projects/Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow development before 1978</td>
<td>✓ 25 coal projects: Fuxin, Fushun, Hegang, Pingdingshan, etc; ✓ 2 oil projects: the second oil plant in Fushun, Lanzhou refinery; ✓ 25 power projects: Sanmenxia Water Conservancy Project, Fengman Hydropower Station, Lanzhou Thermal Power Station, etc. ✓ 3 power plants: Beidagangin Tianjin, Douhe in Tangshan Douhe, Yuanbaoshanin Inner Mongolia; ✓ Oilfields: Yumen, Karamay, Shengli, Daqing; ✓ Railways: Lanzhou-Xinjiang, Chengdu-Kunming, Baotou-Lanzhou, Jiaozuo-Zhicheng; ✓ Ports: Tianjin, Lianyungang, Dalian, Shanghai, etc.</td>
</tr>
<tr>
<td>Starting up from 1978 to 1989</td>
<td>✓ Three-north Forest Protection Project; ✓ A large number of commodity grain production base; ✓ 153 key energy projects: Gezhouba Hydropower Station, Pingshuo opencast coal mine, etc; ✓ 88 key raw materials projects: Jidong Cement Plant, etc; ✓ 125 key transportation and post &amp; telecommunications communication projects: Datong-Qinhuangdao electrified railway, Qinhuangdao Coal Terminal, etc. ✓ Highways: 1st highway from Shanghai to Jiading; ✓ Steel: Shanghai Baoshan; ✓ Electricity: Baishan Hydropower Station; ✓ Cement: Jidong Cement Plant; ✓ Railway: Xiangfan-Chongqing.</td>
</tr>
<tr>
<td>Rapid development from 1990 to 2002</td>
<td>✓ Infrastructure in agriculture, forestry, animal husbandry and fishery: national conversion of degraded farm land into forest and grass land, national wildlife protection and nature reserve construction project, commodity grain base in Heilongjiang and Inner Mongolia, etc; ✓ Energy: Shenfu Dongsheng Mine, Xinjiang Tarim Oilfield, Daya Bay Nuclear Power Station, Lingao Nuclear Power Station, Yellow River Xiaolangdi Water Control Project, Ertan Hydropower Station, etc. ✓ Transportation: Beijing-Kowloon Railway, Beijing West</td>
</tr>
<tr>
<td>Railway Station, Shanghai Pudong Airport, Guangzhou Baiyun New Airport, Shanghai Metro Line 2, Shenyang-Dalian Highway;</td>
<td>✓ Water conservancy: flood control construction on the Yangtze River, the Yellow River and other major rivers &amp; lakes, the Three Gorges Water Conservancy Project, etc.</td>
</tr>
<tr>
<td><strong>Rapid and overall development from 2003 to 2008</strong></td>
<td>✓ Oil and Gas: project of natural gas transmission from West to East, Daqing Oilfield Capacity Development, CNOOC Offshore Oil and Gas Field Exploration and Development, Zhenhai Refinery in Zhejiang, Shanghai Secco Ethylene Project, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Electricity: West-East electricity transmission project, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Railway: Qinghai-Tibet, Nanjing-Xian, Chongqing-Huaihua, Zhuzhou-Liupanshui, Hangzhou-Zhuzhou, Neijiang-Kunming, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Highway: Fujian Sanfu Highway, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Metro: Guangzhou Metro Line 2, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Port: Tianjin Port expansion project, Yangshan deep-water port container project, etc;</td>
</tr>
<tr>
<td></td>
<td>✓ Airport: Guangzhou Baiyun Airport relocation, etc.</td>
</tr>
</tbody>
</table>
SCOPING PAPER III

Promoting the sustainable development of transport and economic corridors under the Belt and Road Initiative

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21 Dossani is Director of the RAND Center for Asia Pacific Policy, a Senior Economist at RAND, and a Professor at the Pardee RAND Graduate School.
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   Section 2.3 - Summarizing the Lessons Learned
3. Evaluating the challenges to make corridors more sustainable and unleash development dividends
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Executive summary

Developing transport corridors that deliver sustained economic, social and environmental benefits is a core goal of the Belt and Road Initiative. This paper examines the potential of transport corridors to deliver these benefits. It does so through two approaches. First, the paper examines previous experiences in the implementation of transportation infrastructure projects and economic corridors. Second, the paper reviews best practices in policy interventions for sustainable development and how these may be applied to corridor development. These approaches serve to illustrate learnings that will support the successful implementation of the BRI in the long-term, and draw lessons for useful and actionable policy recommendations for developing BRI corridors that achieve sustainable development.

We show in this paper that corridor developments historically began with transport linkages that were intended to facilitate development along intra-national routes. Later stages of corridor development focused both on complementary infrastructure (such as hinterland transport and economic development) and cross-border transport and economic integration. Once the physical infrastructure was established, a services infrastructure typically followed, enabling a deepening of economic development.

What economic corridors have historically achieved was determined by various factors, including their own geography, as well as policy interventions. Using examples from Europe and the Pearl River Delta, we show how the impact of corridors can be transformative for all the economies of the region, from the less to the more developed. The role of public policy emerges as crucial to capture economic benefits, especially with regard to facilitating the easy movement of goods and services with minimal distortions introduced by fiscal, regulatory and physical barriers. A focus on hinterland infrastructure also emerges as important.

We then turn to policy interventions for sustainable development. A key lesson from the case studies is the importance of focusing on three approaches: (1) SME support for economic development, (2) Pro-poor policies for human capital development, and (3) Environmentally friendly provision of basic services – water, sanitation, hygiene and electric power.

We argue that corridors can improve the provision of all three aspects noted above. For instance, proper infrastructure planning can help by locating large-scale manufacturing away from residential areas and thus help convert city occupations into SME-focused, high value-added services. Pro-poor policies include supporting affordable housing communities, and addressing education, health, and long-term financial risks faced by underprivileged populations in rural and urban areas. Corridors can help by improving access to health and education services both by reducing the cost of providing such
services and enabling access to remote tertiary services, such as distant hospitals. Corridors expand markets and thus enable banks to pool underprivileged borrowers in order to economically provide financial risk management services. Third, the construction of a corridor offers opportunities to mitigate the environmental consequences of pollutant generating activities related to basic services. For instance, landfills can be located at appropriate distances from water sources and human habitation; waste collection becomes more economically viable, and can replace waste burning, especially in remote areas.

There appears to be no substitute for a strong governmental commitment to spending the necessary resources on these services and to support change with effective policy reforms. Some of these changes will require multilateral, intergovernmental commitments on broad areas such as property rights and environmental commitments, and some changes require regional and bilateral commitments, such as on trade facilitation. Other commitments are specific to national situations, such as pro-poor policies regarding route planning and access to health and education services, trade and banking processes, and environmental compliance mechanisms. The final section of our paper discusses these policy priorities at various levels.
Introduction

Developing the transportation infrastructure across Asia, the Middle East, North Africa and Europe is at the core of the Belt and Road Initiative (BRI). BRI aims at “linking up unconnected road sections, removing transport bottlenecks, and improving road network connectivity.” Also, it emphasizes “connectivity of customs clearance, reloading and multimodal transport between countries.... port infrastructure construction, ... smooth land-water transportation channels, ... port cooperation, ... information technology cooperation in maritime logistics, ... comprehensive civil aviation cooperation, and ... aviation infrastructure”. (National Development and Reform Commission, 2015)

The corridors under BRI are intended to contribute positively to sustainable development. By sustainable development is meant the inclusive, integrated and long-term social and economic progress of the impacted populations – through the work they do, the environment they live in, and their socio-economic status.

Many corridor initiatives have, in the past, brought economic development. However, the link between corridors and sustainable development has not to be taken for granted. To our knowledge, in modern times, there have been no corridor initiatives that enabled a rapid and sustained movement simultaneously in the economic, environmental and social dimensions of development. More typically, corridors raise incomes, but are accompanied by greater inequality, environmental degradation and higher economic vulnerability. To accomplish sustainable development, corridor initiatives will need to display a level of long-term thinking, creative design and multi-dimensional approaches to implementation that is likely unprecedented.(Berke, 2002)

Particular care will be needed for corridor initiatives that connect areas at different stages of development, since the potential for sacrificing sustainable development in return for rapid economic growth in the short-term can be high. In such cases, the economic, environmental and social aspects should be a primary focus, involving major efforts by governments, investors and various stakeholders from the earliest stages.

Considering the potential of BRI to contribute to global infrastructure development, previous experiences in the implementation of transportation infrastructure projects and economic corridors and an understanding of best practices in policy intervention may serve to illustrate learnings that will support the successful implementation of the BRI in the long-term. In this spirit, this paper will draw lessons in order to offer useful and actionable policy recommendations for developing BRI corridors that achieve sustainable development.

1. Connectivity and sustainability: identifying linkages

Whereas economic corridors imply multiple dimensions of economic development, transport corridors are a primary area of focus in infrastructure development and trade

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facilitation strategies. (Adzibgey, Kmaka, & Mitiku, 2007) Arnold, Olivier, and Arvis (2005) define a corridor from a physical perspective as a ‘transport corridor’, i.e., a collection of routes constructed from the transport networks of adjoining countries and bounded by gateways. Corridors can at times be multi-modal and include multiple border crossings. ‘Economic corridors’ (Brunner, 2013) develop out of transport corridors, connecting economic agents along a defined geography, linking economic nodes or hubs, in which large amount of economic resources and actors are concentrated. By doing so, they link the supply and demand sides of markets.

Corridor development thus goes through multiple stages. The following diagram illustrates this. It is adapted from Srivastava (2011) and also referenced by De and Iyengar (2014).

**Figure 1 - Four Phases of Corridor Development**

![Four Phases of Corridor Development Diagram](image)

In Figure 1, the vertical axis shows outcomes, which range from ‘narrow’, i.e., outcomes directly attributable to the physical infrastructure, to ‘broad’, i.e., outcomes that influence the area’s economy. The horizontal axis differentiates national from regional outcomes. Phase I is a typical starting point for corridor development. It is an infrastructure intensive phase, marked by the development of intra-national transport corridors consisting typically of highways and rail links. Phases II and III may occur simultaneously, Phase II focusing on area development and minor road infrastructure,
and Phase III on cross-border trade facilitation (logistics, lowering tariff and non-tariff barriers, etc.). Phase IV focuses on cross-border development.

What economic corridors ultimately achieve is determined by various factors, including their own geography, i.e., their physical and socio-economic features. (Brunner, 2013) A corridor begins with physical connectivity as transport is enabled and other pieces of the physical infrastructure are added. With the growth of the corridor, a services infrastructure should follow. Connectivity in financial (e.g., services such as banking and insurance), social (e.g., human resources, institutional set-ups) and digital (e.g., information and communication technology) terms will need to be in place to ensure a complete transformation to an economic corridor.

While transport corridor planning can address some aspects of sustainable development, such as ensuring that hinterland roads address the needs of rural populations,\(^{23}\) public policy is needed to address other key aspects as well. For instance, transport links should not only provide physical access to resources, but also enable producers, particularly SMEs, to take advantage of opportunities in domestic and foreign markets, leading to economies of scale and specialization. (Trace, Frielink, & Hew, 2009) In this way, people and goods can be moved more quickly at lower costs, thus facilitating economic interactions among agents based on their comparative advantage.

The sustainable development gains, however, can go far beyond economic benefits. In fact, economic corridor should support pro-poor growth. There is still much to be leveraged with enhanced connectivity, which opens up alternative and potentially more lucrative livelihood opportunities, and provides access to goods and services (e.g., electricity, energy, health, education) previously unavailable or too costly. (De & Iyengar, 2014) All of these have far-reaching consequences for public welfare, including poverty reduction and inclusive growth.

Development gains could also arise from aligning environmental sustainability to the initial planning and design of the corridors. Risk mitigation and reducing environmental and climate change impact from the beginning could contribute to significant reduction of greenhouse gas emission and air pollution, preserve landscapes, biodiversity, heritage, communities, and the built environment. Furthermore, they could also boost efficient and sustainable waste and water management while improving living conditions and mitigating climate change related risks. Furthermore, connecting green innovative logistics solutions, including information systems, collaborative models, and technology can contribute to long-term upgrading and development across regions.

In summary, the three pillars of economic, social and environmental benefits form the vital parts of what can be called as sustainable development gains. It should, however, be born in mind that sustainable development gains do not automatically ensue alongside corridor development. To give an example, not all segments of populations may be able to realize fully the benefits from corridor development, either because they are only

partially connected or because individuals vary in their capacity to take advantage of new opportunities unraveled to them. Intentional interventions or, in other words, the strategic alignment between inclusive impacts and corridor design could help enhance developmental gains in a sustainable manner. This will require an understanding of the linkages between the pillars, the areas of opportunity, and the areas of policy intervention.

2. Assessing opportunities of transportation and economic corridors: from where can BRI countries learn?

In this section, we illustrate, through two case studies, first the benefits of transport corridors (as described in Phases I and III of Figure 1) in Section 2.1, and then the wider economic benefits of area and regional development as the corridor develops (Phases II and IV of Figure 1) in Section 2.2. We then draw lessons for sustainable development strategies (Section 2.3).

2.1 Transportation linkages: the Trans-European Transport Network (TEN-T)

Transport corridors, as typically understood, consist of physical infrastructure such as fixed structures (roads, railway), networks (pipelines, communication lines) and nodes (terminals, seaports, airports), vehicles that navigate this physical infrastructure, and associated services that support and smooth such movement (for example, warehousing, insurance, logistics etc.). Such corridors are a means of moving people (for business and personal reasons) and goods/freight/services (raw, intermediate, final) from one location to another.

Scholars generally agree that good transportation infrastructure facilitates economic growth and development (Agénor, 2010; Barro, 1996; Janelle & Beuthe, 1997; Romp & De Haan, 2007), though the research on transportation as a stand-alone developmental factor is scarce. (Janelle & Beuthe, 1997) Among available estimates, in Peru, intercity highway upgrades increased the average annual rates of growth for exports (by 6%) and employment (by 5%). In China, connecting cities with railroads has moderately increased county-level GDP per capita.

The Trans-European Transport Network (TEN-T), initiated in 1990, illustrates the potential of a transport corridor. TEN-T includes road, rail, air, and water (both sea and inland waterway) transport networks. Along with telecommunications (eTEN) and energy (TEN-E) networks, TEN-T part of a broader Trans-European Network (TEN) system. TEN-T includes nine core transport corridors, with the North Sea-Mediterranean Corridor being the major one. Within this last corridor, a high-speed train (HST) system

25 This corridor is the only one that connects Ireland and northern United Kingdom to mainland Europe, via Netherlands, Belgium and Luxembourg, and then goes farther to southern France and the Mediterranean Sea. The North Sea-Mediterranean Corridor also includes key European infrastructure such as the Channel Tunnel, three of Europe’s top-five airports (London-Heathrow, Paris-Charles de Gaulle, and Amsterdam-Schiphol), and four of Europe’s top-ten seaports (Rotterdam, Antwerp, Amsterdam, and Marseille).
has been built with Brussels as a hub located on the intersection of different transport nodes. (Albrechts & Coppens, 2003) The Eurostar HST was created, financed, and is now operated by a unified management company, with the main shareholders being the British, French and Belgian government railway companies.

The main benefit of the North Sea-Mediterranean Corridor is the facilitation of passenger flows and freight movement. The corridor experienced 9% growth in traffic (ton-kilometers transported, across borders) and 12% growth in capacity (kilometers of paths, prearranged/timetable/bookings, across borders) since its completion in 2013 until the end of 2015. (RFC Northsea-Med, 2015) The use of HST means not only less air traffic but also less environmental pollution, as trains generate less carbon emissions than air transport. Consequently, the transport choice and optimal utilization of transport modes arises as a strategic response to mitigate the environmental impact of corridors.

Impact mitigation of greenhouse gases in corridors draws attention to the potential of ‘green corridors’ as a means to deliver transport solutions more economically, socially and environmentally sustainable. Efficiency and optimization of mobility, higher safety, improved impact on the climate and the environment, and lower operational costs could make it a distinctive feature. At the same time, innovative logistics solutions, including information systems, collaborative models and technology could create significant spillover effects. (Kyster-Hansen, Thisgaard, Henriques, & Niss, 2011)

Since the North Sea-Mediterranean Corridor was completed only in 2013, a comprehensive impact evaluation is lacking. However, there exist some early indications that the corridor has transformed former depressed industrial areas along its route (for example, in its Brussels connection) to more vibrant communities where real estate developers actively seek new opportunities for office space and residential buildings that have also resulted in a surge of housing and rental prices in those areas. (Albrechts & Coppens, 2003)
2.2 Economic Linkages: the Pearl River Delta economic and transport corridor

A key benefit of transport corridors is the integration of the economies of the regions that are linked by corridors (along the lines of Phase IV of Figure 1 above). Regional integration is known to stimulate merchandise trade due to the reduction of trade barriers between geographically proximate trading partners. In particular, regional integration offers the following benefits over and above the benefits available from reduction of trade barriers:

**BOX I. How TEN-T could apply to BRI**

TEN-T’s example of multinational cooperation in building and operating the transport network across countries can serve as a model for BRI cross-border implementation. Potentially, the Trans-Siberian Railway (TSR) could become a major rail corridor of the BRI as it connects China’s seacoasts and hinterland with Mongolia and major cities of Russia’s Far East up to Moscow.\(^{29}\) The route is almost 5 thousand miles long and takes six nights one way to complete under current infrastructure conditions (as compared to about 7 hours for a non-stop flight). With railway upgrades to Eurostar standards, the travel time can be reduced to a third of the current time, and the route can thus become more attractive for passengers and freight.\(^{30}\)

A potential benefit of improved TSR could be illustrated by looking at two big cities along its far eastern route – China’s capital, Beijing, and Mongolia’s capital, Ulaanbaatar. Currently it takes about 28 hours by rail and about 2 hours by air to travel the 965 miles (1,553 kilometers) between the two cities. With the rail infrastructure upgrade to high-speed rail, the train travel time can be reduced to within 10 hours.

Half of Mongolia’s three million population lives in its Ulaanbaatar. Mongolia is a rich source of minerals, with mining of all kinds (copper, coal, gold, silver, uranium etc.) being its leading economic sector and located mostly along its southern border with China. China is Mongolia’s main trade partner, importing more than 60% of Mongolian mining exports and is Mongolia’s largest source of imports, consisting largely of manufactured goods.

Beijing’s transition to a post-industrial city with a sophisticated service sector (financial services, retail, wholesale trade, IT, and real estate) puts it in a position to consume an enhanced output of primary goods shipped from Ulaanbaatar.

Beijing can also provide the legal, financial and business infrastructure to support Ulaanbaatar’s growth and transition from a commodities supplier to an industrial state, and introduce environmentally-friendly industrial practices. It can also stimulate infrastructural development into Mongolia’s hinterland. The result of these investments would be to gradually integrate Mongolia into the supply-chain of manufacturing, of which China is the Asian hub.

29 \text{http://www.seat61.com/SilkRoute.html#Ürümqi - Xian – Beijing}

30 An alternative railroad from Beijing to Moscow goes through Kazakhstan (with connections to Kyrgyzstan and Tajikistan) but is less developed than the TSR and requires more investments and upgrades.
trade barriers that apply to all trading partners, not just proximate ones: (1) The creation of supply-chains in which each location specializes in elements of a supply-chain, with the final product destined for remote locations. (2) Lower transport costs between locations, due to physical proximity, enables lower costs of accessing cross-border markets. (3) Newcomers to trade in merchandise can learn from the superior services offered by the more established trading economies, such as marketing, finance, business process management, manufacturing technologies, and other services. Such learning involves the transfer of tacit knowledge that is only possible if there is face-to-face interaction between the less-developed and more-developed locations along the corridor. Regional trade is often understood as being enabled by lower tariff barriers. However, non-tariff barriers, such as differences in inspection regimes and certifications, can also be significant. In many countries, non-tariff barriers have been observed to be costlier than tariff barriers.

A successful example of the development of economic corridors through the prior creation of transport corridors is to be found in the cities of the Pearl River Delta. Building on earlier established special economic zones, starting in the late 1980s, a transport corridor between Hong Kong, Macau and the major cities of Guangdong Province was developed, consisting of high-speed rail, expressway and sea links connecting all the major cities of the Pearl River Delta. The provincial government of Guangdong Province simultaneously began developing the hinterland infrastructure. The next step was a lowering of cross-border tariff and non-tariff barriers in the early 1990s. By the mid-1990s, the seamless movement of people across the region was enabled by lowering entry barriers.31

The benefits to Guangdong Province from the corridor were for the following reasons: (1) Hong Kong was already a developed economy with high levels of human capital and high standards of compliance and transparency in banking, business processes, and regulation at the time corridor development began. Removing the barriers to investment and people movement enabled Guangdong Province to rapidly move up the value-chain by learning from Hong Kong’s business practices. (2) Hong Kong already had a developed banking and currency system which could be leveraged to provide capital for investment in Guangdong Province.

It needs to be emphasized that, just as Guangdong Province was transformed by the corridors of the Pearl River Delta, so were Hong Kong and Macau. Hong Kong’s traditional industry of light manufacturing up to the 1980 changed to providing business services to support industrial activity in Guangdong Province. Initially focusing on re-exports, Hong Kong adapted to the growth of port infrastructure in Guangdong Province, moving to offshore trade and finance, and air cargo services.

An important reason why the transport corridors of Europe and the Pearl River Delta region were able to improve sustainably was that even the poorer areas within the region

31 All four modes of services envisaged under the World Trade Organization – cross-border trade, consumption abroad, commercial presence and presence of natural persons, were enabled by these transport corridors.
were already endowed with a high stock of human capital, were spatially cohesive, and had strong rules regarding property rights and compliance when they entered into collaboration with the wealthier areas for corridor development.

The Pearl River Delta region economic corridor also faces challenges that arose from regional integration. For instance, the cities of Guangdong Province adopted the business standards and regulations of Hong Kong and Macau, to the extent possible. Where these were of high quality, such as in banking and business process management, there were great benefits. However, where there were weaknesses in the standards of Hong Kong and Macau, such as in environmental protection, these weaknesses were also ‘imported’ into Guangdong Province.

2.3 Summarizing the Lessons Learned

The European experience with visualizing, designing and financing the TEN-T corridor provides a constructive basis from which to examine how transport corridors under BRI should be designed. It shows that investing in adequate physical infrastructure is a key starting point, as was shown earlier in Phase 1 of Figure 1. Since, at present, many commodity chains are international, i.e., they include multiple movements and transactions across national borders before the product reaches the final consumer, reducing time on freight transport routes across different countries and regions reduces total costs. (Rodrigue, Comtois, & Slack, 2013) Particular attention needs to be paid to reducing non-tariff barriers, in addition to tariff barriers. Moreover, the ‘logistic hubs’ that combine inland ports, train terminals and warehousing are key for saving resources and facilitating multimodal transportation utilization.

In addition to physical infrastructure to permit the physical movement of goods along transport corridors, attention must be paid to the flow of people. This is often an issue, including in such success cases as TEN-T. The major issues are gaps in transportation nodes (or hardship in their accessibility), especially for continuous rail and/or inland waterway services, and differences in transport and traffic standards across borders (e.g. train length regulations). Also, as economic and business activities tend to cluster along the transport corridor (which is linked to more economic growth but also to more congestion and pollution), it is important to encourage hinterland networks from the corridor. Yet another challenge is to expand the potential of these hinterland multimodal networks via public-private partnerships rather than using only public funds. The case of the Pearl River Delta showed how attention paid to the movement of people enabled the development of an economic corridor.

BRI promises faster and cheaper access to destinations, broader distribution systems of goods, services and ideas, and less clustering. But in order to succeed in its goals, BRI participants will need to extensively communicate, coordinate their transport infrastructure development efforts, work on removing institutional barriers, upgrade old and build new joint international networks. BRI would also require substantial financial investments and a high degree of cooperation between all parties.
Many of the BRI countries are currently starved of investment due to their low levels of economic development, in turn due to low investment. Regional integration can also be a way to incentivize capital-rich states to invest in capital-poor states. This requires enabling regulations, compatible business processes, and financial access. For instance, regulations on property rights will be an important determinant of whether overseas investors will be willing to risk investing capital in a country.

However, as noted earlier, in both Europe and the Pearl River Delta, even the poorer areas within the region were already endowed with a high stock of human capital, were spatially cohesive, and observed property rights and related rules at the time that they entered into collaboration with the wealthier areas for corridor development. This is unlike the situation in the BRI countries, where poorer countries suffer from low levels of internal economic integration, compliance, and human capital. Merely investing in physical infrastructure and facilitating the movement of people and services in addition to goods may not overcome these inadequacies.

Further, proper sequencing of reforms will be needed. For instance, tariff and non-tariff barrier reductions should be in place by the time transport corridors are built in order to encourage economic development that is based on regional comparative advantage rather than on intra-national comparative advantage. We turn to the challenges in the next section.

3. Evaluating the challenges to make corridors more sustainable and unleash development dividends

As the literature has noted, the economic benefits of a corridor encompass the following: (1) reducing transport and production costs, (2) creating jobs, (3) expanding productive capacity, (4) improving access to markets, and (5) reducing prices of final goods and services. (Gekara & Chhetri, 2013; Holl, 2004)

How may these gains be incorporated into a sustainable development strategy? In the earlier section, we concluded with a number of challenges to attain sustainable development. In this section, we evaluate key examples of the economic, social and environmental challenges. In presenting separate analyses, we are aware that these are often linked – for instance, the poor often bear the brunt of an unclean environment, and poverty may create environmental challenges. (Reardon & Vosti, 1995) We shall bring these analyses together at the end of this section.

3.1 Sustaining the economic gains of development – focusing on SMEs

SME development is viewed as a key component of economic sustainability. In most countries around the world, SMEs employ over half the workforce. Many places have

32 https://www.ft.com/content/80c6e51a-4ce6-11e6-88c5-db83e98a590a
been transformed due to the development of their SME sector. Examples includes Italy, Germany and the Scandinavian countries among many others in Europe, while in Asia, the outstanding examples of SME-led growth include China, Singapore, and Sri Lanka. Yet, in many poor countries in the BRI region, SMEs are not the engines of innovation, employment and growth that they should be. Instead, largely due to inadequate human capital, poor access to finance, and overcomplicated tax systems, SMEs in such countries tend to put out low-end services and goods.

As global value chains (GVCs) managed by multinational corporations dominate the world trade system, there are opportunities for SMEs in the BRI countries to become part of this global system. (World Economic Forum, 2012) In GVCs, SMEs usually play the role of subcontractors or suppliers of intermediate goods. (Asian Development Bank, 2015; Zhang, May 2014) However, to succeed and be integrated, SMEs should be competitive and connected to the markets. An Asian Development Bank survey of SMEs in four Asian countries (Kazakhstan, Papua New Guinea, the Philippines, and Sri Lanka) found that product quality, skilled labor and strong customer relations are the most important for SMEs’ successful integration into the GVCs. Access to finance and investments are also vital. (Asian Development Bank, 2015)

To attain sustainability of SMEs, industrial clusters around transport corridors should contain a mix of large firms and SMEs. The former’s contribution to sustainability is through GVC management and ensuring compliance within the cluster of high standards of business process management, including, crucially, environmental standards. The role of the SMEs is to focus on skills and innovation. The relevant skills include both technical skills and business management skills. The second lesson is that policymakers play an important role. First, policymakers should institute high standards of compliance with regard to property rights, including assets, intellectual property, wages and environmental standards. Second, to support skills development and innovation within SMEs, the state should invest in vocational skills training. Third, to encourage SME formation, policymakers should focus on increasing the ease of doing business by SMEs through rules that reduce the cost of new business formation and closure, contract enforcement and related rules. Many of the BRI countries offer formidable challenges to new business formation that should receive policymaker attention.33

3.2 Sustaining the social gains of development – focus on the underprivileged

Improving physical connectivity has been shown to increase agricultural productivity by reducing travel time to agricultural markets, inducing farmers to adopt modern farming techniques and favor cash crops, and raising market participation. Improving road quality has also been shown to induce migration of labor from agriculture to manufacturing. (Ostrom, Schroeder, & Wynne, 1993; Shenggen & Zhang, 2004) The improvement of

33 http://www.doingbusiness.org/rankings
connectivity should be supported by policies to favor farmers to create cooperatives and insurance systems that can enhance welfare by insuring farmers against bad weather.

We argued, in Section 2, that one of the key strategies at the heart of BRI’s corridor initiatives should be the intergenerational sustainability of human capital across the region’s geography, i.e., that the key benefit of the corridor should be a multi-generational upward shift in the productivity of persons in the impacted regions. The most relevant indicators of quality of life must be addressed, including education, health, and long-term financial risk of the underprivileged populations in rural and urban areas.

Adequacies of health and education services are common public challenges in poor countries. There appears to be no substitute for a strong governmental commitment to spending the necessary resources on these services. However, ensuring that the poor derive benefits from public spending on health and education is no easy task. (Castro-Leal, Dayton, Demery, & Mehra, 1999) Corridors can help by improving access to health and education services both by reducing the cost of providing such services and enabling access to remote tertiary services, such as distant hospitals. (De & Iyengar, 2014; Hayami & Ruttan, 1971)

An aspect that usually needs urgent attention is addressing long-term financial risks faced by the poor. The poor need financial capital for basic housing, children’s education and a variety of other needs. The assets of the poor lie primarily in their human capital, which is rarely considered bankable. (Narayan, Chambers, Shah, & Petesch, 2000) Addressing this issue is possible through policies that recognize human capital as a bankable asset, such as through housing finance programs that link repayments to earnings. (Mehta & Mehta, 1991) Corridors expand markets and may thus enable banks to pool underprivileged borrowers in order to economically provide financial risk management services.

In the absence of pro-poor policies, disparities and social vulnerability may be augmented by corridors. For instance, when corridors connect commodity producing regions with consuming regions, even sustained demand for primary goods from the supply location may not lead to large improvements in the quality of life for the latter. Instead, the supply centers may remain dominated by low-end production while its residents remain poor and subject to large variations in income as commodity prices vary. Moreover, rapid degradation of land due to overfarming and overmining, transfer of land ownership to large, corporate interests, and inadequacy of basic human services may result, creating challenges for the environment and equality. Further, if investment in health and education in rural and urban areas is inadequate, the long-term gains of development may be compromised. The residents’ only path to sustainable development may then be through migration along the corridor to the urban area, which would have other costs in the form of overcrowded

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34 Studies have shown that the social benefits of higher education include lower public health costs (due to improved health literacy and better personal health habits), longer life (an additional 4.5 years in the United States for those completing a bachelor’s degree), lower public incarceration costs, and greater contributions to productivity. See: https://www.tiaainstitute.org/public/pdf/institute/research/advancing_higher_education/ahe_privatesocial0310c.pdf
cities and lack of social cohesion. (Banister & Berechman, 2001; Demurger, 2001; Gakenheimer, 1999; Mu & Van de Walle, 2007)  

3.3 - Sustaining the environmental gains of development – focus on basic services

The inadequacy of “basic services”, i.e., water, sanitation, hygiene, and electric power, is a common problem in poor countries and is a particular challenge for the poor. It also greatly influences the quality of the environment in which the poor live, with effects on productivity and health.  

For many poor countries reliant on the primary sector, city life means low-end housing, education and healthcare, and a polluted urban environment as a result of inadequate access to clean water and sanitation, inefficient waste burning, etc. Without addressing these issues, the development of transport corridors with the accompanying growth of manufacturing industry can degrade the environment by adding to the existing sources of pollution. Sustainable corridor development implies sensible planning of infrastructure that focuses on converting city occupations into high value-added services and locating manufacturing away from residential areas.

As with the provision of education and healthcare, provision of basic services requires a strong public commitment. The construction of a corridor offers opportunities to mitigate the environmental consequences of pollutant generating activities related to basic services. For instance, landfills can be located at appropriate distances from water sources and human habitation, and waste collection becomes more economically viable and can replace waste-burning, especially in remote areas.

3.4 - Aligning economic, social and environmental gains

Aligning the three pillars of sustainable development as part of a corridor strategy offers the opportunity to economically address several hitherto intractable problems. Consider the problem of unregulated waste burning. Research shows that 41 percent of the world’s total waste is disposed through unregulated burning, with major effects on health. (Wiedinmyer, Yokelson, & Gullett, 2014) This problem is intrinsically linked to poverty: poor countries cannot afford the facilities for proper waste disposal. Yet, some poor countries are finding innovative solutions. For instance, privatizing the disposal of waste has been found to reduce costs while improving efficiency, although, in the absence of strong compliance systems, the benefits are fewer. (Bel & Warner, 2008) Developing solutions around corridors, where the solutions can include optimizing landfill locations, providing services through collaborations of cities along a corridor, and applying best-practice strategies.

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35 In rural Nepal, for example, easier access to roads appears to have benefited poor households but did not reduce income inequality. In rural Bangladesh, middle-income households rather than the poorest households benefited the most from investments in roads. On the other hand, pro-poor policies can help. For instance, transport improvements in Vietnam and Madagascar reduced inequality.

36 https://www.theguardian.com/environment/2016/feb/12/air-pollution-deaths-india-china
practice regulations developed in more advanced locations along the corridor can lead to outcomes that enhance all the three pillars of sustainable development.

A second example: Tajikistan is a poor, landlocked, largely rural, and natural-disaster-prone country, with immense water resources. Through upgraded pipelines, roads and investment in hydroelectric generation, its hydroelectric potential can be realized through an economic corridor with China and other countries in the region. However, to make Tajikistan’s development sustainable, policies should address economic, social and environmental issues. These include addressing disaster resilience, improving workforce skills, and improving connectivity between rural locations. By focusing on these aspects, a transport corridor can greatly improve the social and economic conditions of Tajikistan’s population.

As these two examples show, corridor development and sustainable development can offer synergistic benefits if policy is aligned around the three pillars of economic, social and environmental progress.

4. Addressing Public Policy Challenges of Sustainable Development under BRI

In this section, we discuss a number of public policy challenges to sustainable development. These include identifying public goods for investment, regulation, and the role of the public sector as an investor.

To achieve sustainable outcomes, policymakers will need to think of FDI in public goods in a different way than has been done so far. The public goods suitable for BRI investment include, at least, physical infrastructure such as railroads and pollution controlling equipment. These are public goods in that they would likely not be financed by private sources of capital because the rate of private return may be below the cost of capital, even while the social rate of return may be high enough to justify the investment. FDI fills the gap between host country capacity and the capital needed.

In the BRI countries, public goods suitable for FDI should also include, under an expanded definition, investments in human capital improving services, such as health, formal education and workforce training. We have argued above that these are services that ensure that the gains to corridor development become sustainable. Yet, these are services that would be provided in sub-optimal amounts and quality levels if left to private capital, since the private rate of return, though positive, is likely to be below the cost of capital for high quality services, but above the cost of capital for low quality services.

The regulation of BRI investment will require addressing cross-border issues, such as differences in compliance standards, and dispute resolution mechanisms. For instance, a power plant will be more viable if the power is used to generate high value-added goods and services. In countries with weak enforcement standards, power produced may be stolen or used for low-end services. In several countries, the power distribution companies have not honored power purchase agreements with private IPPs due to the inability of government to ensure compliance with those agreements. The contrasting situation that of
regulatory capture by large producers, is also widely observed. Thus, setting the appropriate regulatory structure that incentivizes producers while protecting consumers from the monopoly profits inherent in natural monopolies is important.

To enable FDI in such services, the regulations should allow cross-border investment in services, as well as cross-border movements of service providers. These rules could be based on WTO standards.37

To ensure cross-border compatibility, standardized regulations for common resources such as capital and labor should be adopted through common rules on environmental protection, property rights and labor rights. Consumer rights should be protected by common pro-competition rules. A tribunal accepted by all BRI countries could resolve disputes.

For specific industries, since different countries have different organizational structures, e.g., the division of responsibilities between the provinces and the national government will likely not be the same across countries, it may be necessary to take a different approach. A model set of rules could be adopted, with the recommendation that actual rules be based on this model. For example, for power generation, regulations regarding tariff setting and production licenses could be addressed through negotiations among the affected states, based on a model set of rules earlier agreed upon.

A key feature of the projects under the BRI is the role of the public sector as an investor. This could include both the host state and overseas state-owned bodies. Since the investments may be in public goods, normal market principles may not be optimal. The state bodies should, to the extent possible, base their investment decisions on calculations of the social rate of return. The actual investment may take various forms, such as public guarantees for private investment, and joint investment with the private sector. In order to incentivize investment by the private sector, the public sector may also commit resources for complementary investments. For instance, a rail-link can be made more attractive to private investment if radial transport corridors are built at nodes along the railway line in order to transport goods to the nodes.

Complementary investment can also address ‘ribbon development’, a possible outcome of transport corridors.38 This phenomenon arises when the government supports the building of the corridor between two nodes, but does little to stimulate growth in the areas away from the corridor. ‘Ribbon development’ means the development of infrastructure and services in a narrow area around a main transport corridor through private initiative. The state may even support private investment by concentrating public services along the ribbon. This can lead to the economic and social decline in areas (either rural or urban) located away from the corridor. Over time the remote areas can degrade due to rapid outmigration to areas within the ribbon, while increasing congestion along the ribbon. To address this issue, the state should, prior to building the corridor, account for the costs of supporting balanced development in the area through radial transport, electricity and other

37 https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s3p1_e.htm
38 Several developing countries have witnessed the problem of ribbon development.
infrastructure links, and build these costs into the corridor project. Some of these additional costs may have to be borne by the government.

5. Summary of Policy Priorities

Given the transformative ambitions of the Belt and Road Initiative, policy initiatives will need to display long-term thinking and creative design. In this section, we summarize the priorities (Looney, 1997) that policymakers should address in order to accomplish these ambitions. 39

We discuss below the policy priorities in order of coverage, beginning with priorities that should be developed commonly for all the countries within BRI, and then down to specific priorities for locations and industries.

1. Supranational arrangements: The areas targeted for BRI-wide arrangements should cover those where cross-border compatibility will be needed and where well-defined standards can be developed. While a proper sequencing of reforms will be needed, the ultimate goal of such arrangements should be to devise rules based on best practice global standards, such as WTO standards for trade compliance and people movement, as well as create an independent, rules-based mechanism for compliance and dispute resolution. The priorities include the following:

   a. Regulations regarding property rights and labor rights.
   b. Compliance between environmental law and policymaking
   c. Pro-competition and other consumer protection rules.
   d. Regulations to permit cross-border investment in goods and provision of services with low transaction costs, including low tariff barriers.
   e. Design of investor–state, and state-state dispute settlement mechanisms with regard to environmental, labor rights, and property rights disputes.

2. Region-specific or bilateral arrangements: While many of the constraints to efficient delivery of goods and services may be addressed by supranational arrangements, the following priorities should be addressed bilaterally or regionally:

   a. Reducing specific tariff and non-tariff barriers. This particularly applies to non-tariff barriers, such as inspection regimes and could include reducing tariffs on environmental goods and services

39 By ‘policy priorities’ we mean the goals of policymaking rather than the actual policies themselves.
b. Investment in trade facilitation services across borders, such as inland container depots, multi-mode transport services, and automation of service processes.

c. Cross-border tax neutralization, and related adjustments

3. Infrastructure-specific arrangements: These policies are intended to ensure adequacy of the physical infrastructure along the corridor. The policy goals should cover the following aspects.

a. Facilitating movement of freight transport and flows of people through appropriate route planning and determining the types of infrastructure.

b. Addressing the potential of hinterland multimodal networks through infrastructure designed to lower transportation costs and travel times, and to improve road access and proximity to markets from remote areas to nodal points along the corridor.

c. Ensuring that corridors be designed to maximize access to health, education and workforce training services, and improved affordable housing, while helping to reduce inner-city congestion.

d. Ensuring that corridors enable the conversion of city occupations from manufacturing into high value-added services, including through zoning for providing the physical infrastructure to locate manufacturing away from residential areas.

e. Development of green transport corridors in the BRI context as an integrated low-carbon and long term sustainable transport concept (use of green strategies, technologies, environmental effectiveness of operations, use of different transport modes (co-modality) and supply chain constitution, link between environmental and spatial planning and social aspects), and targeting whole-project life-cycle productivity

   i. Creating incentives for green investment financing in infrastructure.

   ii. Fostering green standards, disclosure and reporting on investment impacts.

   iii. Integrating (renewable) energy sensitive measures such as Renewable Portfolio Standard (RPS) mandate to electricity producers, etc.

4. Country-specific/National arrangements: The policy goal should be to establish high business standards. These should include the following.

b. Encouraging SME formation through policies that increase the ease of doing business by SMEs. This should be accomplished through rules that reduce the cost of new business formation and closure, contract enforcement and related rules.

i. Encouraging capacity building programs for the sustainable inclusion of SMEs in GVCs in an inclusive business ecosystem.

c. Ensuring that public sector investment and other support, such as risk guarantees, focus on public goods, such as complementary investments that will attract private capital, and that will address the challenge of ribbon development.

5. Industry-specific arrangements: The policy goal should be to create standards that adapt to country specific differences, such as governance structures.

a. Developing industry-specific model rules could be adopted. Actual rules should be based on and adapted from this model. For example, for power generation, regulations regarding tariff setting and generation licenses in practice could be negotiated among the affected states based on a model set of rules earlier agreed upon.

b. Comprehensive environmental risk analysis should be achieved by integrating the environmental sustainability into industrial arrangements

<table>
<thead>
<tr>
<th>Implementation Authority</th>
<th>Policy Priority</th>
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<tbody>
<tr>
<td><strong>Supranational</strong></td>
<td>Property rights</td>
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<td>Labor rights</td>
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<td>Environmental laws</td>
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<td>Consumer protection</td>
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<td>Cross-border investment</td>
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<td>Dispute settlement</td>
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<td><strong>Regional and Bilateral</strong></td>
<td>Tariff and non-tariff barriers</td>
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<td></td>
<td>Trade facilitation services</td>
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<td>Cross-border tax neutralization</td>
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<tr>
<td><strong>Infrastructure</strong></td>
<td>Corridor route planning</td>
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<td></td>
<td>Hinterland infrastructure</td>
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<td>Access to health and education services</td>
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The interaction of these priorities will be a complex task. For instance, incentivizing FDI in a power plant is not as simple as guaranteeing market-related rates of return to overseas investors. Policymakers need to think about the impact of a power plant on using assets in place, such as known reserves of coal, as well as the impact on existing and future SME development. The utilization of coal reserves should be consistent with long-term viability of the plant as well as inter-generational reliance on those reserves. The possibility of selling surplus power across borders requires a consideration of how to integrate physical and regulatory systems, and how to ensure policy coordination across borders. Investors must be held liable for pro-consumer actions while being adequately incentivized to invest in the appropriate infrastructure. They must be subject to rules on compliance with environmental and financial requirements and risks, and these rules must be enforced.

In particular, the social and environmental objectives should be addressed through governance that encompasses the regulatory and public policy life cycles across supranational, region-specific or bilateral agreements, infrastructure-specific arrangements, country-specific arrangements and industry specific arrangements. Social inclusiveness and environmental sustainability should orient corridor assessment across planning, execution and performance monitoring of and along the corridors.
6. Conclusion
Developing transport corridors that deliver sustained economic, social and environmental benefits across generations (the “three pillars” of sustainable development) is a core goal of the Belt and Road Initiative. To accomplish sustainable development, corridor initiatives will need to display a level of long-term thinking, creative design and multi-dimensional approaches to implementation that is likely unprecedented.

This scoping paper draws on prior experience and an understanding of best practices in policy intervention to develop policy recommendations for developing BRI corridors that achieve sustainable development. A corridor typically begins with physical connectivity and adds a services infrastructure – services such as banking and logistics, with time. To be sustainable, attention to SMEs, human capital development for the underprivileged, and the environment will be needed. This is a complex task and will require an understanding of the linkages between the three pillars, the areas of opportunity, and the areas of policy intervention. This was illustrated with examples of the Trans-European Network and the Pearl River Delta, with potential applications and limitations to the regions of BRI.

Our review of best practices for policy interventions regarding sustainable development yielded lessons for SME support, pro-poor policies for human capital development, and environmentally friendly provision of basic services. Corridors can improve the provision of all three aspects, but there is no substitute for a strong governmental commitment to financially supporting such interventions, and for supporting change with effective policy reforms. We presented a summary of policy priorities outlining the supranational, regional, bilateral, national, infrastructural and industrial priorities for policymaker action.

The rewards for these approaches should be well worth the effort. Some estimates say that BRI initiatives in infrastructure, mostly around transport corridors, may touch $4 trillion over the next few decades.40 If BRI is able to transform even four moderately populated, poor countries along the Belt with a total population of under 50 m – Mongolia, Kyrgyzstan, Tajikistan and Uzbekistan into middle income countries with a per capita income of at least $10,000, the gain in economic value alone would be over $300 billion a year. This is a good return on its own account. Once other economies are included, BRI’s transformative role would be immense.

References


List of acronyms

BRI – Belt and Road Initiative
eTEN – Trans-European Telecommunications Network
FDI – Foreign direct investment
GVC - Global value chain
HST – High-speed train
IPP – Independent power producer
RPS – Renewable portfolio standard
SME – Small and Medium-sized enterprise
TEN-E – Trans-European Energy Network
TEN-T – Trans-European Transport Network
TSR – Trans-Siberian Railway
WTO – World Trade Organization
Scoping Papers

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