Baoji-Zhongwei Railway (China)

Issue-Specific Activities and Initiatives

Economic Infrastructure Development

Regional Development That Contributes to Healthy Economic and Social Progress and the Construction of a Transit and Communication Infrastructure Incorporating Both "Structural" and "Non-Structural" Solutions

The fact that many developing countries lack the basic mechanisms that support the maintenance and operation of fundamental economic and social infrastructures proves to be a primary hindrance to progress. In addition to helping improve economic infrastructures, JICA programs take part in establishing economic foundations in developing countries using capacity development (CD) as a means to boosting social capacity.

While rapid urbanization can drive economic development and bring about efficiency in economic activity, it can just as likely cause misfortune. Stress and strain on worsening living environments, transportation and public security can accumulate, while disparities between urban areas and local areas where development is not as rapid are likely to surface. Furthermore, it's not enough to think of development in terms of each region specifically. The promotion of effective regional development needs to be looked at from a cross-border perspective inclusive of interregional relations and requires macro planning. While working to ensure proper governance, JICA is also striving to boost social capacity in developing nations. In doing so, it emphasizes the importance of forming information and communication networks, formulates appropriate area development plans and improves transport and transit infrastructures based on such plans, as well as makes certain that social and other systems are implemented appropriately.

Urban and Regional Development

—In the Light and Shadows of Rapid Urbanization—

The Promotion of Comprehensive Development Will Open Up the Future

Topic Overview

In 2009, the earth's population was estimated at 6.8 billion people. While only 13% of the world's total population was found to dwell in cities in 1900, that rate exceeded 50% by around 2006, demonstrating the rapid progress of urbanization. This tendency is particularly pronounced in developing countries, where by 2030 a large portion of the estimated 80% of world city dwellers are expected to reside.

The effects of development as rapid as this are dichotomous. While creating greater economic efficiency and corresponding economic expansion, poor living environments, traffic congestion and weak public security often become worse, giving rise to slum environments. A variety of issues related to increasing gaps among developing cities and more rural areas that have been left behind are being exposed. Both areas peripheral to urban centers as well as further distanced rural neighborhoods face problems such as regional economic erosion, outdated social infrastructures and deficient public services.

Trying to resolve these issues individually has its limitations since various events are able to cause both complex and reciprocal effects. This is why JICA believes in taking a medium- to long-term view and comprehensive approach to development in any city or region.

JICA's Initiatives

JICA's efforts to bolster urban development in developing countries include urban master planning and comprehensive regional planning in addition to offering Technical Assistance and cooperation to facilitate the execution of these plans. Through these efforts JICA hopes to contribute to economic growth and improving the standards of living in these countries.

JICA has set five specific strategies that it plans to implement as a matter of priority. In doing so, it will analyze regional issues, create a medium- to long-term vision, formulate development policies, draft specific agendas by sector and propose concrete plans of action to ensure the implementation of these support efforts. By taking these steps, mutual consistency can be gained through multiple projects, the relationship and priority level of each project will become apparent and plans will be efficiently and effectively carried out.

1. Take an integrated and comprehensive approach to the diverse set of issues of any city or region
2. Emphasize CD across all administrative agencies, communities and social organizations to advance urban and regional development
3. Enhance regional administrative systems in accordance with its country's state of affairs
4. Correct disparities between regions by promoting balanced regional development that recognizes the perspectives of its residents
5. Encourage well-balanced development that curbs any negative effects incurred through urbanization

Cooperative Efforts to Expand Human Resources

Until now JICA's collaborative efforts in urban and regional development had

primarily focused on plan formulation. However, recent efforts include concrete measures that give form to such plans through the development of human resources in target regions. In Viet Nam, JICA formulated master plans in Hanoi, Ho Chi Minh City by 2008 and is currently preparing plans in Da Nang. Although efforts are still in their infancy, from March 2009, JICA launched further project initiatives to develop human resources in rural cities, following the lead of more developed urban regions.

Furthermore, while development plans had until now been administrative-based, the formulation of master plans in Viet Nam included an inquiry survey of 10–20 thousand people, a technique being used more frequently to ensure people's opinions are adequately reflected in development plans.

In addition, JICA also provides cooperative support for the improvement of impoverished living environments by strengthening the capabilities of organizations involved in new technological research and development related to housing projects. It also provides accurate geographical information such as maps that are indispensable to development planning.

Regional Development from a Macro Perspective

As regional needs become increasingly diversified, problems are less likely to be resolved when addressed individually. Problem resolution is more likely to be effective today when taking in a larger scope of view to include an entire region or city. For example, specific efforts to support the development of a rural farming village are no longer sufficient. Efforts need to be implemented on a larger scale—one that takes into account not only the village, but the entire region in which it is located—and depending on the country, sometimes across borders. JICA is thus beginning regional development efforts that are based on macro perspectives.

Example

Urban/Regional Development
Cambodia
"Improvement of Sihanoukville City Environment Plan (in Cambodia)"

Continuous and Extensive Support to Achieve Both Economic Development and Environmental Preservation

Sihanoukville City possesses Cambodia's only deepwater harbor and is a mid-sized maritime industrial city that has experienced significant growth in recent years. With the progress of offshore oil and natural gas mining, Sihanoukville is expected to serve as a center of resource development and as a vital supply base. Sihanoukville likewise anticipates a steep increase in its population in coming years.

Beginning with development studies in 1996, Japan has provided a total of four ODA loans to the city of Sihanoukville for the development of harbor facilities including a container terminal in addition to ongoing support via Grant Aid and diverse Technical Cooperation. Japan has therefore been a major contributor to the development of Sihanoukville's harbor as an international port, which provides backing for economic prosperity.

In recent years, however, since urbanization has progressed at such an accelerated pace, the building of basic infrastructure and land utilization planning have not been in the position to catch up. This in turn has created city zoning issues manifested by an integration of industrial and residential neighborhoods. Furthermore, blessed with an abundant natural environment, cities maintain the inherent potential to serve as centers of tourism. Accordingly, the promotion of development harmonized with the natural environment is also an issue of significance.

Against this background, the Cambodian government has asked for Japan's support in creating an implementation structure and land utilization plan that makes both environmental conservation and economic development possible in Sihanoukville City. In addition, it has requested assistance in the formulation of a basic development framework for the entire oceanfront region.

In February 2009, the "Oceanfront development scheme for sustainable growth and Sihanoukville development plan formulation survey" was initiated. The two pillars of the survey have been designated as 1) land utilization and transit (urban transportation and logistics), and 2) legal systems, organizations and structures. With JICA's firm support, cooperative efforts ranging from economic growth via harbor facility improvement to comprehensive development that contributes to environmental harmony are being put into effect.

View of Sihanoukville Harbor's two primary container cranes (left) and container dock (right) equipped with cooperation by JICA

Transportation —Realizing People's Potentials—

Enhancing Cross-Border Transportation Infrastructures to Bolster Regional Development

Topic Overview

Many developing countries lack a solid foundation to support their main means of transportation, which impedes economic growth and contributes to reduce poverty. Transportation infrastructure maintenance is indispensable to the movement of goods and people and therefore the ongoing development and growth of a nation. Proper transport management, however, has the potential to help prevent future climate change with reductions in CO_2 as a result of less congested traffic conditions and greater distribution efficiency.

The demand for the maintenance of transportation infrastructures, including roads, railways, ports and airports, remains high in both developing and developed countries around the world. Furthermore, the need for maintenance

Example

Transportation
Sub-Saharan Africa
"Cross Border Transportation Infrastructure"

The Current Need for Cross-Border Support

Sub-Saharan Africa comprises 48 countries, excluding the five located in North Africa. Its size accounts for 18% of the world's total land area and it holds 12% of the world's population. Yet, its total GDP still falls short of 2%. Excluding South Africa, 50% of its population, totaling 400 million people, in the remaining 47 nations live well below poverty standards on less than US$1.25 a day.

Africa became the collection of nations that it is today through the establishment of borders based on colonial policies. During this colonial era, railways served as the backbone of its transportation infrastructure, which connected harbors to the hinterland. Today, however, lack of investment in this area is causing increasing deterioration of its infrastructure. Moreover, with the global shift toward the use of containers, the cost of maintaining roads and harbors has increased, underscoring the lack of large-scale infrastructural facilities, and causing issues of economic disparity. Accordingly, the need for cross-border transportation infrastructure maintenance from both a structural and non-structural standpoint to cater to the specific characteristics of Africa's border-laden landscape is dire. JICA is thus responding to this call.

One country with great potential for logistical demand is Uganda in East Africa. From Kenya, which runs along its eastern border, there is a major highway artery that runs through Uganda's capital city Kampala to Rwanda and Democratic Republic of Congo. At about 80km east of Kampala this road crosses the Nile River. The existing bridge, however, is not only deteriorating with age, but is a narrow two-lane, two-way road. From a comprehensive cross-border perspective that takes into account several regions, JICA is participating in the construction of a new bridge.

Further research has indicated that the Sub-Saharan cross-border transportation infrastructure in Africa suffers from harbor and railway bottleneck issues. While continuing to support the "One Stop Border Post Project" for cross-border transit maintenance, JICA is also providing Technical Assistance, ODA loans and Grant Aid to back both structural and non-structural efforts in the improvement of harbors, railways and Africa's overall transportation infrastructure.

Near the international Rusumo border between Tanzania and Rwanda


Trucks in transit across the Malaba international border

The yard at the international Malaba border separating Kenya and Uganda

management, repair and renewal of aging structures and facilities is expected to rise.

However, transportation infrastructure maintenance requires considerable funding, which makes securing the finances for such purposes a tremendous challenge. Because of the difficulty in sufficiently maintaining necessary and all infrastructures on public funds alone, a number of finance securitization policies such as those that allow for the injection of private funds are being reviewed. The provision of efficient and continuous transportation services that truly meet the needs of its users are in more demand now than ever before.

Furthermore, the effects of transportation infrastructure maintenance on the environment and society need to be carefully considered and requires the support of partner countries in taking on efforts to do so.

JICA's Initiatives

JICA's main goal for cooperation in the area of transportation is the swift, smooth and safe transport of goods and people in order to invigorate socio-economic activity and to ultimately improve income levels and enrich people's lives.

Transportation infrastructure development and maintenance in developing countries is much more complicated than simply building roads and bridges. It also requires complete infrastructure planning to be able to deal with how to organize an efficient system as well as the construction of a scheme for properly managing and operating the systems and facilities to be put into place for sustainable service deliveries. In sum, infrastructure maintenance is just the tip of the iceberg. Cultivation and management of related human resources, systems and mechanisms and support for the continuous functioning of transportation facilities is also necessary. For this reason, JICA sees infrastructure maintenance as just one aspect of its support. It also bears in mind the people, places and things transportation systems are meant to serve by paying close attention to its users and residents in surrounding areas, actively participating in community activities and collaborating with NGOs.

In addition to support efforts that until now predominately focused on structural solutions such as road construction, JICA is offering assistance in

Example

Transportation

Bolivia

"The Project for Capacity Development of Road Disaster Prevention and Bridge Management and Maintenance"

Technical Support for Disaster Prevention for Roads and Better Operational Management for Bridges

Bolivia is three times the geographical size of Japan, with a total population of approximately 9.6 million. Residing in 314 communities spread throughout the country, Bolivians are 70–80% reliant on ground distribution of essential everyday goods and agricultural products. Accordingly, while possessing 60,000 kilometers of road, much of which is old and deteriorating, its paved road ratio stands at a low of 30% for national highways and less than 1% for other roads. A mountainous country that is susceptible to inclement weather patterns and rough terrain, Bolivia also suffers from damages caused by washed out bridges, falling rocks and major landslides during its rainy season from November to March. Such havoc not only renders local roads useless, but also causes much detriment to impoverished communities.

With the aim of carrying out drastic road reforms in Bolivia, JICA began a series of development studies in 2005. Utilizing these studies, JICA formulated a variety of measures and policies essential to helping Bolivia prevent future disaster while proposing a capacity development (CD) plan to establish an organizational structure to handle such measures. Bolivia has since established a Disaster Prevention Unit within its road management organization and is taking steps to implement the CD plan. Yet, with no experience in disaster prevention, Bolivia has called on Japan to provide Technical Assistance. JICA therefore launched a project to help road disaster reduction management organizations and improve its bridge maintenance and management capabilities. Furthermore, JICA has dispatched Japanese specialists and experts, offered training, in both Japan and Bolivia, and provided necessary equipment.

Surveying fallen boulders (size, configuration of the fall, damages)

Meeting regarding a bridge diagnostics survey

the following ways: 1) support for the development of fundamental capabilities to boost administrative capacity (capacity development for transportation); 2) support for regionalization and internationalization to accelerate the development of regional economic zones and internationalization of the transport of people and goods (international transit systems); 3) support for harmonious national development and the preservation of people's rights to travel freely and equally (national transit systems); 4) wide-ranging cooperation to improve urban living standards and sustainable development (urban transit systems); and 5) support for development and maintenance of a basic transportation infrastructure to enhance rural living standards (remote and local transit systems).

Cross-Border Transportation Infrastructure

JICA recognizes that bilateral aid is not enough to support the transportation infrastructures of certain countries. If we look at the distribution of goods for example, there are times when products are shipped from a coastal country to an inland country, involving more than a single country during the course of travel. For cases such as this cross-border cooperation is essential. In JICA's terminology, cross-border transportation means the progress of regionalization and development in regions where such infrastructures are to be established. As such, cross-border transportation infrastructure not only relates to physical borders but has come to be regarded as something bringing about other development as well. It serves as a network for the promotion of regional development by expanding transportation systems to individual regions. Furthermore, it contributes to the creation of streamlined cross-border administrative operations, which in turn lead to the establishment of cross-border transportation. This allows for easier user access. As yet another non-structural benefit, the expansion of human resources is possible while attempting to put cross-border transportation infrastructure in place at the same time.

Furthermore, the maintenance of cross-border transportation infrastructures requires review from the perspective of interregional cooperation. The "Study of the National Logistics Network Project in Laos," begun in March 2008, is a project that exactly exemplifies this. This project called for interregional cooperation, and its challenge is to

Example

Transportation
India
"Delhi Mass Rapid Transport System Project"

Realizing an Ideal Combination of Support with ODA Loans and Technical Assistance

At one time, only long-distance railway travel and transport was possible in India. There were no trains that traveled short distances to connect its suburbs with its cities. Short distances were mainly traveled by bus and automobiles. However, chronic traffic congestion and air pollution soon became problematic. The need for a punctual and efficient commuter system eventually led to the construction of the Delhi Metro, the city's first large-volume, high-speed transportation system.

Japan's support to India with the provision of ODA loans has been continuous since 1997 and helped fund this massive transportation project. When JICA newly integrated in October 2008, it decided to continue its support for this project by additionally offering Technical Cooperation in safety operations of Delhi Metro and maintenance and management of passenger cars by sending experts. Safety management support included timetable management and the creation of emergency plans taking into consideration India's social climate.

More specifically, JICA helped carry out emergency rescue training under a terrorist attack scenario in which the challenge was to rescue injured passengers and recover passenger cars that had derailed. JICA is pleased to see its provision of ODA loans be further supported by Technical Assistance to realize an altogether enriched foundation of support.

Maintenance inspection and passenger flow control to ensure safety and punctuality

successfully place, mainly, Laos, but also Cambodia, which have seen comparatively less economic growth than Thailand and Viet Nam, within the Asian cross-border transportation infrastructure maintenance scheme.

The fostering of cross-border transportation is expected to invigorate economies in countries that have gotten a late start, accelerate the correction of disparities between nations, and help reduce poverty. On the contrary, full consideration must also be given to the possibility of negative impacts such as benefits being gained primarily by larger countries with more robust economies, an increase in crime and the spread of disease such as HIV/AIDS.

Information Technology (IT)

—Late Start of IT as a New Inhibitor to Economic Development—

The Importance of Closing the Digital Divide between Countries and Regions

Topic Overview

Information technology in recent years has provided developed nations with tremendous development strength, not to mention economic growth largely attributable to a booming IT industry. Applicable in the administrative, social and economic fields, IT has successfully computerized central government operations (e-governance), is being used to educate via the Internet (e-learning), and facilitates digital trade and commerce (e-commerce). IT also has the potential to provide the basic support for a variety of activities, allows for efficient economic and social organization in developed nations, and raises productivity, enhancing life-style quality and improving citizen services.

Developing countries, however, have not yet had the chance to use, learn about or reap the benefits that IT has to offer. The disparity of IT resources between countries has given birth to what is called the digital divide. This gap is also contributing to a widening of the economic disparities and ultimately an unbalanced world structure.

JICA's Initiatives

JICA believes in the importance of boosting the efficacy of standard Technical Assistance by using a face-to-face support method while providing assistance in a more efficient manner in order to close the digital divide. Moreover, it hopes to help eliminate digital disparity issues in developing countries by fostering and promoting the use of IT.

At the G8 Kyushu-Okinawa Summit held in July 2000, Japan asserted its stance on helping close the digital divide in developing countries, particularly in Asia, by adopting distance learning and cultivating IT usage under the auspices of development aid. The government also announced plans to create ways to use ODA funds more effectively and to establish 30 IT bases going forward.

IT Policies Linked to Social and Economic Development

In addressing the late development of IT resources in developing countries, JICA is currently undertaking the following activities established as a five-point IT support plan.

1) Improve IT policy planning capabilities: Dispatch advisors on IT policy planning for national strategization, electric communications, industry cultivation and other purposes.
2) Train and cultivate IT human resources: Implement a human resource expansion project to enhance the capabilities of technicians and policy planners in order to further spread IT usage. This step comprises a large proportion of JICA's IT support efforts.
3) Develop a communications foundation: Formulate a future communications network plan for the development of a foundation for central and peripheral communications networks. Provide support for the reinforcement of maintenance and management systems.
4) Improve the efficiency and efficacy of IT usage in all fields: Channel improved operational efficacy and efficiency through collaborative IT applications in education, medicine and commerce and adopt IT usage in governmental administrative fields.
5) Improve the efficiency and efficacy of aid through the use of IT: Expand JICA-Net operations to better address all of these IT issues and topics.