



Japan International Cooperation Agency
Urban Growth for
Inclusive and Dynamic Development

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Economic Infrastructure Department
Japan International Cooperation Agency

Outline of JICA Strategy in the Urban Development Sector

Why : is cooperation in the urban development sector necessary?

Needs to tackle urban development

Around 40% of the world's population living in cities in developing countries
Yet expected to exceed 50% by 2050

Cities as a driver of economic development
Concentration of people and industries in cities that drives economic growth

Pressing urban issues

Urban facility shortages hindering economic growth
Infrastructure shortage inhibiting private investment
Vast infrastructure demand not being satisfied in supply

Urban economic structure that widens income gap
Negative effects of urbanization concentrating on the poor

Growing risk of disasters caused by climate change
Including flood, heat island, cold-weather damage, desertification

Development for All

Urban Growth for Inclusive Development

Development for a Positive Cycle of Economic Growth and Poverty Reduction

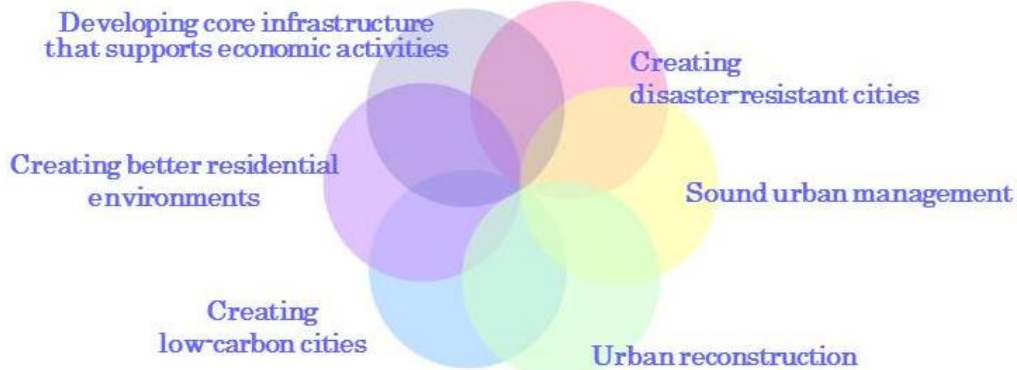
Urban Growth for Dynamic Development



JICA's vision in Urban Development

Urban Growth for Inclusive and Dynamic Development

WHAT: issues to focus on in urban development



HOW: to implement cooperation in the urban development sector

Apply Japan's experience that overcame rapid urbanization and disasters

Comprehensively support all steps from formulation of development concepts, materialization of plans and through to maintenance and operation.

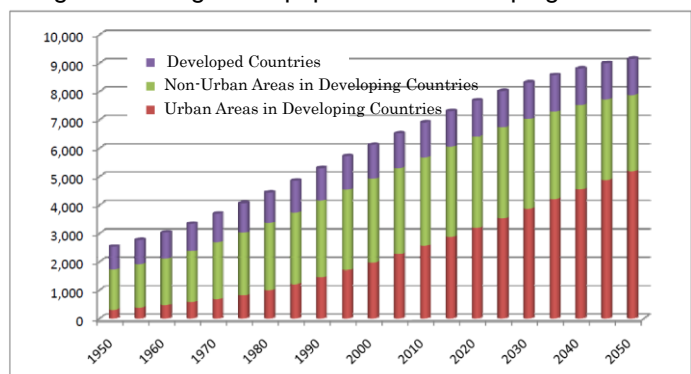


1. Significance and purpose: Why JICA provides cooperation in the urban development sectors

Need for cooperation in the urban development sectors of developing countries

- Nearly 40% of the world's population lives in cities in developing countries

Fig. 1: Growing urban population in developing countries



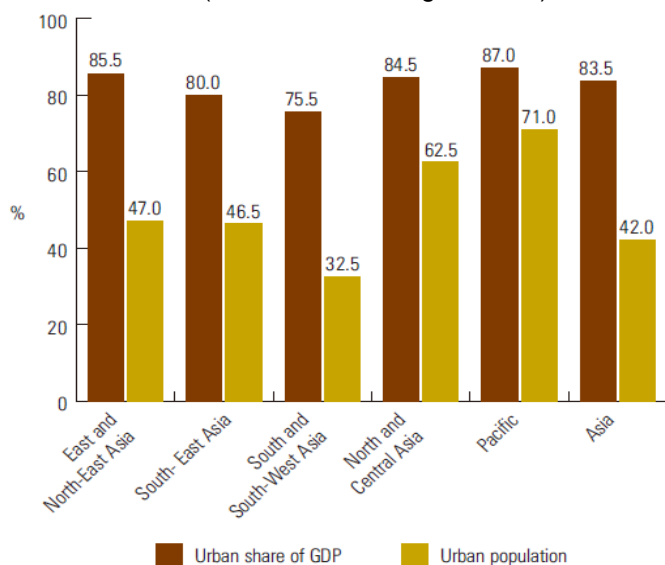
Source: Prepared by JICA based on "World Population Prospects: The 2008 Revision" and "World Urbanization Prospects: The 2009 Revision", United Nations Population Division

According to United Nations (UN) statistics, the world's population almost doubled in the last four decades, reaching 7 billion this year increasing from 3.69 billion in 1970. This population growth is concentrated in developing countries, particularly in the urban areas. In fact, urban population of developing countries quadrupled from 680 million in 1970 to 2.56 billion in 2010 and this suggests that over the last 40 years, approximately two-thirds of the world population growth had occurred in the area.

This explosive growth in world population is thus closely tied to rapid urbanization in developing countries, a trend that is expected to continue. In 1970, 18.4% of world's population lived in urban areas of developing countries. Now the figure is 37.0%. UN predicts that in 2050 — 40 years from now — more than a half of the world's population (5.19 billion which is 56.7% of estimated 9.15 billion) will be living in the cities of developing countries. This means that over the next 40 years, urban population in such area will grow by roughly 5.5 million a month — which is just like a new Paris metropolitan area (10.41 million in 2009 according to UN statistics) being created every two months.

- Cities play a leading role in economic development

Fig. 2: GDP share of urban areas exceeding population share (Asia and Pacific region, 2008)



Source: "The State of Asian Cities 2010/11", UN-Habitat (2010)

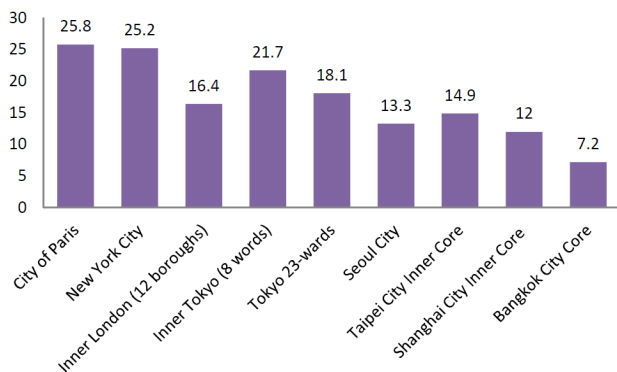
In many countries of the world, cities serve as economic centers for the whole country. In Asia for example, 42% of the population lived in urban areas in 2008; however, these areas produced over 80% of Asia's goods and services. The development of modern industry requires both economies of scale and economies of agglomeration, so on one hand, this trend should be welcomed from the view of economic development strategy — since it is a necessary component of economic growth and poverty reduction in developing countries.

It is therefore obvious that cities are the critical aspect of developing countries in terms of their concentration of both population and economic activity. It is also clear that future development depends on maximization of the benefits of urbanization to bring sound urban growth. These benefits include the revitalization of urban economies, which boosts national economic development as a whole. Since cities are the driving force in national economic development, appropriate management of the energy of accumulated population and industry may help reducing poverty, the challenge shared by all developing countries.

Pressing issues for cities

▪ Shortages of urban infrastructure hindering economic growth

Fig. 3: Low road ratio in cities of developing countries compared to cities in developed countries (as % of administrative district area; 2004)



Source: Prepared by JICA based on "Developing Sustainable Transport System in Asian Megacities: Challenges and Prospects" (Asia Pacific Weeks in Berlin: Urban Transport and Mobility Conference [Workshop I], September 12-14), Raj Acharya, S R (2007).

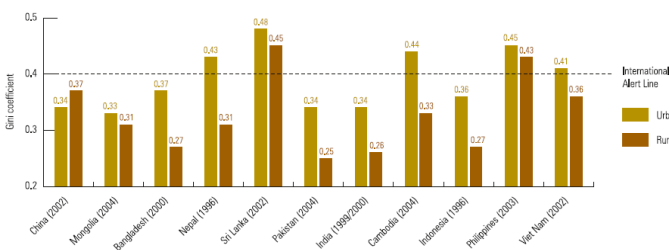
Urban development can be considered necessary for economic growth in developing countries. However, without job creation and development of economic infrastructure, it may result in stagnation of the entire economic growth process and manifestation of the negative aspects of urbanization.

For example, many urban areas in developing countries are expanding rapidly along with increasing migration. Unfortunately the speed of such population growth often overtakes urban infrastructure development (e.g. roads, water supply and drainage facilities, and waste disposal facilities), which results in creating residential districts disorderly in suburban areas with insufficient infrastructure, low housing quality and low income households. Even in central city areas, numerous problems associated with shortage in urban infrastructure have emerged, such as severe traffic congestion, flood during rains and public spaces piled with garbage.

In addition to these visible problems, sluggish development of urban infrastructure eventually hinders sustainable urban development because insufficient infrastructure creates social problems including friction between ordinary city residents and slum tenants/squatters (people illegally living on private property such as empty or derelict buildings in downtown areas) and economic problems such as decline of industrial productivity and poor investment climate due to traffic congestion.

▪ Urban economic structures widening the gap between the rich and the poor

Fig. 4: Wider Income gap in urban areas



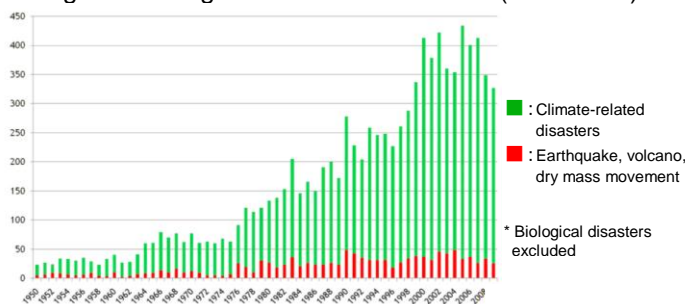
Source: "State of the World's Cities 2008/2009: Harmonious Cities", UN-Habitat (2008)

Urbanization has some positive aspects including stimulation of economic activities, revitalization of social/cultural reform and contribution to economic/social development not only of the cities themselves but also of the nation as a whole. However, if central and regional governments do not intervene with appropriate policies, these benefits will be unevenly distributed among certain groups rather than reaching all the people who live and work in the cities.

This may result in social inequity, where the socially vulnerable (e.g. low-income groups) bears the most of the negative impacts of urbanization and rarely enjoys the benefits.

▪ Climate change increases disaster risks

Fig. 5: Growing risk of natural disasters* (1950-2009)



Source: Prepared by JICA based on "Disasters in Numbers 2009 and the Decade" (CRED - UNISDR Press Conference, 28 January, Geneva), Guha-Sapir, D (2010)

Climate change worsens the negative aspects of urbanization. Enormous damage may occur when the scope and intensity of abnormal weather conditions exceed the capacity of urban infrastructure (e.g., rainwater drainage channels to prevent flood) which was built based on previous disasters and risks. Since economically and socially vulnerable people tend to live in areas that are vulnerable to natural disasters, they are likely to be more seriously affected by the adverse effects of climate change.

JICA's vision in urban development – Urban Growth and Dynamic Development

In light of the above, current conditions and opportunities faced by the cities in developing countries are:

- The ever-growing populations in developing countries are over-concentrated in cities. As a result, more than half of the world's population will live in these areas by 2050.
- In many countries, cities are already serving as national economic centers. The concentration of people and industry represents significant potential and opportunities for national economic development.
- Channeling the energy of urbanization into the right direction can greatly contribute to the reduction of poverty by improving the quality of economic growth and involving all people in the growth process.

These points demonstrate the value of focusing on cities in developing countries and facilitating their growth as a way to contribute to the stable development of the world as a whole.

At the same time, we have to look at the following problems caused by urbanization and make a steady effort to resolve them:

- Infrastructure in these areas has not been adequately developed to meet the pace of urbanization typified by expansion of people and economic activities and the spread of urban districts. For example, lack of infrastructure brings traffic congestion that will result in stagnation of urban activities and deterioration of urban environment, both of which require immediate measures.
- Income gap is actually more severe in urban areas than in rural areas. It is therefore critical to ensure equal opportunities for all people, rather than allowing a particular group to monopolize the wealth accumulated in cities and the access to better living conditions.
- Regardless of whether a country is developed or developing, large cities tend to be located in low-lying or coastal areas. These areas are vulnerable to the adverse effects of global climate change (including torrential rain and rising sea level), so there is a growing concern about the likelihood of severe damage from natural disasters. Even cities at higher altitudes (such as those in Latin America) are vulnerable to landslides and other natural disasters. The people who are most likely to be affected by natural disasters are the poor who reside in vulnerable residential environments. Thus there is a need for disaster management that focuses not only on stable economic growth but also on social considerations.

All of these factors brings necessity to consider both the positive and negative aspects of urbanization. Cooperation efforts must ensure the cities which are the driving source of developing countries continue to

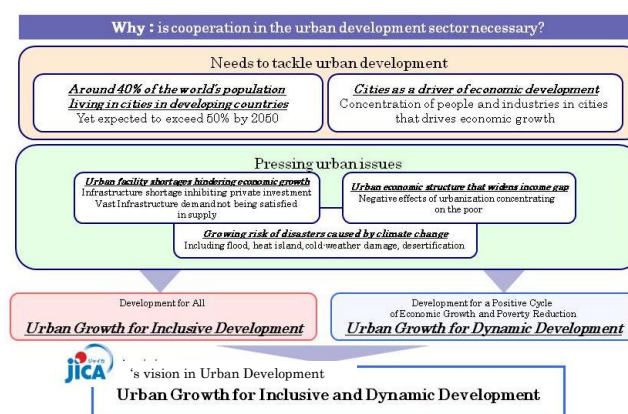
develop as places of equality and opportunity for all people.

JICA's vision in urban development of “**Urban Growth for Inclusive and Dynamic Development**” offers support for economic/social development, reconstruction, peace and stability in developing countries so that their cities can experience stable growth.

“**Urban Growth for Inclusive Development**” is an approach that seeks to prevent concentration of the benefits of urban growth among certain groups. It does not simply refer to a post-project effort to “distribute the results” of development. Rather, it drives citizen-led development initiatives from earlier planning stage which enables involve various social classes in various development processes and to ensure that these classes benefit from the results.

“**Urban Growth for Dynamic Development**” is an approach that seeks to create a positive cycle of medium and long-term economic growth and poverty reduction. At the same time, it seeks to respond quickly and flexibly to the problems — increasingly complex, difficult to solve, and deeply intertwined — that cities in developing countries encounter. Growth inevitably brings changes to the social structure, and these changes generate new sets of problems. JICA therefore aims to quickly provide highly innovative and effective solutions — sometimes immediate and flexible, sometimes from a medium- or long-term perspective — in order to respond to the dynamic conditions in developing countries which embrace constant change and frequent/simultaneous emergence of new issues.

JICA's urban development assistance policy is therefore built on two main concepts: “**inclusive urban growth**” and “**dynamic urban growth.**” It seeks to appropriately direct the energy brought by urbanization, which has the potential to contribute to both economic growth and poverty reduction. The policy also supports sustainable development, which creates a positive cycle of medium- and long-term economic growth and poverty reduction.



2. Priorities: What JICA should focus on

In order to provide assistance to developing countries under the principle of “urban growth for inclusive and dynamic development”, JICA focuses on the following six points considering the proper use of Japan’s development knowhow. These are aimed at drawing a clear picture of the problems and goals that developing countries should address in light of the conditions outlined in the previous section.

1. Developing core infrastructure that supports economic activities

- 1) Planning of urban framework
- 2) Development and operation of infrastructure that facilitates smooth mobility of people, goods, and information
- 3) Infrastructure Development to supports economic activities
- 4) Linking economic activities with local communities

2. Creating better residential environment

- 1) Achieving both economic growth and better residential environment
- 2) Support for slum improvement
- 3) Improvement of hygienic environment

3. Creating low-carbon cities

- 1) Transformation of urban structures
- 2) Promotion of low-carbon technologies in urban transportation
- 3) Creating recycle-oriented cities
- 4) Preservation and creation of “green spaces”

4. Creating disaster-resistant cities

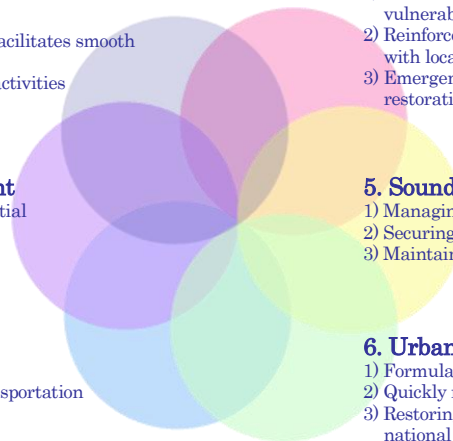
- 1) Urban design that prevents and/or controls damage on vulnerable groups
- 2) Reinforcement of disaster-prevention systems in partnership with local residents
- 3) Emergency response and immediate restoration/reconstruction immediately following disasters

5. Sound urban management

- 1) Managing urban development
- 2) Securing financial resources and introducing private capital
- 3) Maintaining and managing urban infrastructure

6. Urban reconstruction

- 1) Formulating comprehensive master plans for reconstruction
- 2) Quickly restoring/reconstructing infrastructure for daily life
- 3) Restoring/reconstructing economic infrastructure to aid national reconstruction



1. Developing core infrastructure that supports economic activities

In developing countries, lack of urban infrastructure is becoming increasingly serious since the growth speed of population and urban activities (see Fig. 3) are overtaking that of core infrastructure development. Under such circumstances many of the cities have become dysfunctional having troubles such as severe traffic congestion. This can weaken a city’s competitiveness by degrading its investment climate, thereby leading to economic stagnation across the country. It is therefore vital to quickly, systematically, and steadily promote the development of core urban infrastructure. For cities in particular, infrastructure and services in diverse sectors (including transportation, waterworks, sewerage, electric power, waste disposal, etc.) must be consistently developed and operated so that they function integrally as a “system.” This is where master plans (M/Ps) are important in terms of creating the foundation for infrastructure planning.

For decades JICA has supported economic development through planning urban framework based on the core infrastructure, and this approach will be continued and enhanced towards the future. One characteristic of JICA’s approach for the core urban infrastructure development is its emphasis on the linkage between citywide M/Ps and infrastructure development. In other words, JICA seeks to formulate a desirable urban structure (including distribution of industry) by carefully considering priorities in infrastructure development in line with the M/Ps and then promptly working on infrastructure development, which will meet the needs of private economic activities and keep harmony with the city’s overall development policy. An important feature of this approach is that JICA

bases its planning on thorough socioeconomic surveys to ensure that the benefits of infrastructure development are not limited to certain groups. In formulating the plans, JICA gives considerable weight to interviews with stakeholders and gathering and analysis of objective data.

Faced with advancing globalization and fierce competition, national governments must develop their business environment more quickly than ever before in order to meet the needs of the private sector. JICA must offer support at the speed required by the global competitive environment when formulating M/Ps and implementing feasibility studies on priority projects within the M/Ps. JICA must also work to carry out financial assistance process for these projects and that will be more than one at the same time when necessary.

JICA will continue to provide support for infrastructure development focusing on the following four points, which are based on the past experience.

1) Planning of urban framework

JICA will proactively support the formulation of M/Ps that may help (a) appropriate land use and (b) realization of industrial structures to support dynamic urban development (i.e., sustained positive cycle of economic growth and poverty reduction). For M/Ps in particular, JICA emphasizes the clarification of an “urban vision” that will match the characteristics and roles of the targeted city while promoting intensification and streamlining of urban functions related to efficient infrastructure development.

2) Development and operation of infrastructure for smooth mobility of people, goods, and information

JICA will support development of core infrastructure regarding formulation of appropriate planning framework based on accurate demand prediction, creation of effective infrastructure network and capacity development for maintenance and management. To achieve these purposes, JICA will (a) formulate plans based on solid data such as traffic survey, etc, (b) consider to introduce public transportation system that can combat traffic congestion and other problems, (c) reinforce traffic management capability, and (d) systematically establish communication infrastructure and apply it to core infrastructure development and management (e.g., to promote efficient energy supply).

3) Infrastructure development to support economic activities

JICA will actively support initiatives to improve investment environment to ensure stable operation of private sector by supplying power and water needed for economic activities in urban areas and processing appropriately the waste generated by industrial activities. For this purpose, JICA will promote support to develop infrastructure such as power facilities (power plants, transmission/transform facilities and power distribution facilities), water purification and sewage treatment plants, and waste disposal sites while also establishing processing cycles.

4) Linking economic activities with local communities

JICA will support infrastructure development that (a) returns benefits to local communities with positive outcome such as job creation, (b) evenly distributes the benefits obtained through economic activities (avoid situations where only investors enjoy the fruits of economic growth), and (c) has no adverse effects to local communities and society. To ensure these outcomes, JICA will, from the planning stage of the project, identify through environmental assessment that no infrastructure development will have a negative regional impact, consider creation of institutions that facilitate redistribution of benefit, and promote resident participation in the projects.

Fig. 6: A subway system built in Delhi, capital of India, carries 1.6 million passengers per day.



Source: Kenshiro Imamura/JICA

2. Creating better residential environment

In many cases, deterioration of residential environment in urban areas is caused by high population density. It is anticipated that future population growth in developing countries will further aggravate this problem. JICA takes steps to improve urban environment by laying weight on the following three points with a focus on impoverished groups vulnerable to the effects of deterioration of residential environment brought by urbanization.

1) Achieving both economic growth and better residential environment

Whilst concentration of the population in cities tends to deteriorate residential environment, concentration of people and industry in cities leads to economic growth and higher economic status. Even this problem, which appears to be a contradiction, can be resolved by effective utilization of limited urban space — and urban planning makes this possible. JICA will therefore seek to support urban growth through urban planning while also strive to further improve and preserve residential environment that benefit diverse social classes.

2) Support for slum improvement

The residential environments of impoverished groups have further deteriorated in recent years as urban populations increased. According to the statistics of UN

Human Settlements Programme (UN-HABITAT), although the number of people living in slums as a percentage of urban population in developing countries has been declining (from 46.1% in 1990 to 32.7% in 2010), the actual size of population living in these areas is increasing (from 657 million in 1990 to 828 million in 2010).

Improving overcrowded slums through infrastructure development solely is difficult. JICA will therefore offer technical cooperation-centered assistance to help developing countries to tackle this problem sustainably on their own, and will also seek to broadly apply such assistance.

3) Improvement of hygienic environment

Water-related hygiene problem increases health risks. Wastewater treatment is the key to prevent infectious disease caused by ingesting water contaminated with pathogenic microbes and to prepare better living environment. Although there are environment-friendly treatment methods available for use in rural areas with low population density — such as “ecological sanitation” (a treatment method that prevents soil and water contamination by treating refuse with microorganism; in some forms treated material can be used as fertilizer) — the primary solution for major cities with high population density remains to be sewerage systems based on

collective treatment. JICA, as the top donor in this field, continues to provide assistance actively by employing technical cooperation, financial cooperation, and other schemes. Japan's post-World War II experience in developing sewerage systems in response to rapid urbanization can be a help for the major cities in developing countries. Thus JICA will provide cooperation that enables developing countries to sustainably develop and operate sewerage systems based on Japanese

know-how.

For large cities in developing countries, final disposal of waste presents a serious problem. JICA will offer support for appropriate countermeasures for waste in developing countries by utilizing Japan's experience and technologies on waste reduction. In addition, given that the socially vulnerable are often the ones engaged in waste disposal service, JICA will consider the ways of support taking social contexts into account.

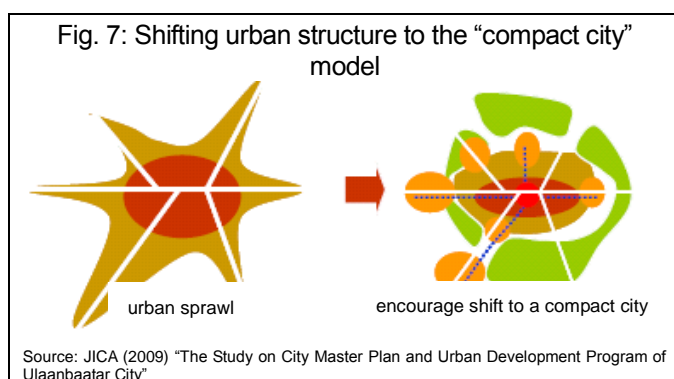
3. Creating low-carbon cities

CO₂ emissions from urban socioeconomic activity account for approximately 50% of the world total. This and other factors mean that worldwide efforts to combat global warming are closely tied to urban development. Creating "low-carbon cities" is thus an urgent issue in urban development, particularly given that urbanization in developing countries is expected to accelerate in the future.

JICA supports efforts to create low-carbon cities by focusing on the following four points.

1) Transformation of urban structures

Using experience and technologies on M/P formulation, JICA will make land use plans and urban development plans based on precise data and analysis from a medium- to long-term perspective. To prevent chaotic urbanization (including expansion and dispersion), JICA will promote a shift in urban structure to keep the key urban activities within the appropriate size of the city (i.e., the so-called "compact city" model).



2) Promotion of low-carbon technologies in urban transportation

Based on the basic concept of the "compact city," JICA will support development of further strategic and

sustainable urban transportation. JICA will work to shorten travel distances for all means of transport by bringing together major urban functions. At the same time, JICA will provide multifaceted support to accelerate shift from "paratransit" (a collective term for intermediate transportation services between public transport and privately-owned automobiles; typical examples include small "ride-share" buses and tuk-tuks) to public transportation by utilizing its experiences in Southeast Asia. This includes increasing transport density by concentrating urban functions and setting appropriate fares based on passenger characteristics.

3) Creating recycling-oriented cities

If cities are to obtain low-carbon environments, they have no choice but to reduce the massive CO₂ emissions generated from water, electricity, and consumables that support urban activities. To address this issue, JICA will seek to create recycle-oriented cities working in partnership with local citizens to enable sufficient use of water resources, energy, and waste within the city. Other specific measures include energy conservation measures for homes and buildings, power distribution with more efficiency, and encouragement of a shift towards environmental-friendly urban activities. All of these measures can contribute to the creation of cities that are "recycle-oriented" in a broad sense of the term.

4) Preservation and creation of green spaces

JICA recognizes that green spaces are the important carbon sink, and therefore they must be created and/or preserved in urban areas and the suburbs. JICA will work from the planning stage of the project to incorporate green space planning into M/Ps, while striving to establish "green infrastructure" such as roadside trees and city parks as important parts of social and economic infrastructure.

4. Creating disaster-resistant cities

Growing urban population in developing countries spurs uncontrolled development that will increase these cities' vulnerability to natural disasters. The more disasters caused by factors like climate change, the worse the human and economic losses. Impoverished groups living in overcrowded districts tend to suffer the most when disasters occur, and yet are still out of reach of

restoration and reconstruction after the disaster. This situation can further aggravate their poverty.

Over the years, Japan has accumulated vast experience and learned innumerable lessons concerning disasters in terms of both physical and human infrastructure. JICA will seek to utilize this knowledge — including that gained from the 2011

Tohoku Earthquake and Tsunami — to create disaster-resistant cities and will implement initiatives in developing countries that are flexible as well as inclusive of various social classes. From the urban planning stage, JICA will join with various stakeholders to study ideal ways of building urban structure that will minimize human and property damage so that economic activity may continue even in the event of a disaster.

1) Urban design that prevents and/or controls damage on vulnerable groups

JICA will formulate plans tailored for specific disaster hazards and risks in low-income neighbourhoods and high-density areas where disaster countermeasures are currently inadequate. Also JICA will offer cooperation to prepare for the occurrence of a disaster aiming at (a) improving urban drainage functions, (b) bolstering fire-resistance of buildings, (c) reinforcing disaster-management functions of urban facilities, and (d) establishing urban disaster-management facilities. The fact that low-income neighbourhoods often extend within the areas that are not covered by urban plans, together with the tendency of building density becoming excessive, may make it difficult for the governments of developing countries to implement such measures. JICA will continue to engage in urban planning oriented for disaster prevention considering a city as a whole with the objective of preventing the damage from spreading.

2) Reinforcement of disaster-prevention systems in partnership with local residents

Another important effort to create disaster-resistant cities is the promotion of human countermeasures. This includes development of the systems by local residents in cooperation with the government. In concrete, JICA will promote cooperation between various social classes through improving information provision to the residents, building government's capacity to respond, conducting

disaster-preparation training, and reinforcing skills such as skills to establish relief system.

3) Emergency response and immediate restoration/reconstruction following disasters

In regions affected by earthquakes, tsunamis, or other disasters, providing reconstruction support for victims, which follows emergency relief efforts, poses many challenges. Therefore, a needs assessment for upcoming reconstruction must be conducted during immediate emergency relief in order to enable seamless support in securing basic services for affected residents. At the same time, JICA will extend a comprehensive approach to ensure that the benefits of reconstruction will not be limited only to a portion of the people but to the entire area and region. One example is the supporting plan for medium- to long-term reconstruction to re-establish socioeconomic functions in the affected regions.

Fig. 8: A public water tap installed by urgent rehabilitation works after the major earthquake in Haiti



Source: JICA (2010), "The Urgent Rehabilitation and Reconstruction Support Project for Haiti"

5. Sound urban management

It is common for cities in developing countries to lack a plan to promote urban development. Even if a plan exists, implementation process is often insufficient due to legal or financial obstacles. JICA has been providing cooperation to establish institutions, reinforce implementation structures, and develop human resources by (a) formulating development plans to support capacity building and (b) dispatching advisors to support development of legal systems. JICA will continue to reinforce approaches that combine technical cooperation with financial cooperation, and strive to strengthen cooperation from a comprehensive standpoint known as "urban management."

1) Managing urban development

Urban development planning requires initiatives to tackle complex issues intercrossing multiple fields. JICA supports plan formulation in developing countries, striving to reinforce capacity and implementation

framework for (a) preparing analyses of current condition, planning framework and development strategies; (b) considering land use plans and resource distribution; and (c) conducting project evaluation. JICA will continue to provide cooperation focusing on human resource development and institutional development.

2) Securing financial resources and introducing private capital

Securing financial resources for community development is essential for autonomous and sustainable urban growth. It requires not simply an appropriate budget execution but also an appropriate balance between revenue and expenditure in government organizations. This includes realizing sound project operation—for example, by thoroughly implementing user-pays principle to the water charge.

In addition to providing yen loans to local governments

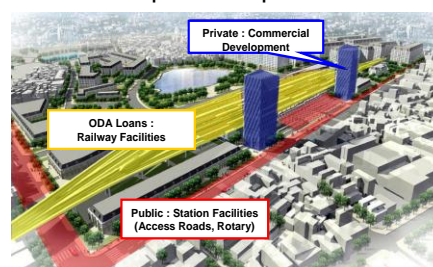
that have weak revenue bases due to its poor fund-raising mechanism, JICA has also begun studies on the feasibility of applying the Public-Private Partnership (PPP) scheme, which promotes development projects through collaboration between public and private sectors, coupled with initiatives to support the formulation of specific private-sector projects. JICA will continue to promote dialogues between various development partners and developing countries.

3) Maintaining and managing urban infrastructure

Urban infrastructure established in accordance with sector plans must be appropriately maintained and managed over the long term. JICA therefore will provide support from the planning stage to achieve autonomous and sustainable project operation from the perspective of asset management by considering lifecycle costs and

providing technical cooperation related to operation and management.

Fig. 9: Railway facility development concept using yen loans and development of the surrounding area through private capital



Source: Prepared by JICA (2010)

6. Urban reconstruction

Post-conflict countries require rapid redevelopment of ruined core infrastructure and prompt restoration of social services. JICA has supported urban reconstruction in Sudan, the Democratic Republic of the Congo, Liberia, Afghanistan, and other countries. JICA continues to lay weight on the support for urban reconstruction in post-conflict countries to help those suffering from deficiencies in local infrastructure needed for daily living, as well as to free them from fear of the recurrence of conflict.

1) Formulating comprehensive M/Ps for reconstruction

Post-conflict countries face a variety of problems. Generally the rapid population growth when refugees return home results in lack of employment opportunities. Core infrastructure reconstruction needs too, are diverse — some may be destroyed or aged while others may have not been maintained. JICA will analyze reconstruction needs in various sectors and implement broad and comprehensive cooperation projects.

At the same time, post-conflict countries have often lost their topographic maps and other basic data. JICA will rebuild the data that will serve as the foundation for all reconstruction support activities and prepare urban reconstruction M/Ps based on this information.

2) Quickly restoring/reconstructing infrastructure for daily life

The most pressing task during the reconstruction period is to restore the function of core infrastructure which was damaged during the war in order to stabilize daily living conditions of local residents. JICA will quickly provide support for the recovery of core infrastructure based on the information on damage as well as on the results of needs analyses.

Sometimes conflicts destroy regional communities or lead to flare-ups of ethnic tensions even after the end of fighting. It is therefore vital to carefully consider the distribution of ethnic groups and the status of communities when considering reconstruction of infrastructure and other social capital so that the assistance will not be unevenly provided in any way.

3) Restoring/reconstructing economic infrastructure to aid national reconstruction

Securing economic autonomy and stability are necessary to prevent conflict recurrence. To restore the functions of the cities serving as economic centers, JICA will harmonize restoration of infrastructure needed for daily living with that of infrastructure that contributes to economic activities.

Fig. 10: Juba River Port in South Sudan improved after Civil War



Source: JICA (2012)

3. Approach: How JICA should provide cooperation

Utilizing Japan's experience of overcoming rapid urbanization and disasters

Using Japan's experience of overcoming difficult circumstances, JICA will provide assistance to the developing countries who are facing similar circumstances. JICA will keep striving to respond to the various needs of the developing countries by utilizing a broad range of human resources including government organizations, research institutions, universities, development consultants, and NGOs.

Experience in responding to urbanization: After the World War II, Japan experienced urbanization at an unprecedented pace. Japan coped with this situation by implementing the following measures:

■ Establishing institutions and systems

Rather than suppressing the development pressure of residential land or requiring all forms of development conform to some unified standards, Japan set standards that met the scale of development and implemented measures to prevent informal development. Japan then established various mechanisms (regulation and guidance, infrastructure development, housing land development, finance, role adjustment and cooperative framework between national and local governments, etc.) as systems of comprehensive urban planning and development management. The goal of these systems was to promote steady urban improvement and development amidst acute urbanization.

■ Infrastructure development

Despite the rapid urbanization, Japan steadily developed its infrastructure, including sewerage systems, urban road networks and urban railway networks. Progress was made possible not only by advancements in Japan's civil engineering technologies, but also by the development of systems that support infrastructure projects, such as: beneficiary payment system for sewerage construction; and land readjustment projects suitable for integrated development of housing land and public facilities.

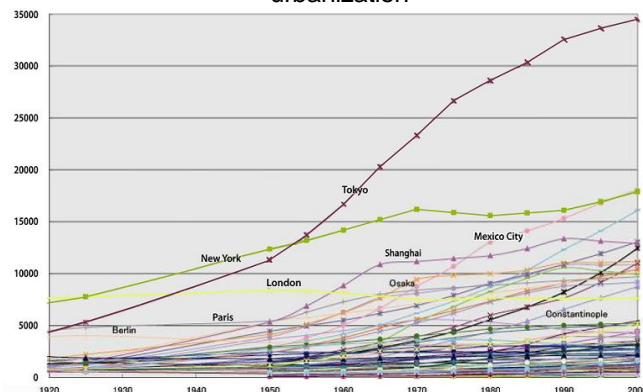
■ Responding to environmental problems

Japan's rapid urban and economic development also brought problems in terms of pollution and environmental destruction. Japan successfully overcame these problems by developing innovative technologies that simultaneously countered pollution and raised manufacturing productivity (by saving energy and recycling resources). The country also succeeded in implementing institutional reforms that included environmental regulations (targeting air and water pollution, noise, vibration, waste, and recycling) and economic incentives.

■ Maintaining social fairness

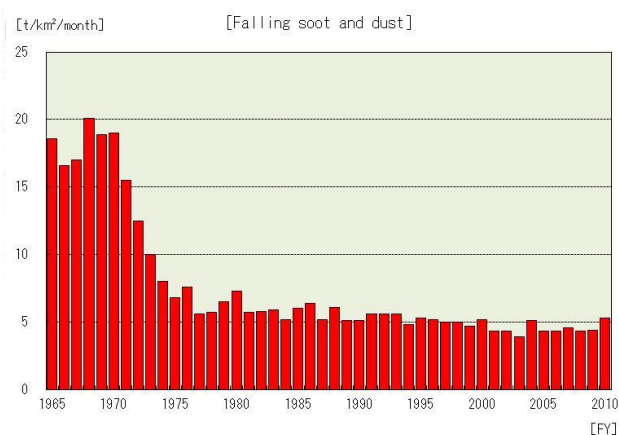
Japan has developed a social foundation where a broad range of urban residents can coexist and earn a living, regardless of income. This was achieved through the establishment of public sector housing supply, housing financing and small business finance. Moreover, Japan's urban planning and development systems have been developed to treat all landowners equally, regardless of the amount of land they own, and to allow ordinary citizens to participate in the urban development process. Japan's cities have thus evolved so that all

Fig. 11: Japan has experienced unprecedented urbanization



Source: "Toshi Hendo wo Rekishiteki ni Bunseki-suru: Zenkyu Toshi Zenshi Purojekuto" (conducting a historical analysis of urban changes: the global cities history project) (2009 AGS research report conference), Shin Muramatsu (Institute of Industrial Science, University of Tokyo), Presentation of city names modified by JICA

Fig. 12: Kitakyushu overcame pollution through integrated initiatives by private citizens, companies, and government



1960s: sky with smoke



2000s: blue sky

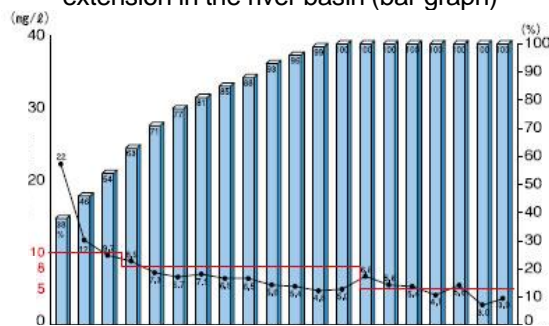
Sources: "Kogai no Kokufuku" (overcoming pollution) (http://www.city.kitakyushu.lg.jp/kankyou/file_0270.html) and "Baieri no Sora, Shi no Umi kara Kiseki no Fukkatsu" (a miraculous recovery from skies of sooty smoke and seas of death), City of Kitakyushu (http://www.city.kitakyushu.lg.jp/kankyou/file_0264.htm)

residents can share the benefits of urbanization.

Experience in responding to disasters:

Japan is situated both in the Pacific Ring of Fire and the Asian Monsoon Belt. It is a densely populated region highly prone to earthquakes, typhoons, and other natural disasters. To protect its cities, Japan has been implementing comprehensive disaster-management measures that include both physical and human infrastructure. In concrete, those are: a) preparation for urban disasters (including earthquake, wind disaster, flood and snow-related disaster) through education, training, and the establishment of disaster-management facilities; b) improvement of physical safety of the nation/city through improving river basin, coast and steep slope areas; and c) post-disaster recovery measures such as facility restoration and fiscal measures (including financing, insurance, local allocation taxes, and local government bonds). The experience of reconstruction from the Earthquake of March 11, 2011 will be effectively utilised in the cooperation in urban development sectors as well.

Fig. 13: Sumida River in Tokyo, where water quality (line graph) has improved in line with sewerage system extension in the river basin (bar graph)



Source: "Tokyo-to no Gesuido: Suji de Miru Tokyo no Gesuido" (the sewerage system of the Tokyo metropolitan area: A numerical look at Tokyo's sewerage system), Bureau of Sewerage, Tokyo Metropolitan Government (<http://www.gesui.metro.tokyo.jp/kanko/kankou/2010tokyo/05.htm>)

Comprehensive support for all steps (from formulation of development concept through to materialization of plans and maintenance and operation)

JICA has a variety of assistance schemes, including technical cooperation, ODA loans, grant aid, grass-roots technical cooperation, and volunteer dispatches. JICA surpasses other aiding organizations with its ability to provide needed support while matching its schemes to the needs of developing countries. JICA carries it out by applying following forms of cooperation.

Formulating development concepts

JICA has been preparing basic plans for comprehensive urban development and improvement (i.e., urban development M/Ps) that have several key characteristics that represent JICA's unique approach compared to other donors. First, the plans maintain a regional perspective (with comprehensive view regarding an urban region consisting of the city and its surrounding area) and a broad scope (considering the socioeconomic aspects of cities in addition to physical aspects like land use and infrastructure). Second, they are designed to bridge the plans to certain projects (as the plans include recommendations for the development of important infrastructure and feasibility studies). Third, they emphasize capacity building of counterparts for planning and plan management.

This approach of planning plays an important role in setting out a development framework for the urban area not only because the plans are followed by JICA's financial cooperation projects but also because the approach itself serves as a basis for the projects/measures of local government and projects of other donors.

Plan materialization

JICA has comprehensively been developing systems for physical infrastructure, primarily by applying ODA loans

to economic infrastructure and grant aid to the core infrastructure needed for daily living. In addition, it has been providing support to develop systems, such as legal system, related to urban planning/development through its technical cooperation schemes.

JICA will continue to provide cooperation by combining these three schemes.

Maintenance, management, and operation

JICA has been striving to help improvement of administrative capacity concerning management and operation of urban facilities through, for instance, preparing urban plans and development permit application systems.

JICA will make further progress in that approach because it brings efficiency in plans established through cooperation and management/operation of the facilities, and also it contributes to increase efficiency and effect of its aid.

Human resources development

JICA has been identifying local needs and implementing human resources development by working with stakeholders in partner governments, local communities, and others throughout above process. This starts with the formulation of development concepts and extends to plan materialization as well as to maintenance, management, and operation. JICA has also been utilizing a broad array of tools in human resources development that meets local needs which includes technical cooperation projects, dispatches of individual experts, and training programs.

JICA will continue to provide this kind of cooperation to support autonomous and progressive urban development in developing countries.





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