

# A Continent in Transition



THE FIRST EMIGRANTS faced daunting odds. Their new homeland was sometimes jungle so thick the sun was totally blotted out and one settler recalled: "Trees grew so thick that it was dark even during the day. At other times the sky turned yellow because the emigrants constantly burned and cleared areas for farmland."

There was loneliness, disease and suicide.

The history of Japanese emigration to South America began more than 100 years ago and, though sometimes overlooked in the wider world, is a colorful story of perseverance and ultimate triumph.

Those original settlers, driven from their homeland by economic hardship like so many other communities across the globe, now number some 1.7 million ethnic Japanese. Most of them live in Brazil but other similar 'Nikkei' communities are scattered around other Latin American countries.

They have become successful entrepreneurs, industrialists, educators, scientists and even politicians in their adopted homelands.

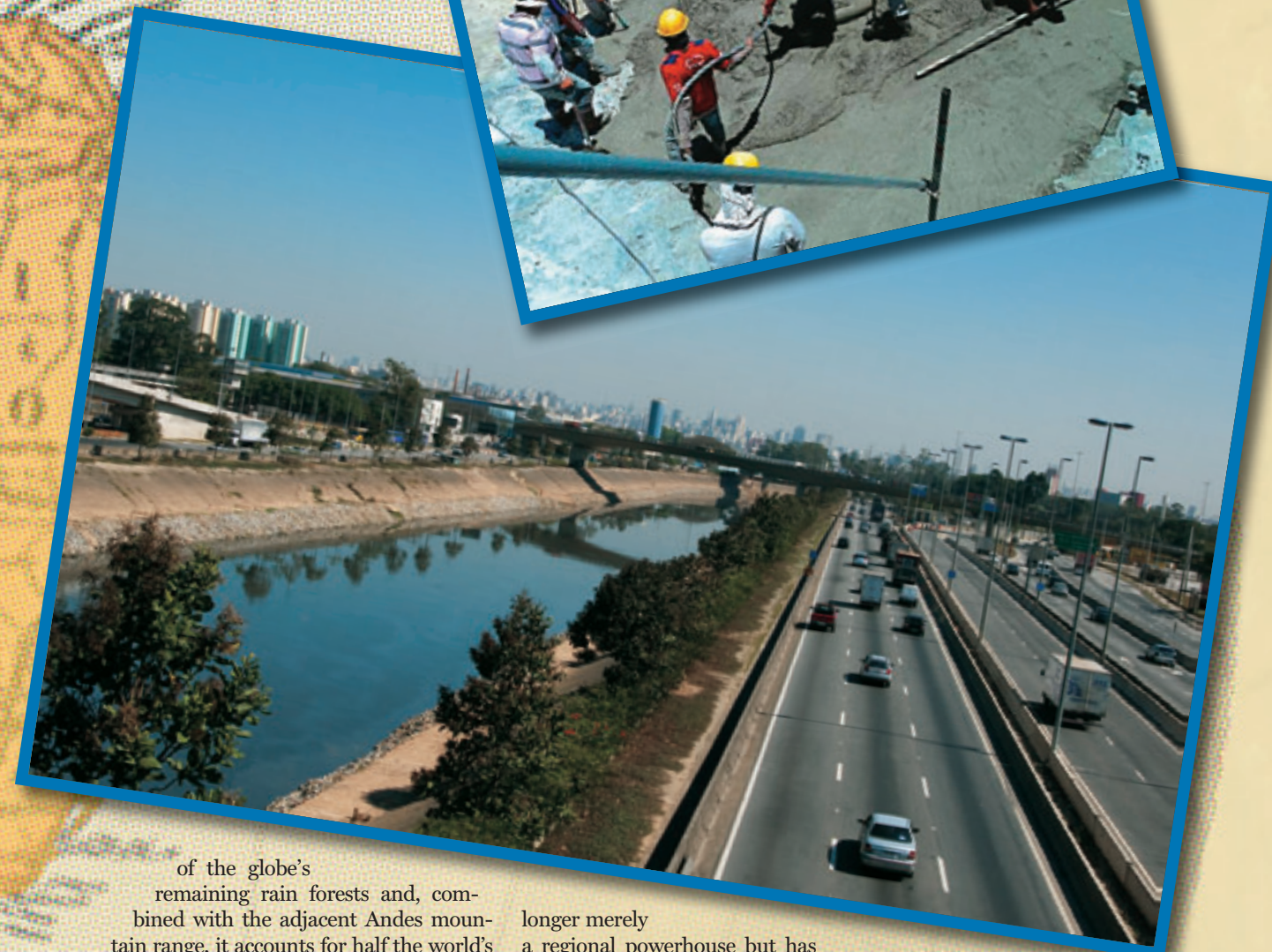
Japan's support for these overseas communities

with infrastructure, hospitals, schools, research centers and financial assistance form an unusual but key component in its development assistance to the whole region which has been rapidly evolving in recent decades.

## Riches...and Poverty

LATIN AMERICA COVERS 21 million square kilometers or 14.1% of the world's land surface. It is home to magnificent ancient civilizations and nearly 600 million people including indigenous Indian communities, the descendants of African slaves, European immigrants and the Nikkei.

The Amazon River basin is the world's most magnificent and important eco-system. It sprawls over 2.5 million square miles and contains two-thirds of the world's fresh water, more than 50%



Peru-Ecuador: bridge building

of the globe's remaining rain forests and, combined with the adjacent Andes mountain range, it accounts for half the world's flora and fauna.

Such extravagance represents both the potential for a 'bright shining future' but also old and new challenges—greed, economic exploitation and climate impact. The early Spanish and Portuguese colonialists, for instance, were attracted by gold and other precious minerals but they also brought death, disease and centuries of political and social turmoil whose aftereffects linger today.

## Mixed Picture

THERE ARE STILL WIDE POCKETS OF POVERTY, economic inequality and political instability amid the natural cornucopia. Some countries have experienced major economic, social and political progress. They are emerging from the official status of 'least developed' to middle-income nations. Brazil is no

longer merely a regional powerhouse but has begun to actively assist other developing nations, often in collaboration with JICA.

The agency's activities reflect these diverse realities—the continued need to address poverty; to provide clean and abundant water and other services to poor rural communities; to eradicate debilitating disease such as chagas which has inflicted a devastating human and economic cost for centuries particularly in Central America; and to promote agriculture and industrial development.

Because of its vital but fragile eco-systems South America has been particularly vulnerable to climate change, environmental degradation, the assault on biodiversity and the impact of human encroachment. JICA has been involved for years in a series of projects aimed at tackling those issues.

So-called triangular cooperation, programs in-

Cleaning up  
Sao Paulo's Tiete  
River with a yen  
loan



volving JICA, developing countries and a third 'partner' from other, more advanced nations, have become increasingly important as has south-south cooperation which involves the exchanges of resources, technology and knowledge between developing countries.

Research institutions and other infrastructure which were originally designed to help the Nikkei communities have become national assets and the Nikkei themselves have gone 'mainstream.'

## Exploring Heaven and Earth

AT THE VIRTUAL SOUTHERN TIP OF THE CONTINENT a years-long scientific experiment is underway to examine the world's ozone layer. This helps to protect



Japanese expertise helps Mexico's plastics industry.

the earth from high radiation bombardment which can cause skin cancer and other human ailments and upset the balance of entire eco-systems.

The problem is that a so-called ozone hole in the ozone layer itself, centered on Antarctica and southern South America and 1 ½ times the land mass of the United States, has been created by the widespread use of chlorofluorocarbons in domestic appliances such as refrigerators.

Japanese scientists working under the auspices of JICA and Argentine counterparts are helping track the 'hole' and its global impact. The JICA project has also helped develop an early warning system against unnecessary exposure to dangerous UV light and an educational program for local schools. (see page 10)

Far to the north, in the vast expanse of the Amazon basin, JICA experts have been working for years both to unlock the secrets of the world's most important eco-system and help protect it from increasing climate, environmental and human pressures.

Japanese satellite systems have helped Brazilian federal authorities dramatically reduce the human destruction of the forests by illegal logging, mapping 'real time' images of the forests even during the rainy season when heavy clouds can mask the destruction.

An ambitious four-year project with Brazil's Na-

tional Institute for Amazon Research is trying to resolve such questions as how much carbon the Amazon basin holds. From the accumulated data politicians and scientists will be able to more effectively understand and meet such challenges as climate change and the preservation of much of the world's threatened biodiversity. (see page 6)

## Mercury Poisoning and Mangroves

IF THOSE PROGRAMS HAVE A 'HEAVENLY ASPECT' equally important environmental projects are very 'down to earth.'

Brazil's Tapajos River area is affected by mercury pollution, partially caused by extensive gold mining activities. JICA has been helping domestic organizations to strengthen their analytical and diagnostic capabilities and develop a modern laboratory which will share its research with neighboring countries such as Peru and Bolivia.

The agency has been providing technical assistance to restore and preserve Mexico's coastal wetlands and mangrove forests in the Yucatan Peninsula which is home to 600 animal species including its famed pink flamingoes.

Japanese experts are helping Argentina's National Museum of Natural Resources, one of the most important institutions in Latin America, to preserve and catalogue its collections which run into millions of specimens even as specialists continue to identify dozens of new species.

The Andes mountains form the backbone of the continent and provide not only a spectacular backdrop, but their glaciers are an important source of fresh water for local and urban populations.

The glaciers are retreating because of climate change. Some have already virtually disappeared. In Bolivia JICA and local experts are helping to build up a comprehensive picture of what is happening to the glaciers and why.

The results of the five-year program will allow officials to draw up programs to minimize the climate impact on surrounding eco-systems, farming activities and the threat to the supply of drinking water to the capital, La Paz, and other urban centers. (see page 8)

Water is a complicated issue in many parts of South America. Bolivia and Peru, for instance, theoretically have an abundance of water.

But for several reasons—the shrinking of glaciers, river pollution, the difficulty in exploiting underground reservoirs—many communities, particularly in the countryside, face perennial water shortages.

Since 1992, however, an estimated 4,500 of Bolivia's 28,000 rural communities representing 70% of the country's population have received help as thousands of deep and shallow wells have been sunk, solar and wind power systems installed to provide electricity and small-scale enterprises introduced to generate funds to support water systems.

In Peru a program entitled Agua Para Todos (*Water for All*) both aims to improve the overall supply of fresh water to urban centers such as the capital,

Lima, but also to tackle related sewage problems.

## Closer Cooperation

IN THE 1970S JAPANESE EXPERTISE HELPED Brazil transform its virgin *cerrado* or closed lands into a farming breadbasket, growing huge harvests of soybeans, corn, rice, cassava and sugar. The transformation was hailed at the time as "one of the greatest achievements of agricultural science in the 20th century." More recently JICA helped develop the concept of agro-forestry in the Amazon basin.

An important aspect of these and many other projects is a 'knock on' or 'value added' aftereffect. JICA and Brazil, for instance, are now cooperating with Mozambique in an example of 'triangular' cooperation to recreate that *cerrado* miracle in the southern African state. The recipients of JICA's agro-forestry expertise are, in turn, sharing that knowledge with neighboring Bolivia and other countries.

Japan, Paraguay and Mexico are engaged in a joint project to boost Paraguay's important sesame seed industry. Japan's homegrown community policing system, Koban, is in widespread use in Brazil and that knowledge has been shared with nearby countries such as El Salvador, Guatemala, Honduras and



Nicaragua.

Argentina is working with Japan to help the Caribbean nation of Haiti recover from its devastating 2010 earthquake in which as many as 220,000 people died.

JICA has been working with international, regional and national governments in Nicaragua, Honduras, Guatemala, Panama and El Salvador to battle chagas disease or the 'kissing bug' which has caused widespread death and destruction through South and Central America for centuries. (see page 11)

## Infrastructure, Education, Industry

INFRASTRUCTURE, EDUCATION, HEALTH, community development, industrial expansion and disaster prevention also play important roles in JICA's development activities.

Through an array of loan and grant aid agreements and technical assistance bridges, ports, waste management systems, power stations and flood control projects have been undertaken in Nicaragua, Peru, Ecuador, Bolivia and Brazil.

In Mexico, JICA is helping to strengthen some of the country's small and medium companies with training programs and technological support in industries ranging from plastics to auto production.

In the Dominican Republic waste management and pollution projects are being implemented in the country's major urban areas.

And poignantly in the aftermath of Japan's own 2011 earthquake and tsunami, JICA is involved in disaster prevention projects in El Salvador, Guatemala and other countries.

"Latin America is undergoing rapid change," says Hajime Takeuchi, deputy director general of JICA's Latin America department. "The range of our projects reflects that change and the complex issues facing the region." ■

Helping to preserve Mexico's mangrove forests

Latin America represents both the potential for a 'bright shining future' but also old and new challenges.

Testing for mercury pollution in the Amazon basin