

BOP Technology Mission to Peru & Bolivia

By Seiji OSHIMA



Photo: author

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View of central La Paz, Bolivia

Why Peru & Bolivia?

The high-plateau/Andes mountain area, Amazon area, and dry Pacific Ocean seaside area of Latin American countries are unique areas from a geographical point of view, where it is worth considering the application of special technologies such as renewable energy, water treatment, and food processing for the people who are living there.

And from an economic point of view, Peru and Bolivia, whose economies are steadily growing, are now receiving a great deal of attention for the huge potentiality of their economic growth and natural metal and mineral resource development. Copper from Peru and lithium from Bolivia are well-known examples.

Looking at history, many Japanese immigrants went to Latin American countries, and worked hard and educated their children, thus gaining a good reputation economically and socially. So there exists a good base of human relations for Japanese joint businesses.

Although the geographical locations of the two regions are on opposite sides of the planet, the low cost of transportation by large container ships means the distance is not a barrier for trade, and an FTA agreement has already been signed between Peru and Japan.

Japan has invested substantially in Asian countries, from Thailand, Malaysia, and Indonesia to China, Vietnam, India, etc., but now it might be a good time to really consider the Latin American countries as target countries for international business corporations and investment.

Concept of BOP

The Base of the Economic Pyramid or Bottom of the Economic Pyramid (BOP) is an interesting concept focusing on the world's low-income-earners' market, a market of about five trillion dollars covering four billion poor people who earn less than 3,000 dollars per year, following a document produced by METI's BOP Committee.

Although the individual person's potential purchasing power parity remains small, if we consider the total volume of the market, it becomes worthy of consideration as a prominent market. After the Lehman shock in 1998, developing countries' economies are growing rapidly, while those of the developed countries are stagnating. These worldwide drastic economic changes suggest that the poor of today are the middle-class of tomorrow. Now the president of Panasonic Corporation is saying that it is necessary to consider the mass-volume world market.

Indeed, Japanese companies maintain competitiveness in the high-quality product market, but are not so aggressive in the low-price or low-quality market, so it might be time for Japanese companies to look at the worldwide market strategies of American, European and Korean companies in the developing or newly growing economy countries' market, and to consider the future market strategy, considering the big potentiality of the market in these

countries. METI, JETRO and JICA are already supporting private companies' BOP activities.

Some big Japanese companies have started to determine their business strategy by looking at the future large potential of developing countries, but in order to expand the BOP activities from multinational big companies to local small and medium-size companies, in the Japanese case, the language barrier and reliability barrier are very important issues to be overcome. The existence of Japanese descendants in Peru and Bolivia, who can communicate in Japanese in a reliable manner, might open a new horizon of BOP activities for Japan.

In Japan, a typical developed country with an aging society, the need for healthy foods is becoming increasingly important, so it might be interesting to focus on new types of healthy products, using healthy agricultural products of high-altitude or tropical areas, collaborating with BOP-targeted people. For a contribution to the global warming issue, the Andes mountain area is also a wonderful area for installing photovoltaic cells, in view of the strong sunlight and many sunny days.

Mission Purpose & Schedule

The Japanese Research Industries and Industrial Technology Association (JRIA), now composed of around 100 Japanese private companies in various industrial sectors, arranged a BOP technology mission, receiving a contract for a research project of the BOP technology mission to Latin America from the Japan Economic Foundation, and visited Peru and Bolivia from October 30 to November 13. The group comprised private-company representatives, a member of a local chamber of commerce, a Japanese Bank for International Cooperation (JBIC) officer and JRIA officers, covering various unique Japanese technologies in food processing, waste-water treatment, renewable energy, and stationery.

Mr. Noguchi, president of Toyo Koatsu Corporation, a unique SME company that is famous in Japan as the only company to use high-pressure technology, introduced a technology of a high-pressure machine of 100MPa, equal to the pressure of 10,000m below sea level, to extract the aroma contents of health-giving vegetables, to make a very short and smooth fermentation process in order to produce low-salt-content soy sauce, and to extract other interesting nutritious food liquid from fish and vegetables.

The machine itself is small in size, and can be installed in a small space at a modest price, using just water and a small-volume enzyme. Operating it is not a complicated process and in fact is very simple, so that anyone can use the machine and might easily produce very-high-added-value products such as aromas or perfumes using, for example, original plants from the Andes area.

Mr. Tadasuke Tayama, chairman of the retail committee of the Hiroshima Chamber of Commerce, introduced a technology of Aquamake, invented by a small company located in Hiroshima, which



Solar lantern demonstration

makes it possible to clean the sewage from toilets and completely recycle water without adding new water, using just natural oyster shells. Aquamake systems have already been widely introduced in Japanese natural parks and mountain areas where normal sewage facilities cannot be installed. The Aquamake system might be considered one useful system for healthy and water-efficient toilet sewage treatment in semi-dry areas along the Pacific coast or Andes mountain area where the river water supply might be difficult.

Tayama also introduced “furikake,” representing Tanka Food Corporation located in Hiroshima. This typical Japanese food consists of topping material on rice as a supplement to food, and it suggests the possibility of using small fish of the Pacific coast or very healthy Andes high-altitude crops such as quinoa as ingredients.

Mr. Hotta, a representative of Sanyo Electric Corporation, introduced the “Solar Lantern,” a very compact LED illumination system equipped with a photovoltaic panel, which might be useful in remote areas where there is no electric grid connection, for example, in isolated small villages in the Andes mountain area (*Photo 1*).

Other than the above three technologies, as a mission leader, I introduced several technologies such as the bio-diesel engine technology of Yanmar Corporation, together with a small machine technology of Biomass Japan Corporation to produce bio-diesel from vegetable oil, which might be applicable to areas where the oil and gas supply is unreliable but abundant vegetable oil can be produced.

Warm Welcome & Good Contacts

The Ambassador of Peru in Tokyo, Mr. Juan Carlos Capunay, was kind enough to give us interesting information about Peru as well as good advice concerning suitable contact organizations in order to have a fruitful exchange of opinions at his residence before the departure of the mission.

After arriving in Peru, the Japanese ambassador, Mr. Megata, was also kind enough to organize a meeting in his residence with the Peruvian responsible persons, including the Vice President of Peru, Mr. Luis Gianpietri Rojas; director general of the Ministry of Production; president of Lima Chamber of Commerce; president of the Peru-Japan Economic Committee, and a number of important Peruvian businesspeople as well as leaders of the Japanese descendants. The mission's explanation about various unique Japanese technologies in food processing, sewage treatment, bio-energy and stationery, using OHP presentations and actual demonstrations, were highly appreciated and a good exchange on how to promote Japanese BOP technology in Peru took place. The vice president himself tasted furikake and



Seminar at Peru Japan Association

commented about its nice taste.

With the strong support of the Peruvian ambassador, Japanese ambassador and leaders of the Peru Japanese Descendant Association, the mission held a series of useful presentations at the Peru Japan Association (*Photo 2*), Peru National Industry Association, Peru Ministry of Production, Lima Chamber of Commerce, Private Investment Promotion Agency of Peru, and Cusco Chamber of Commerce, and received a lot of comments and some future proposals.

In Bolivia also, the mission received a very warm welcome from the Japanese embassy in Bolivia, Bolivian National Academy of Sciences, Vice Ministry of Science and Technology, Bolivian National Chamber of Industry, Santa Cruz private companies' associations such as CAINCO and FUNDES, and the Japanese descendant association of Bolivia, FENABOJA.

Looking for Future Cooperation

With the kind support of the Japan Economic Foundation, JRIA was able to organize this BOP technology mission to Peru and Bolivia, and the mission made many presentations at seminars and bilateral discussion occasions in each country, inviting around 250 persons in total, including interested government officers, private-company persons, academics and many very friendly Japanese descendants, and achieved the purpose of the mission with a lot of future business possibilities, furthering win-win relations.

The mission members also recognized that the Japanese technologies presented and their related products need more efforts for adaptation to the market needs of Latin America countries, such as reducing the cost of the products further, drastically reducing the necessary space especially in the case of sewage treatment, demonstrating the use of local food ingredients, etc. They are now considering how to make actual business relations between potential partners of the two countries.

Peru and Bolivia need development of economic growth, modernization of industrial activities, and much more technological collaboration with Japan. The JRIA BOP mission, through visiting the two countries, received much information on the domestic needs of both countries, including how to clean waste water from the factories, how to efficiently process quinoa, and how to make a connection with Japanese companies for business. I believe the BOP technology mission has made one small step for the future overall cooperation between Latin America and Japan. **JS**

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