Message from a project manager

１． Development goals and Nepal

Millennium Development Goals (MDGs): There has been great improvement in the overall poverty levels in Asia, which was a Millennium Development goal; however, poverty levels are still found concentrated in Bangladesh, Nepal, Myanmar and Laos. In particular, South Asia is the poorest region lying near sub-Saharan African countries. UNDP's Human Development Report (2016) [1)] assessed the quality of life in each country in terms of educational standards, health, life expectancy and income level and created a Human Development Index (HDI), which showed that Nepal still ranked 144th of 188 countries, making it the poorest country in South Asia.

Following the MDGs, Sustainable Development Goals (SDGs) were formulated in September 2015. MDGs are goals in the field of human development, which are focused on conventional development issues such as poverty, primary education, and the preservation of health in developing countries, and it is thought that developed countries should pro-actively assist them to solve these problems. Among the following SDGs, the criteria are not only to develop a solution for these issues but also to tackle the problems with three aspects: economic, social and environmental aspects, as well as dealing with new and urgent issues such as climate change, energy problems, disasters, and domestic disparities. While MDGs aim to reduce poverty in developing countries, SDGs extended that scope to create sustainability in developed countries. Among the listed 17 goals, Goal 1 is to "eliminate" all "forms of poverty" in "all places", and states ideas to structurally resolve the processes that cause poverty. The SDG catchphrase "Leave no one behind" means "to aim for a fundamental solution to the problem" and is to show the importance of strengthening international cooperation and ties in developing countries. The integral collaboration for social development and humanitarian aids we aim for are clearly shown and globally shared.

In the current situation, household income is increasing in Nepal (official country name: The Federal Republic of Nepal); however, the proportion of overseas remittances accounted for 21.7% [2)] of the GDP, which is by far the largest among South Asian countries. It clearly shows Nepal's economic structure depends on remittances from migrant workers. Consequently, in a broad sense, the ratio of the money supply (M2) to the GDP is also relatively high, being 77.7%. [2)] Although the GDP level is low in Nepal, its economy is cash-rich, with people holding highly fluid financial assets such as cash and bank deposits. Its financial resources are derived from remittances from overseas migrants, so it is inferred that in addition to Malaysia, migrants to the Gulf countries are rapidly increasing, especially after the 2015 Nepal earthquake.

Excessive dependence on remittances weakens domestic employment opportunities and further encourages overseas migration. It is also inevitable that the local economy will be weakened as the labor force decreases due to migrants leaving for work abroad, and this causes more trouble with regional, social and inter-ethnic disparities.

Furthermore, in some rural, mountainous and far western areas, the transport infrastructure is not very well developed, and accessibility to electricity is extremely low. [3] In those areas, opportunities for employment, education and access to diverse information are restricted; in addition to that, maintaining living standards, receiving medical health services, and securing the procurement of water and food are also adversely affected. The ethnic population distribution [3] helps us to understand that many of the people living in remote areas are people in the lower ranks of the caste system. It is said that there are more than 100 ethnic groups and different languages in Nepal, and the poverty rate of the Newar who are in the upper caste and mainly live in Kathmandu Valley in the capital, is low, being around 10-20%. However, the poverty rate is high among the Dalits (untouchables) in the lowest caste, the minority ethnic groups living in the hilly areas, the Tharu living in the plains areas, Muslims, etc., and is around 40-50% [4], which creates social disparity.

In a report featuring Nepal's status in 2012, improvement was shown in terms of gender discrimination and women's social participation; however, the employment rate for women in non-agricultural sectors was extremely low compared to men (about 1:4 ratio). There are large income disparities between men and women, regardless of sectors.

Regarding types of disasters, flooding accounts for more than 30% of the number of disaster occurrences, which causes 30% economic loss as well; floods and landslides frequently occur especially in rural and mountainous areas, causing a number of casualties each year. Also, nearly 9,000 people died in the Nepal earthquake that occurred in April 2015, along with immeasurable economic losses due to secondary disasters, including the loss of important cultural properties and the closure of tourist spots.

2. Promotion of independence (self-help efforts) in rural areas of Nepal and the importance of primary health care

Primary Health Care was a basic principle advocated in the Alma Ata Declaration to promote the health of all people at the joint international conference between the WHO and UNICEF in 1978. The declaration on Primary Health Care states the unfairness between the accessibility of healthcare between people in developed countries and people in developing countries, and regards being healthy as a basic human right. To help attain the goals with the participation of local residents, it shows the principles and methodology of self-determination. [5] Specifically, the statements list the following methods and materials to be provided: education

on health management to prevent general health problems, supply of food and promotion of appropriate nutrition, adequate supply of safe water and basic hygiene, health care for mothers and their children along with family planning education, vaccinations against major infections, treatment for the prevention and management of community-specific infectious diseases, appropriate treatment for general diseases and injuries, and the provision of basic medicines. [5)]

In Nepal, people in rural areas which are far away from urban areas, poor people, and people in the lower castes are hindered from accessing medical care due to physical distances, economic circumstances, social disparities and linguistic barriers. [4)] Although the importance of health problems in rural areas of Nepal is strongly recognized [2)], resources (funds, human resources and supplies) for improvement are chronically deficient. Resources for various improvements are intensively abundant during the implementation period of each support project, which makes activities focusing on self-help efforts more difficult. Even if the situation improves with temporary support, if support from donor countries ends then activities will be interrupted and the development project itself will stop.

Development will not be sustainable if residents are passive. Development will take root only if residents want to make improvements and make efforts for that. Therefore, it is important to support the process of development so that developing countries can grow and progress by themselves. The most important issue is assisting them so that people in that area can sustain the project and further develop it even after the end of donor support. In order to get local people involved in participating in activities which foster independence (self-help efforts), it is necessary to create an organization that manages the activities based on their own intentions and plan formulation. Training leaders who can help local people to disseminate activities by themselves, as well as establishing a coordination system, will allow activities to be continued after the end of donor support.

In Nepal, efforts to establish a primary healthcare system were institutionalized in the health policy and healthcare provision system; however, effective activities have not been seen and the results are ambiguous. [6)] The social and political environment of Nepal has not been favorable for promoting comprehensive primary health care, as the decentralization of the health sector and the empowerment of the community are restricted. [7)] For health activities, selective medical strategies, including disease prevention, vaccination, vitamin A supplementation, the use of oral dehydration solution and the use of contraceptives have been focused on and implemented. However, the geographical features of the hilly terrain in Nepal can prevent the supply of goods, cooperation with related organizations, and the mobility of health workers, and have become big issues. [7)] Among the factors which prevent building a fair and comprehensive primary health care system in Nepal, there are disparities and discrimination due to the caste system, and there is also a hierarchy even in receiving medical education. [8)] Hence, it is

necessary to support them while considering the social, cultural and historical backgrounds in addition to poverty.

3. Health issues and lifestyle related diseases in Nepal

It is globally common that improving people's nutrition contributes to various aspects of sustainable development. Improving the enrollment rate among girls and women in school, access to safe water, hygiene, food supply, etc. in developing countries greatly contributes to the reduction of growth inhibition, and can be expected to bring cost reductions and facilitate development. Dealing with the dual nutrional problems of undernourishment and obesity, which are both common in South Asia, shows that malnutrition is getting more and more complicated. [10)]

In Nepal, malnutrition decreased by 16% from 2001 to 2011, but 41% of children under 5 years old were still malnourished. That is because there are many young pregnant women, and maternal problems, such as malnutrion in pregnant women, anemia and low birth weight etc. cause these rates. In order to tackle the problem of malnutrition in Nepal, it is reported that the following measures are crucial: nutritional guidance for young people, postponing the age of first marriages and pregnancy, treatment for malnutrition during pregnancy (including micronutrient supplementation), essential care for newborn babies, education on appropriate breast feeding habits for infants and children (including early breast feeding habits), and the management of acute malnutrition among the local community, especially with the malnutrition of infants and children. 29% of people who give birth are adolescent girls, and they are among the most malnourished group of all generations capable of pregnancy (10s-40s), which causes low birth weight and child malnutrition. [11)] According to the latest report investigating women who are in the age group capable of pregnancy (15-49 years old), 25% or more women had a BMI of less than 18.5 (kg/m2) .[12)] This study was conducted in Mahesh, an elongated plain spreading from the east to west in Nepal. There are significant regional differences, gender differences and ethnic differences in Nepal 's nutritional issues [13)], and even an increase in obesity rates is also seen. [14) 15)] Among the nutritional problems in Nepal, poor nutrition has been focused on for a long time; however, in recent years additional problems have surfaced, and not only malnourishment but also obesity is being seen (the double burden of malnutrition), causing even more problems. Regarding the association between malnutrition and overweightness, there is a theory: An adult disease (a lifestyle disease) occurs in a fatal stage; in the Barker theory (Fetal Orgins of Adult Disease: FOAD), it is a predisposition to adult diseases (lifestyle diseases) formed when fetuses or infants are exposed to under-nutrition or over-nutrition during fertilization, at the fetal stage, or when being breast-fed as an infant, and it is widely known that adult diseases (lifestyle diseases) can develop if these children are further exposed to negative lifestyle habits after that. [16)] Fetuses and infants whose growth was inhibited in childhood have

a higher risk of becoming obese in later life. The risk of becoming overweight further can increase due to bad lifestyle habits; overeating snacks and drinks (high in trans-fats and sugar content, and low in nutritional value), not getting much exercise or working out. These phenomena are currently seen in Nepal, and the incidence of chronic diseases such as diabetes and heart disease has significantly increased. [17) 18) 19)]

4. Activities to improve nutrition and prevent lifestyle diseases in the Nepal mountain areas (Machhapuchhre administrative village, Ward 6, Kaski District, Nepal: formerly Dhital Village in the Kaski District, Nepal)

Machhapuchhre village, Ward 6, Kaski District, (formerly Dhital Village) located in the western part of Pokhara City in central Nepal was the area we conducted our survey in, and there were 2,781 residents in 767 households.[20)] It is a mountainous area with terraced fields built on steep slopes. They produce crops such as rice, beans, corn, millet, barnyard grasses and wheat. Most of the residents live a self-sufficient life. In this area, many people who are not part of the caste system (the Varna-Jati system) are living, notably the Dalit or the Hill Dalit.

For the JICA grass-roots technical cooperation project conducted from June 2012 to March 2015 titled "Life improvement in Dhital Village, Kaski District - Promotion of safe water supply", their nutrition ingestion and health condition were analyzed. [21)] Infants and children with malnutrition exceeded 40%, and contradictory health problems included the obesity rate of middle-aged and elderly people which was a little less than 20%, and their lifestyle diseases rate exceeded 30%. During this activity, 15 units of sand filtration equipment were installed mainly in elementary schools; furthermore, boiling disinfection and solar disinfection technology was supplied, and it was clearly shown that cases of diarrhea among the residents decreased when safe water was supplied. However, it did not lead to a reduction in serious cases of malnutrition among children, and furthermore, the rate of lifestyle diseases among middle-aged and elderly people remained high; thus, we learned that new nutritional problems could not be solved by just supplying safe water. Residents suffering from lifestyle diseases are aware of their symptoms, such as diabetes, gout or hypertension. To improve their symptoms of these lifestyle diseases, a sub-health post was set up in the village; however, due to inadequate drugs and medical devices, and the absence of a doctor, they cannot receive adequate medical treatment.

Considering this background, in order to contribute to enhancing the villagers' health, improve nutrition, and prevent lifestyle diseases, we thought that it was necessary to implement feasible programs in Machhapuchhre Village, Ward 6 (formerly Dhital Village) while understanding the importance and priority of residents' problems and making full use of the village and human resources.

In 2017, we started the JICA grassroots technical cooperation project, "Activities to

improve nutrition and prevent lifestyle diseases in Machhapuchhre administrative village, Ward 6, Kaski District, Nepal (formerly Dhital Village in Kaski District, Nepal)" to improve preventive measures.

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