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Nepal: Women's empowerment to further the development of rural agriculture

Nepal is cradled in the hotbed of South Asia, an amalgam of ethnicities, cultures, and languages each more diverse than the next. Squeezed between India and China, two global powerhouses, the mountainous nation is often overlooked as a player in the international market. Nepal, with its deep-rooted history and tradition of agriculture, is ripe for agricultural innovation and global attention. However, rural poverty has been a significant roadblock to Nepal's path to international inclusion. Threats of climate change, politically unstable environments, and a largely illiterate and marginalized populous have all transmuted into issues too multifarious for Nepal's relatively small government to handle. As a result, the Nepali government struggles to regulate its agricultural and economic development as an increasing number of its citizens fall prey to an unrelenting cycle of poverty.

Nepal, now beleaguered by a population of approximately 27 million, was once ruled by a corrupt Shah dynasty of kings until only five years ago. In 2008, mass protests led to the abolishment of the monarchy and the formation of a representative democratic republic. Political tensions are ubiquitous in Nepal regardless of the form of government, however, and legislative deadlock is common in a nation polarized by opposing political views. All the while, the country's poor are living in the some of the most destitute conditions in the world.

Agriculture accounts for 80 percent of the Nepalese workforce and 50 percent of national income; however, the farmers and rural communities that drive Nepal's core industry account for 95 percent of Nepalese in poverty (IFAD). These poor commonly have large, extended families, typically six children per family, and agricultural output is disproportionate to the quickly burgeoning population of Nepal. Rural families have very little access to infrastructure; specifically, transportation is severely limited and thus those living in farming areas, such as the Terai region, have no access to roads, greatly restricting their marketable output and their access to urban services. A majority of the rural poor spend about three fourths of their income on food alone, leaving nearly nothing for education and healthcare; as a result, high rates of illiteracy in pastoral areas are common ("Nepal: Poverty in Nepal: At the Turn of the Twenty-First Century."). Those that do attend school frequently drop out due to illness. Most children have no access to toilets and receive no training in personal sanitation, leading to high instances of diarrheal disease, acute respiratory infection, and typhoid in rural areas (IFAD).

Children in Nepal are rarely allowed to go to school at all as they are needed at home to help their parents in farming, livestock rearing, and the like, thus encouraging the formation of a vicious cyclic breed of poverty and illiteracy that spans entire generations (Guru-Gharana). A vast majority of the Nepalese are also severely malnourished due to their insubstantial diets. A typical Nepalese meal consists of *dal* and *bhat*; *dal* is a lentil soup commonly served over rice, *bhat*. The diet of the rural poor is severely lacking in fresh fruits and vegetables, leading to Vitamin A, Iron, Protein, and Iodine deficiency. As a result, 50 percent of Nepalese children and 29 percent of the general population are malnourished ("Nepal: Priorities for Agriculture and Rural Development.").

Access to proper healthcare and medical facilities for the rural poor is essentially nonexistent. Healthcare programs, in addition to being low budget, are poorly planned and executed. The essential issue with reforming healthcare policy in Nepal is prioritizing care in isolated regions where extreme poverty is rampant. The problem lies in deciding whether to prioritize curing the ill health that already exists over taking a longer term approach to preventing these illnesses before they strike. Primary Health Care (PHC)

is the base of Nepal's health care approach. The World Health Organization (WHO) describes PHC as "the first level of contact that the population has with a nation's health system, as it brings health care as close as possible to where the people live and work." PHC emphasizes health promotion and health education among rural workers rather than focusing on improving urban hospitals—an idea that has merit considering the nearly inaccessible regions in Nepal that make it impossible for the rural poor to travel to hospitals. However, recent studies have shown that villagers would prefer curative and medical services from health workers rather than health education services. Due to low literacy rates, many of those in rural poverty are confused by the health education promoted by government workers, making the program largely ineffective (Bentley).

Most rural families grow rice and other low value cereal crops through traditional methods such as terracing. These crops are highly seasonal and output fluctuates dramatically due to severe weather conditions, such as flooding, that are common in Nepal. The Nepalese government, through numerous Five-Year Plans, has attempted to instate agricultural practices that they believe will strengthen production: the use of fertilizers and insecticides, the planting of high-yield crops, and the endowment of credit to poor farmers. However, the government failed to properly implement these practices, particularly in the more rural regions, and thus the majority of farmers continue to struggle without access to new farming technologies and services ("Nepal").

As farming is the primary source of food, income, and employment for those Nepalese in poverty, the barriers facing agricultural productivity and the barriers facing the empowerment of the rural poor are intrinsically interlinked. According to World Bank, the chief issues preventing the growth and development of the Nepalese agricultural industry are a deficiency of infrastructure, growing trade challenges, and a lack of equitable and secure access to land ("Nepal"). As discussed previously, the absence of rural road networks and the lack of governmental implementation of irrigation, fertilizer use, and technology not only hinders crop yields but severely limits the ability to market goods and diversify the workforce. In terms of trade challenges, Nepal now faces daunting agricultural standards and competition due to its recent inclusion in the World Trade Organization—lack of education amongst rural farmers will likely only serve to heighten the challenges caused by Nepal's entry into the WTO. Lastly, land fragmentation and an outdated feudal system of land distribution undercuts the poor, whose access to land is typically limited to 1 hectare per household (Guru-Gharana).

A common link exists between causes of the three major factors hindering Nepal's agricultural growth: the relegation and disregard for marginalized peoples, particularly women, who make up the majority of the rural workforce (Ashby). The lack of infrastructure and failed implementation of technologies is largely due to the underrepresentation of women in decision-making processes—their inclusion would allow the government to successfully transition its largely hypothetical Five Year Plans to cohesive, real world strategies. The formidable regulations now imposed on Nepalese farmers by the WTO would be more easily met if rural workers, the majority of whom are women, had clearer access to education and urban programs designed to train them under these new guidelines. Likewise, the archaic land distribution system currently skewed towards the elite should be eradicated in order to empower the majority of the agricultural workforce, women. The gender disparity in access to education, healthcare, and infrastructure is further segregating rural families, limiting their knowledge of new crop technologies and ultimately crippling Nepal's involvement in the global market.

The marginalization of women in Nepal is significantly hampering the strength of Nepal's workforce and further, agricultural productivity. Though the Nepalese government has insisted that it is committed to the empowerment of women and gender equality, progress has been slow. Women constitute more than 60 percent of the agricultural labor force and are largely supporting the rural economy, yet are having to do so with little training and education (IFAD). This incongruence results from the deeply ingrained patriarchal system rooted in Nepalese culture. A typical Nepalese household consists of a patriarch who

has sole financial and decisive control, and a mother of six or seven children who, despite having virtually no rights, does the bulk of the household and agricultural work.

The fact that females take on up to 40 percent more work load than males notwithstanding, women are considered burdens to the family while men are regarded as blessings. Although they are legally permitted to go school, within most households, women are commonly expected to stay back and fulfill domestic duties (Guru-Gharana). Thus, the literacy rate of women is far below that of men. As a result of this culturally embedded mindset, rural women that head farming households, and have little access to the tools and education necessary to prompt sustainable agricultural growth, are not likely to lead successful communities. Contrastingly, studies conducted in West Nepal have shown that educating and involving women in the design and field testing of new agricultural technologies such as crop varieties, small machinery, and farm tools streamlines the adoption of innovations, increasing productivity and incomes.

Chronic malnourishment and denial of health services to women in Nepal are also at the root of many problems facing rural families. The majority of those in poverty are given birth to by a malnourished mother and subsequently suffer from birth complications, birth injuries, neonatal tetanus, low birth weight and infant mortality. Mothers themselves are at great risk when pregnant—the maternal mortality rate in Nepal is 539 deaths per 100,000 live births, and that estimate may be three times as high as reported due to the difficulty in gathering accurate information (IFAD). Consequently, Nepal is one of only three countries in the world where female life expectancy is lower than male life expectancy. In a country where women make up more than half the labor force, women's health services should be far beyond where they currently stand. Improving health conditions for all women, and especially those who are pregnant, would further secure the health of millions of Nepalese children and future agricultural workers, serving as a preemptive strike to disease and malnourishment.

The PHC program attempted to correct the issue of inadequate women's and general health facilities by training nurses under the Assistant Nurse Midwife (ANM) program, but sociocultural barriers have prevented the program's success. Since rural women do not have the educational prerequisites to participate in ANM, those in the program are mostly women from urban areas. These nurses are much more susceptible to criticism and alienation from rural villagers, who consider it taboo to associate with unmarried women who live by themselves or with male staff. Since the sociocultural context was not taken into account, some villagers are still not accessing basic healthcare not because it is not available, but because they are skeptical and suspicious of urban women. Pregnant rural women much prefer the help of a traditional birth attendant—a close female friend who is untrained but trusted. These cultural traditions make the ANM program largely irrelevant and ineffective (Bentley).

The solution that has been proposed by many is to train rural women whom villagers know and trust to be nurses, but this raises the overarching issue that the vast majority of them are illiterate. The bulk of health and medical decisions in rural villages are carried out by women. Efforts to increase education among rural women would not only aid the primary health decisions already being carried out by Nepalese women on behalf of their communities, but would allow rural women to participate in programs like ANM, gaining more access to health education and thus being able to make informed choices.

Current issues facing women in Nepal, and further, the rural community as a whole, include the nation's rapidly inflating population. After the country's 10^{th} population census in 2001, the Nepalese government introduced its ninth Five Year Plan aimed at controlling expanding population growth. However, their planned implementation of birth control and other preventative measures largely failed, and according to Nepal's 2011 census, growth rate has actually increased 1.35 percent ("Major Findings of 2011 Census"). As a result, rural areas are becoming overcrowded and arable land is dwindling annually, leading to increased poverty and an even larger decline in rural infrastructure. The lack of access to birth control and contraceptives is particularly dangerous for women considering the risks involved in carrying a baby to

term and the lack of affordable, accessible birthing facilities and skilled birth attendants. A boom in population places an added strain on already overworked and underpaid Nepalese women, giving them less time for their agricultural duties and a higher likelihood of contracting venereal diseases (IFAD). Birth control and contraceptives are not readily available, and in rural areas are virtually nonexistent, due in part to poor infrastructure but also cultural stigmas attached to the use of these preventative measures. Although PHS health education services attempted to establish better maternal and family planning practices, due to the social taboos surrounding both the medical practitioners and the contraceptives themselves, the PHS service never had a significant effect.

In addition to a mounting population, irresponsible environmental practices are also impeding economic growth as forest degradation becomes widespread. Deforestation is promoted by the Nepalese government, which legislates policies that incentivize forest degradation (Stewart). Virtually all forests in Nepal have been thinned throughout the last three decades; these unsustainable actions have grievous consequences including decreased biodiversity, soil erosion, and desertification. Added to the quickly diminishing amount of cultivatable land in Nepal, deforestation cannot conceivably continue in Nepal without severe consequences; however, local communities currently do not consider reforestation a worthy investment of time. Since women, who make up more than half of the workforce, are not educated or aware of the repercussions of what has long been considered an acceptable practice, the majority of agricultural workers is oblivious to the damage they are inadvertently doing (O'Connor). Consequently, although the effects of deforestation are dire, no significant steps are being taken to alleviate the problem due to the simple fact of ignorance. Repopulating the forests of Nepal will require concerted efforts on the parts of both rural agricultural workers, primarily women, and the Nepalese government as a whole (Damodar).

Water scarcity is another significant problem affecting rural populations in Nepal. According to the Department of Water Supply and Sewerage in Nepal, an estimated 80% of the total population has access to drinking water, but it is not safe. Those in rural areas have limited to no access. Water is usually polluted by industry and domestic waste along with discharge of untreated sewage; this is especially true in rural areas, where groundwater is commonly contaminated from arsenic (Suwal). In rural Nepal, women have to walk miles to collect contaminated groundwater, often leaving home in the middle of the night to avoid crowds at the water source—this leaves them vulnerable to sexual harassment and illness. Continuously carrying heavy water containers weighing up to 20 kilograms, on the head, hip or back, has severe health repercussions. In extreme cases, curved spines and pelvic deformities can result, causing issues with childbirth ("Women and WaterAid.").

Involving women in the decision making processes essential to solving these matters is integral for the furthering of Nepal's food security. Strengthening both access to education and healthcare for women will not only be a victory for human rights, but will also serve as a catalyst for economic and agricultural growth. The bulk of agricultural production attributable to Nepali women makes them the principal agents of food security and household welfare in rural regions (Ashby). Thus logically women's empowerment and involvement is key to agricultural success. For instance, since Nepalese women are traditionally involved in bringing water back and forth from rural villages, they are vital to the construction of sewage and water infrastructural projects. Nepalese women hold generations of knowledge concerning the location and status of various water sources in rural areas, and thus would be invaluable in this kind, and various other kinds, of community infrastructure building. Similarly, the development of products like fertilizer must be built with women in mind, packaged in units that women will be capable of transporting. Small changes such as these can preface larger scale infrastructural changes, ultimately building up to the larger inclusion of women on a national level (Suwal).

Gendered responses to Nepal's prominent environmental and agricultural issues are critical to resolving them. Women must play an active role in testing innovations and technologies, for they will be the ones

implementing the changes on their farms. Soliciting opinions from women on new agricultural technology will not only open an essential dialogue on outdated farming practices, but will also normalize the involvement of women in decision making processes that are normally dominated by men (Savada). Actively consulting women in agricultural work will assure that the application of proposed government plans, such as those from the failed Five Year Plans, will not go to waste.

Empowering women financially is also essential to diversifying Nepal's economy. Currently, women often lose lucrative business opportunities to men. For instance, the commercialization of buffalo milk in Nepal should have been a boon to women's personal incomes, considering that women there are the primary caretakers of buffalo. Instead, women's work increased and their pay went to male relatives who privatized the business opportunity for themselves largely on the backs of women (Ashby). This risk should always be mitigated by enforcement of strict guidelines that ensure fair income distribution; this is an extremely complex problem to regulate; however, by delegating economic regulation to small governments in rural Nepal primarily, the simple implied protection of women by the law will do its part in slowly but surely eradicating this kind of immoral economic behavior.

The inclusion of women in agricultural and economic decision making processes starts at a much more basic level—the bettering of women's education in rural areas. The lowering of illiteracy rates among women would have immediate effects, both in agriculture and healthcare, as women would be able to address these issues as informed and empowered individuals. The key to educating rural women in Nepal is to approach the problem on a village to village level. Nepal's rural areas are highly diverse and each community is different than the next—and each has their own separate cultural reason for not educating women. The common mistake among Nepal's well-intentioned but ultimately ineffective government programs is a lack of awareness or understanding of traditions and customs in rural villages. Thus the method that should be taken in addressing both illiteracy and women's empowerment is one that takes into account the existing sociocultural contexts in these regions. The crux of this localized approach would be for the national government to support and strengthen existing grassroots organizations in order to address gender inequality from the inside out. There is no catch-all solution for all regions in Nepal. Rather the Nepalese government should focus on delegating women's education to smaller organizations throughout Nepal that have workers who have grown up in the regions they are working in, and are thus more likely to be trusted and accepted by local villagers.

One such organization is "I Have a Voice", established in the remote Karnali district of Nepal, whose central approach to women's empowerment is enabling local women to educate and collaborate with each other. This methodology is much more inclusive and culturally conscious than the more common approach the Nepalese government now takes—sending government workers or healthcare professionals to aid villagers who both misunderstand and mistrust them. "I Have a Voice" targets vulnerable and marginalized women, women with disabilities and their family members, single women and illiterate women in an effort to establish Women's Development Groups in rural villages. "I Have a Voice" collaborates with local NGOs and existing community groups within rural communities who don't have the means to carry out successful campaigns on their own, thus gaining familiarity with a village and its people before trying to affect change. Local women previously educated under "I Have a Voice" are able to teach other local women as well as advocate for change within their villages by way of the Women's Development Groups.

"I Have a Voice" also solves a logistical problem that prevents women from attending school. Because of the inaccessible roads in remote areas, educational meetings or healthcare services in urban areas nearly impossible to attend. Although technology such as television or computers could prove to be highly effective in aiding this problem, these tools are virtually nonexistent in rural regions. "I Have a Voice" and other grassroots organizations, however, subvert this issue by simply traveling to the villages themselves and setting up workshops and headquarters adjacent to existing village councils. Women and

girls do not have to take time out from their domestic and agricultural duties to attend meetings directly in their villages, and these organizations are welcomed into the villages because, as previously noted, they are largely made up of women from that region itself.

After women in "I Have a Voice" have taken literacy courses and been educated in various aspects of business, food security, and agriculture, they are then able to join the Women's Development Groups and advocate for change within their villages. It is this two-pronged approach, education and empowerment, that should be central to Nepal's gender equality stance. By first addressing the rampant problem of illiteracy, local organizations can ensure that women have the means to enter larger, government sanctioned programs such as the ANM program, or even a government sponsored agricultural board. In this way, the Nepalese government must work closely with grassroots organizations to streamline and integrate this process in order to maintain the link between education and further healthcare and agricultural opportunities. Local NGOs can play a role in this approach by collaborating with grassroots organizations in terms of providing the supplies and manpower needed to support these movements.

Thus local and national governments, non-profit organizations, and grassroots movements must work together to include women, chiefly on a village-to-village level, in order formulate useful solutions to problems affecting the rural poor. A gender-equal Nepal is conceivable, and can be achieved through the concerted efforts of local organizations and national government agencies in ensuring women's education and including women in local and national discussions concerning agricultural issues.

In a country where a staggering 44 percent live below the poverty line, it is undeniable that efforts should be taken by the Nepalese government to alleviate the issues facing the rural and marginalized poor working in agriculture. If Nepal is to use agriculture as its basis for economic growth and poverty reduction, however, it must take a gendered approach to resolving the myriad of problems, primarily facing women, that currently plague its agricultural industry. Women who are encouraged and empowered in their financial decisions, educated and informed in their agricultural work, and validated and endorsed by their government will make for a strong and reliable driving force behind a promising country.

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