

平成 30 年 6 月 22 日現在

機関番号：32631

研究種目：基盤研究(B) (海外学術調査)

研究期間：2013～2017

課題番号：25301002

研究課題名(和文)ネパールにおける持続的発展可能な環境配慮型ビジネスモデルに関する研究

研究課題名(英文)A Study on Environmental-friendly Business Models for Sustainable Development in Nepal

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交付決定額(研究期間全体)：(直接経費) 13,400,000円

研究成果の概要(和文)：ネパール経済の産業化/近代化の為、環境配慮・持続可能性が最重要課題の1つである。本研究で、観光業、農業、正式/非正式企業部門に絞り、都市と地方のコミュニティでの環境配慮型ビジネスモデルの可能性を解析した結果、以下が判明した。

1.部門間の連携はICT技術により支援/促進が可能で女性が経営し地元経済を支える多くの零細企業には特に重要。2.地元住民の視点から、ごみ処理、持続可能な発展への教育、健康増進等のコミュニティ支援システムが重要。3.貧富や教育の格差、性差別問題、インドネパール間の政治的働きかけが必要。4.持続可能な発展支援の為、環境配慮社会的経済的システムの発展への実業界と政府の協力が必要

研究成果の概要(英文)：As Nepal industrializes, environmental sustainability is regarded as one of the pressing challenges. This research analyzed the potential for environmental-friendly business models in urban and rural Nepal, focusing on sectors of tourism, agriculture and informal enterprise. We found that mobilizing linkages among these sectors and adopting ICT can support and promote eco-friendly sustainable business models, particularly for small scale businesses run by women. Additionally, perspectives from local citizens reveal the importance of community support systems, such as waste management, Education for Sustainable Development (ESD) and health promotion. The research illustrates the need to include gender issues, as well as the wealth and education gap. There is also a need for coordinated efforts from businesses and government in developing the social and economic systems that work in harmony with the environmental systems to support sustainable development in the business sector.

研究分野：Sustainable Development

キーワード：Nepal sustainable development economy society business model environmental-friendly gender

1 . 研究開始当初の背景

Currently ranked as a Least Developed Country (LDC), Nepal aims to graduate from its status by 2021; however, there are various obstacles to overcome, including low economic growth, high income inequality, social and environment vulnerabilities, political instability and corruption. And while the current government constitution approved in 2015 addresses these issues, the trajectory towards sustainable development investment in the environment, human resources and social justice is seen to be faltering. This is evidenced in the gaps in achievement of the Millennium Development Goals (MDGs) and the government's loose commitment to the Sustainable Development Goals (SDGs) 2015-2030. Further challenges that derail development include geography, migration, degraded resources and natural disasters.

In our previous research (2008 – 2012) we determined a set of potential 99 indicators, identified through field surveys in 6 communities, in both urban and rural Nepal. These indicators served the purpose of determining development priorities. The analysis highlighted the importance of community engagement and the possible synergy that can be created towards the mobilization of sustainable development.

In other words, we found that Nepal needs to develop a people-centered strategy to achieve sustainable growth. This concept is made relevant by the fact that there is limited financial support from the government for business and institutional investment, so therefore, a model for environmental-friendly development, reflecting harmony between people, environment and economy is a priority.

2 . 研究の目的

The purpose of this research is to identify environment-friendly business models through the evaluation of the social system, and reported needs of the people in local communities. Due to its land-locked geography, limited financial government support, as well as limited human capital and technological development, good practices in the business and institutional sectors are currently lacking. Utilizing data gathered from local people, we determined various factors which can be considered as best practices for promoting the sustainable development of society and businesses in Nepal.

3 . 研究の方法

The research method included field surveys in the form of questionnaires and interviews, as well as focus group discussions, presentations by organizations and observations and guided site visits. Over the course of the research, approximately 800 randomly selected Nepali citizens responded to structured and semi-structured questionnaires and interviews. Using statistical analysis, the findings were analyzed. Additionally, 5 focus group discussions with various INGOs and NGOs, owners of small businesses, teachers, and staff from various health institutions were carried out. Presentations by government officials and educators provided balanced input for analysis. This qualitative data was analyzed by theme, based on the principles of Amartya Sen in her book *Commodities and Capabilities* (London: Oxford University Press, 1999).

4 . 研究成果

As Nepal attempts to industrialize and modernize its economy, environmental sustainability is regarded as a pressing challenge. Through data collection, this research analyzed the potential for environmental-friendly business models and practices in both urban and rural communities in Nepal, focusing on sectors of 1) tourism, 2) agriculture and 3) education. The sectors were identified through secondary research and consultation with various Nepalese researchers. Respondents in the communities, as well as businesses and educational institutions constituted the data collection.

1) Tourism

Tourism in Nepal is a multifarious industry, which promotes cottage industries, agriculture and other sectors. In 2016, it accounted for 7.5% of Nepal's GDP and is considered the largest source of foreign exchange. Tourism from local and international tourists has grown rapidly in Nepal over the last decade. By 2020, tourism is expected to support both directly and indirectly approximately 726,000 jobs (6% of the total employment in Nepal). If a sustainable and environmentally sound tourism model can be developed, Nepal has the potential to become one of the major tourist destinations in the world in the future. This is promising for local communities, where the economic situation is critical for many impoverished individuals and families. However, rapid development in tourism may destroy the

nature and sites of the tourism-led growth.

Our research focused on three popular tourist areas: Annapurna trekking, Chitwan wildlife, and Kathmandu and Patan cultural heritage. In order to determine an environmental-friendly and sustainable model for tourism, we analyzed the regional characteristics in these areas and the relevance between the three sectors of economy, society and environment. We targeted approximately 100 respondents per area, investigating the positive and negative impacts of tourism development, as well as the policies and efforts that should be made to create a sustainable tourist model. Findings indicate various ways in which tourism has had both a positive and negative impact for the 3 sectors.

In terms of economy, household incomes have increased, infrastructure has improved, cottage industries and small businesses for local people have expanded, and the variety of goods and produce available has increased. One of the negative impacts is that the price of goods has increased, due to demand and the tourist buying power.

Focusing on society, tourism has brought about greater cultural exchange and more awareness of the importance of culture in the tourism model. Additionally, effort in improving the sanitation and hygienic environments has enhanced the quality of life for some local people. Negative impacts include population increase, as Nepalese migrate to start new businesses. An increase in tourists causes congestion, and as tourists influence the tourist location, the local culture erodes.

Concerning the environment, the findings reveal that there is an urgent need to raise awareness for environmental protection and conservation, as the forest sites have decreased, the animals and their habitats have decreased, the water quality has deteriorated, and the landscape visibility has also deteriorated. Additionally, a system of waste management is needed.

From an overview of these positive and negative impacts from tourism, we conclude that good practices for tourism development that leads to sustainable development include the need for tourism planning and development with a 5 or 10 year plan for each district. This may limit migration and congestion. Goods and products should be sourced locally, with supply networks created so that all

farmers and cottage industries have equal opportunities. The tourism industry must work closely with local entities and the government to plan appropriate infrastructure which supports not only tourism, but also the local people. These entities must also ensure that a good waste management system is in operation, with educational campaigns that promote proper waste management and businesses that will recycle waste. Strengthening networks and providing education on tourism will lead to best practices in tourism for future generations.

2) Agriculture

Over 80 percent of the Nepalese population is involved in agriculture in some way, and agriculture constitutes approximately 41% of Nepal's GDP. While it is an important sector in terms of development, only 20% of the land in Nepal is arable, so for many, subsistence farming is the only way for families to survive. The seasonal nature of farming leads to widespread underemployment, forcing many men to migrate to cities in Nepal or to find jobs abroad. This has left many women responsible for farming, and our research reveals various gender gaps and unsustainable farming practices.

Our data collection, targeting approximately 50 women per location was based in 3 farming areas, in Chitwan and Kathmandu Valley. In addition, focus group discussions were held at 2 micro-credit organizations. Analysis focused on the socio-economic status of women farmers and their access to technology and resources which could lead to sustainable farming practices.

Education was recognized as one of the factors that allow women to access information and make informed decisions for better farming practices. Based on data collection, only 3% of our women respondents achieved a high school education, with the majority having only grade 5 education. Land ownership is considered another key factor for sustainable agriculture. We found 75% of women claimed they owned land together with their husbands, while 25% had no land of their own, working as day laborers for other landowners, or working on land as squatters in unsuitable terrain. The 11th Amendment of the Civil Code of Nepal guarantees women the right to property; however, the main means is through inheritance, which is largely patrilineal. In reality, women without property rights

have no ready access to finance, which is very necessary for purchasing equipment and other farming needs, and also for family emergencies, which are closely linked to women's responsibilities and daily lives.

Linked to the issue of financing we found greater autonomy and satisfaction among women who were part of a micro-credit group. The women could borrow money, and while the interest was high (12% to 20%), they found strong support and formed farmer cooperatives to share the farming costs and workload. This in turn improved production and expanded sales. However, women not involved in networks felt marginalized in terms of access to high quality seeds, equipment, and sales opportunities.

As rural communities in Nepal are rooted in patriarchy, we found women do not have equal opportunity with men for economic participation, and are not recognized as contributing to the development of their country. Women's work day is much longer than men's, as women are responsible for the care of the immediate family and in-laws, as well as all the farming tasks, marketing and sales.

Our study of agriculture reveals that women are the main force when it comes to subsistence and small cash cropping. To create a sustainable model and ensure their farming practices are environmental-friendly, women need education, and they also need to be recognized as contributors in the farming sector, and to have equal access to finance, equipment and markets. One way to ensure these needs is to expand micro-credit, and to lower the interest on loans of micro-credit. Many women hesitate to take loans due to the high interest rate and the rigid rules and the time-cost involved as a group member.

Additionally we found the need for local governments, and or local entities to establish cooperatives where women can access high quality seeds, fertilizers, and take part in educational workshops on farming methods, including organic and alternative ways that will generate sustainable income. Introduction of conservation practices, irrigation and technologies and tools can also help women to increase the output and quality of their produce, and allow them to obtain the best price for their produce through access to daily market prices. Workload balance, another critical issue, cannot be solved

without a transformation from a patriarchal society to a gender-equal society. We conclude that when women farmers gain socio-economic status they will become empowered and will be a potent force for change—they will produce, earn income, consume, borrow and save, and improve the lives of their families and communities. Ultimately, this model will contribute to the sustainable development of Nepal.

3) Education

Over the past several decades, education and capacity building have become recognized as critical components in helping to shift societies toward sustainable development. Having children become more cognizant of their surrounding environment and society through Education for Sustainable Development (ESD) provides the building blocks for a sustainable future. This approach to education is still uncommon in Nepal, but is well-suited for addressing sustainable society and business practices. In our research, we engage children and teachers in 4 government schools in an ESD program, involving approximately 50 children in each school, in grades 5 through 8. We developed individual one-day programs, based on the location and issues in the communities. The concept of the ESD programs was aimed at dovetailing the research we carried out in the community. For each school we conducted a pre-questionnaire, then specific activities based on economy, society and environment, followed by a post-questionnaire. Students found new perspectives on their community through investigating local businesses and environs under the categories of economy, society and environment. By comparing the pre and post-questionnaire items, we could identify a positive effect from the program.

Our belief was that sustainability can materialize only when all community members are aware of its value. Therefore, the lessons the students receive at school can play a critical role in shaping future business leaders and progress the sustainability agenda in their communities.

The drop-out rate in these and other government schools is high, at around 4.8%. And the rate is noticeably higher for girls, according to our research. The reasons are connected to poverty, education quality, infrastructure, gender inequality and culture. Our research highlights great

potential for women to contribute to sustainable society. Addressing these issues that prevent girls from attending school is crucial for the future sustainability of Nepal.

The research confirms the importance of education and the synergy among all stakeholders for achieving environmental-friendly business models, considering the limited government finances, the geographical and political climate, and the cultural and social reality.

5. 主な発表論文等

(研究代表者、研究分担者及び連携研究者には下線)

[雑誌論文](計 9 件)

Brenda Bushell, Amani Ushemo, "Farming Cooperatives: Opportunities and Challenges for Women Farmers in Jamaica and Nepal." *Journal of International Women's Studies*, Vol. 18 No. 4, 2017, pp. 13-29.

Takumi Arai, Masayuki Goto, "A Survey on Present Tourism in Nepal and its Ripple Effects on Other Industries." *Journal of Environment and Ecology Research*, Vol. 5 No. 7, 2017, pp. 467-475.

Brenda Bushell, Amani Ushemo, Masayuki Goto, "Insights from Two Case Studies on the Socio-economic Status of Women Farmers in Low Income Societies." *Interdisciplinary Environmental Review*, Vol.17 No.1, 2016, pp. 38-47.

後藤正幸, 中澤 真, 梅澤克之, 藤原靖宏, 井田安俊, 岩村相哲, ラーニングアナリティクスに基づく次世代ICT教育モデル, 経営システム, Vol. 26 No. 3, 2016, pp. 172-179.

Brenda Bushell, Puspanjali Khoju, "A Case Study of the Socio-economic Status of Women Farmers in Nepal." *Samriddhi Journal of Development Studies*, Vol IV No.1, 2015, pp. 30-35.

Naohiro Fujiwara, Masayuki Goto, Brenda Bushell, "A survey for sustainable development of tourism in Nepal." *Interdisciplinary Environmental Review*, Vol. 15 No. 4, 2014, pp. 239-251.

Brenda Bushell, Masayuki Goto, "Overview of Livelihood Challenges in

Nepal: Nepal Japan Project Research." *Samriddhi Journal of Development Studies*, Vol III No.1, 2014, pp. 12-21.

Brenda Bushell, Momoko Ozawa, "Women's Enterprise in Nepal: Profile, Problems and Prospects." *Interdisciplinary Environmental Review*, Vol. 14 No. 2, 2013, pp. 97-106.

Brenda Bushell, Information and "Communication Technologies in Women's Business Ventures: Perspectives from Women Entrepreneurs in Nepal and Japan." *Journal of Asian Association of Women's Studies*, Vol.13. No. 1, 2013, pp. 14-26.

[学会発表](計 13 件)

Hikari Nakamura, Brenda Bushell. "Investigation into the Awareness of Gender Inequality in Nepal." Canadian Conference on Research in Education, Ryerson University, Toronto, Canada, July 9, 2017.

Megumi Asada, Haruka Yamashita, Masayuki Goto, Brenda Bushell. "An Investigation into the Need for the Awareness of Quality Education in Nepal." Canadian Conference on Research in Education, Ryerson University, Toronto, Canada, July 9, 2017.

Ryotaro Shimizu, Haruka Yamashita, Masayuki Goto, Brenda Bushell. "Research on the Political Crisis and its Impact on the Economic and Social Sectors in Nepal." Canadian Conference on Research in Education, Ryerson University, Toronto, Canada, July 8, 2017.

Brenda Bushell. "Farming Cooperatives: Challenges and Opportunities for Women Farmers in Jamaica." The 22nd International Interdisciplinary Conference on the Environment, Austin Texas, USA, June 29, 2016.

Yuri Nishio, Masayuki Goto, Brenda Bushell, Manita Shrestha. "A Survey to Identify the Necessary Support and Appropriate Disaster Risk Management System for Nepal." The 22nd International Interdisciplinary Conference on the Environment Austin Texas, USA. June 29, 2016.

Ryotaro Shimizu, Haruka Yamashita,

Masayuki Goto, Brenda Bushell.
“Research on the Political Crisis and its
Impact on the Economic and Social
Sectors in Nepal.” The 22nd
International Interdisciplinary
Conference of the Environment,
Austin Texas, USA, June 28, 2016.

Satomi Ito, Brenda Bushell,
“Educating for Sustainable Development
in Nepal: Findings from an Environme
ntal Awareness and Disaster Prevention
School Program.” The 22nd Internati
onal Interdisciplinary Conference on
the Environment, Austin Texas,
USA, June 28, 2016.

Hirotake Arai, Haruka Yamashita,
Manita Shrestha, Masyuki Goto, Brenda
Bushell. “A Study of the Future Utilization
of ICT in Nepal.” Conference on Technology
and Development, Kuala Lumpur,
Malaysia, Sept 20, 2015

Brenda Bushell, Mako Hidaka, Eri
Shigata. “Community Attitude,
Willingness and Responsibility towards
Waste Management in Kathmandu City,
Nepal.” Conference on Educational Design,
Toronto, Canada July 4, 2015.

Takumi Arai, Brenda Bushell, Masayuki
Goto. “A Survey on Present Tourism in
Nepal and its Ripple Effects on other
Industries.” San Juan, Puerto Rico, June
11, 2015.

Seiya Nagamori, Yuki Matsuzaki,
Masayuki Goto, Brenda Bushell. “A
Comparative Survey on Sustainable
Tourism Development
Considering Regional Characteristics in
Nepal.” 20th International
Interdisciplinary Environmental
Conference, Denver, Colorado, USA, June
14, 2014.

Brenda Bushell, Penny Seymoure,
Genius G.C. “Transitional Phrases in the
Roles of Women in Developing Economies:
From Reproduction To productive
Activities to Entrepreneurship.” 19th
International Interdisciplinary
Environmental Conference, Portland,
Oregon, USA, June 15, 2013.

Brenda Bushell, Rei Horie, Ruri Kyoda.
“Women’s Entrepreneurship in Nepal:
Factors for Success.” 19th International
Interdisciplinary Environment Conference,
Portland, Oregon, USA, June 13, 2013.

6 . 研究組織

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