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Sustainable Livelihood: Guidelines for Human Capital Access of Goat Farmers in the Upper Northern Region of Thailand: A case study

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ABSTRACT

This article aimed to explain and present guidelines for the human capital development of goat farmers in the upper northern region of Thailand. To analyze the whole point of development towards sustainability, there was a field visit to explore the basic information of the basic goat farming context. In-depth interviews and non-participant observations were used as tools for conducting the research using the narrative method, and the story of goat farmers who have a high experience in raising goats was analyzed and conveyed. The information was obtained from farmers of 3 cases (Information-Rich Case) in Chiang Mai, Lamphun, and Lampang provinces and examined in a triangular way from visiting the area, and the results of the study were analyzed, summarized, and described. The results of the study revealed that “Human Capital” is the most valuable factor in production among other factors of production because, in addition to acting as a mechanism for carrying out various activities, it is also a factor that must be developed for the development of sustainable practices. Sustainable livelihoods will be available in the future for farmers as well, but before human capital can be a quality factor, it has to be learned to acquire skills, experience, and what human beings have accumulated, forged, and merged. That is to say, the development of the human capital of goat farmers for sustainable livelihoods is the development of knowledge of specific professional skills that are applied to ensure the stability of the farmer sector along with continuous support from the government and academic departments.

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1 Introduction

Agriculture has been associated with the life of Thai people for a long time, whether in the form of farming, gardening, or raising animals. It is in parallel with cultivation, which has been the main occupation of most Thai people in the past (Kamluangng et al. 2019). Besides, Thailand is known as an agricultural country since it is located in a terrain that is suitable for agriculture. Most of the country's population has always been engaged in agriculture or in some ways related to agricultural activities. Despite an effort to become an industrialized country, Thais are still strongly reliant on agriculture like other developed countries. The evolution and development of Thai agriculture have not only changed throughout time but have also been corresponding to the ever-changing trends of the world (Thongmeethip 2021). Presently, specifically in the northern region, the main occupations are agriculture and livestock which are relevant to the people's way of life in the upper northern region, and the new popular type of occupation that has just emerged is "Goat Farming" (Raksasiri et al 2019).

The primary reason for this form of livestock is the suitable climate in the upper north as it is mostly hot and humid alternating with dry weather (Agriculture Extension and Development Office at six 2017). Therefore, this kind of weather is suitable for producing many types of crops. Thus, this reinforces the fact that a career in goat farming became popular. Although goat farming in the area accounts for only about 10 percent of the country's total goat farming (Moonmanee 2020), the number of goat farmers has increased steadily over the past three years (2017-2020). There are currently 824 individuals who are now working in goat farming (Department of Livestock Development 2020), and the trends are positively promising. However, the fact that the number keeps

rising cannot guarantee that the farmers' job is secured. Besides, each farmer does not come from the same background and some may lack an essential quality: "Human Capital" which is related to knowledge development that farmers should be provided. In other words, people lack life sustainability. This study aimed to provide information regarding the development and risk assessment of the physical capital of goat farmers in the Upper North of Thailand.

The researcher has studied the concepts and theories that are pertinent to the subject matter to employ them as theoretical frameworks and to analyze and discuss the result of the study. Therefore, the literature review related to this paper can be divided into approaches and concepts.

1.1 Sustainable Livelihoods Approach

In the mid-1980s, the concept of sustainable livelihoods, or rural livelihood, emerged in development academia in the West. The academics Robert Chambers and Gordon Conway were the ones defining the term, "Sustainable Livelihoods." This concept opens up rural people's perspectives and offers alternatives to livelihoods beyond being tied to the land. In Chambers and Conway's view, livelihoods consist of the competence to own assets and activities necessary for the means of living (Chamber and Conway 1992).

A sustainable Livelihood Study has a purpose which is to understand the living system which supports opportunities for improvement to reduce poverty. To understand Sustainable Livelihoods, there are six main concepts which are as follows: (i) People-Centered: starting from the analysis of farmers' lives and methods changed over time. The impact of policy changes on organizations, people, property ownership, and the dimension of

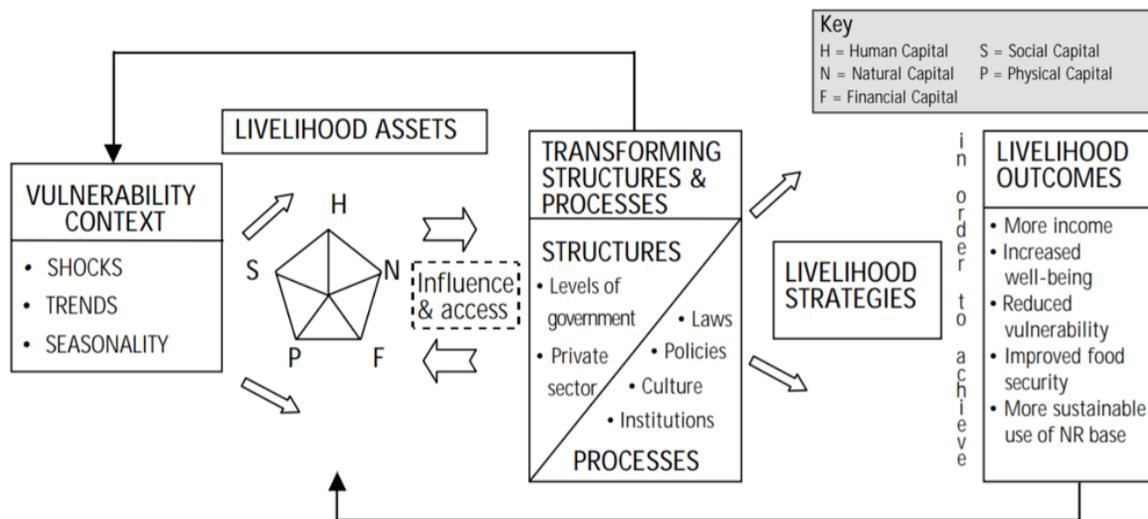


Figure 1 Sustainable Livelihoods Analytical Framework (Adopted from Department for International Development (2001) Sustainable Livelihood Guidance Sheets)

poverty is well recognized. Working towards the goal emphasizes the importance of policy and institutional management and influences on the poverty agenda. This serves to support people to achieve their goals of living. Poverty is also reduced when external support works following the livelihoods approach, environment, society, and the ability of people in the community for use in each locality; (ii) “Holistics” approach suggested that everything is interconnected and is not segregated by geography and social groups. This is to be aware of the various influences on humans, to find out, and to understand the relationship between these influences and the impact they have on livelihoods. The awareness of a variety of duties means accepting different ways of living and seeking to lead to various outcomes of living; (iii) “Dynamics” seeking to understand and learn from change to be able to support positive outcomes and mitigate the negative effects that will arise from external effects; (iv) “Building on strength” the key principle is to start an analysis of strength over needs; (v) “Macro-micro linking” in the study of sustainable livelihoods, the link between communities and individuals to the policy and institutional level; and (6) “Sustainability” an assessment that is based on four main components: society, economy, institutions and the environment (Department for International Development 2000).

According to Figure 1, the Sustainable Livelihood Study discusses the relationship between the five elements. What leads to the livelihood goals of the target audience includes (1) the contextual component of vulnerability and uncertainty; (2) the capital of livelihood which is the most important; (3) the structure and processes that cause change; (4) the livelihood strategy; and (5) the

results of the activities which is the relationship between five elements that lead to the goals of the farmers’ livelihoods and describes the elements and contexts relevant to livelihoods within each context where people live and make a living (Department for International Development 2000).

As mentioned above, the “Capital of Livelihoods” is the most important element that farmers use in their livelihood, which is positively correlated with outcomes and affects the opportunity to choose a way of life that is directly influenced by the vulnerability context and the structural and institutional changes. Five main types of the capital of Livelihoods are shown in figure 2.

The first is Human Capital; this is not just about individuals as resources, but it also covers their energy, health and well-being, knowledge and skills, motivations, and emotions. The second is Natural Capital; this represents the environmental and ecological resources that are needed to produce goods or deliver services. This consists of energy, water, fuels, raw materials, and other natural resources, as well as the ecosystems from which they are taken. The third one is Social Capital; this describes the way that people interact in the various departments within the organization. It is also about how people relate through other networks, partnerships, and less formal groups. The fourth is Physical Capital; this covers material goods and infrastructures used by an organization to generate products and services, but they are not part of the delivered output. This includes buildings, machines, tools, communications networks, IT systems, etc. The last one is Financial Capital; these are assets that exist in a currency form, including cash, shares, bonds, and loans (Porritt 2007).

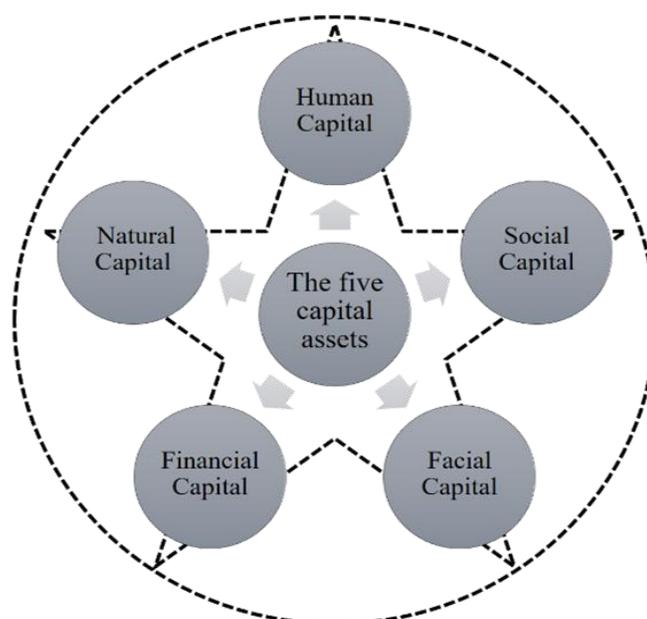


Figure 2 Five capital assets for Sustainable Development

1.2 Sustainable Development Concept

A sustainable development concept emphasizes the change that has been done or has been planned, toward a better direction. Although the changes do not improve the current condition, it is still called “Development”. According to the dictionary of the Royal Institute, the word “Development” means to grow which corresponds to its English counterpart since in English the word “Development” means any change that can lead to expansion, growth, or improvement of a situation (Thongmeethip 2019). In other words, sustainable development is a development guideline that meets the needs of the current generation and does not fail to consider the needs of future generations (Brundt and Report 1987). There are three key components to achieving sustainable development: economic growth, social inclusion, and environmental protection, and all these are aimed at the Sustainable Development Goals 17 (SDGs) which strengthen and revitalize global partnerships. To that end, the goals can be categorized according to five interconnected factors (5P): (1) people development, focusing on eliminating poverty and hunger, and reducing inequality in society; (2) environmental development reinforcing the protection and preservation of natural resources, environment, and climate for next generations; (3) economy and prosperity promoting individuals’ well-being and harmony with nature; (4) peace and justice upholding the principles of peaceful coexistence for a harmonious, and inclusive society; and (5) development partnerships, a cooperation of all sectors in driving the sustainable development agenda (Blewitt 2018).

In this research, the authors employed two concepts as a ground used to compare the data obtained from field trips on the topic, “Sustainable Livelihoods: approaches to human capital development of goat farmers in the upper north of Thailand.” The researchers have put forward a partial literature review of each case study to both describe and present specific aspects of the local context such as “Human Capital” which is a part of the five Capitals,

or a framework for sustainability. The idea contributes to the development that is related knowledge and skills that can be devised and applied so that people can reap the most benefits it. There are three significant attributes to this. The first one is intellect or tacit knowledge, which consists of knowledge, an ability to learn, specialized skills, and experience individuals have accumulated throughout their lifetime. The second characteristic is social, or a network of relationships. Lastly, the third part is emotions which include features such as self-awareness, integrity, and resilience (Wedchayanon 2008). Therefore, as far as the matter of the sustainable development concept under the sustainable development goals (SDGs) framework is concerned, the second goal of SDG aims to terminate the hunger of the people, enhance food security, elevate nutritional levels, and ensure agricultural sustainability. Hence, if people understand human capital, they will be able to increase their productivity as well as the income of small business entrepreneurs especially those whose occupations concern farming, livestock farming, and fishery, not to mention the accessibility to land, resources, factors of production, knowledge, financial services and marketing, and opportunities to add value to their work and to be recruited to work outside of their farm sphere stably and fairly.

2 Materials and Methods

The research was conducted at Chiang Mai, Lamphun, and Lampang Provinces, which are pilot areas to develop goat farmers, and has an important aim to explain and present a sustainable approach to human capital development of goat farmers in the northern region of Thailand (Figure 3). For sampling the Information-Rich Cases, there is a person who has very vast experience and knowledge about goat farming has been chosen. With a target audience for collecting data from 3 main sectors and using a qualitative approach, including observations and in-depth interviews, the data was examined in a triangular way after visiting the area, and the results of the study were analyzed and summarized by description.

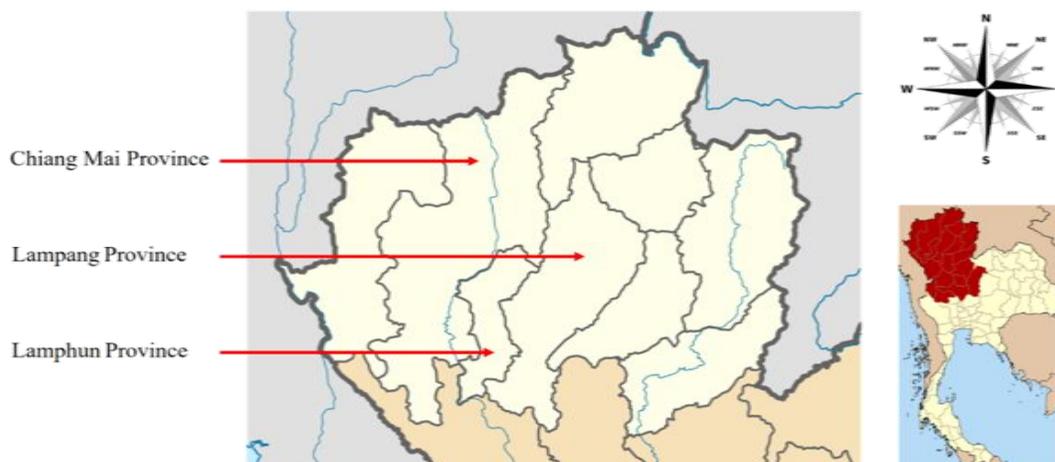


Figure 3 A pilot area for promoting goat farming in the northern region of Thailand

3 Results and Discussion

3.1 The Risks and Certainty of Life with Goat Farming

The results of the study showed that the people of the northern region of Thailand have been raising goats for decades, especially among the rural area people who prefer to raise them for two purposes: to consume and sell to foreign countries. In general, farmers do not raise goats as their main occupation, but rather as a secondary occupation that is blended with other agricultural occupations and as an additional money-making venture since goats are highly tolerant of hot and dry climates, and better at foraging than other types of farm animals. Besides, they also require a shorter time to raise, take up less space, and their entire body can be sold. All these are the distinctive features of goat farming. Despite these benefits, the number of goat farming in the upper northern area is still relatively small compared to that of other animals. It is only popular among certain groups of people, and, unfortunately, goats have become a low-prioritized economic animal.

However, with the government programs that promote goat farming over the past period and the pilot areas for raising, which are Chiang Mai, Lamphun, and Lampang Provinces, goats have gradually become an important economic animal that farmers in all regions pay more attention to as well (Figure 3). Some farmers hold goat farming as their main occupation or supplementary venture, which can generate a lucrative income for their family. This is because goat meat products started to be in demand both domestically and internationally. Thus, goat farming is predicted to expand more and more.

As mentioned above, the northern region of Thailand still has a small number of goat farming. This may be due to some limitations such as; local people do not generally consume goat meat, or they may simply lack the knowledge of where to distribute and sell goat meat products. Goat farmers do not know where and how they can gain the most benefits out of the goats, which can be a primary problem or obstacle that hinders people from farming goats. Therefore, it is inevitable that goat farmers should learn about human capital so that they can gain fruitful knowledge and some important skills about goat farming. If farmers are well aware of this knowledge, they can prevent any potential risks, which can arise from any economic approach that does not view capital as just money but categorizes capital into many aspects, such as natural capital, social capital, etc. At present, human capital is widely accepted both in the agriculture and non-agriculture sector, which is an important factor driving various activities that can contribute to the goals that have been initially set effectively.

3.2 Human Capital and Sustainable Development of Goat Farmers

Human capital is one part of the concept of “Sustainable Livelihood” which is equivalent to the foundation of

individualism. This consists of knowledge, abilities, skills or expertise, and experiences individuals have accumulated within themselves, and all those combined can become a potential or an essential, valuable resource. This can be advantageous in many circumstances and various contexts. Therefore, for one to be able to manage or find a way to make use of his potential or knowledge to the greatest extent, one must understand the qualities of “Human Capital” that are different from other resources. That is, people are “intangible assets” without depreciation like other assets; people are “human capital” that can build “added value” (Thosuwonchinda 2005). In other words, goat farming can be viewed as similar to planting trees. If people keep watering, cultivating, fertilizing, and paying attention, the plants will bloom and thrive. They will have stronger roots than those neglected ones. If goat farmers have competence in human capital, they will be prepared to deal with the risks mentioned above. Consequently, goat farmers in the upper north of Thailand can have a sustainable life and secure occupation.

The results of the interviews with goat farmers revealed that nowadays, goat farmers rely only on the prior knowledge of goat farming that comes from individuals' experiences. However, this is not enough because each goat farmer has a different experience in raising goats. Therefore, goat farmers must seek further knowledge and training to increase their body of knowledge as a guideline for goat-raising management along with building skills by practicing until they become experts in goat farming. This is evident and consistent with the concept of human capital that human capital is a body of knowledge and specific professional skills that are applied to benefit (Kamluang 2019) and under what Nigro (2007) said, human capital development is a process undertaken to achieve the development of human capital so that its potential is ready for the fulfillment of the mission assigned to it by the organization. By the tools used for the development of effective and accepted human capital that is human resource development, the new and old methods are used to obtain the results and performance both quantitatively and qualitatively. The determination of the target of human resource management, the basis according to the concept of "RDMU", has the following goals: 1) Recruitment and Selection 2) Development 3) Maintenance, and 4) Utilization.

Moreover, the non-participation survey of the observed areas revealed that government agencies in the areas have given importance to the development of goat farming potential with farmers to organize promotional activities and transfer or pass on knowledge about goat farming in the community. In addition, access to support and assistance in the development of goat potential from the academic department is always delivered. It operates in line with the sustainable development concept under the sustainable development goals (SDGs) framework of Goal 2 on



Figure 4 Development of goat farming potential with farmers to organize extensional activities

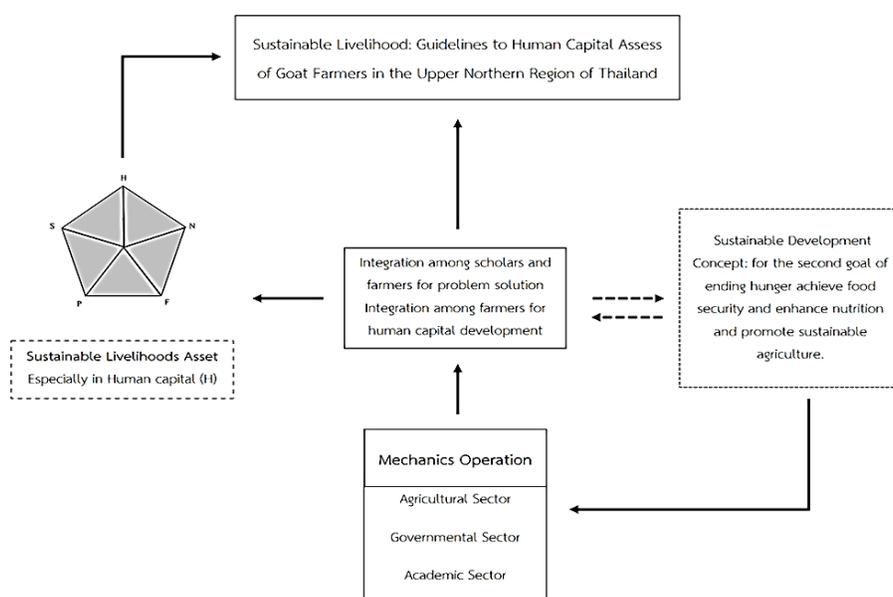


Figure 5 Guideline for human capital development for goat farmers

the issue of promoting sustainable agriculture to increase not only agricultural productivity and income of small food producers, indigenous people, farmers' households, goat farmers and fishermen, but also access to land resources and inputs, knowledge, financial services, markets and opportunities for value-adding and non-farm employment fairly and equally (Figure 4).

4 Conclusion

4.1 Approaches to Human Capital Development of Goat Farmers

In the conclusion of the article, sustainable livelihood: guidelines for human capital access of goat farmers in the upper northern region of Thailand, the study found that

sustainable livelihood is based on the stable and sustainable development of "human capital". Also, it is responsible for future activities but before humans can become a factor of quality, and possibility, investments must be made to obtain skills, experience, and things that humans have accumulated, forged, and merged until we become who we are today. Then, we will call it "Human Capital." Together with intellectual knowledge and the ability to learn, people have accumulated specializations, skills, and experiences. Moreover, an important development mechanism is social, which consists of a network of relationships between the farmer, government, and academic sectors which can help drive and fulfill the sustainable development of human capital. The last aspect is emotions which consist of attributes such as self-awareness, integrity, as well as individual resilience (Figure 5).

4.2 Farmer and the importance of “Human Capital”

Finally, the researcher concluded that it could be seen that the "human capital" of the farmers is very important. Therefore, ensuring the sustainability of the development of farmers in each period is considered very significant for the livelihood of farmers as well. In other words, the more the farmers develop in the dimensions of specific knowledge and professional skills, the more the livelihood and quality of life of farmers will improve.

In addition, the government must be the center of learning to increase the capacity of farmers to develop quality, as it should be under support of the partnership, from the farmers, the community, and the academic sectors to achieve genuine development in the upper northern area and Thailand's livestock.

5 Recommendation

The development of goat farming in the northern region of Thailand—despite continuous development according to the potential of farmers, occupation, and assistance from some agencies—is still not acceptable as it should be. “Goat farming” is a profession that requires a certain level of knowledge and understanding in the field of livestock for one to have a successful career. Therefore, the search for such development paths is focused on the development principle, which is, first, the need for continuous development planning in goat farming. Secondly, there should be measures to increase the efficiency and quality of goat production to increase marketing channels, support innovation, and use various technologies, including agricultural management. Thirdly, costs from both the public and private sectors for the development of goat farming careers should be combined. Lastly, the self-reliance of farmers as the main goal should be promoted so that farmers can help themselves.

Conflicts of interest

The authors affirm that they do not have any conflict of interest

Ethics approval and consent to participate

All Information Rich-Cease or samples were applied as per the Chiang Mai University Research Ethic Committee, Thailand. The approved samples license number is COA No.082/64, CMUREC64-155

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Authors' contributions

All authors discussed and designed the experiments:Thongmeethip K., Phayakka N., Sreshthaputra S. and Limmirankul B. conducted the main experiments and data analysis. All authors wrote, read, and agreed on the final manuscript.

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