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Research Article

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A SWOT Analysis of Nepalese Agricultural Policy

Arun GC[1,*] **Kiran Ghimire**[2]

[1]Kyunpook National University, Republic of Korea
[2]Department of Agriculture, Nepal

[*]Corresponding Author: gcarun88@gmail.com

Abstract

Agriculture, which generates two-third of the employment and one-third of the GDP in Nepal, is an important sector since Nepal is a small, landlocked country with low income. The government enacted the National Agriculture Policy in 2004 (NAP-2004) as an umbrella policy in the agricultural sector to guide all sectoral policies coming in the future. The paper has examined NAP-2004 by using the Strength, Weakness, Opportunity and Threat (SWOT) analysis technique. For the analysis, secondary data, the publications of the government and the international organizations as well as peer-reviewed articles were reviewed. The strength and weakness were analyzed by using nine different indicators. The results of the paper will be instrumental for improvement of the agricultural policy.

Keywords: SWOT, Agriculture Policy, Nepalese

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Introduction

Nepal is a small, landlocked, agricultural country which is sandwiched between China and India. It has an area of 147,181 square kilometers and a population of 28 million with the growth rate of 1.35% (CBS, 2015). Regarding the fact that agriculture in Nepal contributes to one-third of the GDP and provides employment opportunity to almost two-thirds of the population (MoF, 2016), it is an important economic activity in Nepal.

Nepal is geographically divided between mountains (35%), hills (42%) and terai (23%). The cultivated agricultural land of Nepal is three million hectares, whereas the uncultivated agricultural land is one million hectares. On the other hand, only 1.4 million (up to 2012/13) hectares of agricultural land is irrigated (MoAD, 2015). Nepal produces many agricultural commodities due to the diversity created by altitudinal variation (60 – 8,848 masl) and geography (UN, 2013). The Ministry of Agricultural Development publishes the annual statistics of 119 agricultural commodities (MoAD, 2015) and farmers still practice mixed crop and livestock integrated farming in every agro-ecological region of the country (FAO, 2010a).

Unlike Japan where average farm size is increasing (OECD, 2009), the average farm size in Nepal is continuously decreasing and has reached to 0.516 hectares by 2011/12 (CBS, 2013). Around 97 % of the agricultural holdings in Nepal are less than 2.0 hectares (CBS, 2013). Moreover, one forth of the total population lives below the poverty line and per capita GNI is just $730 (ADB, 2016). The rate of fertilizer consumption, which has increased from 57 kg / ha by 2012-2013 to 97 kg / ha by 2014-2015, is still low (MoF, 2016). The increase in fertilizer consumption is supported by government grants and stable price for the last few years (MoF, 2016). The share of agriculture in total exports is 28%, while the share in total imports is 20% (TEPC, 2017).

To guide the agricultural sector in Nepal, the government launched the "National Agriculture Policy, 2004" (NAP-2004) in the background of the World Trade Organization and the commitments of Millennium Development Goal (FAO, 2010a). The paper attempts to analyze the policy in the framework of "Strength, Weakness, Opportunity and Threats (SWOT) Analysis". The SWOT analysis is a planning and strategic positioning tool (Maratovna, 2014) which enables the planners to have a better understanding of enhancing the strengths to achieve the possible, available opportunities and overcoming the weaknesses and threats (Helms and Nixon, 2010).

Objective

The objective of the study is to assess the influencing factors of the National Agriculture Policy- 2004 and take them into consideration. The specific objectives of the study are:

- Evaluating the strengths and weaknesses of the NAP-2004
- Assessing the opportunities and threats of the NAP-2004

Materials and Methods

The NAP-2004 (in Nepali and English Language) was accessed from the web portal of Nepal Law commission (www.lawcommission.gov.np). Similarly, the secondary data has been collected from various government reports and websites. Likewise, the peer reviewed articles and publications from international organizations working in the field of agriculture and economic policy were reviewed to categorize the policy options laid down by the NAP-2004.

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Originally, a SWOT matrix was devised for strategic positioning and giving an advice to business entity, but it can be extended to be extensively used in other areas, too (Sica, et al., 2015). A conceptual framework has been developed to categorize the NAP-2004 into endogenous and exogeneous factors. Endogenous factors are further classified into the strengths and weaknesses, while exogeneous factors are classified into the opportunities and threats. Table 1 describes the details of each factor.

Result and Discussion

For the better comparison the strengths and weaknesses of the NAP-2004 have been categorized into nine sub-headings, namely "Policy Objective", "Inclusiveness", "Competitiveness", "Cooperation", "Modernization", "New concepts", "Environment and sustainability", "Monitoring and Structure" and "Policy Option". The same category enables to have insight in particular issue, which contrasts strength and weakness. Since a policy has wider implication, various categories can have both strength and weakness due to limited internalization or imperfect accommodation of the issues. The result has been discussed accordingly into four sections: as the Strengths, Weaknesses, Opportunities and Threats.

i. Strengths

a. Policy Objective: The policy objectives of the agricultural policy are categorized into three parts as the objectives related to the farmers, consumers and society at large (OECD, 2008). The objectives related to the farmers aim to increase both the production and productivity of agriculture, as well as increasing the competitiveness in the regional and world markets through the commercialization and development of a competitive agriculture system. Similarly, the objective related to the society deals with the environment and sustainability issues and it aims to conserve, promote and utilize the natural resources, environment and biodiversity. Considering the policy objective of the OECD, the NAP- 2004 is enough in creating the objectives related to the farmers and society but does not satisfy the consumers in the field of fair price. Nevertheless, food quality, food safety and quarantine system were some consumer related issues taken into consideration at the policy levels, rather than as an objective.

b. Inclusiveness: The NAP-2004 has a special section for the target group, which has been identified as Dalit, oppressed, marginalized farmers and farm labors. Eight policy options which consist of the access to land, the provision of a land bank, loan, special facilities to small-scale irrigation, the assurance of food availability, the priority of the access to food, transportation interest and the provision of a "Food and Nutrition Safety Net" have been envisioned for the target group by the government. Likewise, farmers having less than four hectares of land have been identified as "resource-poor farmers". On the other hand, enhancing the participation of female farmers to 50% in response to the 35% target of the Ninth Period Plan (1997-2002) and providing mobile training to female farmers were also expressed in the NAP-2004 (FAO, 2010a). Moreover, devolution in the agricultural programme and a bottom-up approach have been adopted to make the NAP-2004 more inclusive. The provision of participatory implementation and monitoring have been made and the National Agricultural Resource Center has been envisioned in each development region.

c. Competitiveness: The second objective of the NAP-2004 is aimed at increasing the commercialization and competitiveness. Considering small holding sizes which contribute to low output and high costs of production (UN, 2013), large production packets have been proposed to address the market demand and to be benefited from economies of scale. The diversification toward high value-added crops is important for the competitiveness which has been observed in recent years (UN, 2013). Double Track system was introduced to be used in governmental farms where local community and private sector participate at the optimal level. Considering market demand, promotion of organic farming and regulation on GMOs have been devised.

Table 1. Definitions of SWOT factors from a trans-disciplinary interpretation

		Business/Management	Policy perspective
Endogenous Factors	Strengths	Characteristics of the business / the project to stay ahead of the game.	Both the characteristics and policy options provide an advantage. The policy options address both the current and upcoming problems.
	Weaknesses	Characteristics that are a disadvantage for the business/project.	Characteristics which are a disadvantage for the policy. The policy option that cannot address the existing and upcoming issues. Similarly, such options have a negative impact on the success of the policy.
Exogeneous Factors	Opportunities	Elements that the project can exploit to its advantage	Exogenous factors which will be beneficial for the success of the policy if carefully grasped.
	Threats	Elements in the environment that can cause trouble for the business / project	Exogenous factors which will pose a risk to the failure of the policy and cannot be controlled by the policy itself.

Adopted from "Ecosystem services-based SWOT analysis of protected areas for conservation strategies" (Scolozzi, *et.al*, 2014)

Special training of young, educated and unemployed people about commercialization of agricultural products with the provision of the access to loan has been proposed to increase competitiveness.

Likewise, provision of the assurance of improved agricultural inputs, market information system, contract farming, fee-based agriculture extension (if possible), focusing on the development of high value added agricultural products in rural areas and strengthening the quarantine system can be considered as the strengths of the NAP-2004 to boost the competitiveness. Strengthening the quarantine system is important because trans-boundary diseases are a big problem not only for the access to markets, but also for domestic plants, animals and humans (MoAC, 2010).

d. Cooperation: The NAP-2004 has focused on the cooperation among the government agencies, private sectors, nongovernmental organizations, cooperatives, international organizations and universities. It is a strength of the NAP-2004.
e. Modernization: Increasing the agricultural productivity through irrigation and other supports is a key challenge in Nepal since it requires increasing the investments in rural infrastructure like irrigation, rural roads, and markets (ADB, 2009; Schwab, *et.al*, 2015; Haefele, *et.al*, 2014). Thus, the assurance of improved inputs, such as seeds, fertilizers, irrigation, rural roads and electrification and training of the young, educated and unemployed people living in the rural areas has been proposed for modernization. The introduction of agriculture and livestock insurance is another strength of the NAP-2004 for the modernization of Nepalese Agriculture. The provision of quality control, regulations and well-equipped wholesale markets for agricultural products will all help for modernization.
f. New Concepts: Some of the concepts introduced in the NAP-2004, such as the agriculture and the double track system in governmental farms are the new practices that are currently implementing. Land banks, cooperative-based industrialization and participatory biodiversity park are the other new practices, which are yet to be realized. Moreover, gene banks and in situ conservation are the other strengths of the NAP-2004.
g. Environment and Sustainability: Some policies, such as discouraging Nepalese farmers from using agro-chemicals in agriculture as well as medicines and hormones in livestock production and promoting the use of organic fertilizers are the environment friendly options. Furthermore, the commitment to the conservation of biodiversity and promotion of agro-forestry are the other strengths of the NAP-2004. With respect to the various agricultural practices, geographical conditions and other problems, such as increased soil erosion, lower fertility of soil, diminished biodiversity, increased pollution of ground water and eutrophication that become a threat to the sustainability of upland farming system in Nepal, agroforestry is a good option to counteract such practices (Schwab, Schickhoff, & Fischer, 2015).
h. Monitoring and Structure: A monitoring system which involves the stakeholders is a strong point of the NAP-2004. The provision of multi-level committee for participatory and coordinative program planning, implementation and monitoring made the NAP structurally strong.
i. Policy Option: One of the very strong points of the NAP-2004 is that it has established itself as an umbrella policy for the agricultural sector. Acknowledging the extent of agriculture, an agro-industry development policy as well as the commodity and subject- specific policies are taken into account by the NAP-2004.

ii. Weaknesses

a. Policy Objective: The policy objective was stated by the OECD regarding the consumers is lacking in the NAP-2004. The concept of "fair price" is not mentioned in the NAP-2004. Regarding the fact that governmental capacity has a significant influence on providing quality service to the producers and consumers, there is the need to increase the competency, motivation, professionalism, etc. (MoAC, 2010; FAO, 2010a). However, these issues are totally ignored by the NAP-2004. Moreover, governance which is an important aspect in receiving better output (MoAC, 2010; MoAD, 2014) cannot be visualized in the NAP-2004.
b. Inclusiveness: Even though the NAP-2004 was designed to be as inclusive as possible, this could not be actually realized since "poverty reduction", which cannot be extracted from the policies for target groups, is not a determining factor in the NAP-2004. In this connection, the formulation and successful implementation of a labor policy to encourage labor-intensive agriculture can be a better option for the Nepalese rural development (Joshi & Maharjan, 2008)
c. Competitiveness: Although the NAP-2004 explained global competition in the background, the policy fails realize global competition to a large extent. Due to the opportunity created by geographical diversity, Nepal produces large numbers of agricultural commodities and livestock. However, Nepalese agriculture suffers from high costs of production (MoAC, 2010) which the NAP-2004 failed to overcome. Furthermore, the ratio of technical manpower to farm family is 1:2500 in the crop sector. As a result, the government adopted the group approach (Shrestha, 2011) to change this ratio, even after whose adoption the ratio will be 1:100, still unsatisfactory to provide the quality extension services and to increase the competitiveness. There was more than a 12 % net increase in forests since 1996 because cropland was abandoned for migration, resulting in fragmented families, a higher proportion of elderly people for land management and higher household incomes. However, the increase in household incomes is not used for agricultural development (Schwilch, et al., 2017).

As a matter of fact, Nepal cannot produce all agricultural commodities in a competitive-way and the agricultural policy should identify priority commodities which cannot be found in the NAP-2004. There was more than a 12 % net increase in forests since 1996 because cropland was abandoned for migration, resulting in fragmented families, a higher proportion of elderly people for land management and higher household incomes. However, the increase in household incomes is not used for agricultural development (Schwilch, et al., 2017). As a matter of fact, Nepal cannot produce all agricultural commodities in a competitive-way and the agricultural policy should identify priority commodities which cannot be found in the NAP-2004.

d. Cooperation: Even though the NAP-2004 has focused on cooperation among several agencies, there is ambiguity on the roles of the private sector and cooperatives which may lead to confusion and contradiction on implementation.
e. Modernization: Regarding ensuring improved and quality inputs, the NAP-2004 failed to explain how it will ensure it. The connection between farm and market is not clear. Most farmers suffer from a longer and strong chain of brokers, leading to farmers earning less money and consumers paying more. Similarly, logistic improvement, which is another important part of modernization, was not considered sufficiently. The promotion of agricultural mechanization was not mentioned in the NAP-2004, even though most farmers still use locally made agricultural equipments and tools (UN, 2013). In consequence, the government introduced a separate policy, namely "Agriculture Mechanization Promotion Policy, 2014". However, the use of jargons like "Scientific Land Use" and "Appropriate Technology" creates difficulties during implementation.
f. New concept: The NAP-2004 has not included some of the new agricultural concepts which can be unavoidable in the near future. For example, agro-tourism or leisure agriculture, which is a combination of agricultural production and modern tourism, has been developing rapidly (Zhang and Feng, 2013). Urban agriculture and small-scale agriculture like kitchen garden and roof-top gardening, which can helpful in achieving food and nutrition security, were also neglected (FAO, n.d.). Likewise, smart farming and protected agriculture are some promising technology in agriculture which has not internalized by NAP-2004.
g. Environment and Sustainability: Climate change is not taken in consideration sufficiently in the NAP-2004, which poses a great threat to the whole agricultural system. The contradiction between the promotion of high input farming and organic agriculture prevents the NAP from being a sound policy.
h. Monitoring and Structure: Implementation and monitoring by the same organization is against the principle of independent monitoring. In this respect, participatory monitoring becomes one of the weaknesses of the NAP-2004. Moreover, no justification has been provided for the provision of agricultural research and development fund within the same organization.
i. Policy option: The NAP-2004 has successfully established itself as an umbrella policy for Nepalese agriculture. However, it failed to explain the status of policies enacted before itself, namely the National Seed Policy 2000, National Tea Policy 2001, National Fertilizer Policy 2002 and National Coffee Policy 2003.

iii. Opportunities

In addition to various, positive, endogenous factors, there are several, positive, exogeneous factors which may lead to the success of the NAP-2004. These potentials are discussed hereunder.

- The growing interest of youth and private sector in agriculture creates a conducive environment for agricultural development. Similarly, farmers, entrepreneurs and traders are organizing gradually (FAO, 2010b).
- In every policy document, the government has prioritized agriculture as the top choice of the nation. Nevertheless, budget allocation for agriculture, which is around 3%, still does not match with this priority (MoAC, 2010) and is not adequate to promote the anticipated growth rate and to ensure the food security (Wagle, 2016).
- The revolution on Information Communication Technologies (ICTs) is another opportunity for the success of the NAP-2004. If government successfully grabs this chance, it can overcome the setback of group approach.
- Several sectoral policies, such as – "Agribusiness Promotion Policy, 2006", "Agro-biodiversity Policy, 2006", "Dairy Development Policy, 2008", "Floriculture Promotion Policy, 2012", "Poultry Policy, 2012", "Rangeland Policy, 2012", "Agriculture Mechanization Promotion Policy, 2014" and "Beekeeping Promotion Policy, 2016", made good opportunity to NAP-2004 are introduced to assist the NAP-2004 (MoAC, 2010).
- Increasing foreign cooperation also became a positive external factor for the success of the NAP-2004.
- Growing concern over the "food security" has created a favorable environment for the success of the NAP-2004.

iv. Threats

Despite various opportunities, the NAP-2004 has been surrounded by several threats. They are discussed hereunder.

- Global trading system has posed a severe threat to the success of the NAP-2004. Lowering traffic decreases competitiveness of domestic product accompanying with high cost of production (MoAC, 2010).
- Rapid changes in the preference, quality and standards of consumers also pose a threat to Nepalese agriculture. Small and resource-poor farmers cannot keep pace with the change of preference, quality and standards demanded by the consumers.

- Nepalese agriculture is highly dependent on weather conditions, a situation which is supported by the variation in the agricultural growth rate. The average rate of agricultural growth which was 3.3 % in 1997-2001 periods became 2.67 % in 2002-2007 periods (ADB, 2009). As a result, climate change is the greatest exogeneous factor threatening the agricultural sector.
- Policy inconsistency is another threat for the success of the NAP-2004. It emphasizes increasing the production by ensuring inputs like the chemical fertilizers. However, the demand for chemical fertilizers in Nepal is far behind the supply and the supply of fertilizers decreased from 38,950 MT in 2002/03 to 25,169 MT in 2007/08 after the withdrawal of subsidy (MoAC, 2010).
- A lack of "funnel system" (centralized funding mechanism) in agricultural development may pose a threat to the success of the NAP-2004. Without funnel system development activities cannot ensure alignment with NAP-2004.
- Being a landlocked country, unrestricted supply of inputs matters a lot to achieve the desired pace of growth. In this connection, Nepal has already faced several trade and supply restrictions along southern border which had restricted growth severally.
- Due to the sanitary and phytosanitory measures (SPS) and the technical barriers on trade (TBT) of the World Trade Organization (WTO), small and resource-poor farmers face severe problems to comply with these set standards.
- The agricultural policies of the neighbouring countries also threaten the NAP-2004. Heavy subsidies to the farmers of neighbouring countries, directly hamper the competitiveness of Nepalese agriculture
- Cross-sectoral interaction and improving coordination among inter-sectoral ministries are the key challenges (ADB, 2009) in Nepal which is also threating the success of NAP-2004.

Conclusion

As a result of the economic growth and globalization, increase in food consumption, diversification of the diet away from traditional food and decline in the share of food in household expenditure are expected. Thus, a sound agricultural policy should foresee the future along with addressing these current issues. However, the policy-making processes in Nepal are highly complex and they are influenced by political, social and economic environment to a great extent. Considering these factors, the NAP-2004 has achieved to overcome some of the constraints in Nepalese agriculture and can be classified as a good agricultural policy. Nevertheless, limited considerations on climate change, global trading system, innovation in agriculture, ensuring competitiveness, reducing poverty and providing fair prices both for the farmers and the consumers and higher dependency on other sectoral policies are the serious setbacks of the NAP-2004.

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