

PROMOTING NON-TIMBER FOREST PRODUCTS TO ALLEVIATE POVERTY IN THE KERINCI SEBLAT NATIONAL PARK BUFFER ZONE IN SOUTH SUMATRA: A REFLECTION ON MARKET AND POLICY CHALLENGES



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Background

Kerinci Seblat National Park (KSNP) is located within the administrative boundaries of four provinces: West Sumatra, Jambi, Bengkulu and South Sumatra. Part of the latter is a buffer zone located in the village of Karang Panggung. Most livelihoods in Karang Panggung involve farming, with at least 49% of villagers working as farm laborers and 34% as farmers. Communities use the forest area to supplement their economic, environmental, social, and food needs, which they meet by utilizing Non-Timber Forest Products (NTFPs) such as coffee beans, durians, ferns, and sago. Farmers grow coffee as their main crop and harvest coffee beans at monthly intervals. They also plant durian, ferns and sago to prevent land degradation. Local farmers can produce green coffee beans and coffee powder for commercial purposes, but some of their products, such as coffee luwak and bokashi, have less commercial potential because do to sourcing and market access limitations. Despite being able to produce these NTFPs, local farmers face problems in regard to product quality, market access and government support. Therefore, a business analysis evaluating internal and external factors was a necessary prerequisite to developing NTFP products, and particularly to marketing. Internal Factor Evaluation (IFE) matrices are strategic management tools for auditing or evaluating major strengths and weakness in functional areas of a business, and also identifying and evaluating relationships in those areas. External Factor Evaluation (EFE) matrices are strategic management tools for identifying opportunities and threats, and analyzing external economic, social, cultural, demographic, environmental, political, governmental, legal and technological factors as well as competition (Ningsih and Hamamah, 2015; Ommani, 2011). Identifying these internal and external factors is essential for any marketing or value chain analysis, and for making recommendations to governments in support of NTFPs.

Objectives

The specific objectives of this study are as follows:

1. Identify internal factors (strengths and weaknesses) and external factors (opportunities and threats) in promoting NTFPs for poverty alleviation
2. Identify carrying capacity and government policies on marketing analysis for the development of NTFPs

Results

Study sites are located in the northern part of South Sumatra province, adjacent to Jambi province to the north. The study has identified the district of Musi Rawas as a target area.

Figure 2. IFE & EFE matrices (modified from I. Fatimah, 2004)

No.	Internal Factors	Weight (a)	Rating (b)	Score (c=axb)
Strengths				
1	Land available for planting	0.043	3	0.129
2	Climate and soil fertility	0.031	3.1	0.0961
3	Farmer awareness for NTFP planting, maintenance and management	0.035	3.8	0.133
4	Loyal customers to buy NTFP	0.052	2.8	0.1456
5	Local community farmer organization(s)	0.048	3.1	0.1488
6	Certified plant seed	0.055	3.8	0.209
7	A means for utilizing natural resources for fertilizer	0.041	3.5	0.1435
TOTAL				1.005
Weaknesses				
1	A lack of cultural awareness for NTFP processing and post-harvest management	0.068	1.2	0.0816
2	Limited access to cross border markets	0.065	1	0.065
3	Traditional technology	0.061	1.8	0.1098
4	Traditional equipment of processing	0.063	1	0.063
5	Simple techniques for grading and sorting	0.052	1.5	0.078
6	A lack of operational management and bookkeeping	0.067	1	0.067
7	Limited information on commodity price updates	0.03	1.8	0.054
8	Simple packaging	0.069	1.8	0.1242
9	A lack of producer collaboration	0.05	1.8	0.09
10	Limited access to funds and investors	0.04	1.8	0.072
11	Direct selling to local producers	0.065	1.8	0.117
12	No brand and product composition	0.065	1.2	0.078
TOTAL				0.9996
Total IFE Matrix score				2.0046
No.	External Factors	Weight (a)	Rating (b)	Score (c=axb)
Opportunities				
1	A growth of coffee consumption in Indonesia	0.067	2.8	0.1876
2	International agreement for coffee	0.075	2.5	0.1875
3	Stakeholder partnerships and government regulations	0.071	2.5	0.1775
4	Demand enhancement for Bokashi fertilizer	0.068	3	0.204
5	Product promoted by government	0.061	3	0.183
6	Networking and Association of Indonesian coffee producers	0.075	2.5	0.1875
7	Organic planting system for sustainable coffee	0.077	3	0.231
8	Coffee planting as local wisdom	0.065	3	0.195
9	Value chain and product diversification	0.077	3	0.231
TOTAL				1.7841
Threats				
1	Land conversion	0.067	4	0.268
2	Coffee price following international trade mechanism and limited promotion	0.078	3	0.234
3	High cost for certified products	0.077	2.3	0.1771
4	Low farmer income	0.065	3	0.195
5	Local supply chain	0.077	2.3	0.1771
TOTAL				1.0512
Total EFE Matrix score				2.8353

The overall total IFE matrix score was 2.00. Anything below 2.50 means there are weaknesses regarding internal factors. Strengths are producers are able sell their coffee to regular customers (score of 0.14). Sales involve offering samples directly to potential buyers and selling to the buyer offering the highest price. The limited access to new markets, indicated by a weakness score of 0.065, shows farmers must sell locally with little access to information on prices. Farmers sell products in a raw state as it is less time consuming to do so, they have limited equipment, and because it is easier to maintain product quality with coffee beans.

Coffee is considered a non-durable product, which allows the market to access it directly (Wong *et.al.* 2012). Interviews with various stakeholders (wholesalers, distributors, and retailers) revealed they receive raw coffee beans from local producers and process them into powdered coffee.

The total EFE matrix score of 2.83 shows that local producers are making efforts to use opportunities to minimize threats as the score exceeds 2.5. As upstream operators, producers strive to maintain crop quality, by using natural fertilizers and moving away from chemical fertilizer use as indicated by a score of 0.231. They are also striving to diversify their products by making powdered coffee, luwak coffee, and Bokashi fertilizer.

Challenges to farmers' product quality are a lack of product certification, competitors with lower prices for coffee powder, and prices determined by world market mechanisms. This situation allows an oligopoly that supplies one product which is controlled by a few actors who can enjoy profits from a limited buying process (Rahmawati, 2012). Limited information and market-determined pricing mechanisms enable the establishment of oligopolies.

Tools and Methods

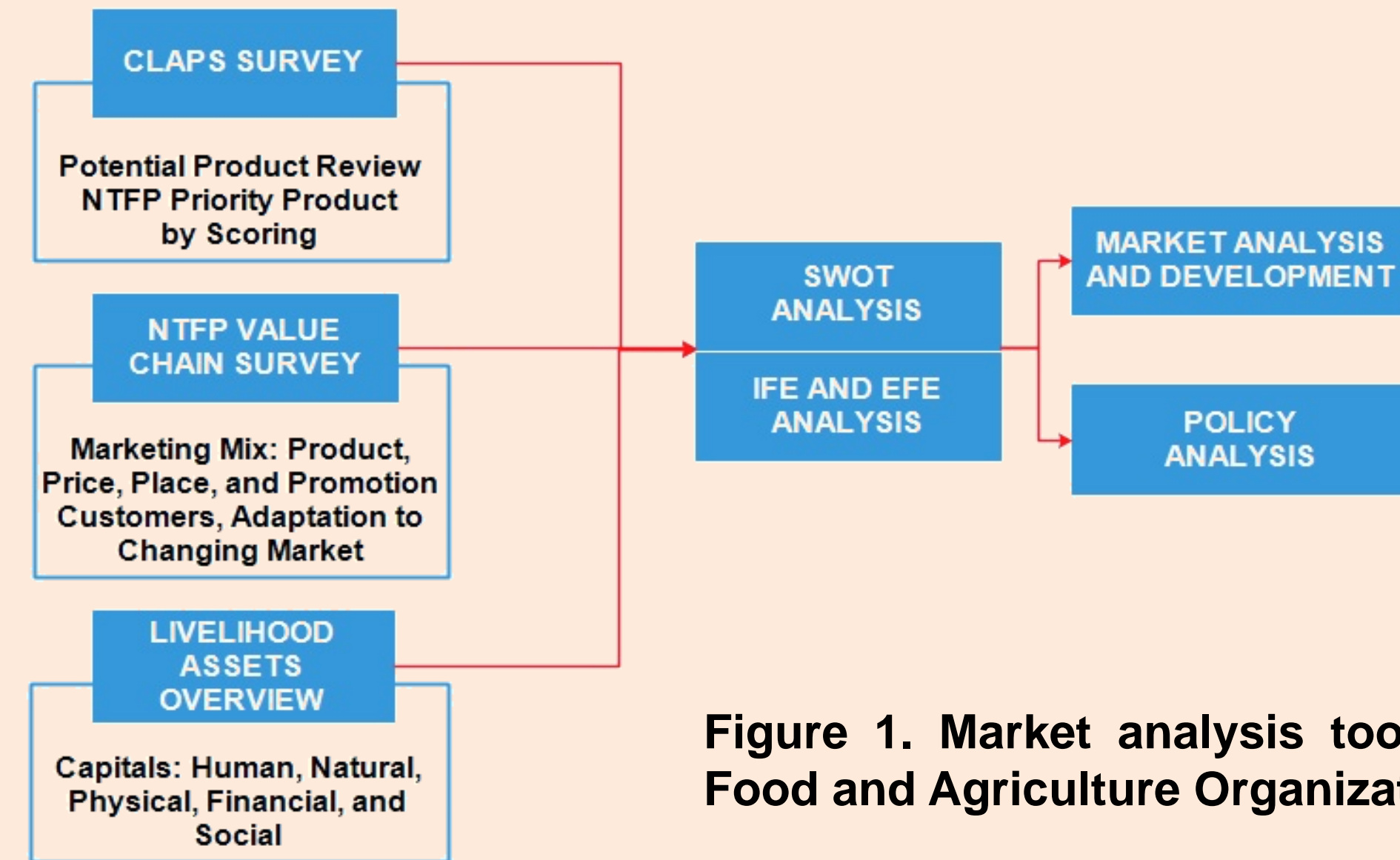
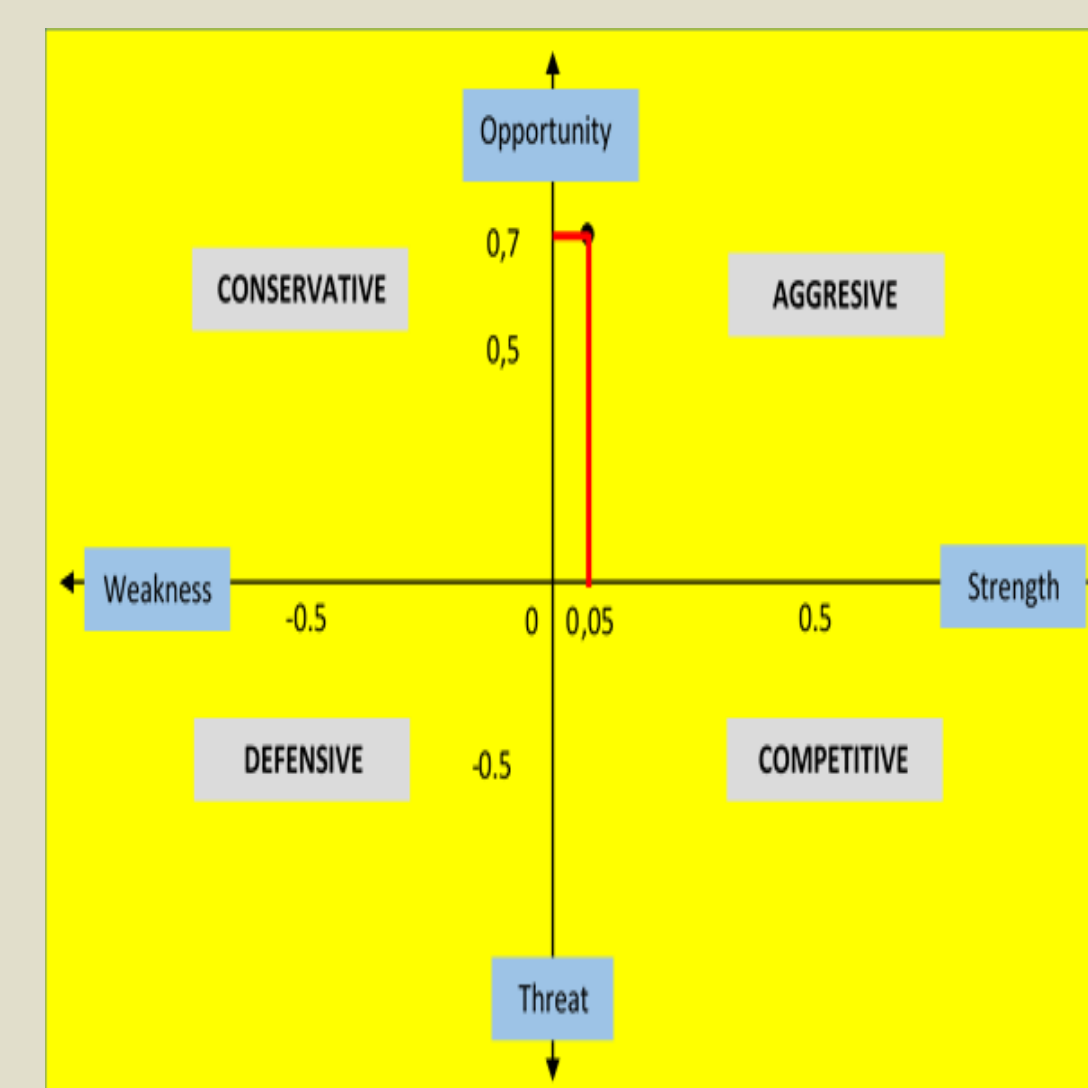


Figure 1. Market analysis tools, modified from the Food and Agriculture Organization (2011)

This study has been conceptualized through a research framework focused on sustainable livelihoods assets to achieve the research goals of improving forest-adjacent peoples' livelihoods and conserving forest resources. Instrumental to pursuing the research question was a mixed method that involved both quantitative and qualitative approaches, including the community livelihood appraisal tools (CLAPS), in-depth interviews by snowball sampling targeting households and NTFP-market stakeholders (35 respondents), focus group discussions (15 respondents), key informant interviews (10 respondents), and field observations.

Data were analyzed using Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) matrices. Value chain and livelihood assets were overviewed using Strength, Weakness, Opportunity and Threat (SWOT) parameters. In reference to I. Fatima (2004), Market Access Development was analyzed in light of internal and external factors. The internal factors were people, product quality, place, price, promotion, distribution, packaging, networking, and segmentation, while external factors were public policy, technology, product trend, and competitiveness. All of these factors are also related to livelihood assets such as human, natural, physical, financial and social capital.

Figure 3. Grand Strategy Analysis



Providing for local livelihoods in the buffer zone may lead communities to preserve forests. Local people using NTFPs to meet their food and economic needs may be a solution to improving people's welfare, but there are constraints in terms of NTFP quality and quantity. In the context of this study, Forest Management Units (FMUs) could become close partners in empowering communities through NTFP management. Government regulation No. 3/2008 on Forest Management Plans and Forest Use does have provisions on NTFPs, but does not stipulate specific arrangements for strategic plans for managing NTFPs. The stakeholder partnerships and government regulations external factor score of around 0.177 under opportunities shows they are unable to maximize business opportunities with stakeholder and government support.

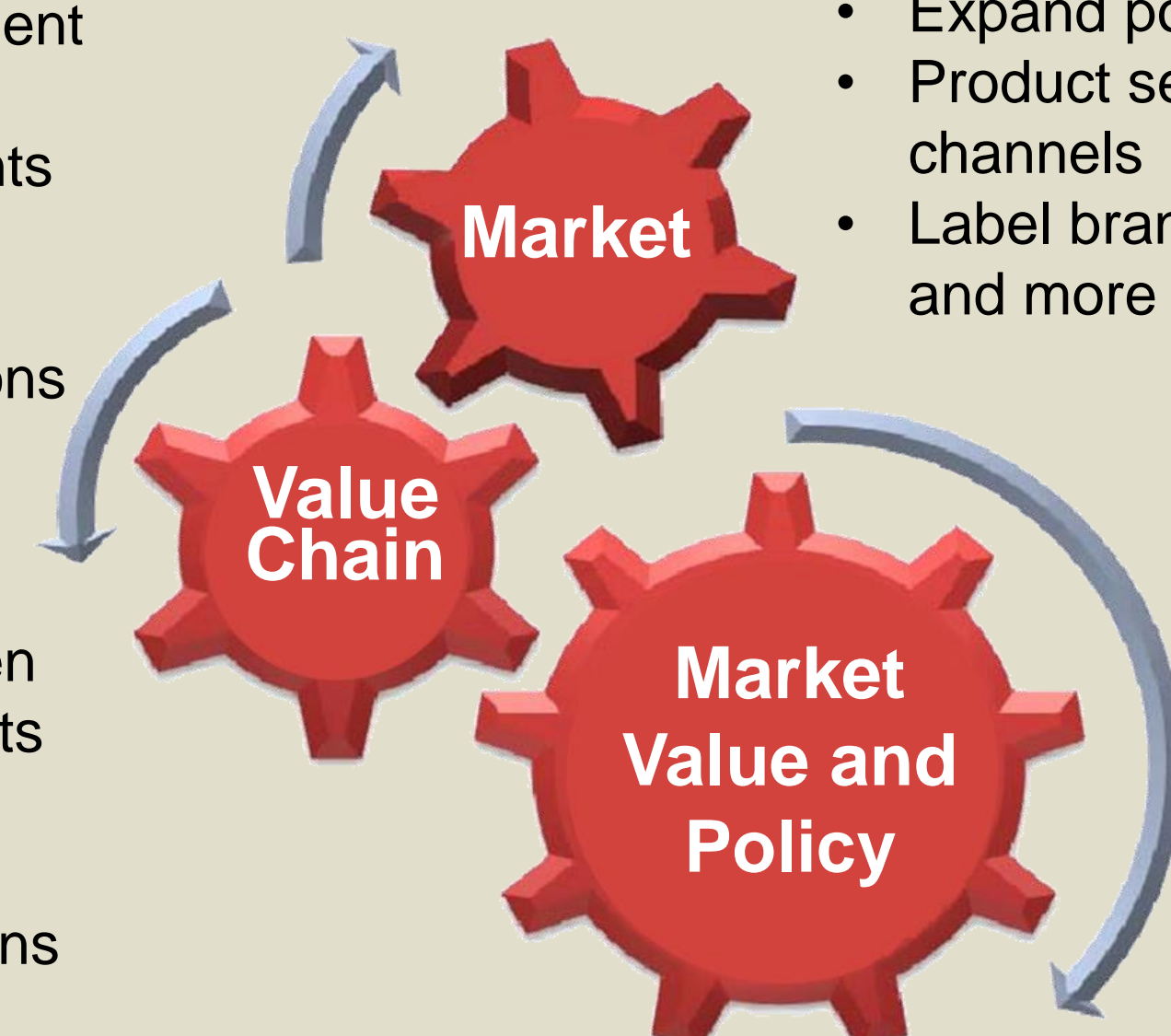
In the study area, FMUs such as the Lakitan FMU, still face regulatory constraints in relation to partnership programs with local communities. Conversely, referring to Minister of Home Affairs Regulation No. 61/2007 on Technical Guidelines for Managing the Finances of Public Service Agencies, FMUs can implement the Sub-National Public Service Agency Financial Management Scheme (PPK-BLUD) (MoF 2013). Furthermore, establishing mutually profitable partnerships requires relevant government-constructed policies that ensure FMUs have short bureaucratic chains, reduce high transaction costs, provide cheaper and expeditious (responsive) services and are able to improve the quality and quantity of public services in the field of forestry (MoF 2013).

Requirements:

- Availability of sufficient quantities to meet market requirements
- Collaboration and partnership with business associations and producers / distributors
- Quality testing and certification as green and organic products
- Established coffee markets for green beans, roasted beans and powder

Market Access:

- Expand potential cross border markets
- Product segmentation and distribution channels
- Label branding, nutritional composition and more cooperation with stakeholders



Enabling Conditions:

- Policy and legal review; policies that support collaboration with stakeholders
- Principal forest uses (forest area and tenurial certainty)
- Further attention to luwak coffee and instant coffee management, packaging appearance, planting, and processing
- Processing technologies

Conclusions

- Access to cross border markets and market segmentation are possible with appropriate technologies, quality testing and certification, organic branding, and by optimizing distribution channels.
- Collaboration and partnerships are needed with business associations and producers/distributors.
- Local farmers are interested in developing products and planting sustainably, and realize organic fertilizers are important for the ecosystem. However, their products are only sold locally. More support is needed from the government, regulations and strategic FMUs in terms of commitment to promoting coffee, and improving quality and quantity. More stakeholder collaboration and partnerships are also required.

Acknowledgements

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