

How to do

Interventions in support of NUS export markets



Nutrition-sensitive agriculture - Note no. 4



How To Do Notes provide tools for good practice design based on best practices collected at the field level. They guide teams on how to implement specific recommendations of IFAD's operational policies, standard project requirements or financing tools. The How To Do Notes are "living" documents and will be updated periodically based on new experiences and on feedback. If you have any comments and suggestions, please contact the originators.

Originators

IFAD Nutrition Team and Bioversity International

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List of Acronyms

BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Cooperation and Development)
BSO	Business Support Organisation
CBI	Centre for the Promotion of Imports from Developing Countries
COGS	Costs of Goods Sold
EC	European Council
EU	European Union
GIZ	Gesellschaft für Internationale Zusammenarbeit (Society for international cooperation)
G.A.P.	Good Agricultural Practices
GTAI	German Trade and Invest
HACCP	Hazard and Critical Control Point
HTDN	How To Do Note
IFAD	International Fund for Agricultural Development
IP	Indigenous People
IPD	Import Promotion Desk
IPGRI	International Plant Genetic Resource Institute
ISO	International Standard Organisation
ITC	International Trade Centre
JAS	Japanese Organic Standards
NFR	Novel Food Regulation
NGO	Non-Governmental Organisation
NTB	Non-tariff Trade Barriers
NUS	Neglected and Underutilised Species
PPP	Public Private Partnership
R4D	Research for Development
SIPPO	Swiss Import Promotion Programme
SME	Small and Medium Sized Enterprise
TDC	Trade for Development Centre
TPO	Trade Promotion Organisations
UNCTAD	United Nations Conference on Trade and Development
USDA	US Department for Agriculture

1. Introduction

Agricultural biodiversity is a strategic asset to fight climate change vulnerability, poverty, and food and nutrition insecurity. The wealth of food crops is estimated at 5,000 species (Kew Royal Botanic Gardens 2016) but global food systems are increasingly dominated by just three crops—rice, maize, and wheat—which altogether make up more than 50% of human plant-based caloric intake and cover 40% of arable land globally (FAOSTAT 2013)¹. Modern agricultural practices, uniformity in agricultural markets, and changing lifestyles are causing the disappearance of crop diversity from production and food systems. The diversity of plant species gathered in the wild for food is also threatened due to degradation of natural habitats. Such a situation is having multiple impacts on peoples' livelihoods as cultivations are becoming more susceptible to climate change, farmer assets are being eroded, and consumers have fewer choices for nutritious and healthy diets.

Neglected and underutilized species, or NUS for short, are crops that have been left at the margins of research and development. The word 'neglected' underlines the low level of research investments made on these species when compared with mainstream commodity crops and 'underutilized' alludes to their untapped livelihood potentials. NUS include wild, semi- or fully domesticated plants from various food groups (cereals, vegetables, legumes, roots and tubers, fruits, spices) with diverse growth forms (field crops, trees, shrubs, vines, etc.). NUS are an integral part of local cultures and food traditions, and they are increasingly in the spotlight of efforts for revitalizing local cuisine and celebrating the identity of the 'terroir'.

Hot spots of NUS diversity coincide with regions where indigenous peoples live—largely remote areas where standardization of agricultural practices has not been very intense and agro-ecological practices have prevailed. Many of these areas are characterized by challenging conditions for agriculture where NUS are central in traditional farming and risk management practices, owing to their early maturation, low water requirements, and capacity to thrive in marginal soils, among other characteristics. Indigenous women in particular are often the custodians and main knowledge holders of NUS because of the great relevance these crops have for household nutrition and other livelihood needs. But in spite of being so relevant in the lives of local communities around the world, NUS have been sidelined by the Green revolution and received very little investments for their research and development. Scarce attention has been directed to enhance their yields and overcome challenges in their cultivation, processing, and marketing. Such a trend need to be reverted, as investing in these crops represents a strategic opportunity to unlock multiple livelihood benefits, especially for marginalized groups in both rural and urban settings.

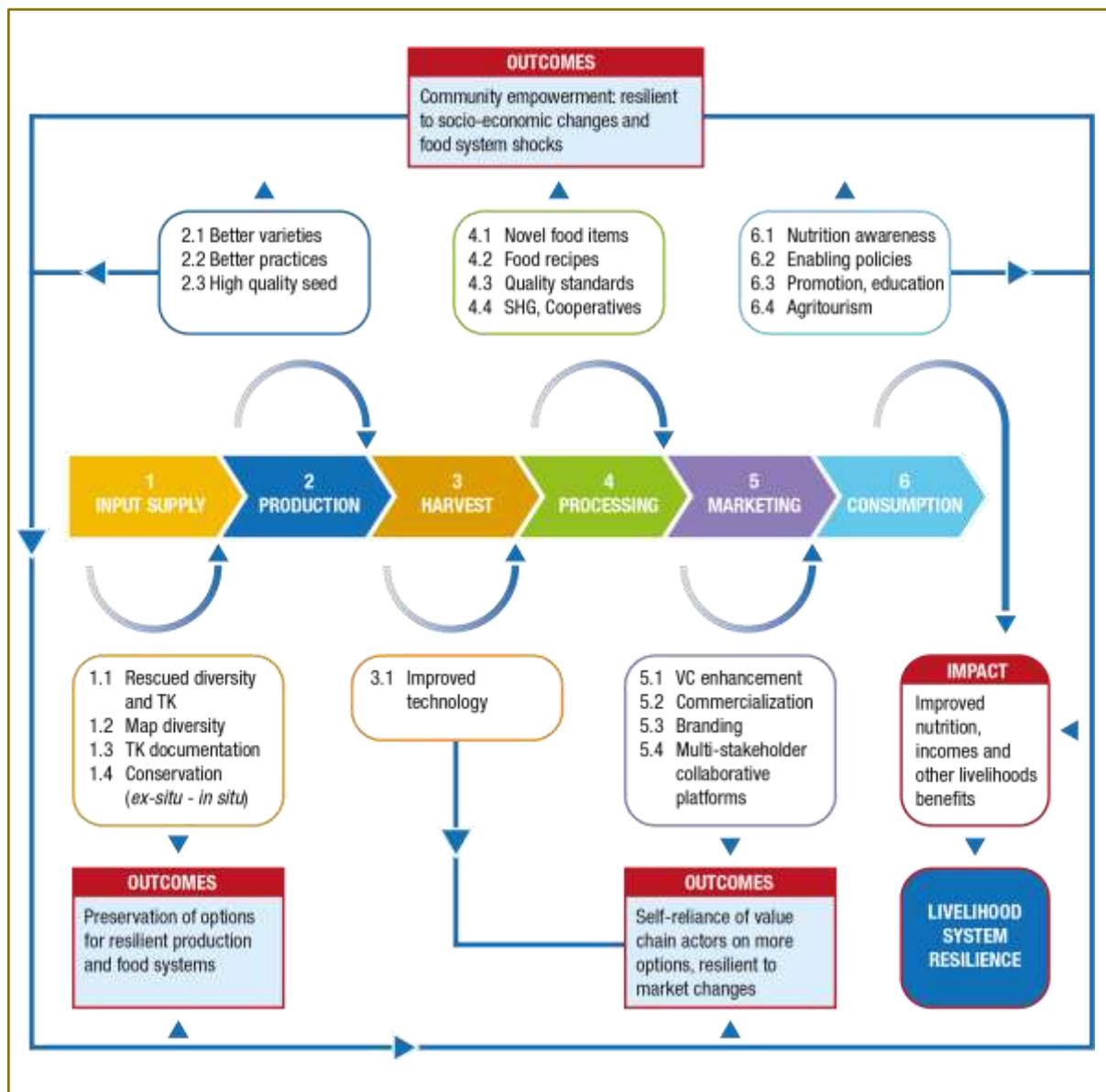
A Holistic Value Chain Approach for the use-enhancement of NUS has been developed and tested through IFAD-supported research grants. This approach involves interdisciplinary and participatory interventions at different stages of the value chain to overcome bottlenecks in the use of NUS and enable resilience, nutrition, and income generation outcomes to be reaped (figure 1). The Holistic Value Chain Approach is outlined in the Operational Framework “Supporting Nutrition Sensitive Agriculture Through Neglected and Underutilized Species”, which was developed to support IFAD Country Directors, CPMs and ICOs to integrate NUS and indigenous peoples issues into their nutrition sensitive agricultural investment programmes, consistent with IFAD’s 2016-2018 Action Plan on Mainstreaming Nutrition Sensitive Agriculture². A definition of nutrition sensitive Agriculture is provided in box 1. This *How to Do Note* is part of a series of 5 NUS-focused Notes, that build on lessons learned, drawing on evidence- and experience-based insights from a number of research for development projects (including those financed by IFAD). They offer recommendations on practical methods, approaches, and tools for addressing use enhancement and mainstreaming of NUS in both design and implementation of an IFAD Project. Specific consideration is given for project design that can support the empowerment of indigenous peoples, women, and youth. The five HTDN in the series are as follows:

¹ FAOSTAT. Production, Food Balance, and Land Use Data. Available online: <http://www.fao.org/faostat/en/?#home> (accessed on 18 May 2018).

² <https://bit.ly/2SYUCgn>

1. Priority setting for nutrition and resilience
2. Assessing market needs and emerging opportunities in value chains
3. Interventions in support of NUS domestic markets
4. Interventions in support of NUS export market
5. Policy and mainstreaming of NUS

Figure 1. Holistic value chain approach



Source: Padulosi et al. (2014). Sustainability 2014, 6, 1283-1312. <https://bit.ly/2FftCpt>

The NUS Operational Framework is complementary to the recently published volumes of IFAD's Operational Framework "Nutrition-sensitive value chains: A guide for project design"³. NUS are likely to stand out in the commodity selection (step2) of the latter framework because of their great potential for nutrition-improvement. HTDN 1 outlines approaches and methods for ensuring that NUS are considered in such crop selection processes, as they are easily overlooked as a result of being poorly known. Situation analysis (step1) is a core element of the process for identifying high potential NUS. Value chain analysis (step3) is a key step in the nutrition-sensitive value chains operational framework, which identifies constraints and opportunities to guide the design of interventions (step4). As NUS value chains have some particularities compared to more established agricultural commodities, specific approaches and methods for value chain analysis of NUS are outlined in HTDN 2, while NUS-specific approaches for domestic and export market development are discussed in HTDN 3 and 4, respectively. The nutrition-sensitive value chains framework is supported by an enabling environment that promotes the development and integration of the different stages of the value chain. HTDN 5 discusses approaches for building an enabling environment for NUS.

Box 1. Definition of nutrition-sensitive agriculture

Nutrition-sensitive agriculture is an approach to agricultural development that prioritize nutritionally rich foods, dietary diversity, and food fortification as the means to overcome malnutrition and micronutrient deficiencies. This approach stresses the multiple benefits derived from enjoying a variety of foods, recognizing the nutritional value of food for good nutrition, and the importance and social significance of the food and agricultural sector for supporting rural livelihoods (FAO 2014).

IFAD and NUS

IFAD has long been supporting research projects related to promoting NUS. These projects have especially been related to strengthening NUS value chains for stimulation of smallholder economy and increased nutrition and it is thus time to have guidelines of help mainstreaming NUS more systematically. Under IFAD's Strategic Framework 2016-2025, Strategic Objective 3 *Strengthen the environmental sustainability and climate resilience of poor rural people's economic activities* it is stated that IFAD project interventions should focus on addressing the loss of habitat and biodiversity. It further says that *special attention needs to be paid to environmental sustainability and climate resilience in agriculture while also promoting a reduction of greenhouse gas emissions from agriculture and agrifood value chains, and harnessing underutilized synergies that exist between adaptation and mitigation* (IFAD 2016). NUS are a type of resources that can be leveraged to contribute to these goals both directly in strengthening adaptation and mitigation and indirectly by offering opportunities to build untapped synergies across disciplines and sectors of society owing to their multiple roles in peoples' livelihood. IFAD hold important potentials to enhance outcomes and impact of many of the agrobiodiversity-based projects that the organisation is working on or planning to develop in the future. Furthermore, as also stated in the companion NUS Operational Framework (Padulosi et al. 2019), IFAD has the capacity to influence the development of supportive national and local policies that recognize the value and importance of NUS aiming at more resilient production systems.

In this How to Do Note we encourage the broader use of NUS to improving livelihood and their mainstreaming in almost any IFAD project, because of the many potentials of these species with regard to nutrition, climate change adaptation, rural economy and empowerment of vulnerable peoples. Enhancing their use will contribute also to maintain higher levels of biodiversity, critically important for sustaining local food systems today and in the future.

³ De la Peña I. and J. Garrett. 2018. Nutrition-sensitive value chains, A guide for project design (Vol II and II). IFAD <https://bit.ly/2PWtTzV> and <https://bit.ly/2D8qoBf>

About this note

This note is dedicated to NUS export marketing and meant to complement the companion HTD Note n. 2, which focuses on domestic marketing (local, district or national level). Although -owing to their nature- NUS are mainly sold in domestic markets, there are however emerging opportunities also for their exportation, leveraging growing regional or global consumers' interest for exotic, nutritious, healthy, and culturally rich and stimulating *novel* foods. These opportunities can be seized by the IFAD Loans for raising the incomes of local NUS producers, including marginalized groups. To pursue that effectively, issues, methods and approaches related to access to export markets need to be though well understood, which is what this Note aims to facilitate. The Note starts by giving an overview of potential benefits from the NUS export and highlighting some characteristics of these crops that can be leveraged to enter export markets. It continues by providing entry points to increase both supply and demand. Key issues (viz. market entry barriers, lack of data, how to avoid negative impacts) are be also provided along with some successful case studies of NUS exports. As in other notes, also here the reader will find a dedicated section on women, IPs and youth and ways to promote their participation in value chains, focusing on those export. The note will end by offering some tips on the inclusion of NUS export marketing in IFAD Loans.

Potential benefits of exporting NUS to international markets

Type of impact and beneficiary groups

Before looking at the benefits of marketing and exporting NUS to international markets, it is useful to first review the *positive* impact that the use enhancement of NUS in general may bring about to people. This impact can be analysed through two key dimensions, viz, benefits and beneficiaries.

The first dimension looks at the **type** of impact that the greater use of NUS may generate. To that regard, impact can be categorized into three types of benefits:

1. Economic benefits
2. Social benefits
3. Ecological benefits

The second dimension refers to the **target group or groups that will be accruing the benefits from the enhanced use of NUS**. These could belong to single community members, entire households or actors engaged in the value chains of target crops (e.g. farmers, processors, transporters, manufacturers, retailers, etc), as well as conservationists, NGOs, CBOs, local authorities etc. A special mention should be made here of vulnerable groups, including women, Indigenous Peoples (IPs) and youth. All these groups can be then subdivided into public and private beneficiaries.

Using these two dimensions viz. types of benefits and beneficiaries, we could use the following matrix (figure 2) meant to illustrate most important benefits arising from the use enhancement of NUS.

Figure 2. Impact matrix

	Economic Impact	Social Benefits	Ecological Benefits
Private	Income generation for a number of stakeholders engaged in the value chains incl. smallholders, manufacturers of processed goods	Improved food and nutrition security and health, thanks to nutritious dense and diverse crops; Empowerment of marginalized groups	Healthier production systems; Greater protection of farmers against crop failures owing to the use of hardy and more adapted NUS.
Public	Income generation for various public entities, deriving from taxes of other levies in connection with enhanced marketing of NUS	Raise of communities' visibility and self-esteem where NUS are produced; More resilient production and food systems.	More genetic diversity in the field contributing to more resilient agroecosystems at the landscape level.
Private / Public		Enhanced use of NUS contributing to keeping alive cultures and identity of those people whose lives are closely connected to these species/ products.	

Commercialisation and NUS

One critical aspect of the wider utilisation of NUS is related to their commercialisation. Commercialisation is defined as making a product available to the market; whereas 'market' in this context is defined as a system with its characterizing elements such as vendors, buyers, retailers, consumers, etc.

Commercialisation of NUS can happen at two levels, viz. in domestic markets (community, district, regional or national level) and in international markets. This HTDN is focusing on export NUS marketing. The companion HTDN no 2 is focusing instead on domestic NUS markets.

Why export NUS?

The answer to this basic question is straightforward: this is pursued for generating more income from NUS (in its raw or processed forms) arising from opportunities to meet larger demand. To that end, making NUS available on the international market and creating suitable demand would be critical for success. Increased demand leads in fact to increased production, which in turn leads to increased economic benefits for all the actors involved in the value chains. Usually, whereas ecological, social and economic benefits for local communities can be created by enhancing use of NUS at local or regional level, benefits for larger sectors of the population, calls for marketing NUS on the international market. When intending to do so, we need to be aware of both the pros and cons involved in such a step, which is what this HTDN note aims to present.

Differences between export of commodity crops vs. export of NUS

Prior to explore differences between commodity crops and NUS in export markets, it is useful to define these two categories as follows:

Commodity crops in the context of this HTDN are agricultural goods that:

- Are produced globally (or in different regions of the world)
- Are traded on a global scale (or at least in some regions of the world)
- Have a global demand (or at least sought in some regions of the world)
- Are fungible (meaning that individual units of the product are basically interchangeable), e.g. a ton of rice is more or less equal to any other ton of rice (with exceptions) making it irrelevant for buyers, where the product is coming from and how it is produced
- Have established and functioning value chains
- Are well researched with an established scientific knowledge

Typical examples of agricultural commodities are wheat, maize, coffee, cocoa, etc. Although there is a certain export market also for specialty coffee, cocoa or other products from specific areas, regions or 'terroirs', which are sold in small amounts and through small value chains, the bulk of products from commodity crops is not linked to local production systems.

Neglected and Underutilized Species show on the contrary the following characteristics:

- Are only produced locally, mostly to meet household, local or district' demands
- Are specific to a certain region, culture or Indigenous Peoples' group
- Are not fungible (i.e. individual units of the product are scarcely interchangeable), e.g. Baobab pulp powder (*Adansonia digitata*) from Eastern Africa is not interchangeable with Baobab pulp powder from western Africa, as the units differ in taste.
- Do not have properly established and well functioning value chains (often these do not exist at all)
- Are most often not/not sufficiently researched and knowledge about them is mostly confined to local user groups
- Are characterized by a level of use that is limited and closely dependent upon the perception that people have of their economic potential.⁴
- Encompass both wild and cultivated species.

As NUS include both wild and cultivated species, we further need to differentiate between these two subgroups. Whereas the above-mentioned characteristics of NUS can apply to both cultivated and wild NUS, for the wild types we should add also the peculiarity that quality cannot be usually properly monitored and assessed as done for species under cultivation. Thus, NUS from wild harvests (e.g. leaves from Moringa trees (*Moringa oleifera*)) before being exported, require usually more analyses on quality parameters. Furthermore, buyers in international markets have often the perception that products from wild harvests are of lower quality, than those cultivated. But this perception may change altogether as in the case of wild medicinal plants, whose healing properties are believed to be strongly linked to the natural habitat where these are being gathered.

Typically, for the export of commodity crops, we can rely on well-established, well-functioning supply chains, whereas for exporting NUS we face inadequate supply chains. In commodity markets, information

⁴ Gruère, G.; Giuliani, A.; Smale, M.; „Marketing Underutilized Plant Species for the Benefit of the Poor: A Conceptual Framework“, EPT Discussion Paper 154, IFPRI, 2006, p. 3.

is transparent and ubiquitous, whereas for NUS, information is limited and not available to market actors. We could summarize by saying that main differences in the export of commodities and export of NUS have to do with physical (logistics in the value chain) and informational barriers (lack of information on availability, demand, actors etc).

2. How to do

Typical features of NUS Value chains and implications for export

First of all, it is important to point out that there is not one “typical” NUS value chain and that NUS value chains may differ depending on type of species involved. Cultivated species have dedicated areas for their production and may have thus different value chains compared with those that are harvested in the wild.

The differences that we encounter in export value chains of commodities vs those dealing with NUS can be illustrated by reviewing the steps of a typical value chain such as follows:

Figure 3. Simplified value chain



To start with, as said earlier on, commodity value chains are typically well established, based on current knowledge, strong research and state of the art in technological applications for their cultivation, processing, storage, transportation and other operations. They are efficient, and market-driven. NUS value chains on the contrary are characterized by a number of imperfections that reduce their efficiency. They are often poorly established, do not have standard transportation means and/or good roads connecting to markets, their value chains actors -like producers, processors, wholesalers and exporters- are poorly connected or even do not know of the existence of each other. These conditions represent major challenges for the successful marketing of NUS in export markets. Other important differences along the various steps of the value chains include production, processing and logistics along the value chains as follows:

Production

In most cases, NUS are produced on an informal, small-scale level, meaning not on a professional, scalable level, but rather on an individual, household or community level. Often there are no significant areas under their cultivation. Many species of NUS (leafy vegetables, fruits, spices or medicinal plants) are also harvested directly in nature for household consumption, bartering or trading in local markets. Commodity crops on the contrary are farmed and traded as major source of income for farmers and other value chain actors. Advanced, highly efficient, drudgery-free cultivation practices exist for commodity crops and this is not the case for NUS, whose harvests cannot rely also on proper storage infrastructures, usually available for commodity crops.

Processing

After production and harvesting, the next step along the value chain is processing. For commodity crops processing technologies and supporting facilities are well established, whereas for NUS there is usually a lack of processing knowledge, technologies and facilities for carrying out these operations. In most cases, therefore, would NUS entrepreneurs be interested in bringing these species to the market, investments in adequate processing technologies and facilities is needed. Such types of interventions are particularly

relevant for export markets. Furthermore, since many NUS cannot be commercialized on export markets due their short shelf life, the use of efficient processing technology is also required. Many are in fact the NUS species that are neglected by markets precisely because of their very short window of freshness, before spoilage. On the other end, the huge progress in novel technologies that has benefited the spread of commodity crops, with minor technical adaptation measures, could be also leveraged to prolong the shelf life of many NUS, which is an actionable research area worth exploring when investigating export opportunities for these species.

Logistics along the value chains

After harvesting and processing, the NUS final product need to be transported, i.e. delivered to collection points, warehouses of wholesalers or ports, from where they will be dispatched to more distant markets or retailers' shops. This step does often pose a great challenge. While commodities rely on well-functioning logistics arrangements, NUS are facing imperfect or non-existent logistics. Commodity crops are produced on significant and dedicated cultivation areas, well connected to reliable communication systems. NUS are on the contrary usually grown in remote hard-to-reach areas, on a small scale, in small patches of land, as intercrops or in backyards, which makes their efficient transportation not an easy task. In order to successfully bring NUS to international markets, establishing good logistics for their delivery (to be made in a timely fashion and in ways that safeguard the quality of produce) becomes indeed a crucial issue.

The following table shows the main characteristics of global value chains, and the differences between commodity value chains and NUS value chains. Significantly, commodity value chains are driven by capital (either industrial or commercial), which is lacking in NUS value chains.

Table 1. Main characteristics of global value chains compared to NUS value chains (from Gereffi, 1999, modified) ⁵

Key features	Commodity value chains		NUS value chains
	Producer-driven	Buyer-driven	
Drivers of global commodity chains	Industrial capital	Commercial capital	None or very little capital
Core competencies	Research & development, production	Design, marketing	Cultivation
Barriers to entry	Economies of scale	Economies of scope	Economies of scope
Economic sector	Consumer durables, intermediate goods, capital goods	Consumer non-durables, agriculture sector, health sector	Mostly Agricultural sector
Typical industries	Automobiles, computers, aircraft, etc.	Apparel, footwear, toys, food and feed, medicinal products	Mostly food and feed, traditional medicine products
Ownership of manufacturing firms	Transnational firms	Local firms, predominantly in developing countries	Local firms, predominantly in developing countries
Main network links	Investment-based	Trade based	Trade based
Predominant network structure	Vertical	Horizontal	Horizontal

Entry points to increase supply of NUS for export markets

NUS by definition are underutilized, and their current values (including their economic value) are not fully captured. Enhancing their use through better marketing –including at the international level- could be an interesting opportunity to explore. Before however addressing the marketing side of their commercialisation, the supply side needs to be also properly addressed. To that regard there are two main factors that are found to often limit the supply of NUS to export markets, namely quantity and quality of produce.

⁵ Gereffi, G.; A Commodity Chains Framework for Analyzing Global Industries, Duke University, Durham, 1999, p.9.

Quantity

In order to increase the quantity of NUS for export markets, the propensity to produce NUS needs to be fostered to build up a sustainable supply to cover larger demands. The following paragraphs will describe factors involved in raising the supply for a better comprehension of how supply can be tackled most effectively.

The NUS literature typically identifies three relevant elements related to an increase of their supply, viz. (1) the existing gap between current or perceived potential use value compared to their economic value⁶, (2) local abundance⁷ of produce vs limited global demand and (3) lack of scientific knowledge.

The use value can be in turn described in its two dimensions of public and private value. Public value originates from the contribution of NUS to agro-biodiversity and ecosystem services, the contribution to cultural and traditional life and the contribution to nutrition of the society as a whole. Private value instead, originates from the contribution of NUS to income generation of primary producers or collectors and other value chain actors, the contribution to mitigation of crops failures and production shocks, and the contribution delivered to single individuals in terms of diversified nutritious diets, provisioning of medicinal and cultural benefits. In this note, we will focus on the private value of NUS as a key factor to attain successful marketing of NUS in international markets.

The low propensity to grow and produce NUS very often is rooted in the fact that other crops get prioritised over them because of their higher market value, expected to provide better incomes. This causes a comparable lower private value of NUS vs. commodities or other better-established crops. Furthermore, established crops are also very often the recipient of government support (e.g. through subsidies for purchasing agricultural inputs or procurement systems that secure the sale of their harvests to the government), which makes their supply and marketing chains functioning better⁸.

So the key question at this point would be: *“what kind of incentives would increase the propensity of producers to raise the supply of NUS instead of focusing on other crops?”*

The answer is simple: *“the only lever that will induce value chain actors embarking in producing more NUS (for meeting domestic or export demands) is to increase the NUS private value of production by increasing their profitability”*. But this must be realised through the sustainable increase of market demand. For sure, market interventions such as subsidies or other forms of support could increase the profitability and thus the propensity to produce NUS, but there is however a risk, that these interventions be short lived, not sustainable and provided under the form of a “development aid”, rather than a contribution towards a sustainable market development.

So, in order to increase the profitability, demand should grow, and/or market prices of NUS should be possibly increase. Again, this shall be based on the free market mechanism of demand and offer, and not triggered by public interventions.

Quality

The other important element in the context of NUS exportation is quality. Unfortunately, in many cases quality of NUS does not meet international standards. The lack of knowledge and skills in the production of NUS according to international quality standards often results in low productivity and products of low quality. Thus, together with the quantity of supply, also the quality of supply needs to be adequately addressed to achieve a successful export of NUS.

Lack of knowledge and proper skills for the production of good quality NUS for export can be addressed through capacity building interventions. To that regard, it should be stressed that capacity building as

⁶ Gruère, Giuliani, Smale, 2006, p. 5.

⁷ Local abundance in this context means that these species are collected or produced in geographically restricted areas offering a good supply to meet only local needs.

⁸ Gruère, Giuliani, Smale, 2006, p. 5.

recommended in the NUS Operational Framework, is an area where the role of third parties (NGOs, government agencies or international agencies like IFAD) would be very strategic, as local producers are too often not in the position to implement these activities for lack of expertise, financial means or just lack of organizational strength. However, before embarking into a capacity building program, there should be first of all a confirmed market demand, or at least the outlook that the NUS for which capacity building shall be applied, will be successfully sold on the market. But how to assess demand or develop an outlook for the export marketing of NUS? The answer is through a dedicated market analysis. Considering indeed that this HTDN is directed mostly to IFAD actors who might be interested in fostering the export of NUS, it is highly advisable that an analysis of both the NUS demand on the international market and an assessment of current quality of its products be carried out in earnest. Once there is confirmation of the existence of a certain market demand for export then and a robust description of the quality of the products is obtained, only then, quality enhancing capacity building measures can be reasonably considered and pursued.

Capacity building for quality improvement

When dealing with capacity building for quality targeting export markets, we should focus on two domain areas, namely a) quality requirements and b) international certifications⁹ which are briefly described as follows:

Quality requirements

The first step to carry out if wanting to improve the product quality of NUS is a gap analysis to assess the current status of product quality of the NUS being produced and the quality requirements of the potential export market/s which are being considered. Such a gap analysis would need to know the quality requirements of the target market/s. However, since NUS encompass a huge variety of species and the potential target markets may be numerous, this HTDN will not state any specific set of quality requirements but rather recommend a few relevant web sites where typical quality features of agricultural products are freely available for consultation. For example with regard to the European Union, quality requirements can be found on the website of the official EU helpdesk¹⁰; additional information is also provided by promotion agencies of European countries such as the Dutch CBI (the Centre for the Promotion of Imports from developing countries)¹¹. A summary of the EU import rules has been also compiled by the US Department for Agriculture (USDA) and is also available on line¹². Through the consultation of these documents it will be possible to identify existing NUS quality gaps and develop a plan for addressing these through capacity building interventions (targeting infrastructure or human capacity).

Based on our experience, common quality requirements, that are usually applied in export markets for agricultural products include the following:

- Country specific food and feed codes, such as the German code for food and feed.¹³
- EU Organic regulation (if desired to export organic products): ref to Council regulation (EC) No. 834/2007 on organic production and labelling of organic products
- Local legislations regarding mycotoxin values, contamination values, heavy metals, microbiological parameters
- Legislations regarding treatments (no irradiation, no fumigation, no sulphites)

Lastly, it should be said that although not every quality requirement might be met by producers of NUS from the beginning, it is recommended, that producers seek to achieve the majority (if not all requirements)

⁹ For a more comprehensive coverage of capacity building efforts at IFAD the reader is reminded to IFAD's document on "Capacity Development Plan for Supporting Mainstreaming Nutrition" which has also a number of references to NUS.

¹⁰ See: <http://trade.ec.europa.eu/tradehelp/trade-regime-and-general-product-safety/>, website accessed 23.11.2018.

¹¹ See: <https://www.cbi.eu/market-information/fresh-fruit-vegetables/buyer-requirements/>, website accessed 23.11.2018.

¹² See: <https://www.usda-eu.org/trade-with-the-eu/eu-import-rules/>, website accessed 23.11.2018

¹³ See: <https://www.gesetze-im-internet.de/lfgb/>, website accessed 23.11.2018.

in the medium term; such a process can be also guided by a strategic action plan where time frame, costs involved, available budget and target human resources for each intervention is properly described.

International certifications

In order to demonstrate to potential buyers that quality standards have been successfully achieved the production (or wild gathering) of NUS, certifications will be most critical. Indeed, these will allow buyers to better assess the quality of the product, thus reducing buying risks. Among the quality standards that are commonly sought after by buyers on the international markets the following should be mentioned:

- Hazard and Critical Control Point (HACC) concept in production and processing
- Certification according to ISO 9001 (general)
- Certification according to ISO 14001 (ecological)
- Certification according to ISO 22000 (food safety)
- Global G.A.P. (good agricultural practices)¹⁴
- Organic certifications such as EU-organic (according to regulation 834/2007), USDA organic (for the US market) or JAS (Japanese organic standards)
- Other quality certifications such as IFS (international featured standards) and BRC (British retail consortium)

Of all the above-mentioned certifications, the Global G.A.P. can be considered the most important one, a kind of “entry ticket” to global markets.

As indicated in the previous section, NUS producers wishing to export their products need to comply in meeting the basic quality requirements such as effectively managing contaminants and keeping microbiological parameters and pesticides values under strict control. It is highly recommended that the adherence to these parameters be demonstrated through relevant analyses carried out by accredited laboratories¹⁵. Once these requirements are finally met, a first attempt to export the target NUS to international markets can be actually pursued.

Once a reasonable level of adherence to these basic quality requirements is achieved and kept under continuous check, only then producers shall endeavour to pursue further certifications. As certifications are costly processes, financing these can be challenging. To this regard, associations like NGOs or rural development programs (such as those supported by IFAD) can play a strategic role in supporting international quality certifications for producers, and that would be most valuable especially for those NUS managed by IPs, women associations or youth.

¹⁴ See: https://www.globalgap.org/uk_en/index.html, website accessed 23.11.2018.

¹⁵ Note: international buyers will request analysis from renowned and accredited laboratories.

How to link NUS to export markets

Before even dealing with quality issues and certifications, a number of basic preconditions will have to be verified by VC actors interested in exporting their NUS produce.

The best way to review these pre-conditions is perhaps for producers to ask themselves the basic question of *why NUS have not reached insofar a wider market*. To that regard, a number of situations such as those listed below, may assist actors in answering such a fundamental question:

- **Presence of an economic barrier**
 - Low or absence of an economic incentive, i.e. producers are gaining more by focusing on the production of other crops or are not receiving a mark-up by selling the product compared to private consumption
 - Lack of financial resources, i.e. producers would be able to sell to wider market but are refrained to do so due to financial barriers (e.g. upfront investments in infrastructure, production and processing utilities).
- **Presence of a physical barrier**
 - Presence of unfavourable product features, i.e. products cannot be transported because they deteriorate fast
 - Lack of infrastructure, i.e. products cannot be transported because there is no infrastructure (e.g. access to roads or vessels)
- **Presence of an informational barrier**
 - Lack of information, i.e. products do not reach markets because market actors (producers/collectors, buyers, wholesalers) do not know of each other or do not have a clear understanding about product features, qualities, prices and quantities of NUS products.
 - Lack of contacts, i.e. producers, collectors and vendors from the countries of origin do not get in contact with potential buyers from international markets.

Reviewing these possible scenarios will help producers to better understand existing barriers that might be well underestimated or overlooked. Following are some suggestions on how to address most relevant barriers viz. economic, physical, and informational.

Economic barriers

In line with what discussed above, there are two types of interventions that can be pursued to address the two most common types of economic barriers:

- ➔ Increasing the quantity of NUS produced by incentivising its cultivation/processing (which need to be done in parallel with an increasing of the total demand, which in turn will lead to price increase of the product). This is likely to lead to a higher mark-up for producers, thus increasing their propensity to produce NUS
- ➔ Facilitating production through financial support whenever the lack of financial resources is found to be an obstacle.¹⁶

¹⁶ In some cases, producers are not producing a product, because they simply lack the facilities or equipment and are not able to invest in these. In such a case, an initial funding (loan etc.) can facilitate the production. However, this shall not be confused with subsidisation of products in order to increase their profitability in order to increase the quantity produced (market supervision). Also, grants that do not have to be paid back can be misleading, as they do not trigger the producers to set up a profitable business model.

Both types of interventions should be considered when linking NUS to export markets and it is recommended that a proper assessment be made by producers for choosing the best solution out of the two options.

Physical barriers

Like for the marketing of any type of agricultural produce, also NUS (in raw or processed form) need to reach physically the target markets, that is, need to be transported. While this operation might be rather simple for local marketing, it does pose a major challenge when VC actors are dealing with export markets. Typically, NUS are grown in rural, remote areas in small fields located most often in developing countries. Whereas commodity crops get picked up by trucks or other vessels relatively easily and are transported to a well-connected network of product stocking or processing facilities, NUS do not have usually access to transportation means and/or storage facilities. Furthermore, many NUS may originate from wild harvests taking place in remote areas, where no means or reliable routes of transport may exist at all. Examples of such a situation is that of the value chain for the baobab (*Adansonia digitata* L.) in Mali and Benin¹⁷. In these countries, Baobab trees occur naturally in the countryside where gatherers pick leaves and fruits which are then brought to collectors in main towns, who then sell them to wholesalers.¹⁸ Gathering and collecting baobab's products is a manual process, carried out by local households or small-scale farmers, and most often involving IPs, women and young people.

Another example is caper (*Capparis spinosa* L.) value chain in Syria. Collectors, mainly children and women, collect the caper buds and hand them over to a "collector chief", who provides collection vessels, collection premises and defines the purchasing prices.¹⁹ The capers are then sold to private local traders, who then sell these to foreign buyers (wholesalers).²⁰ The first step of this value chain - the collection and aggregation at the place of the collector chief- is carried out by people on foot. It is only when transportation means come in, that capers brought on foot by harvesters to an aggregation place can be then delivered to successfully to local traders.

Simple observations like these help to highlight also the fact that NUS value chains require a lot of attention to details across all their steps, starting very often from their very beginning, which happen to occur in most cases in remote rural areas challenged by poor transportation and communications means.

Informational barriers

All intervention efforts in overcoming the above mentioned physical and economic barriers will be made in vain, if market actors do not have the necessary information to make an effective market transaction. With regard to export marketing of NUS, VC actors need information transparency especially on the following aspects:

1. Demand
2. Supply
3. Product features & product quality
4. Timing of supply (e.g. harvest seasons, etc.)

A description of each of these information gap factors and suggestions on how to tackle them is provided as follows:

¹⁷ De Caluw_e E. (2011). Market chain analysis of baobab (*Adansonia digitata* L.) and tamarind (*Tamarindus indica* L.) products in Mali and Benin. Ph.D. thesis, Faculty of Bioscience Engineering, Ghent University, Ghent, Belgium, pp. 107-112.

¹⁸ Ibid.

¹⁹ Giuliani, A., Abdulkarim, N., Buerli, M., (2005). Linking Biodiversity Products to Markets to improve the Livelihoods of the Resource Poor: Case Study on the Market Chain of Capers in Syria, International Plant Genetic Resource Institute (IPGRI), Rome, p.3.

²⁰ Ibid.

1) Demand

There might be a demand for a certain product, but producers/collectors who could potentially grow/harvest the product do not know about the existence of this demand. This is particularly true in very remote and rural areas, where people have difficult access to information regarding demand on export markets, a condition that is exacerbated among IPs, women and youth. Owing to the difficulties in accessing in general such type of information, it is advisable to seek the support of third party agencies, like NGOs, specialized private sector actors or government agencies. It should be also noted that whereas commodity crops benefit of a well-articulated system of trading information, provided also on line through the internet, this is not at all the case for NUS, for which no market intelligence systems exist at local national and international level, that would provide a minimum of guidance to entrepreneurs interested in developing their value chains and/or their markets.

2) Supply

Just like producers need to know the demand that may exist for a certain NUS on the international market, potential buyers do also need to know about its supply. This is also a challenging task and buyers most often consider sourcing NUS from the anonymous “market” instead of looking at a specific area of sourcing and get a better idea of the supply. Caper buds for example have been widely grown and harvested traditionally throughout the Mediterranean region over centuries (Italy being one of those countries where the cultivation and marketing of this produce has reached highest levels of organization). Only relatively recently (some 20 years ago) though, its value chain reached a stage of reasonable development in Syria²¹, which means that buyers on the international market have to be made aware about the supply of such a produce from this country if they are to become buyers of that and start extending their sourcing scope to local producers.

3) Product features & quality

Possible buyers on export markets need to know:

- 1) General features of a product
- 2) Specific qualities of a product

General features or traits are those that are specific to a particular species, i.e. traits that make up the uniqueness of that NUS compared to other species or products (e.g. content in Vitamins, minerals, amino acids, secondary plant substances such as polyphenols etc.). For example, Maca (*Lepidium meyenii* Walp.) has long been a local food in the Andean communities with a very limited geographical distribution in the Junín area in Peru.²² However, during the last 10 years, the information about the special pro-health traits of maca has spread around the world thanks also to internet, and interest of buyers from international markets grew out of that awareness. The popularity of maca was driven by some scientific findings supporting the traditional believe of the beneficial roles played by the roots of this crop in reproductive medicine related issues.²³

The information about the quality of a product describes the specific quality of a particular NUS product or a specific batch of that, or that associated to its producer, region or manufacturer. Maca roots for example, exist in different varieties (yellow, red, black coloured roots) each possibly having a different appeal to consumers. Furthermore, maca is offered to the international market as simple powder, gelatinized powder, powder with reduced microbiological contamination, in a 10:1 or 30:1 extract powder, as a water-soluble

²¹ Giuliani, A., Abdulkarim, N., Buerli, M., (2005), p.3.

²² Hermann, M. and J. Heller, editors. 1997. Andean roots and tubers: Ahipa, arracacha, maca and yacon. Promoting the conservation and use of underutilized and neglected crops. 21. Institute of Plant Genetics and Crop Plant Research, Gatersleben/International Plant Genetic Resources Institute, Rome, Italy, p. 182.

²³ Gonzales, G.F., Ethnobiology and Ethnopharmacology of *Lepidium meyenii* (Maca), a Plant from the Peruvian Highlands. Evid Based Complement Alternat Med. 2011;2012:193496.

compound, etc.²⁴ Along with the general traits of a product, this quality information needs to be available to potential buyers on export markets.

4) Timing of supply

Finally, buyers on the international markets, such as natural ingredients wholesalers, need to know if a NUS product has any supply limitation, for example due to a limited harvest season. This will impact their buying behaviour (e.g. wholesalers stocking up larger quantities at the harvest time, when product is available, to be able to supply the same to customers off season). These adapted buying behaviours need to be considered by producers and processors in the countries of origin, in order to ensure sufficient supply of produce.

Match making

In the end, once the above-mentioned barriers are overcome, the right buyer needs to be identified and approached. In international trade, especially in the field of agricultural products and specifically in the case of niche products, there is a two-sided information gap. This information gap leads to insecurity and risk on both sides. Addressing the information gap on both sides will allow the so called “match making”, which is described below.

On the one side, producers and vendors of NUS from developing countries do not have experience in selling to international markets and have none or very limited experience in dealing with international clients. Producers without experience on international markets lack information and experience about negotiation customs to use in such a context, have limited knowledge about prices, quality and standard requirements and this situation is a deterrent for producers and vendors interested in approaching international markets, a fact that leads ultimately to a perceived risk in pursuing exports.

On the other side, buyers from international markets might not know about a product. They lack information about the product traits and specific product quality and most importantly, lack information about the trustworthiness and reliability of the producer/s. This leads to a perceived risk in sourcing from these new markets.

A solution to this problem is the so called “*match-making*”. International match-making between suppliers and buyers helps both parties to overcome the above-mentioned issues and to reduce risks in negotiations for those local producers having little familiarity with international marketing.

Common match-making opportunities include:

- a) International fairs
- b) Local fairs
- c) Buying missions
- d) Public-Private Partnerships (PPP)

a) International fairs

International fairs are THE opportunity to present products to an international audience. They provide access to a significant number of potential buyers at the same time, thus reducing travel and transaction costs. These events offer an excellent opportunity for deal-making, to assess the current market situation and competition and to establish personal contacts.²⁵ International fairs play definitively a strategic role in

²⁴ Nature's Ingredients, 2018 product list, NATURE'S INGREDIENTS GmbH, Neckarsulm, Germany.

²⁵ Koolman, K., (2016), Foreign trade fair participation, A Guide to successful trade fair participation for small and medium-sized exporters from developing countries, Publisher: Import Promotion Desk (IPD), Bonn, p. 5, available on: <https://www.importpromotiondesk.de/en/media-centre/publications/>, website accessed 24.11.2018.

exporting NUS to international markets. However, at the same time, they are also a challenging endeavour to most producers from developing countries who are not adequately prepared to attend these large gatherings, present their products and network with prospected buyers. For that reason, export promotion agencies and foreign trade offices of the countries of origin and import promotion agencies of target markets offer schemes for international trade fair participation to small and medium sized producers from developing countries. It would be thus a good idea for local producers to seek assistance of these agencies, an investment indeed worth considering, though not at the very beginning, but as a medium-term goal of their entrepreneurial NUS activity.

b) Local fairs

Local fairs, compared to international ones are better opportunities to showcase the capability of a certain region, industry or sector within a given country to produce certain products. A good example of a local, sector-specific fair is the national agricultural fair of Argentina “La Rural”²⁶, where Argentina showcase all its agricultural capabilities to agribusiness people. Compared to international trade fairs, local fairs attract mostly a local audience. In general, buyers from international markets will make their way to local fairs only if they are already active in that particular region, have existing contacts or are on-buying missions organised by foreign import promotion offices such as the Dutch CBI, German Import Promotion Desk (IPD) or the Swiss SIPPO. An even more specific type of agricultural fair is the agrobiodiversity fair, such as that organized specifically for Andean grains in Bolivia. These agrobiodiversity fairs specialise on showcasing the different varieties of specific NUS with the goal to foster cultivation of different species and thus preserving agrobiodiversity.²⁷

As a way to prepare local producers of NUS in linking to international markets, also local fairs do play an important role. At these local fairs, possible exporters of NUS can be exposed/ receive a first training on topics like trade fair logistics, booth design, communication material, product sample logistics, customer acquisition, deal making and documentation. Participating producers/potential exporters, once successfully attended at these fairs and exposed/trained on these topics, would be better equipped in know-how for taking the next step in attending international trade fairs.

c) Buying missions

Buying missions are trade expeditions of importers, manufacturers and wholesalers from the same industry to buy and order goods from a certain market, country or region. Buying missions sometimes are organised by import promotion or trade promotion offices of national governments (e.g. IPD, CBI, SIPPO), industry associations, or the importers themselves. Buying missions reduce the transaction costs for importers. During buying missions, importers get to know several different exporters/producers at the same time. Most often, the participating producers have been pre-qualified by the respective organisation to meet the required quality standards and supply standards of the buying companies.

As an intervention in order to integrate local producers/exporters into buying missions, producers need to be connected to the organisers of the buying missions. Most often, the chamber of foreign trade of the countries of origin are knowledgeable about the planned buying missions and are therefore important entry points to establish such linkages.

d) Public-private-partnerships

Public-private-partnerships (PPP) are a way to incentivise private sector investments into agricultural value chains, *although the evidence base regarding the effectiveness of PPPs in leveraging private investment in poorly functioning agricultural value chains and the impact of such interventions on smallholder producers is still limited*²⁸. PPPs are mechanisms to bring together private sector actors from developed countries (buyers) and private sector actors from developing countries (in this case, producers of NUS) with a public

²⁶ <http://www.larural.com.ar/>, website accessed on 24.11.2018.

²⁷ Padulosi, S., et. al., 2014, A Holistic Approach to Enhance the Use of Neglected and Underutilized Species: The Case of Andean Grains in Bolivia and Peru, published in: Sustainability 2014, 6, 1283-1312; doi:10.3390/su6031283, p. 1293-1294.

²⁸ Poulton, C., Macartney, J., Can Public-Private Partnerships Leverage Private Investment in Agricultural Value Chains in Africa? A Preliminary Review, World Development Vol. 40, No. 1, pp. 96-109, 2012.

sector actor as a third party. Goals of PPPs can be the development of new products based on agricultural products (NUS), the installation of necessary infrastructure, the improvement of quality or the achievement of international certifications in order to be able to export to international markets. An example of a PPP is the successful training carried out for Karité (*Vitellaria paradoxa*) butter producers from Mali, which was realized by the German organic cosmetics brand “Börlind” and fostered by the German Federal Ministry of Economic Cooperation and Development (BMZ).²⁹ A list of national import promotion offices and services that can be contacted is to seek information on export markets is given in box 2.

Box 2. List of import promotion offices and services

The following list of national import promotion offices and organisations shall provide a first entry point for producers of NUS for facilitating their access to information about export markets and possibly establish first customer contacts:

- Austrian Import Hub www.handelsverband.at
- Belgium Trade for Development Centre (TDC) www.befair.be
- Canadian Trade Commissionaire Service (Department of Foreign Affairs and International Trade) www.tradecommissioner.gc.ca
- Dutch Centre for the Promotion of Imports from Developing Countries (CBI) www.cbi.eu
- German Import Promotion Desk (IPD) www.importpromotiondesk.com
- International Trade Centre (ITC) www.intracen.org
- Swiss Import Promotion Desk (SIPPO) www.sippo.ch
- Trade Promotion Organisations Network (TPO Network) <http://www.intracen.org/itc/trade-support/the-tpo-network-world-conference-and-awards/>
- US Department of Commerce International Trade Administration www.trade.gov

Strategy to increase demand of NUS in export markets

The demand of goods in markets is defined as the buyer’s willingness and ability to purchase a good at a given price. For commodity crops, five factors determine the demand:

1. Price of the good
2. Income of the consumers
3. Price of alternative goods
4. Preferences of consumers
5. Expectations about the future development of the price for a certain good

Usually, under the assumption that factors 2 to 5 are being kept stable, the factor price is used to modulate demand and supply. Low prices result in high consumer demand and low supply, whereas high prices result in high supply and low demand. However, applying this logic to exporting NUS is not realistic, as no producer/exporter of NUS will be able to influence the prices of goods in such a way that prices can be controlled. Using price as a trigger for demand does not work for NUS export markets!

Before starting to trigger the demand for a NUS in a certain market, we recommend to strategically select first the potential target market for exporting the product. This can be done with the help of the above listed factors. Exporters of NUS shall thus select their potential export market based on:

²⁹ Certified karité butter from Mali, publisher: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Registered Offices: Bonn and Eschborn, Germany Sector project on Cooperation with the Private Sector/ Corporate Responsibility for Development, 2015, available on: <https://www.developpp.de/en/projects-and-success-stories-developppde-success-stories/sequa-boerlind-mali/>, website accessed 24.11.2018.

- **Income of consumers** → prefer high income target markets over low income markets
- **Prices of alternative goods** → prefer markets in which no, or few alternative goods are available or prices for alternatives are high
- **Preferences of the consumers** → prefer markets where consumers are willing and interested in trying new products (NUS)

Once a target market for the export of NUS has been selected, and trade relations to buyers from the market have been established, the demand for certain NUS can be triggered. Looking at the above-mentioned five factors, only one factor can effectively be influenced by exporters, NGOs or other actors: **the preference of consumers**. This factor is also the most important factor for successfully marketing NUS in international markets. If there is no consumers' preference, then selling NUS to a market will be impossible and pointless. But how to then influence consumers' preference for a certain product (which is difficult per se) and how to do that in export markets (even more difficult)? Such a consideration leads to an action that is to be carried out before NUS can be marketed to international markets, that is answering the key question of *how the consumer may benefit from NUS*³⁰. To that regard, we need to consider:

- a) Possible benefits
- b) Target groups
- c) Relevance of the target product

These are being briefly described as follows:

Possible benefits

Benefits can be characterised along the hierarchy of needs. There are physiological benefits such as nutritional benefits and health benefits or intangible benefits related to human needs that are higher up in the hierarchy of needs, such as self-expression, distinction, or meeting altruistic motivations. Not all benefits are relevant to all consumers, hence the respective target groups must be identified in order to identify a possible group of consumers.

Target groups

Benefits are not equal to everybody. Some consumers might value a trait of a NUS more than other consumers. Some consumers might not even care about a trait of a certain NUS as in the case of products from Moringa (*Moringa oleifera*). Products obtained from Moringa leaves, such as Moringa leaf powder or Moringa tea have seen recently a tremendous increase in interest from countries like the United States or several other based within Europe. However, still not everybody likes or uses moringa products: to some people, the nutritional and supposed medicinal benefits are not that important, to others its taste may be an obstacle. The message from this example is that potential product benefits must always be analysed in the context of a certain target group/s and checked whether a particular benefit is relevant to it/theme.

Relevance of the target product

Relevance, as the underlying factor of preference, is one of the strongest drivers of consumption. People will be willing to spend money for a certain product or even prefer a product over an alternative solution if the relevance is higher. Unlike the common marketing approach, where demographic factors such as age, gender, profession, education are used to describe a target group, relevance is independent from demographic factors. Relevance originates from personal interest, individual situations, challenges, peer groups, environments, trends, word-of-mouth, and other factors, such as stage of life a consumer is in. In order to successfully market NUS to export markets relevance needs to exist or needs to be triggered.

³⁰ Koolman, K. (2014): Marketing neglected and Underutilised Species. Success factors of a market and consumer-oriented approach, Berlin, Germany.

In order to find out, what features or traits of NUS might be relevant, exporters and suppliers might carry out market research and testing, described in the following paragraphs.

Market maturity

Another element that influences the adoption of a NUS in export market is the stage of maturity of the target market. From a seller's point of view, the level of market maturity is determined by the potential to achieve additional revenues over time. The earlier stage a market is, the higher the additional revenues that would be generated over time. In later stage markets, where most of the consumers already have adopted a product, it will be more difficult to achieve additional sales. In the context of export market of NUS, it will be important to check beforehand whether the target market is at a growing stage, when consumers have still high interest in trying out new products such as NUS.

It should be added though that mature markets, where a specific NUS is already being marketed may show pros and cons. In mature markets, the number of consumers who are already aware of a product is higher than in early stage markets. This means, that efforts for making a NUS known to people will be less than those necessary in early stage markets. However, at the same time, competition will be higher than in early stage markets, and overall communication efforts to market a specific NUS could be higher. On the contrary, early stage markets allow for huge increment in sales over time and bear the opportunity to position oneself as a leading supplier of a certain 'novel' NUS product.

Usually, early stage markets hold bigger potential and opportunities for marketing NUS, especially as market shares are not yet concentrated on few players but are still spread among many small players. The more mature markets become, the higher the concentration of market shares on just few players will be.

Increasing demand by influencing consumer preferences

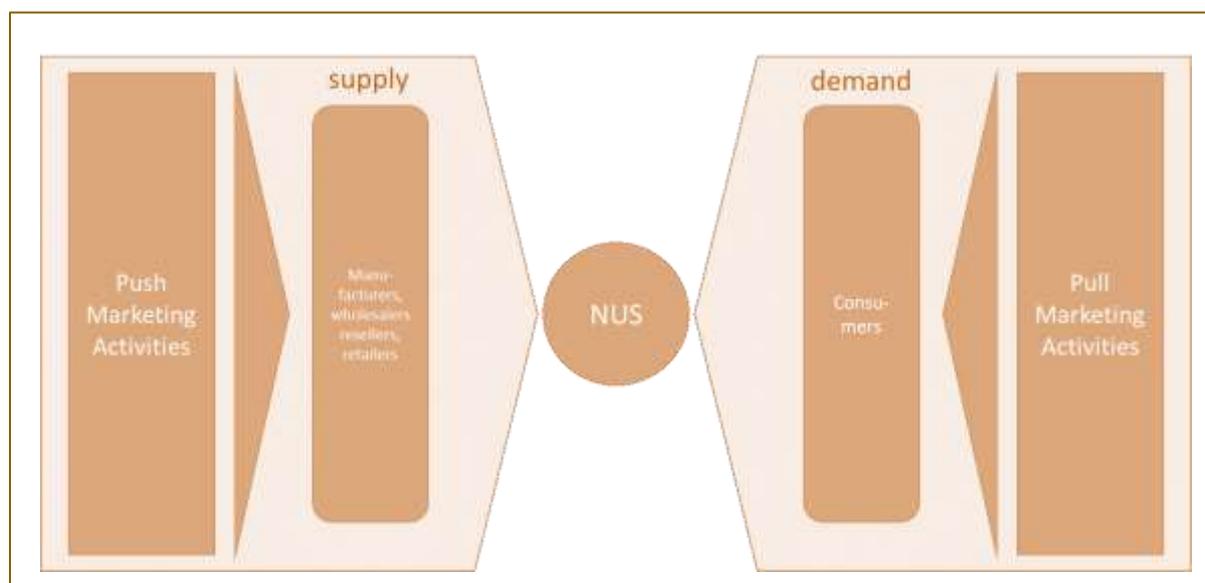
As already discussed, **only one determining factor** of demand can be realistically influenced by exporters of NUS, i.e. the consumer preference. Preference determines which agricultural product or NUS will be purchased and which agricultural product can be established in the market.³¹³² Consumer preference however is mainly influenced by the relevance a certain product has to a consumer. In order to be relevant, a product needs to be known to the consumer. Usually, NUS are not well known to consumers.

When introducing NUS to a new market a "push and pull" marketing strategy should be applied as shown in figure 4.

³¹ S. Baldermann, et. al., (2016) Are Neglected Plants the Food for the Future? Critical Reviews in Plant Sciences, 35:2, 106-119, DOI: 10.1080/07352689.2016.1201399

³² Schreiner, M., Korn, M., Stenger, M., Holzgreve, L., and Altmann, M. 2013. Current understanding and use of quality characteristics of horticulture products. Scientia Horticulturae 163: pp. 63–69.

Figure 4. Push-Pull Marketing



Push marketing is targeted towards manufacturers wholesalers, resellers, retailers and other intermediaries within the supply chain with the goal to adopt a NUS as a product or as an ingredient for an existing or new product. Once manufacturers adopt a NUS as ingredient or as a standalone product, then it becomes visible on the market.

Pull marketing is targeted towards end-consumers in order to create a market “pull”. The underlying assumption here is that once consumers get to know a product and understand its benefits, then they will be actively looking for it in the market and act as the “pull” force. This is based on the well-known AIDA model (figure 5). The AIDA model describes the stages a consumer goes through from the moment when a consumer first becomes aware of a product until the consumer finally makes a purchase decision.

Figure 5. AIDA model of consumption



Ideally, push and pull marketing go hand in hand in order to create a market demand from the consumer side simultaneously with a market push from the supply side. When consumers reach the “action” stage of the AIDA model, they need to be able to find the product on the market. This illustrates the importance of aligning push and pull activities. If there is no supply of a certain product, then all awareness raising campaigns will be made in vain. If there is market supply, but no consumer knows the product let alone is willing to purchase it, then sales will not happen, and manufacturers and retailers will abandon the production. Table 2 summarizes some key features of push and pull marketing related to target groups, type of messages, communication, point of contact and final endorsement of a general product, which is helpful also in the case of NUS.

Table 2. Main features of “push and pull” marketing strategy

Features	Push marketing	Pull marketing
Target groups	Manufacturers, wholesalers, retailers	Consumers
Main messages	Advantages of the product, features and traits as ingredient, quality, price	Benefits for the consumer, ease of use, recipes, “how to”-guides
Type of communication	Fairs, meetings, phone calls, direct mailings, sales representatives	Mass communication, social media, influencer, blogger, public relations
Point of contact (consumer)	At the point of sale, retail	At home, in public, through word-of-mouth
Endorsement	By scientific research results, superior manufacturing qualities, superior nutritional values	Influencers, celebrities, chefs

Awareness campaigns

One means of triggering consumer demand is raising awareness amongst consumers. It is the basic point of every product introduction campaign. Following the above-mentioned AIDA model, consumers first need to get in contact with information about the existence of a product (attention) in order to develop the interest. Over decades, awareness campaigns used to be run via mass media communication means such as TV, radio, newspaper and magazines, billboards and sport sponsoring. This is not only very costly, but it is also characterized by low efficiency rate. These communication means show a high waste coverage, as recipients cannot be targeted or if they are, they would be only insufficiently reached.

With internet and social media, awareness campaigns can now be targeted much more efficiently. Advertisement in social media allows specific targeting. Bloggers and influencers have very specific audiences, which makes easier the targeting of the right audiences. Contents in the digital world can now be shared and distributed within seconds, allowing campaigns to “go viral” within a short time. Some possible interventions for marketing NUS to new markets may include:

- creating interesting digital content for a specific target group (early adopters)
- join online groups and discussions to create “buzz” around a NUS
- participation in fora, blogs and reviews that talk about NUS
- creation of viral material in order to trigger user distribution and spreading of content
- create recipes and food inspirations with the NUS to be marketed
- develop marketing cooperation with online magazines, bloggers and influencers in order to distribute the message about the benefits of NUS
- create “real world” guerrilla marketing activities that trigger users to share content online

In order to successfully develop a campaign for a foreign target market, exporters of NUS shall team up with communication experts for the respective target markets. It is not recommended to approach the project of setting-up and conducting an awareness campaign without good knowledge about the tools that exist and how they work. It is also very important to clearly identify all target groups and tailor messages to their needs. In order to identify target groups, the communications specialists will have to resort to the information identified by the market research.

3. Key issues in NUS export

Market entry barriers

Market barriers in international trade can be high and, in some cases, too difficult to overcome. There are tariff and non-tariff trade barriers. Non-tariff trade barriers (NTB) are those that restrict the import or export of goods by means other than tariffs. A popular example of those is the EU Novel Food Regulation (NFR).³³ This is intended to regulate the import of food products into the EU, that have not been commercialised in the EU before 1997. “Novel Food” can be newly developed, innovative food, food produced using new technologies and production processes, as well as food which is or has been traditionally consumed outside of the EU³⁴.

Although this regulation is mainly targeted at products from biotechnology, genetically modified products or those produced involving nanotechnology and aims at protecting the food safety of European consumers, it also concerns traditional agricultural products such as NUS. It must be noted that many NUS in their countries of origin have a long history of safe consumption and are thus safe to use. However, under the EU NFR their commercialisation in the EU might be prohibited. Interestingly, biotrade experts have affirmed that the EU NFR as it is currently applied is in direct conflict with the aims and goals of international organisations such as the United Nations Conference on Trade and Development (UNCTAD), Crops for the Future, Bioversity International and other agencies, who aim at fostering small-scale farmers and communities in developing countries by utilising “their rich botanical heritage to improve their economic situation”³⁵.

Given the existing policy, in order to be able to successfully market NUS in export markets (specifically the EU), non-tariff trade barrier (and specifically the EU novel food regulation) must be taken in due consideration. As a point of intervention, therefore, the compliance of a product to the NFR should be properly checked and clarified before any other endeavour to market the NUS in European markets is taken forward.

Furthermore, along with the NFR, quality requirements do also exist and need to be considered. These quality requirements have been mentioned in a preceding paragraph. It is important to subject any NUS to quality checks in order to determine the general quality level of the NUS that shall be exported. Non-compliance with food legislations can result in NUS being banned from import.

On top of quality requirements, there might be requirements for certifications. For example, if a product shall be imported as “organic” into the EU, it must comply with the EU organic regulation (EC regulation No. 834/2007). Similar regulations for organic products exist for all major markets like the US, Japan and others.

How to handle lack of data when promoting the export of NUS

When promoting the export of NUS to international markets, exporting entities such as producers, wholesalers (from the countries of origin) or exporters are usually confronted with the challenge of lack of data about the target market. At the same time, exporters of NUS from developing countries most often lack funds in order to finance thorough market research to address that gap. Hence, the following is recommended:

³³ Regulation (EU) 2015/2283 of the European Parliament and of the Council of 25 November 2015 on novel foods, amending Regulation (EU) No 1169/2011 of the European Parliament and of the Council and repealing Regulation (EC) No 258/97 of the European Parliament and of the Council and Commission Regulation (EC) No 1852/2001 accessed on <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R2283> on 24.11.2018.

³⁴ https://ec.europa.eu/food/safety/novel_food_en, website accessed on 25.11.2018.

³⁵ The EU Novel Food Regulation Impact on the Potential Export of Exotic Traditional Foods to the EU: Suggestions for Revision, Discussion paper prepared for UNCTAD and CBI, November 2005.

- a) Desk research
- b) Market testing research.

Desk research

Through desk research, exporters of NUS can gain access to market information with none or a very modest investment. During the desk study, the following aspects should be addressed:

- Market size, market growth
- Export and import statistics
 - if applicable for comparable products
 - for exports from the same country of origin
- Product trends
- Research competition
- Research price level
- Potential buyers

Most of the above-mentioned information can be accessed through reports and databases managed by a number of agencies, including:

- Chambers of foreign trade in the target markets
- Import promotion agencies (private sector)
- Import promotion offices (usually governmental) such as Industry federations and associations (e.g. food and drink industry federations, fruit trade association and others)
- Trade and invest promotion agencies (e.g. the German Trade and Invest GTAI)
- Foreign trade associations of retailers

The data provided by these organizations are expected to provide a good overview about a potential target market. It should be added that these bodies are also knowledgeable and cooperative in assisting producers in finding solutions or answering specific questions and it is thus highly recommended to approach them to develop a good understanding of the market where the target NUS is supposed to be commercialized.

Market testing research

Desk research is a good source of quantitative, general information about a potential target market. It provides first insights and can be the starting point of exporting NUS to international markets. However, particularly NUS and their products in most cases will not be known to consumers in target markets. This is a challenge for exporters and suppliers of NUS, as there is none or very limited information about the acceptance of NUS in a target market.

Hence, exporters and suppliers of NUS might want to conduct a field market research to explore possible consumer interest on these products. One technique commonly applied in market research is market testing. Market testing is a common method to find out if a product will be accepted in a certain target market. Market testing can be realised on a small scale by testing a new ingredient or a new product concept with a certain group of consumers, the so-called focus groups. Focus groups usually consist of 8-12 consumers that can be selected based on common interests, attitudes, demographics or other characteristics. In order to conduct focus groups, exporters and suppliers of NUS should direct themselves

to local market research companies. This type of research will require a certain level of funding which agencies, including IFAD, aiming at supporting exporters and suppliers of NUS from developing countries should consider allocating early in the process of intervention.

How to avoid negative impacts

Some external factors that cannot be controlled, or can only hardly be influenced, may have negative impacts on the successful export marketing of NUS.

Examples of these external factors include:

- a) Price erosion
- b) Quality issues caused by external factors
- c) Trend-like market developments
- d) Changes in legislations
- e) Un-favourable new scientific findings.

Usually, negative impacts cannot be influenced or avoided. Exporters and suppliers of NUS shall therefore need to prepare a risk management strategy for absorbing negative impacts that may originate as a result of these unpredictable external shocks.

Price erosion

Price erosion happens, when demand is declining (while supply is stable) or when the supply is increasing (while demand is stable). In case of NUS, it is more likely that prices erode due to an increase in supply. Most of NUS, once they made their way into an international market, are faced with an increased demand due to a raise in their popularity. Examples for this effect can be observed in the so-called “*Superfoods*” like Maca, Quinoa or Chía. Business cases of exporters that build on stable prices or prices above a certain level might fall apart as soon as the prices erode. In these situations, most of the smaller suppliers get pushed out of the market. Such situations need to be contemplated when developing a NUS export strategy, and especially to safeguard from shocks vulnerable producers like women, IPs and youth.

In order to avoid price erosion, it is recommended to gain a good understanding of supply-limiting mechanisms.³⁶ For example, a good supply limiting mechanism is the definition of the NUS product specifications and characteristics that make NUS more “authentic” compared with other similar ones. Along the same line, production processes can be also better specified to illustrate to consumers that the NUS product is realized according to a peculiar and unique production process or that the NUS originates from a certain region, which would make it distinctive from other competitive ones and avoid its mass production by other producers. Especially regional “branding” is an effective measure to limit the supply and thus avoid price erosion, as other producers from other regions will not be able to market the same NUS under the same “regional brand”.³⁷ This will limit the market supply and keeps prices stable. Anti-price erosion measures specifically benefit to indigenous people, women and young people, who are in most cases at the start of the VC and do not have much influence on market pricing.

³⁶ Gruère, Giuliani, Smale, 2006, p. 30.

³⁷ Regional branding communicates the product characteristics of a certain product from a certain region and thus acts as a strong differentiating element or in some cases as a limiting factor. E.g. the Italian condiment *Aceto Balsamico Tradizionale di Modena DOP* (Traditional Balsamic Vinegar of Modena DOP) may only be labelled this way when it is produced according to exactly specified production processes and within a certain region.

Quality issues caused by external factors

Quality deterioration caused by external factors such as bad weather or pests are hard to fully control. However, when faulty batches of the product reach the markets, this may cause serious damages to the business. A constant supply of inferior quality of a NUS produce can lead consumers to the perception that a certain NUS is inferior *per se* or unavoidably its quality is always flawed. For example, Moringa powder has seen an increase in supply and demand in Europe during the last couple of years. At the same time, incidents of faulty or inferior batches have increased, which has led competent authorities to carry out more random quality control sampling on this product than in the past. To this regard, it is important to note however that a strict quality management of produce in the country of origin can prevent exporters from accidentally exporting faulty or inferior batches to international markets and safeguard thus the business of many value chain actors. It is therefore worth reminding that good agricultural practices and capacity building in quality management for export should be pursued especially at the sourcing segment of the value chain.

Market Trend-like market developments

Changes in trends in agricultural markets do regularly happen and cannot be avoided. On the one hand, whereas a strong increase in market demand for a NUS would sound great, enabling producers to build better livelihoods, the same demand may tail off after a while, bringing down the business and leaving producers with oversized production capacities. This situation would pose a serious risk. Once a trend for a certain NUS tails off or market prices decline to a point where production is not profitable anymore, especially small producers, indigenous people, women and young people will be those most affected. Diversification of the portfolio of the NUS products to be exported would be a safe strategy to buffer these shocks. Here, IP, women and young people are the VC actors who will need the most support in diversifying their production portfolio.

Changes in legislations

Legislations and regulations can have an impact on the successful export of NUS to international markets. The good thing about legislations is that they are public and accessible. Thus, exporters and producers of NUS can refer to legislations before pursuing to export the target NUS to international markets. Legislations are frameworks that are relatively constant, compared to other external impacts. Legislations and regulations do not change overnight. However, if they change, they can pose a major obstacle if they don't change in favour of the NUS. Hence, exporters and suppliers of NUS need to keep an eye on current developments in regulatory and legislative matters.

Unfavourable scientific findings

NUS lack scientific research that is on the contrary available for commodity crops. Scientific findings (e.g. regarding the nutritional benefits of NUS) can be very helpful in promoting attention from consumers outside the country of origin, which would translate into a support for export. On the other end, these might also act against their promotion for possible concerns emerging from research results or on the contrary recommend changes in existing regulations in support of valuable NUS that might be unjustly affected by these. Bodies like the European Commission may turn to agencies like the European Food Safety Authority (EFSA) in order to assess the security of a product. As an example, the EU asked EFSA to re-assess the security of consumption of Noni Juice (*Morinda citrifolia* L.) which was authorised in the European Union in 2003 for use as a novel food ingredient in pasteurised fruit drinks, under the Novel Foods Regulation.³⁸ In this case, the safety of the noni juice had been reaffirmed and commercialisation could be continued. However, there might be also cases where new scientific findings can lead to a negative re-assessment.

³⁸ "EFSA re-assesses safety of noni juice" on: <https://www.efsa.europa.eu/en/press/news/060906>, website accessed 20.11.2018.

Exporters and suppliers of NUS can never fully hedge against these external impacts. However, one strategy to hedge these risks is to diversify the product portfolio in order to be able to absorb negative impacts caused by changed regulations due to new scientific findings. Certainly, diversifying a product portfolio is easier for actors such as wholesalers, exporters and suppliers, whereas single producers, smallholders and farmers may find difficult to do so. Especially IP, women and young people need support, making this an important field for intervention.

4. NUS export success stories

Açaí (*Euterpe oleracea*)

Açaí, a fruit indigenous to the Amazon region is a good example of an international marketing success story regarding NUS. The small fruits of this palm tree are consumed as fresh pulp in the Amazon region by IPs and local inhabitants mainly in Brazil. They are very nutritious and, in some areas constitute an important element of local diets. As the fresh fruit pulp deteriorates fast, transportation and thus consumption at other places than that of origin has been so far very difficult. Things changes however a couple of years ago. Although Açaí consumption has been increasing since the 1980s, the international demand only picked up in the 2000s and Açaí went from a rural staple food in the 1970s to an international trend food in 2010s³⁹. So, how did Açaí become known across the borders of the Amazon region? One of the companies that played a key role to boosting its popularity was “Sambazon”⁴⁰. It is thanks to its efforts that Açaí is today a well-known and sought-after product for health-conscious people around the world. Sambazon was one of the first companies to set up an export business for Açaí from the Amazonas and introduced the product to the US market. Celebrities like Oprah Winfrey did their bit to help Açaí becoming well known, when she introduced the Açaí berry to her wide TV audience in the USA, where it received massive attention due to its advertised weight-management properties. As the demand for Açaí increased, producers in Brazil found ways to produce its pulp in aseptic containers so that it could be adequately transported and exported. Today, Açaí powder and frozen fresh Açaí pulp have become also popular. Açaí is now used in drinks, cereals-based breakfast, energy-bars, yoghurt and dairy products, and confectionary.

Interestingly, several barriers in the commercialisation of Açaí, found commonly in many NUS, have been successfully overcome: viz. the product can be produced on a significant scale, it can be processed in such a way that it can be transported and exported, transportation routes and means are available, an export market exists, and most importantly there are consumers eager to buy it. On top of that, Açaí production can only be realized in ecologically well managed rainforests which contributes to the conservation of the habitat within a non-timber rainforest sustainable business.

Jackfruit (*Artocarpus heterophyllus*)

Jackfruit is a good example of successful marketing and exportation of a fruit that had been previously only used locally. Jackfruit is a tree diffused mainly in South/South-East-Asia, where countries like India, Bangladesh, Thailand and Indonesia are its main producers. Jackfruit pulp is consumed as a vegetable in stews, curries and to prepare other traditional dishes.

Until recently, jackfruit pulp has not been commercialised on a broader level to foreign markets like Europe or the USA. However, since a couple of years, this product is becoming increasingly popular and new brands are starting to roll out jackfruit pulp to the markets. This success is mainly driven by a number of small brands like “Jacky F”⁴¹. The German start-up Jacky F imports canned jackfruit from Sri Lanka and sells it to organic grocery chains in Germany. But not only Jacky F is engaging in this trade, other small

³⁹ Janaki R.R. Alavalapati, Frances E. Putz, 2004 : Working Forests in the Neotropics: Conservation Through Sustainable Management?, p. 344.

⁴⁰ <https://www.sambazon.com/>

⁴¹ www.jackyf.com

brands and medium-sized food manufacturers are also jumping on the jackfruit bandwagon. The reason for its popularity is simple: jackfruit pulp, when cooked and seasoned in the right way, resembles slow-cooked meat and thus makes this fruit a perfect meat substitute for vegetarian and vegan consumers. Moreover, companies like Jacky F provide the adequate recipes for jackfruit so that consumers can enjoy the full product experience cooking the food also at home.

The jackfruit story is a good example of how timing of its promotion and market maturity consumer relevance have been just right and also how did contribute as well to its popularization.

Guayusa (*Ilex guayusa*)

Guayusa is a bushy tree growing in the rainforest regions in South-America. It is related to the popular Yerba Mate (*Ilex paraguariensis*). However, unlike Mate, Guayusa has not been used commercially on a significant scale and has not been exported in significant volumes, until the US-company RUNA started to export it from Ecuador.

RUNA is a New York-based beverage company, founded in 2008, which is providing drinks made from the Guayusa (*Ilex guayusa*) leaves sourced from the Ecuadorian rain forest. Prior RUNA's intervention, guayusa has never been used on a wider commercial level. The guayusa leaves are used for the preparation of infusions like tea which are appreciated by consumers in the USA.

RUNA is the perfect case of „conservation through use“, by putting an underutilised crop or species into commercial use. Such an activity is not only contributing to the conservation of the rain forest, but it is providing a significant increase as well in the income generation of the indigenous peoples engaged in sourcing this plant. RUNA also pays an additional 15% of social premium to the local producer's executive body, who uses this fund for community development projects. Apart from that, RUNA has set up a foundation, that is dedicating itself to joint research on the impacts and benefits the Guayusa production has on the environment.

RUNA company has applied for the USDA organic certification as well as the fair-trade certification, which have been both granted. The Guayusa case has also been picked up by the German's Agency Gesellschaft für Internationale Zusammenarbeit (GIZ), which has developed a project together with RUNA to further advance the goals of fostering native biodiversity, sustainable income generation from forest products and preservation of the natural resources.

What are the success factors behind the Guayusa export marketing? Backed by a supervisory council of marketing and business professionals from large companies, RUNA was able to focus on the core of its business, that is: embracing a good cause to improve the livelihood of IPs. But, whereas the ethical principles are noble and admirable, in the end, the true success is due to a proper marketing strategy. There was a time, when consumers bought fair trade products as an act of benevolence, perhaps in some cases also bearing with poor quality and high prices. Yet, with the recent trends in fair trade becoming increasingly popular and consumers becoming more aware of social and economic imbalances, this perception has now changed. Such a development means that even the best well-intentioned project will fail, if we would not create a robust market for the NUS products or if there would be no consumers willing to buy these.

5. Women, Indigenous People and Youth

Following are some reflections on challenges, strengths and opportunities that vulnerable people like women, IPs and youth usually are confronted with when dealing with NUS export markets. A few recommendations on how to help these groups in seizing livelihood opportunities from exporting NUS are also offered.

Challenges

- IPs often live in remote areas
- IPs have no or few connections to international markets
- Women are occupied with double or triple “burden” (family, food production, raising children) and often have a “weaker” position in business life than men
- Young people often have less access to markets, are less integrated into business and lack skills (mathematics, economics, foreign language) when they are still in the educational process

Strengths

- IPs often have a very good knowledge about traditional food plants, medicinal plants and herbs, how to grow, harvest, prepare these for food and other uses
- Young people in all cultures around the world, have a high level of energy, internal drive and willingness to change for better their lives
- Young people are more open to and adept in using modern communication technology and social media than older generations which is becoming increasingly important in marketing

Opportunities

- IPs can contribute with knowledge to successful commercialisation of NUS
- Young people can play a role in marketing and communication of NUS via modern media
- IPs will be eager to engage in the production and commercialisation of NUS not only for economic reasons but also because this can make them “proud” and foster their self-esteem through increased visibility of their communities and traditions
- Capacity building for NUS enhancement and integration of young people into business processes can open up new employment opportunities
- Joint-ventures or PPPs with companies engaged in fair trade, ethical and sustainable production can be leveraged to integrate IPs, women and young people into marketing of NUS, including at export level

Recommended actions

- Interventions aimed at building human capacities of women, young people and IPs in exporting NUS and upgrading infrastructure for drudgery elimination in cultivation and processing
- Provide support to associations and cooperatives to strengthen collective production, processing, transportation and marketing of NUS
- Implement communication strategies mean to raise visibility on the importance of NUS and the contribution that vulnerable groups make in their sustainable conservation and use
- Strengthen RAS (rural advisory services) for promoting NUS in marginal areas to the benefit of local communities and assist in initial exploration for their better marketing, including for export
- Support the active participation of vulnerable groups into business processes needed for export
- Assist vulnerable groups in setting fair and ethical standards in support of the commercialization of NUS, including in export markets
- Support IPs to register unique NUS products from their territories as trademarks or geographic indications and provide backstopping on issues related to ABS and IPR linked to the commercialization of NUS.

6. Guidance for project design and implementation

Markets in developed countries are highly competitive and the supply of all kinds of agricultural goods is more than enough to satisfy demand. Truth be told, it is very challenging the introduction of a biodiversity product or increasing its market demand, if the product is not *new, interesting*, bears specific *advantages* over other similar ones or caters for a (partial or fully) unmet consumer *need*, or does create altogether a new consumer need.

In order to successfully bring NUS to international markets and increase the demand from those markets, we recommend IFAD to consider including the following strategic actions in its project designs:

- a) Assessment of current market situation (“check process”)
- b) Definition of a general project design
- c) Development of a project plan

It should be pointed out here, that exporting NUS to international markets and increasing its demand therein is a typical business endeavour and less of a traditional development intervention. From an NGO perspective, it is an intervention project aimed at improving the living conditions of local populations, however, from a practical perspective, it will require a great deal of competitive entrepreneurial skills, abilities to setting up a new business and manage it effectively, all actions that will have to be driven by strict market needs and requirements.

Because of that, it is therefore advisable to first pursue the establishment of an internal “start-up” and consider marketing NUS to international markets as part of the development of its business plan. It is recommended to start the project design with defining the desired outcome. Unlike typical development interventions, efforts to increase market demand of NUS are undertaken in a highly competitive environment, where many different market actors operate and where information (especially for NUS) is hard to find. To that regard, it is also advisable to turn to external partners, service providers and consultants who would be in a better position to help filling the information gap and/or assist in developing a robust marketing strategy.

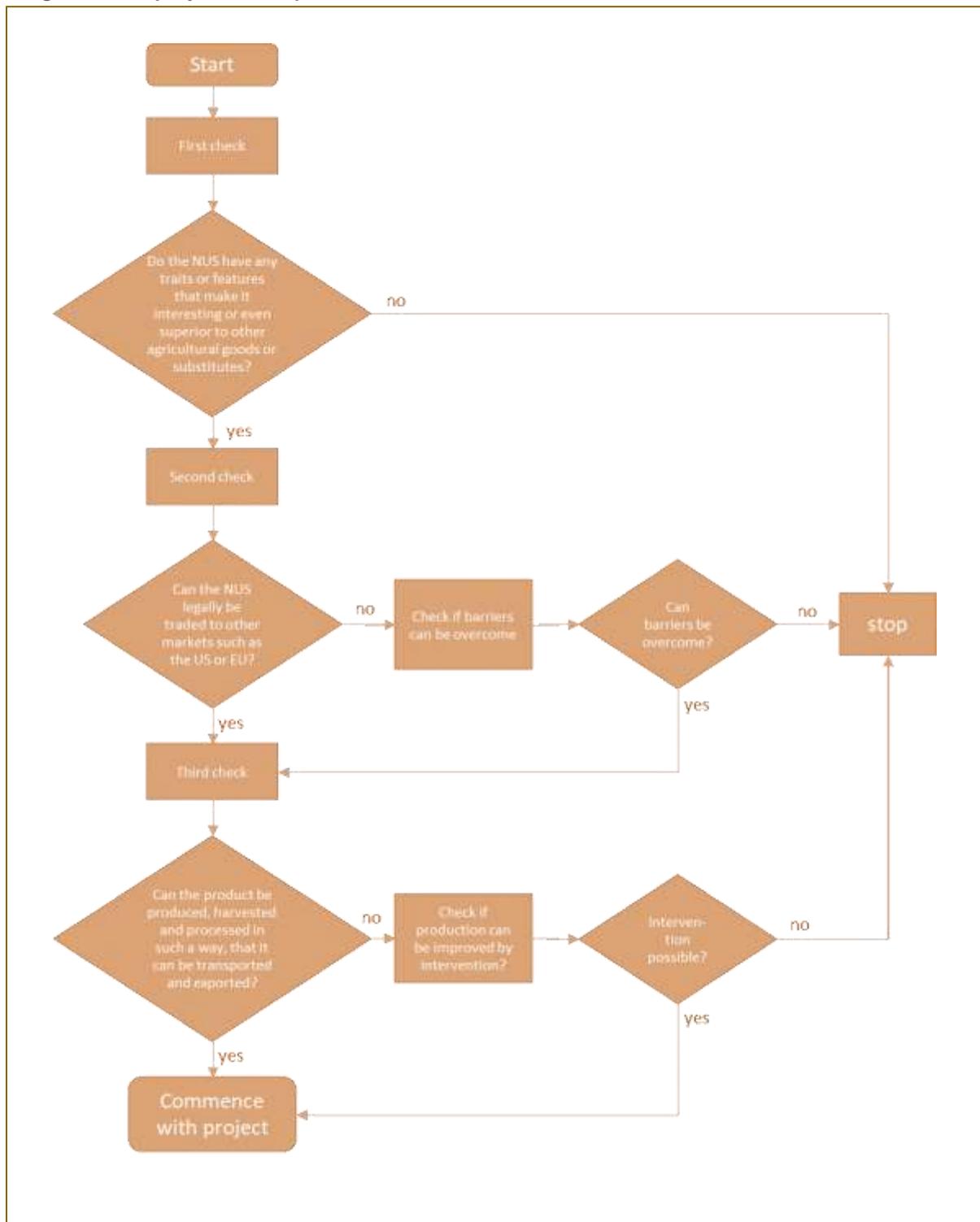
Following is a synthetic description of these three recommended actions.

Assessment of current market situation (“check process”)

The following check process (figure 6) will help to check basic issues that need to be considered before pursuing any NUS marketing exportation project:

Once these basic questions have been clarified, project design can commence.

Figure 6. Pre-project check process flow



Definition of a general project design

This section deals with the operational design of an intervention project on NUS export marketing. Some of the roles that need to be followed when setting up the project include:

- Integration management: i.e. how does the project integrate into the wider COSOP context, overall country strategy and who are the stakeholders to be involved?
- Timing: definition of project time frame and spread of expected results over time
- Sound budget definition and costs management plans
- Quality management: mechanism for continuous monitoring of output delivery
- Human resources management: internal staff, external staff with special attention on women, IPs and youth
- Communication management: effective information sharing with internal and external stakeholders
- Risks assessment & management: for risks that may arise during project implementation or resulting of unexpected outcomes after its conclusion.

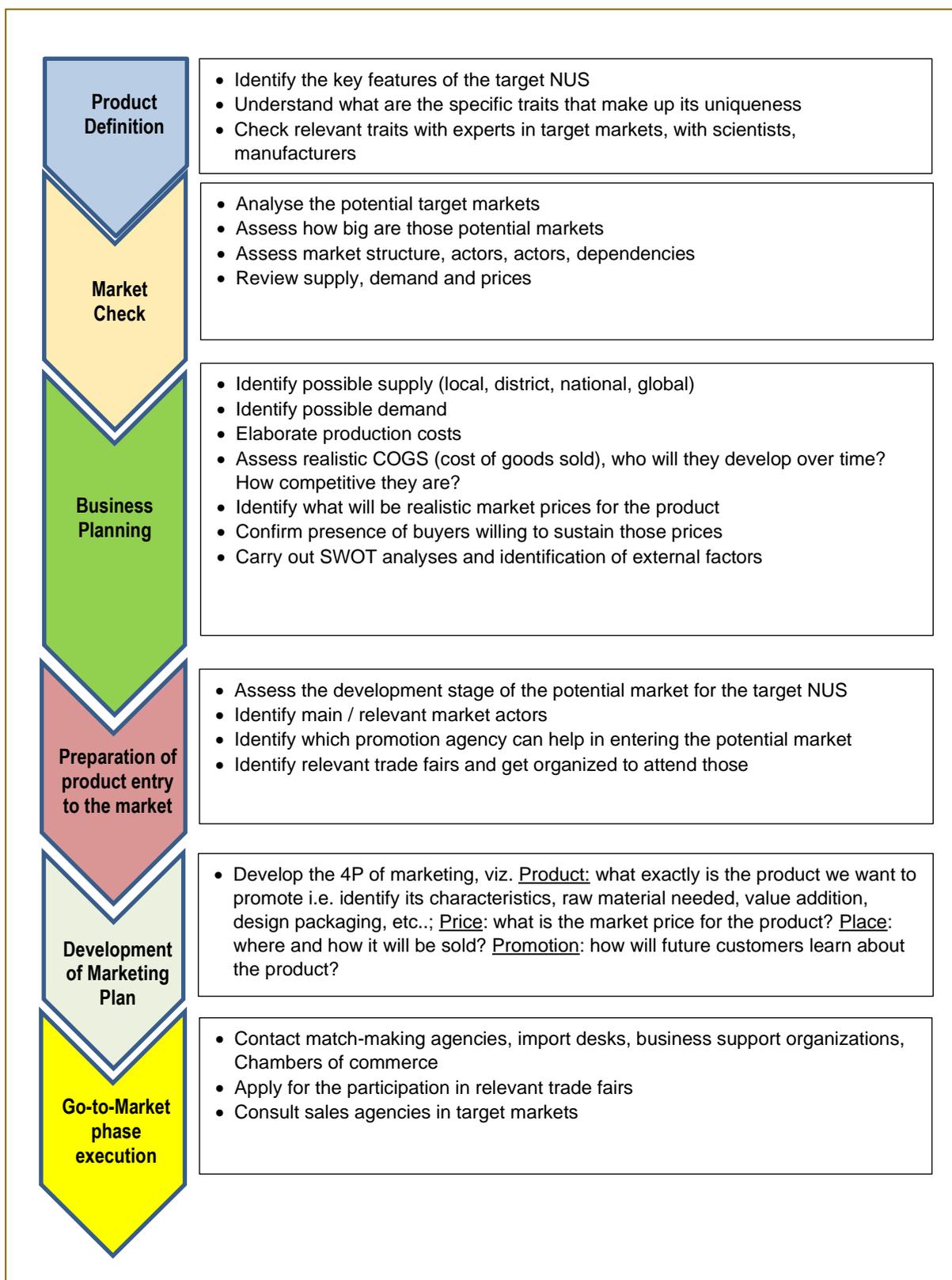
A robust project design will have to cover at least the following elements:

- **Problem identification:** identify those constraints behind the market marginalization of our target NUS (incl. lack of germplasm or seeds; poor infrastructures, lack of skilled human resources, lack of financial means, high transaction costs for value chain actors, low productivity, short shelf-life of produce, lack of demand, low profitability or economic incentives)
- **Impact pathway:** visualize outcomes and relationships among these leading to final impact, guided by environmental, economic and socio-cultural principles
- **Logical framework:** define scope, goal, objectives, outputs and activities
- **Elements of success:** define criteria, key deliverables and milestones to reach those
- **Performance indicators:** such as timeliness of activity implementation, budget allocation according to given guidelines, how well project is progressing, or how effectively the project is being managed
- **Responsibilities:** review proper allocation of these to team members, check consistency of assigned tasks with respective competencies, etc..
- **Resources:** review technologies, budget, teams, staffing plan incl. hiring of external contributors if needed
- **Schedule:** define proper time line for the effective implementation of key activities
- **Assumptions and constraints:** review significant ones related to human resources, budget, time or other relevant project's components
- **Dependencies:** review existing relationships between two or more sequential activities planned by the project
- **Risk assessment and management plan:** review risks across the value chain activities and identify possible mitigation measures.

Development of a project plan (step-by-step guide)

The step-by-step guide describe in figure 7 will help to develop our project plan meant to bring NUS to export markets:

Figure 7. Project Design Process fro NUS export marketing



The implementation of this work will succeed in bringing NUS to export markets, but it won't actually secure automatically our sales as these will depend on how effective we are in fostering demand for that product. As stressed earlier on, market demand needs to be triggered by push and pull marketing activities. Push and pull activities are part of the marketing plan that must be developed as part of the project. However, these marketing need to be activated as soon as it becomes clear that a NUS is going to be introduced to the market. Hence, the work on these activities ideally should start parallel to the development of the business plan.

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