

Product Strategy for Sacha Inchi.

State of affairs, product strategy and interventions for market entry in Europe.
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Title	Product Strategy for Sacha Inchi.
Language	English
About SIPPO	<p>SIPPO, the Swiss Import Promotion Programme, is a mandate of the State Secretariat for Economic Affairs, SECO, within the framework of its economic development cooperation. It is carried out by Osec, the official Swiss foreign trade promotion agency.</p> <p>The programme helps SMEs in developing and transition countries to gain access to the Swiss and European markets by providing information, training courses and other matchmaking services. SIPPO also assists importers from Switzerland and the European Union with finding suitable partners and high-quality products from selected developing and transition countries. The programme has five main goals:</p> <ul style="list-style-type: none"> • To inform the Swiss and European import economy about new market sources • To strengthen trade institutions and business sector associations in the trade promotion process • To increase the competitiveness of SMEs in selected partner countries • To develop the manufacturing and exporting skills of SMEs in selected partner countries • To establish qualified trade contacts between SMEs from emerging markets and markets in transition and the Swiss and European import economy
Report Content	<p>Within the scope of the project Perubiodiverso, an initiative supported by the State Secretariat for Economic Affairs (SECO) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (german cooperation), in convention with the Ministry of Foreign Trade and Tourism (MINCETUR), the Peru Export and Tourism Promotion Board (Promperu) and the Ministry of the Environment (MINAM), SIPPO is mandated to support Peruvian companies in accessing the European market. In this context, SIPPO compiled product strategies for: Maca (<i>Lepidium ssp.</i>), Sacha inchi (<i>Plukenetia volubilis linneo</i>), Tara (<i>Caesalpinia spinosa</i>), Aguaymanto (<i>Physalis peruviana</i>), Algarrobo (<i>Prosopis ssp.</i>), Camu Camu (<i>Myrciaria dubia</i>) and Native cacao (<i>Theobroma cacao</i>).</p>
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List of abbreviations

API	Active Pharmaceutical Ingredient	R&D	Research and Development
APOs	Asociaciones de Productores Organizados	MRL	Maximum Residue Level
DIGESA	Dirección General de Salud Ambiental, Ministerio de Salud, Lima	MSDS	Material Safety Data Sheet
EOI	Expression of Interest	PBD	Perúbiodiverso (Phase I, Phase II)
EU	European Union	REACH	Chemical legislation in European Union (Registration, Evaluation, Authorization and Restriction of Chemicals); European Com- munity Regulation: Regulation (EC) No 1907/2006
FAO	Food and Agriculture Organization	SECO	Staatssekretariat für Wirtschaft SECO (Bern, Switzerland)
FLO	Fairtrade Labelling Organization	SIPPO	Swiss Import Promotion Programme (Osec)
GACP	Good Agricultural and Collection Practice	SMEs	Small and Medium-size Enterprises
GHS	Global Harmonized System	SNV	Netherlands Development Organization
GIZ	Gesellschaft für Internationale Zusammenarbeit, Eschborn, Germany	SWOT	Analysis of Strength, Weaknesses, Opportunities and Threats
GMP	Good Manufacturing Practice	TDS	Technical Data Sheet
HACCP	Hazard Analysis and Critical Control Points. See Codex Alimentarius, and ISO 22000	UN	United Nations
HR	Human Resources		
HS	Harmonized System		
INDECOPI	Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual	UNIDO	United Nations Industrial Development Organisation
IPPN	Instituto Peruano de Productos Naturales (Lima-based business association)	WHO	World Health Organization
ISO	International Standards Organization		

1. Product relevance.

Plukenetia volubilis L. (Syn. *Plukenetia peruviana* Muell. Arg.), better known as Sacha Inchi, is described as promising species of the countries of the Convenio Andrés Bello by Correa (1992). The plant has been cultivated by indigenous people for centuries. Its geographical distribution ranges from Bolivia to Mexico, but is most widespread in the Amazon regions of Peru, Ecuador and Colombia.

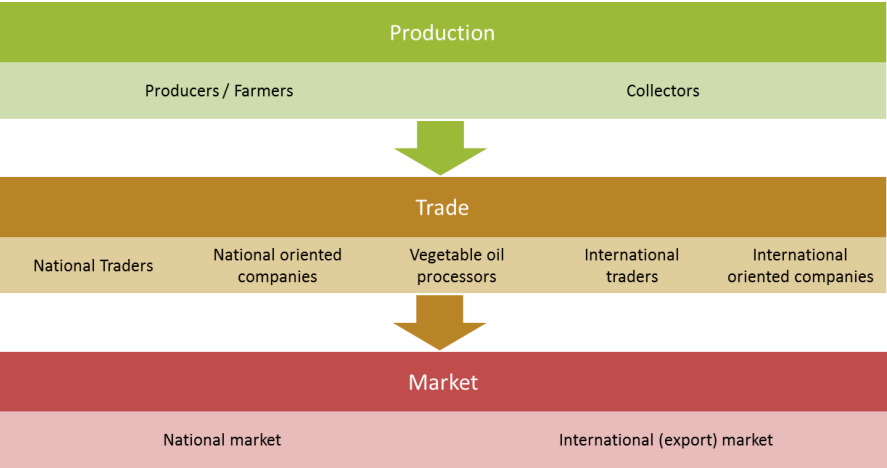
Sacha Inchi or ‘Inka nut’ is an oleaginous perennial plant grows to a size of two meters. Its fruits are capsules consisting of four to seven lobes, containing the protein- and oil-rich seeds. The oil of Sacha Inchi has a high concentration of polyunsaturated fatty acids and is thus the largest plant source of Omega-rich vegetable oil characterized by approximately 48% Omega 3, 37% Omega 6 and 8% Omega 9. Awareness for this edible oil with good taste, health properties and high value as nutritional supplement is growing in national and international markets. Moreover, Sacha Inchi is used in cosmetic (skin care) products. The sector map (Figure 1) describes the supply chain and the principal actors in the three distinct categories and functions.

Peru is known for its rich heritage of plants since the Inca times. This is why Sacha Inchi is also known as Inca Inchi or Inca Nut.

As a climber Sacha Inchi grows naturally in low-land forests and is collected by hand. Its oil bearing seeds are processed into oil for the national and global market. In recent years the Museo de Historia Nacional in Lima, has published “Hojas Botánicas: Sacha Inchi” describing the two groups of species “*Cylindrophora*” and “*Euplukenetia*” and their characteristics for differentiation, but warning as well of the potential for confusion and adulteration of raw materials.

Manuals for cultivation were published by CAF/IIAP, INCAGRO or PBD I, including cost calculations. The national and international markets are dominated by companies which have invested in domestication and cultivation.

Figure 1. Sector map of Sacha Inchi.



2. Product status.

Introduction to the market

Sacha Inchi is interesting as a natural ingredient and as raw material for vegetable oil used in the food and cosmetic markets. It is mainly exported as a natural ingredient.

For the EU food sector, an application for registration as a 'novel food' is pending since 2005. In Switzerland Sacha Inchi is tradable as a raw material and as vegetable oil.

For the cosmetics market in Europe, the REACH regulations for chemicals and cosmetics apply, including the documentation for TDS/specification and MSDS. The Swiss sector legislation is harmonized with EU legislation.

As no specific HS (Harmonized System) code exists for Sacha Inchi, the exact import and export statistics for the EU cannot be presented. However, there are data available on Peruvian exports of Sacha Inchi by PromPeru that give an indication of market size. This product is not produced in Europe, and Peru is the largest producer.

In 2006 and 2010, France and Spain were the main purchasers of Sacha Inchi in Europe, followed by Germany and Belgium. Organic Sacha Inchi is exported from Peru to France, and in 2009 also Switzerland started to import Sacha Inchi in large quantities from Peru. 80% of organic Sacha Inchi is leaving Peru as oil, mainly for the food and cosmetics industries.

Sacha Inchi could fit in present trends in the food and cosmetic sectors since it is a natural and exotic ingredient and can also be sold as organic and fair trade. Consumers in Europe are increasingly interested in organic and fair trade products today. However, much more product documentation is needed in addition to paying the cost of certification itself, before Sacha Inchi can be sold at a premium.

Offering new products is the main aim of the cosmetic products industry. Sacha Inchi could be rapidly introduced in European markets by properly vaunting its product value propositions, such as being a natural ingredient, high Omega content and Amazonian origin. Increasing production and preserving outstanding quality are the key factors to successfully bring Sacha Inchi to the global market.

The annex provides more information on trade figures and characteristics of Sacha Inchi.

Constraints and opportunities

Constraints are determined by the production and regulatory environments, funding, business acumen, labour rights and ethics, and market opportunities. Prices in Peru have typically been set by buyers without a consistent basis on cost calculation, resulting in loss of interest to ensure the sustainable procurement of raw materials.

The following SWOT analysis (Table 1) articulates specifically the core needs for export marketing and market entry in Europe. At the same time, the analysis points to specific bottlenecks in product documentation and compliance with market access requirements based on national and international legislation.

Table 1. SWOT Analysis (Biotrade 2005, reviewed by K. Duerbeck 2011).

Strengths <ul style="list-style-type: none">• Peru is recognized worldwide as a major supplying country.• Active sector associations (e.g. IPPN) are in place.• Appropriate legislation in force governing conservation and sustainable use.• Native communities have ancestral knowledge about the utilization of plants.• High acceptability by population of natural ingredients and cultivation.• Cold pressed oil.	Weaknesses <ul style="list-style-type: none">• Apparent insufficient supply of seed.• Wild collection not sustainable.• Lack of standardized scientific information.• Lack of company and product information.• Lack of comprehensive research on production, use and validation.• Difficulties in domestication leading to insufficient and heterogeneous national agricultural production.• Few specialized and accredited laboratories for chemical analysis.
Opportunities <ul style="list-style-type: none">• Widespread worldwide trend towards new natural ingredients.• Application for food, cosmetics and health.• Sector and company strategies for sustainable production and marketing.• Institutional support to companies.• International cooperation for toxicological studies for application in food, cosmetics.• Income generation for rural areas to increase sustainable production.• Sustainable resource management.	Threats <ul style="list-style-type: none">• Growing competition from other countries, e.g. Ecuador, Colombia.• Presence of opportunistic exporters.• Possible product adulteration.• Loss of markets for failure to meet the international quality standards and buyer requirements like hygiene and quality.• Lack of consumer safety data.• Lack of product data for novel food.• Service providers not established.

The following constraints (see Table 2) need to be removed before considering opportunities and pathways to improve responses to environmental and natural resource issues.

Table 2 Constraints, opportunities and objectives.

Constraints	Opportunities	Objectives
Resource management and control mechanisms	Resource assessment Resource management Domestication and cultivation: Best practices	Strengthen natural resource management for wild collection, domestication, and cultivation
Enabling environment Socio-economic	Product quality/description Market information Access to markets	Organize access to product/market information Increase transparency in chain
Enabling environment Policy	Access rights/land tenure policy Policy framework conditions Access to credits, subsidies	Support stakeholder involvement and representation; market control and facilitation
Enabling environment Institutional	HR development/management Access to rural extension	Capacity development in management skills
Enabling environment Production and processing	Access to information and applied R&D	Facilitate access to communication and services

The most important objective is the evaluation of the novel food status for Sacha Inchi and its ingredients. Once the need to apply for novel food status is established, the following requirements, costs and timelines need to be met :

Table 3. Requirements, costs and timelines for Novel Food

Requirements	Costs	Timelines
Toxicological tests		
Minimum requirements	- 100,000€	9 months
Full tox package	- 1.2 million €	24 – 36 months
Pre-assessment meeting	6,000 – 9,000 € + 5,000€	3 months
Compilation of file	30,000 – 50,000€	3 months
Initial evaluation of national authority	0 – 25,000€	6 – 12 months, or longer
Final opinion by EU Commission		6 – 36 months
Total	136,000 – 1.3 million €	27 – 90 months

Source: Armbruster, a&r (2011), modified by K. Duerbeck 2011

Additional consultancy costs may appear if additional data have to be provided to the national authority and/or EU Commission.

Moreover, since Sacha Inchi has to compete with various other vegetable oil plants in different market segments, options for adding value include obtaining certification, such as organic and fair trade. Certifications as a value adding tool improve the product's competitive positioning in markets. Besides, demand for certified products that can tell a story is increasing significantly. In this context the United Kingdom, particularly, is an interesting market.

Sacha Inchi can best be sold as a speciality product, for instance as a luxury salad dressing or in a special cosmetic context.

Risks and constraints

Supply, process, demand, and control risks and the above mentioned weaknesses and threats constitute constraints and need to be acknowledged before considering opportunities and pathways to improve responses to environmental and resource issues. The greater uncertainties are found in supply and demand conditions, market globalization, and complex international supply network relationships all of which result in higher exposure to risks in the supply chain, including disturbed markets and poor decision making. Production risks include:

- Difficulties in assuring raw material supplies
- Poor quality of raw materials
- Poor supply chain risk management processes
- Vulnerability (logistics, extent, elements at risk and why, people and their locations at risk)
- Degree of resilience in natural resource management and logistics
- Lack of supply chain confidence
- Lack of visibility
- Lack of supply chain controls

Producers also face difficulties in approaching international market due to missing R&D and product documentation.

Specific risks emerge from the delay in obtaining approval for the novel food filing from August 2005 by ITERG, Pessac, France, in cooperation with a Peruvian company. In March 2011 rumours surfaced that an imminent decision is pending from the EU Commission. Until today no EU decision has been published creating a major risk for companies and other organizations needing to make decisions about Sacha Inchi in Peru.

Trade barriers

European product requirements and specifications, and European companies' own internal control systems, are constantly expanding, including application of new ISO Standards (26.000 & 31.000). More strict EU regulations have a direct effect on the market of supplier services for finished products.

To sell their produce in Europe exporting companies must comply with regulations based on international guidelines provided by different UN organisations (WHO, Codex Alimentarius of WHO/FAO), or otherwise identify new markets outside Europe which might be easier to penetrate.

3. Product strategy.

The aim of the SIPPO product strategy is to achieve consistency of Perúbiodiverso II (PBD II) with SIPPO's indicators. It also seeks to develop a common platform for any other potential project and business partners that SIPPO may work with so that they can develop separate interventions and still be consistent with this strategy.

Such a strategy may appeal to SECO and enable them to use this paper as a unifying document for the selected products. The bulk of data and analysis comes from the sub-sector analysis done by Biocomercio & Perúbiodiverso in recent years.

The strategies for the products preselected by PBD II will revisit earlier recommendations for entering European markets using the following filters:

- market access
- achievable target for March 2013, and
- work planning for 2013 and beyond.

The short-term strategies for Sacha Inchi should concentrate on using the ancestral knowledge of the native communities, which constitutes a source of innovative products. This effort should be accompanied by local and foreign investment to organize sustainable wild collection, domestication and cultivation in Peru.

This strategy should quickly reposition dietary supplement products under the label of "functional foods", and natural cosmetics. Efficient communication systems are likewise needed for each actor in the value chain to contribute to expanding domestic consumption.

Intensive external promotion campaigns to increase global demand are important to justify investments in product development and registration. These measures should also tap the opportunities for natural ingredients comprised in international regulations. (UNIDO 2006)

Long term strategies should aim at strengthening the value chain to remove structural weaknesses, which significantly hinder competitiveness increases. The principal weaknesses to be considered are limited research at national/international levels on how to manage and use this resource, validate

claims, address land tenure and local culture issues, and comply with fiscal and sanitary requirements.

Given the constraints discussed so far, SIPPO has identified four core elements for the product strategy that can contribute to achieve this goal:

- Increase collection and production of Sacha Inchi raw material
- Increase value addition of exportable products through:
- An increase in the share of properly verified and/or certified products
- Moving up the value chain to oil extraction
- Reduce the cost of production, and benchmarking wild collection against cultivation
- Develop a promotional strategy that supports these initiatives through:
- Raising awareness of these products and their strategic markets, and of their value proposition.

As seen in the above section, the industry is too new as a vegetable oil industry in Peru and too small to compete with any economy of scale even when it expands to its full potential. Hence, the option for Peru is to utilize a focused strategy whether in terms of cost or differentiation. It seems that the Peruvian government is focusing on moving the industry along the specialty (differentiation) route.

More companies operating in Peru are moving towards organic or are already organic certified. At the same time and in the context of fair trade certification, companies must pay close attention to costing and pricing, or at least provide credible explanations of why they must charge premium prices in international markets. Special efforts must be made to introduce vegetable oils in markets that have been verified following Ethical Union of Biobrade Standard (for wild collection and cultivation) and/or certified according to the FairWild Standard (wild collection only) for the implementation of Biobrade Principles and Criteria.

4. SIPPO Focus.

Guiding criteria

This section explains where SIPPO will focus in the value chain in order to accomplish the maximum possible impact on this sector's competitiveness and export orientation. As it stands, SIPPO and its national expert play a pivotal role in trust building in Peru. The technical assistance provided by the SIPPO expert focuses on trust building and introducing demonstrated SIPPO competencies, and in encouraging the use of the guiding criteria, so that the greatest impact will be accomplished as demonstrated in SIPPO's indicators.

The following three questions are relevant when examining SIPPO's guiding criteria:

- Is the desired change feasible for the selected target group?
- Can the project output be delivered in a sustainable way?
- Can this be done in the time frame and with available project resources?

Building on this rationale/logic SIPPO establishes a plausible hypothesis on the sector's evolution. SIPPO's facilitator/national expert will focus on local governance, environmental education and awareness through institutional strengthening with and among resource owners and users.

Table 4. Assessment of market based solutions

Type Value Chain Constraint/Opportunity	Identified potential market-based and commercially viable solutions
Product Development and Registration	<ul style="list-style-type: none"> • Organize training courses for personnel of companies in national quality standards, export requirements of niche markets • Promote the science based product documentation
Service Providers	<ul style="list-style-type: none"> • Assist sector service providers, such as consultancies, research institutions to improve service capacities • Support promotion of authentic ingredients and final products
Organization and Management	<ul style="list-style-type: none"> • Encourage companies to introduce business plans and management plans and to implement good practices • Organize trainings for producers that will cover issues of data collection for resource assessment & management planning
Regulatory (Policy)	<ul style="list-style-type: none"> • Support national legislation development in accordance with UN guidelines and to enable its appliance on company level • Generally improving the business enabling environment
Finance	<ul style="list-style-type: none"> • Devise micro-finance schemes for collectors, farmers and companies • Identify financial service providers
Input Supply	<ul style="list-style-type: none"> • Support conservation of traditional knowledge and practices • Promote the science based domestication and cultivation • Promote Best Practices in resource management
Infrastructure/Human Resources	<ul style="list-style-type: none"> • Provide collectors & farmers training in sustainable procurement • Address value adding and logistics issues
Business Membership Organisation	<ul style="list-style-type: none"> • Maintain permanent dialogue and cooperation among all stakeholders in the value chain as services to members • Strengthen competent sector representation on a national, regional and international level

The result of the assessment of market based solutions is:

- a) Identification of existing service providers: consulting firms, institutes, etc.
- b) Identification of number of existing and potential users: collectors, farmers, companies, etc.
- c) Constraints to provision (by service provider type).
- d) Proposed provider of sustainable market based solution.
- e) Commercial feasibility of market based solution (by service provider type).

The two major targets that can guide establishing priorities in choosing market-based solutions are the potential value chain growth resulting from an expansion of raw material production, and the enhanced competitiveness and greater number of SMEs in the target group that will directly and indirectly benefit from this initiative (outreach potential).

Supply and strategy

The main characteristics of the supply situation for companies from Peru were stated earlier in the strategy and are the following:

- Expand production area (wild collection, forestry and agriculture)
- Develop appropriate technologies
- Build a better working and business environment
- Further develop and implement an enabling legal framework
- Engage in active sector marketing

Visibility and control can be achieved through better and more documentation, transparency and open pro-active communication all along the supply chain. Such transparency will eventually also become visible in consumer markets. Certified labelling and/or a verification framework help to preserve and augment trust along the whole supply chain. Over the long term fair trade certification for these products will help to mitigate any supply risks.

Partners

The core partners in the implementation of the project's interventions are:

- Intervention: Implementation of market access requirements based on national legislation. With this intervention, PBD would act as a facilitator and link between service providers and companies.
- Intervention: Export promotion in partnership with PromPeru, which gathers export oriented companies and supports IPPN and individual companies for market entry.
- Other interventions: PBD will work on identifying other partners by type of intervention, for example, regarding assistance in drafting national legislation together with partners from the concerned government agencies, etc.

5. Interventions.

The interventions considered in the context of this product study are primarily part of the component I of the Perúbiodiverso II.

Ongoing interventions.

Identification of new companies: The purpose of this activity is to increase the impact of the interventions to as many companies as possible so that all good export-ready companies in Peru can profit from better market access.

Collaboration with sector associations IPPN and PromPeru: The trade associations so far have always had difficulties because they were not able to build up trust and get enough funding for their activities.

The ministries of agriculture and trade and industry have expressed their interest in supporting this sector and including them in their rural development strategies, provided they get organized. Subsidies and financial support are available under a special budget line if the requests are made by clusters or associations.

Types of interventions needed

The overall objective of this SIPPO project (PBD II) is to enhance the export competitiveness of companies and therefore help to alleviate poverty. In order to measure these objectives similar indicators should be used as in other SIPPO activities, namely increased sales or exports, increased revenues and employment, more diversified markets, products and services, and increased attendance at promotional events.

Sequencing of SIPPO interventions

After mapping the productive environment, human resources and miscellaneous basic infrastructure needs, and determining the categories of interventions, the context and the sequencing of activities, it will be required to identify access opportunities, available service providers, and leading firms. After the first intervention the number and expertise of the leading firms is expected to unfold and develop. The leading firms and the service providers may vary for the different interventions and their sequencing.

Consistent with their temporary nature, the interventions need to define a clear exit strategy from the beginning.

Ranking and prioritization of issues.

During the stakeholder meetings the expert presented the “gap analysis” findings including the prioritization on the basis of the identification of potential market-based and commercially viable solutions. They include the following.

1. Increase raw material production based on strict cost calculation
2. Create product documentation to meet known market access requirements based on national and international legislation
3. Promote exports
4. Assist service providers
5. Organize training courses
6. Create an enabling environment (national and international)
7. Encourage stronger business planning.

The stakeholder meeting reviewed the expert's findings and recommended to include R&D for product development and documentation and access to markets in the national priority listing.

Table 5. Priority matrix.

Interventions	Aim	Actor	Time	Lead by
Producer performance				
Identification of R&D inputs	Claim substantiation for botany, chemistry, use, novel food	National research institutions, universities	April 2011 - March 2013	PBD
Elaboration of product parameters	R&D for MSDS, Novel Food, REACH, GMP	National research institutions, universities, service providers	April 2011 - March 2013	PBD
Product documentation	Product profiles (Data Sheets, certification, etc.)	Companies, national service providers	June 2011 – June 2012	PBD
Resource management	Sustainable resource management and raw material procurement, including financial resources	Companies, national service providers	August 2011 – March 2013	PBD
Market development				
Access to market	Market entry in Switzerland, and Europe based on the regulatory status and requirements: trade fairs & buyer missions	PromPeru, SIPPO	May 2011 – March 2013	SIPPO

The detailed portfolio of services of PBD II is available in the context of Estrategia del Proyecto Perúbiodiverso para Empresas y Asociaciones de Productores Organizados (APOs) as implementation pathway at company/APO level.

Intervention pipeline

First Intervention: Resource management

The increase of sustainable wild collection and the agricultural production of raw material is the basis for market development. The scaling up of raw material production has been identified as one of the main constraints for companies. Specifically bottlenecks were apparent in the identification of suitable areas for agricultural production and the build-up of agricultural extension service in identified areas. Differentiation from the large scale production from outside Peru through certification is opening options for market entry as a genuine biodiversity product of Peru.

Table 6. Impact logic and indicators for impact logic for sustainable procurement.

Impact Logic		Indicators of Impact Logic
Activity	Identification	Potential growing regions, companies interested in supply chain and their requirements, products and parameters
Output	Documentation	Documentation of potential regions and the respective soil and climate characteristics, potential supply chain partners, potential service providers, farmers interested Marketing strategy
Use of output	Contacts Offers	Appropriate areas identified for cultivation Cost calculation and pricing for different supply chain levels Supply chain partners identified
Outcome	Contracts, orders	Opportunities for value addition (certification, extraction) Development of product standards based on Codex Alimentarius guidelines Regional marketing activities Decentralized processing
Impact	Sales	Extension service available Increase of rural income
Aggregated impact	Increase of employment	Increase of employment

The Results Chain for this intervention with indicators at each level is as follows:

Table 7. Indicators and measurements used

The ongoing SIPPO market access intervention requires the

Indicators	Measurement used
New areas for cultivation	Description of climate and soil properties & participatory cost calculation Evaluation and transparency of alternative options to enhance farmers' income
Diversification of products and documentation	New products identified Specifications (TDS, MSDS), Manuals for cultivation, post-harvest, price calculation and logistics
Interest of companies	Promotion of supply chain and options for value adding
Preparation of companies	New products identified and developed Complete documentation Audits and certifications
Marketing strategy	Management documents Information for dissemination through brochures, posters, website Marketing support for companies as Peruvian biodiversity product
Indicators	Measurement used

support of the first and second intervention for sustainable resource management to be executed by components 2 and 3 of PBD II.

Second Intervention: Access to market

The product documentation and implementation of known market access requirements are basic requirements for market entry in Europe. Product documentation has been identified as another main constraint for companies. For years product documentation was neglected as a main constraint for national, regional and international market access for

Sacha Inchi products. Together with PromPeru, INDECOPI and DIGESA have developed product standards for Sacha Inchi. GHS-based Safety Data Sheets are required for Sacha Inchi extracts, like vegetable oils.

Table 8. Impact logic and indicators for impact logic for product documentation.

Impact Logic		Indicators of Impact Logic
Activity	Identification	Companies, products and parameters
Output	Documentation	Documentation (companies and products, e.g. brochures, business contact sheets) Marketing strategy
Use of output	Contacts Offers	Market research, intelligence Contacts, marketing activities
Outcome	Contracts, orders	Pre-fair: company/product documentation, tools for fair Fair presentation format, booth, HR, documentation, EOI Post-fair: contacts, EOI, trial orders, contracts
Impact	Sales	Increased turnover Increased rural income
Aggregated impact	Increased employment	Increased employment

The Results Chain for this intervention with indicators at each level is as follows:

Table 9. Indicators and used measurement within the result chain.

Indicators	Measurement used
Preparation of companies	Completeness of documentation; preparation of samples; stand arrangements; marketing strategy
Documentation	Manuals, check lists, price calculation, business contact sheets
Marketing strategy	Brochures, posters, website, language, visualisation of company
Market research	Number of new ideas gained and quality/ technology/ marketing improved
Contacts	Number of contacts established
Marketing activities	Number of brochures distributed, number of mailing campaigns
Increased sales and turn-over	% of business growth
Increased employment	Number of new workers hired after intervention

In the course of the first two a number of raw ideas will be validated and further developed into new interventions. Even-tual additional interventions will require new sourcing and funding that can be made available by national interest groups, service providers, the national government and do-nors.

A target group of companies for each intervention was identi-fied consisting of leading firms and core companies, and companies to be included in the outreach initiative. The fol-lowing leading firms were identified for different Sacha Inchi products, i.e., as raw material and vegetable oils.

- Raw material: Shanantina, Lamas, Tarapoto
- Vegetable oils: Roda, Tarapoto; Osho, Lamas, Tarapoto; Industrias Amazónicas, Tarapoto; and 3QP, Lima.

The leading firms are considered the main pillars of PBD II in Peru. They blaze the trail for other sector companies in busi-ness association, communication with national service pro-viders and, most of all, in creating an enabling environment.

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7. Annex.

Sacha Inchi – use and production

The oil of this Inca nut contains 48.6% Omega 3, as well as 36.8% Omega 6 and 8.2% Omega 9. Next to the high content of Omegas, this oil has an exceptionally low content of saturated fatty acids (6.2%), which makes it a healthy product compared to other oils. The remaining part consists of unsaturated fats (93.7%). Besides, the oil also contains vitamin A (681 mg per 100gr) and vitamin E (17 mg per 100gr). (SIPPO 2009)

Sacha Inchi, with its slightly nutty taste, is consumed either roasted or ground as flour, and also as a nutritional supplement. The cosmetic sector uses Sacha Inchi as a natural ingredient for skin care products. The oil acts as skin moisturizer, to hydrate skin and fight wrinkles.

Traditionally, Sacha Inchi was obtained through wild collection. Greater awareness and increasing demand led to cultivation of Sacha Inchi. It grows in secondary forests, and then the capsules are collected by hand to be processed into oil.

Sacha Inchi typically grows in the tropical Andean region of South America. Although Colombia, Ecuador and Venezuela are producing Sacha Inchi, Peru is the only relevant producer of Sacha Inchi, and does not face strong competition. In Peru, Sacha Inchi grows in San Martín, Ucayali, Huánuco, Amazonas, Madre de Dios and Loreto, with the main production sites in Ucayali (51%) and San Martín (49%).

Due to very limited production capacity, Sacha Inchi oil will never be able to compete on the global market with other vegetable oils like olive oil. However, demand is high and the potential to optimize the economic benefit as well. Therefore, it is essential to work on a sustainable value chain and to communicate the efforts, opportunities and the outstanding qualities in the best way.

Trade

As mentioned before, Sacha Inchi is interesting as an ingredient and as a final product in the food and cosmetics markets. Globally, Sacha Inchi is mainly imported as a natural ingredient.

In Europe the 'novel food' regulation regards certain foods as 'new' if they had not been consumed in Europe before 1997. 'Novel foods' must undergo an extensive authorization process for registration in the European market. Sacha Inchi is not yet approved as a food ingredient and is therefore only available in the Swiss market.

As no specific HS (Harmonized System) code exists for Sacha Inchi, the exact import and export statistics by the EU are not available. However, PromPeru data on exports of Sacha Inchi are available (see Table 10), which could give an indication of market size. The product is not grown in Europe. Peru is the largest producer.

The table below shows that France and Spain were the main purchasers of Sacha Inchi in Europe, in 2006 and 2010, followed by Germany and Belgium. Sacha Inchi is mainly exported from Peru as oil, as powder, roasted and as flour.

Table 10. Sacha Inchi exports from Peru to European countries, 2006 and 2010, in FOB value and net weight.

SACHA INCHI	2006		2010	
Peruvian exports to:	FOB value US\$	Net weight Kg	FOB value US\$	Net weight Kg
Belgium	5,704	694	1,367	444
Spain	5,076	977	70,806	2,400
Sweden	50	7		
Switzerland	1,089	109	32,415	2,311
Czech Republic			496	59
Norway			176	17
France	14,191	1,843	68,140	4,715
Italy			6,878	591
Germany	50	600	9,711	954
Total	26,160	4,230	189,989	11,491

Source: PromPeru

Moreover, since Sacha Inchi has to compete with various other oil plants in different market segments, it is recommended to obtain certification, such as organic and fair-trade. Certifications as a value adding tool improve a product's competitive market advantage. Besides, demand for certified products that can tell a 'story' is increasing significantly. In this context the United Kingdom, particularly, represents an interesting market.

Fair-trade schemes, which are less challenging than FLO and which could be applied for Sacha Inchi include:

- www.ibd.com.br / www.ecosocialnet.com.br (Brazil)
- <http://www.ecocert.com/-EFT-.html> (France).

Major organic certification organizations in the EU include Ecocert (Germany, France, Belgium, Italy), BCS and Naturland (Germany), SKAL (The Netherlands), Soil Association (United Kingdom), and KRAV (Sweden).

For sustainable wild collection and the implementation of Biotrade principles and criteria the verification scheme of the Ethical Union of Biotrade UEBT for cultivation and wild collection and the implementation of FairWild Standard as management and certification standards are the first choice.

Table 11 shows the bulk of Peruvian exports are organic certified Sacha Inchi to France. Since 2009 also Switzerland started to import Sacha Inchi in high quantities from Peru. In fact, 80% of organic Sacha Inchi is leaving Peru as oil, mainly for the food and cosmetics industry.

Sacha Inchi can best be sold as a specialty product, for instance as a luxury salad dressing or in for special cosmetics. Sacha Inchi's extremely high content of Omega 3 and good taste and consistency are considerable product advantages. Important to the industry is also a HACCP (Hazard Analysis Critical Control Point) certificate as well as extensive and candid product information, including Safety and Technical Data Sheets.

For Sacha Inchi exports to the EU the following requisites must be met:

- Food industry:
General Food Law 178/2002/EC: basic principles
EU Official Controls Regulation 882/2004: for imported products
Regulation (EC) 852/2004: food hygiene
EU Regulation (EEC) 2092/91: organic food
Regulation EC 258/97: novel foods
- Cosmetic industry:
Directive 76/768/EEC: cosmetic substances and labelling
Dangerous Substances Directive 67/548/EEC: product testing
REACH: registration, evaluation, authorization and restriction of chemicals

Table 11. Exports of organic Sacha Inchi from Peru to European countries, 2008 to 2010

ORGANIC SACHA INCHI	2008		2009		2010	
	Value FOB US\$	Net Kg	Value FOB US\$	Net Kg	Value FOB US\$	Net Kg
Peruvian exports to:						
Italy						
Belgium	6,285	416				
France	86,013	6,090	70,920	4,420	65,629	4,479
Czech Republic	84	10				
Germany			3,960	230	7,200	750
Switzerland			15,840	923	31,823	2,248
Total	92,382	6,516	90,720	5,573	10,4652	7,477

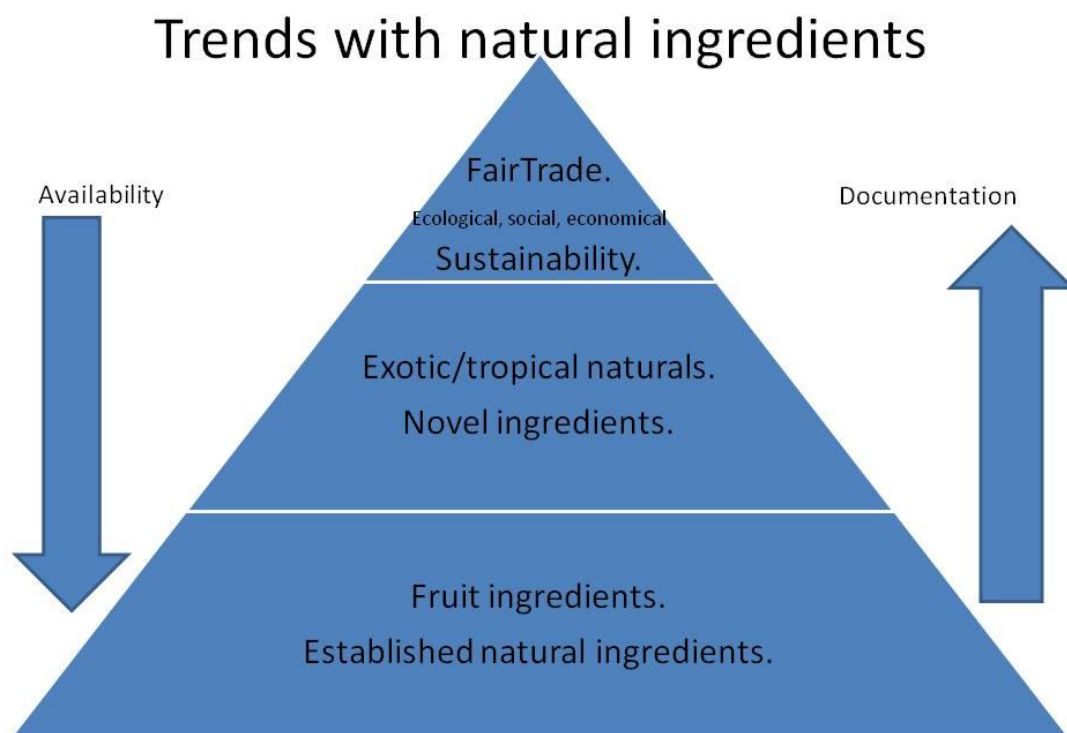
Source: PromPeru

Trends and perspective

Sacha Inchi could well fit in present in the food and cosmetics sector trends (except as fruit ingredient) since it is a natural and exotic ingredient and can also be sold as organic and fair trade. Consumers in Europe are increasingly interested in organic and fair trade products. However, much more documentation is needed and paying the cost of certification itself, before Sacha Inchi can be sold at a premium.


Offering new products is the main aim of the cosmetics industry. Sacha Inchi could be rapidly introduced in the European market by tapping its value proposition as a natural ingredient, source of Omega oils and for its Amazon origin. Increasing production and preserving outstanding quality are the key factors to successfully bring Sacha Inchi to the global market.



Figure 2. Trends in the natural ingredients market.



Source: Adapted from A. Jones 2007, modified by K. Duerbeck (2011).

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