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5/2015 – 4/2018

Global market demand for high quality arctic NWFP products

Global wellness industry 2013: 3,4 trillion US\$ /value growth 1/3 (UN FAO)

Healthy eating, nutrition, weight loss, fitness/mind/body, beauty & anti-ageing, preventative/personalized health, alternative medicine, workplace wellness—(medicine)

Nordic health and well-being business 2016 12.1. bill. €/a→36 bill. € 2018? (Natural Products Scandinavia)

MEGA TREND



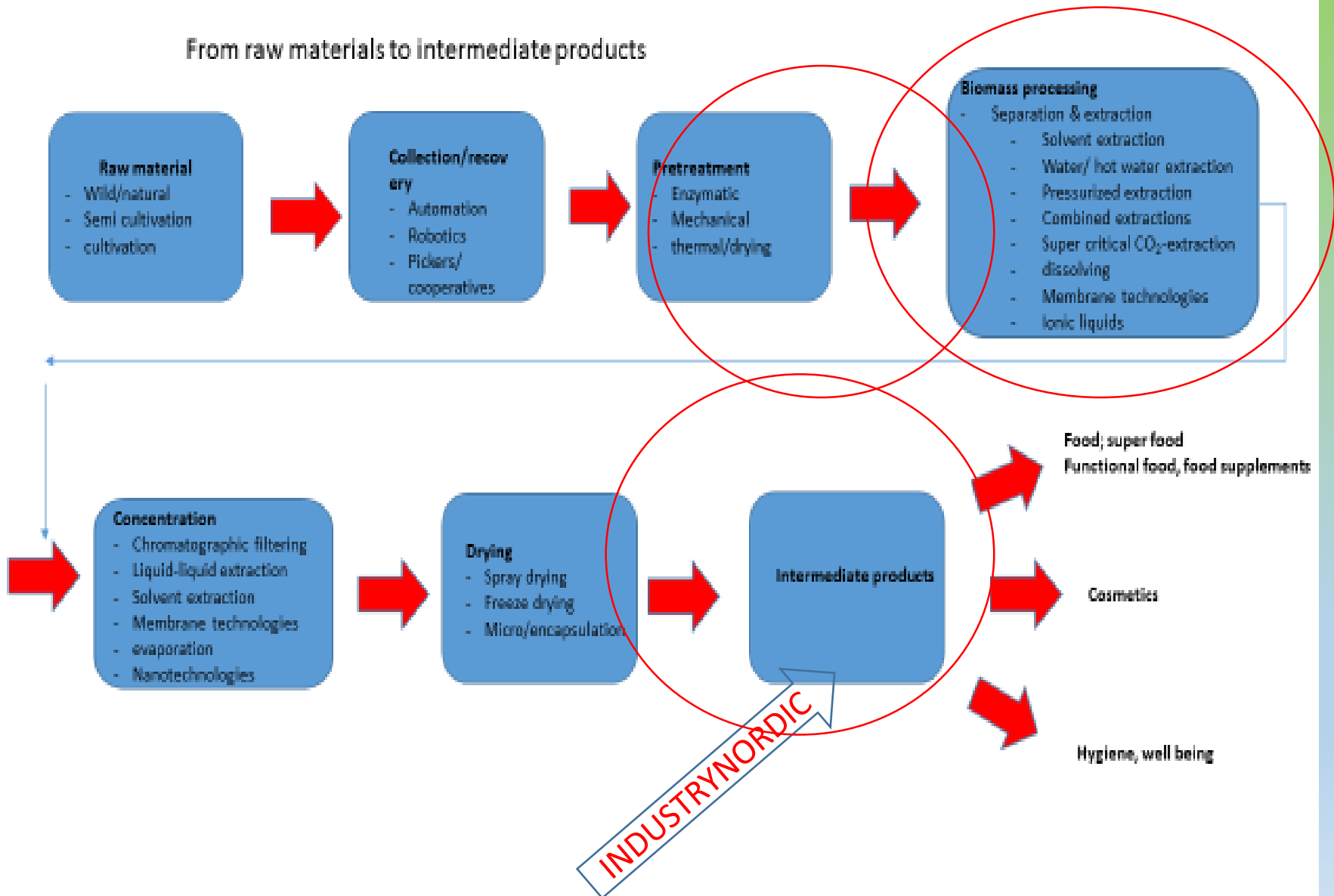
High value arctic NWFP raw materials: Non wood forest products NWFP (berries, leaves, bark, herbs, etc)

Berries: 80% are left in the forests annually

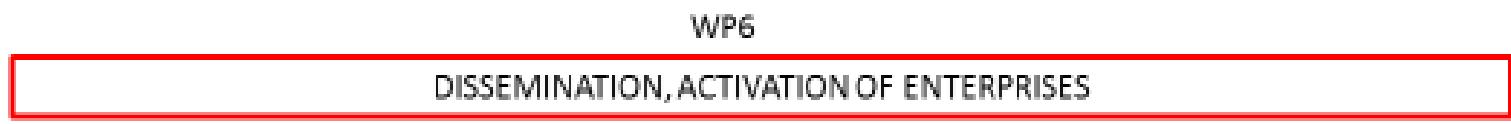
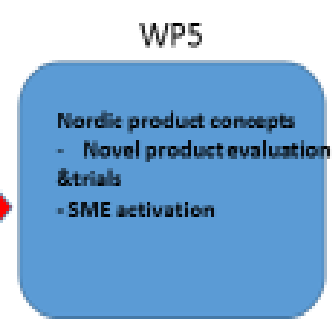
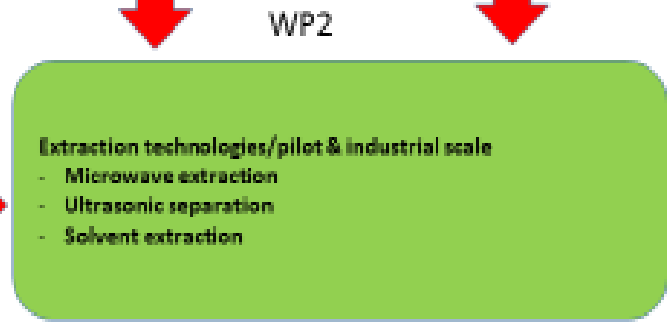
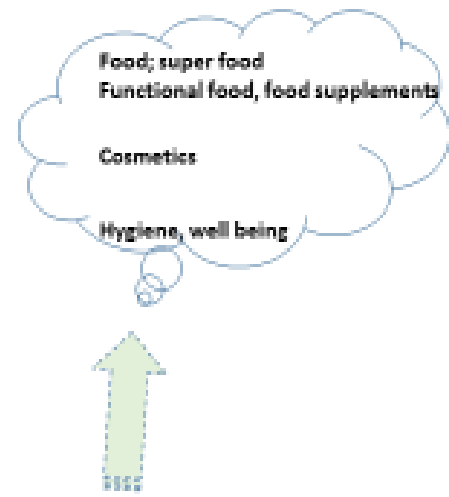
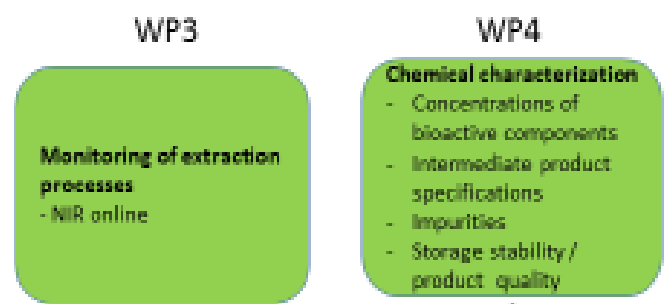
Global blueberry export between 2001 – 2010 has grown from >53 000 t to 113 000 t, value growth from 119 mill. \$ to > 300 mill. \$

1,4€/kg → 4€/kg → 100 €/kg → 3500 €/kg → anthocyanins from bilberries: >>>10 000 €/kg
Bilberry cleaned powder extract
picked

NWFP Industrial manufacturing processes consist of many phases where RD input is needed



WP0 Centria
 WP1 Centria
 WP2 SLU
 WP3 Novia
 WP4 Centria
 WP5 Centria
 WP6 Centria



TRENDS

All demographic groups are interested in **premium products**, rising: women & elderly people, sports

Personalized nutrition based on genetic testing

Online shopping is growing (easily available also from the Nordic) region

Natural colorants

concern about chemicals
ethical consumers
to avoid synthetic chemicals

Snacks, eater-tainment, drinkable meals

Use of powders

Demand for total transparency (from raw materials to final products)



there is a need for both low value refined products (dried berry powder) and high value refined (extracts containing specified quantities of valuable compounds such as anthocyanins/anthocyanidins in bilberries) in final products

Status in Finland

- NWFP are included in the Finnish bioeconomy strategy (2014)
- National NWFP sector report 5/2017
 - Enterprises >750, turnover >300 M€
 - Strengths of NWFP business : **Arctic**, organic, healthy, high concentrations of valuable components
 - Opportunities: export, digitalization, novel product concepts

- Berries
 - Annual crop: 500 – 1000 mill. Kg → 15 mill. Kg utilized by the industry
 - Bilberry 2014 5,9 mill kg (50% organic); 2015 7,6 mill kg
 - 50 % to export (frozen or refined products)



PLENTY OF BIOMASS IS LEFT UNUTILIZED ANNUALLY!

Status of industrial manufacturing

- Many *profitable* medium and large scale enterprises
 - *Business is growing*: particularly in Central Europe, NA, Asian countries (growing middle class)
 - Both cultivated and collected wild plants(contract farmers)
 - Raw material collection/harvesting according to *GAP* (good agricultural practices)
 - Conform to *international standards* (ISO, FDA, etc.) and *GMP* (good manufacturing practices)→ whole value chain traceable, products according to defined specifications
 - Invest in *R&D*

How can European/Nordic/**Arctic** industry compete with Asian enterprises?

- Transparent and traceable manufacturing from raw materials to finished products→ PROOF OF QUALITY NEEDED
- High level quality standards; European quality → **Nordic**→ **Arctic** quality and authenticity! **Organic** and/or **wild**
- Reduction of manufacturing costs: energy

Results expected and benefits for the Arctic region

- **Global market demand surveys and novel product concept examples:**
 - motivates start ups, SME´s, farmers, forest owners in the Arctic region → more jobs, enhanced utilization of our valuable Arctic NWFP
- **Evaluations of green extraction technologies and processes** (RBR, microwave, online etc)
 - Enhanced and more competitive manufacturing technologies → consistent quality
 - Cost efficiency
 - → compatibility with other regions (Asia, Southern Europe)
- **Quality assurance methods**
 - Rapid determination of valuable components in bilberries: SME`s can use/need in marketing and export
 - High **quality** of **Arctic** raw materials and products can be shown → **PREMIUM PRODUCTS** (and higher prices) **from the Arctic region**
 - **Arctic region can be competitive** (if **energy** costs are also cut down)
- **Cross border collaboration**
 - Nordic SME`s could meet the global high demand **together**
 - Nordic RDI collaboration helps SME`s



SME'S need help

- Product labels often include:**
- Specification for active ingredients
 - Clinical tests
 - Made without Wild, organic Standards
 - GMP GAP
 - Geographic region
 - Plant part: root, leave, berry



Vad är Medox?
Medox är ett kosttillskott utvecklat från naturens eget skaffereri med antioxidanter från blåbär (*Vaccinium myrtillus*) och svarta vinbär (*Ribes nigrum*). Antocyaner kallas de blåsvarta färgämnen i blåbär och svarta vinbär. Dessa antocyaner har i medicinsk forskning visat sig vara några av naturens mest effektiva antioxidanter. Medox har sedan 2000 varit utvärderat i kliniska prövningar vid universitet och universitetssjukhus och internationellt.

Kapsel: 80 mg antocyaner från blåbär och svarta vinbär, (majs), vegetabiliska kapslar av cellulosa, citronsyra [E300].

Innehåll: 30 kapslar.

Dosering: 1-2 kapslar dagligen i förebyggande syfte, 2-4 kapslar per dag vid hälsoproblem. Kapslarna sväljs med vatten (inte mjölkprodukter). Rådgör med läkare vid graviditet eller amning. Rekommenderat dagligt intag bör ej överskridas. Bör ej ersätta en varierad kost.

Förvaring: Torrt och svalt. Förvaras oåtkomligt för barn.

Bäst före datum, se förpackningens botten.

Tillverkas av MedPalett AS, Sandnes, Norge.
MedPalett AS, Hanaveien 4-6, 4327 Sandnes, Norge
www.medox.se



Herbs from Siberia

wild

without

Wild, organic



Altai Oblepikha is a famous Siberian berry (also known as Altai sea-buckthorn) which has been used by Siberian locals for centuries to strengthen their hair, revitalize skin and even to heal wounds. Not surprisingly since this small berry is the richest natural source of beta-carotene and is full of rare Omega 3,6,7,9 acids moreover, it also has up to 22 other fatty acids as well as 36 kinds of flavonoids.

Each Natura Siberica product is based on mixtures of unique Siberian herbs which survive -50° C temperatures and severe winds. As a result they possess special qualities: high concentration of vitamins and minerals which are deeply beneficial for the skin. All our products are composed of wild Siberian herbs which strengthen skin and hair to preserve their natural glory.

Based on Siberian Pine oil derivative
Wild harvested Siberian plants
Pure Siberian Oils
No GMO plants were used

Product formulated WITHOUT:
Parabens (methyl, propyl, etc.), Sodium Lauryl Sulfate (SLS), Sodium Laureth Sulfate (SLES), Polyethylene Glycol (PEG), Glycols, Mineral Oils

Natura Siberica aims to bring positive changes in lives of native people of Siberia. We pay premium prices for wild manually harvested herbs and plants in order to support small Siberian tribes. Just by choosing one of our products you are helping Siberian natives, their families and their surrounding communities.

This beautiful oil complex helps to smooth out, thicken damaged hair and to seal split ends. Making it the perfect solution for repairing weak, dyed and lightened hair, as well as hair damaged by chemical treatment. The oil complex protects hair from damage caused by blow-drying and using straightening irons.

Altai Oblepikha Organic Oil helps to produce keratin, which gives hair strength and elasticity, **Moroccan Argan Organic Oil** deeply nourishes and instantly improves hair structure. Being rich in minerals and vitamins, **Pine Nut** and **Wheat Sprout Oils**, it strengthens brittle hair and split ends. As a result hair is left sleek, glossy and delicately scent.

How to use: rub a few drops of oil in your palms, apply to damp clean hair paying special attention to hair ends. Do not rinse, proceed to styling.

Ingredients: Cyclopentasiloxane, Dimethicone, Dimethiconol, Phenyl Trimethicone, Dimethicone Crosspolymer, Argania Spinosa Seed Oil*, Hippophae Rhamnoides Fruit Oil**, Bis-Cetearyl Amodimethicone, Tocopherol, Pinus Sibirica Seed Oil***, Triticum Vulgare Germ Oil**, Retinyl Palmitate, Phospholipids, Glycine Soja Oil, Glycolipids, Glycine Soja Sterols, Pinus Sibirica Seed Oil Polyglyceryl-6 Esters***, Parfum.

(*) Issued from organic agriculture
(**) Wild harvested Siberian plants organic oil
(***) Siberian Pine Oil Derivative

Made in EU
Made under the license of Natura Siberica LTD.
Produced in compliance with ISO 9001 and ISO 22716 (GMP) standards.

Welcome to www.naturasiberica.eu
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Leiva str. 5, 12618 Tallinn, Estonia.
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Plants
and Science.

Discover
plant-powered products
for ultimate results.



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