

Bioeconomy in South Bohemia



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Bioeconomy in South Bohemia

- Region and its economy
- Bad examples of Bioeconomy
- Good examples of Bioeconomy
- Key Success Factors

South Bohemia

The total area of the region is 10,056 km² which is 12.8% of the total area of the Czech Republic

Population is 636,459

the lowest population density in the whole country.

Climate

mild, warm and wet zone

the warmest month is usually July

40-50 days a year above 25 °C



The Capital of South Bohemia – České Budějovice (Budweis)

93.000 inhabitants, district of CB 184.000 inhabitants
founded by the King [Ottokar II of Bohemia](#) in 1265



Today / Before



The Region of South Bohemia - Economy and Employment

- **5%** of the national **GDP**.
- 300 thousand people employed in the region
- **31%** in industry, 13% in trade and 10% in construction sector.

The Region does not rank among key industrial areas of the Czech Republic.

Food and drink processing industries plays a significant role in the region.

Automotive industry, production of machinery and appliances, and also the textile and clothing industries.

Travel industry has become an important sector in the region.

11% of the national agricultural production is produced in the South Bohemian Region- plant production, mostly cereals, oil plants and potatoes.
In animal husbandry, the breeding of **cattle** and **pigs** prevails.

Fishpond cultivation has a long tradition in South Bohemia. Fish husbandry makes up about **50% of the total national production**.

Public sector, administration, health and education

The Region of South Bohemia - Economy and Employment

Food and beverage industry



Automotive industry



BOSCH



The Region of South Bohemia - Economy and Employment

Travel industry, agricultural production and Fishery



The Region of South Bohemia - Economy and Employment



SKUPINA ČEZ

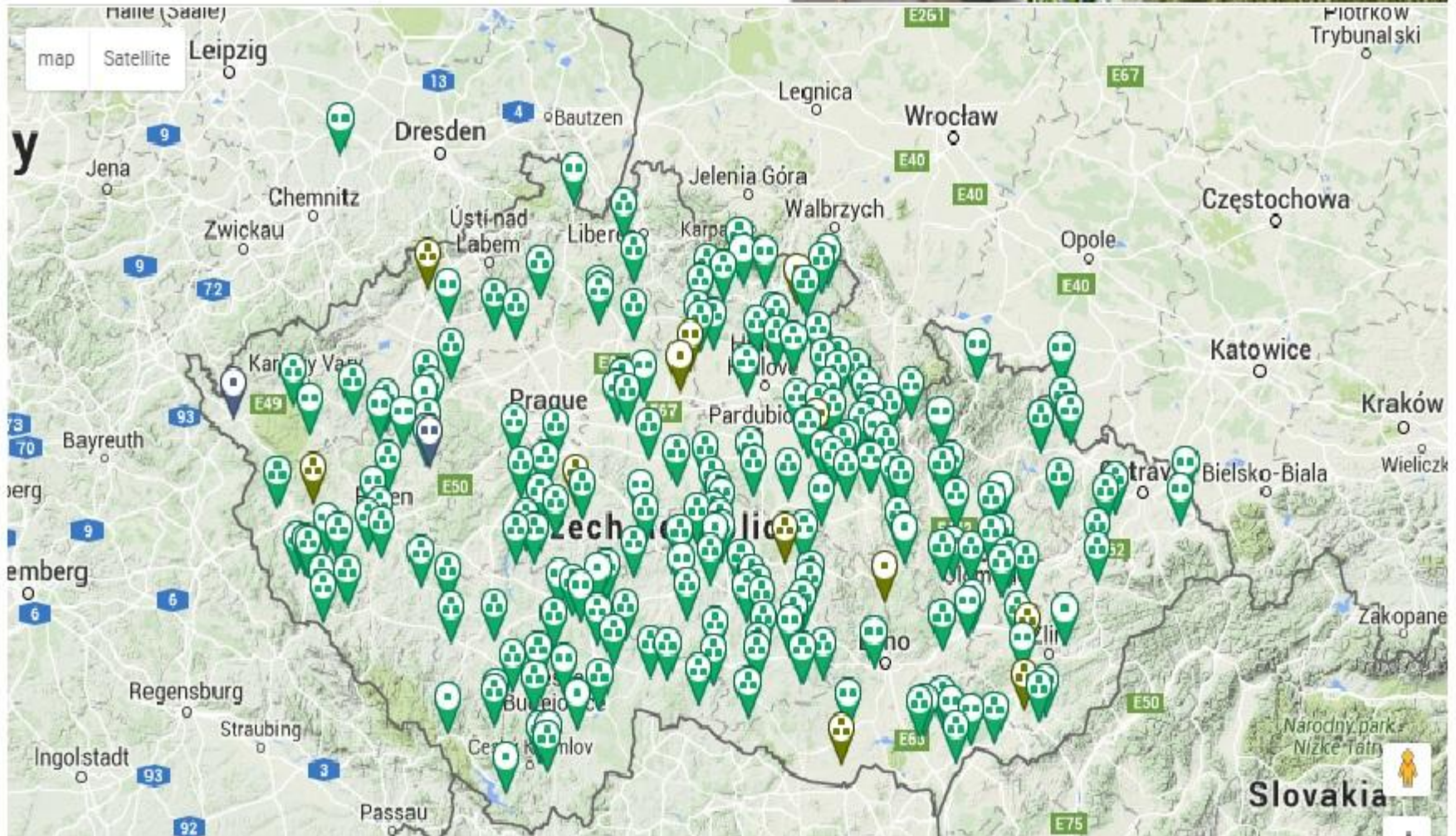


Sociological aspect

*Prague, 3 May (ČTK) - Nearly **three-quarters** of Czechs believe that renewable energy sources (RES) are energy future.*

More than **80** percent of people wishing to become energy self-sufficiency to support households.

MAP - BIOGAS, BIOGAS PLANTS, BIOGAS PLANTS

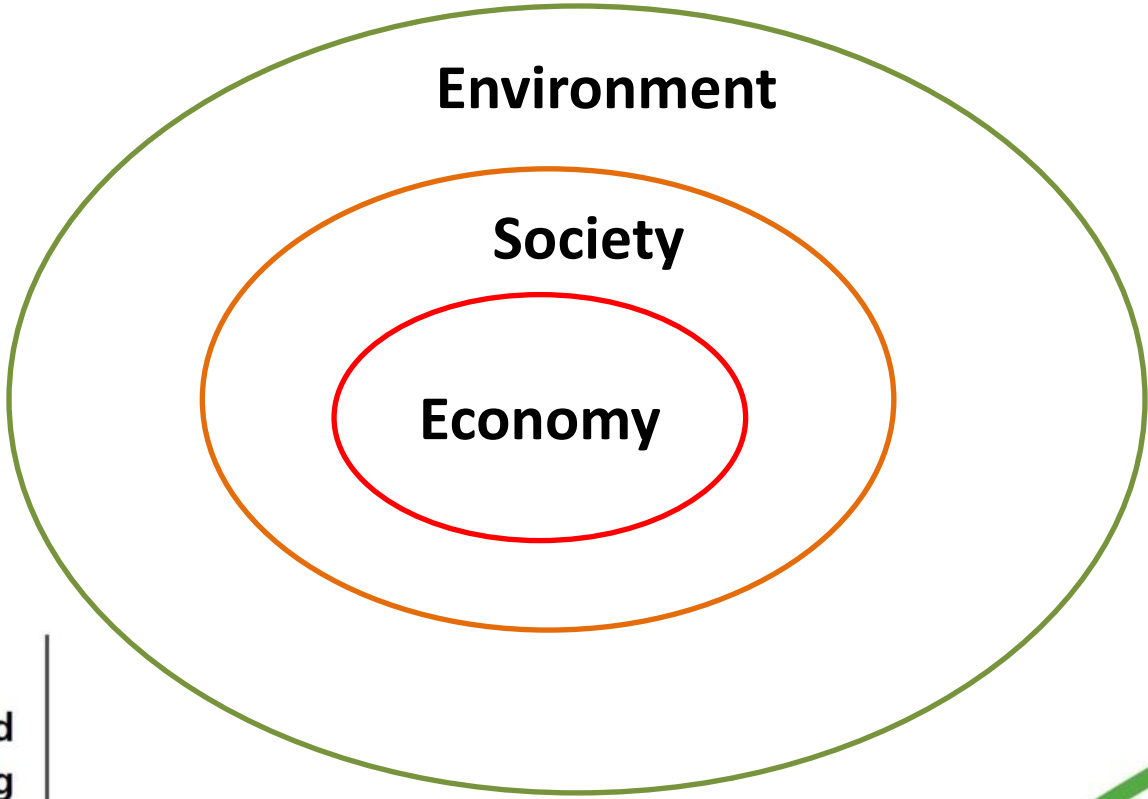


Source: biom.cz

MAP OF PRODUCERS ASH FROM BIOMASS

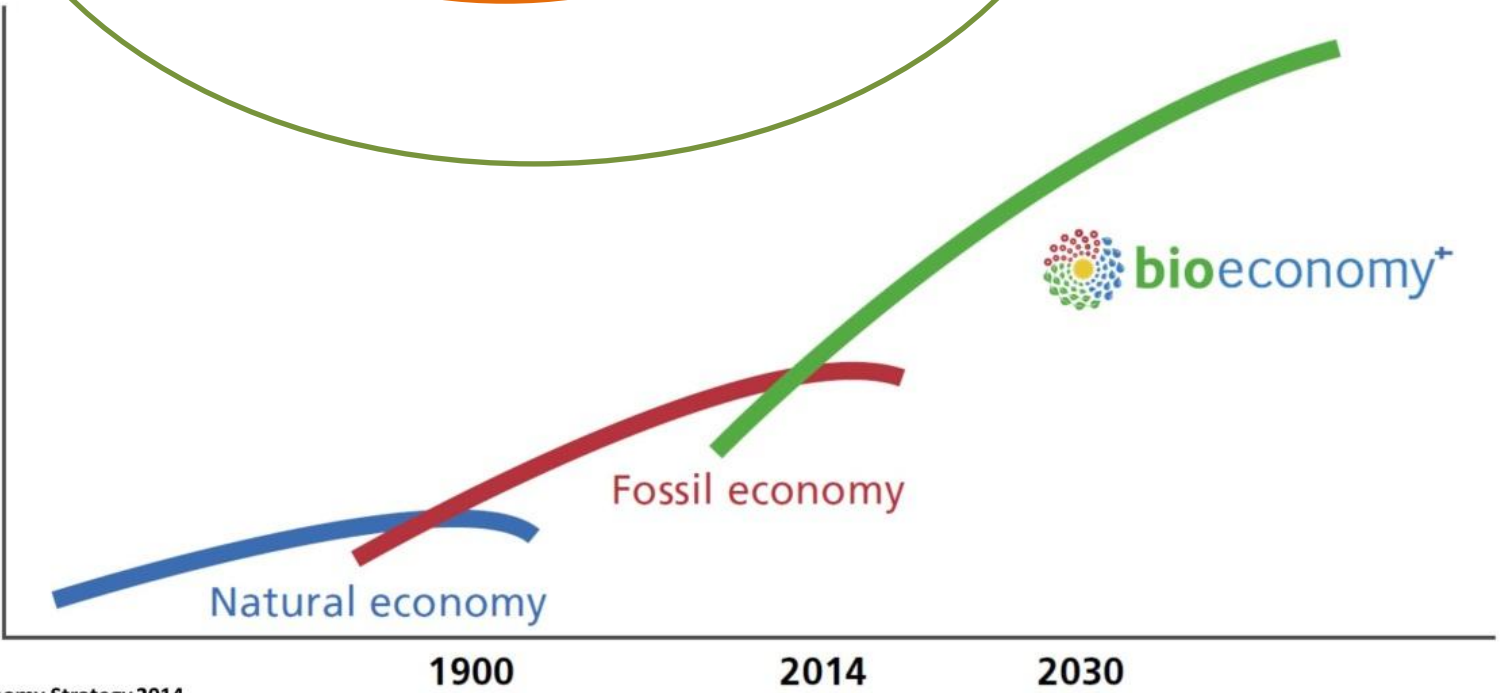


Source: biom.cz



- Jobs
- Food
- Energy

GDP and well-being



Ref: The Finnish Bioeconomy Strategy 2014

Agricultural production and the food production related to this is one of the traditional industries of the national economy.

Fishery

Water Management



Organic farming



Forest Management



Sustainable use of pesticides

Waste management



CYCLIC BIOECONOMY



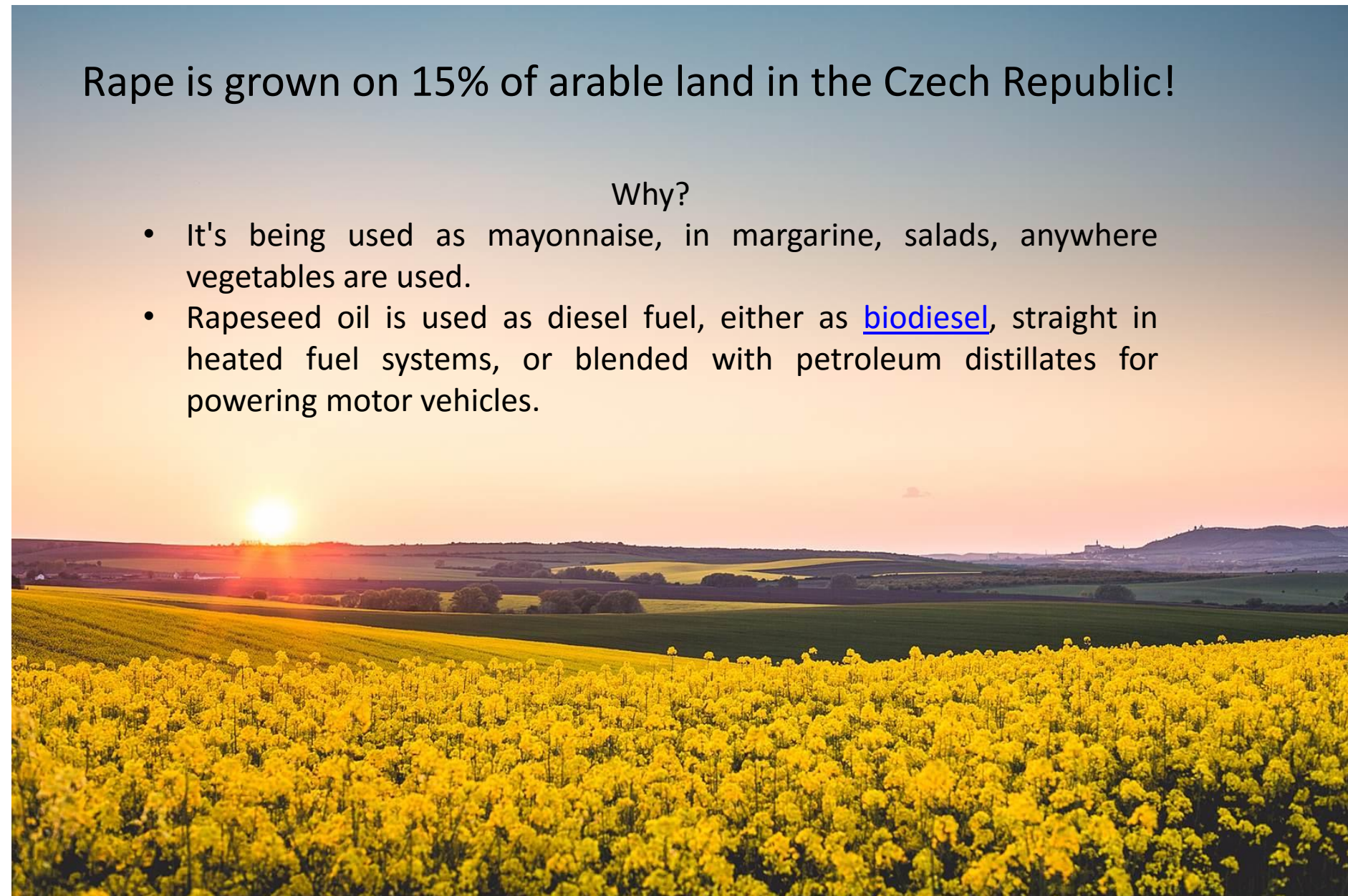
During the so-called solar boom at the turn of the decade, the installed capacity of solar [power plants](#) in the Czech Republic increased from 465 MW at the end of 2009 to 1,959 MW in 2010. The then development of **photovoltaics** raises all sorts of controversy. In the survey, about seven percent of respondents seeing a greater use of [renewable energy sources](#) rather barriers, mostly in terms of high prices and corruption.

Oilseed rape yellow fields

Rape is grown on 15% of arable land in the Czech Republic!

Why?

- It's being used as mayonnaise, in margarine, salads, anywhere vegetables are used.
- Rapeseed oil is used as diesel fuel, either as [biodiesel](#), straight in heated fuel systems, or blended with petroleum distillates for powering motor vehicles.



Top rapeseed producers in millions of [tonnes^{\[35\]}](#)

Country	1965	1975	1985	1995	2000	2005	2007	2009	2011	2012	2013
Canada	0.5	1.8	3.5	6.4	7.2	9.4	9.6	11.8	14.2	15.4	17.9
China	1.1	1.5	5.6	9.8	11.3	13.0	10.5	13.5	13.4	14.0	14.4
India	1.5	2.3	3.1	5.8	5.8	7.6	7.4	7.2	8.2	6.8	7.8
Germany	0.3	0.6	1.2	3.1	3.6	5.0	5.3	6.3	3.9	4.8	5.8
France	0.3	0.5	1.4	2.8	3.5	4.5	4.7	5.6	5.4	5.5	4.4
Australia	<0.007	<0.06	0.1	0.6	1.8	1.4	1.1	1.9	2.4	3.4	4.1
Poland	0.5	0.7	1.1	1.4	1.0	1.4	2.1	2.5	1.9	1.9	2.7
Ukraine	<0.007	<0.06	<0.03	<0.1	0.1	0.3	1.0	1.9	1.4	1.2	2.4
United Kingdom	<0.007	0.06	0.9	1.2	1.2	1.9	2.1	2.0	2.8	2.6	2.1
Czech Republic	0.07	0.1	0.3	0.7	0.8	0.7	1.0	1.1	1.0	1.1	1.4
Russia	N/A	N/A	N/A	0.1	0.1	0.3	0.6	0.7	1.1	1.0	1.4
United States	<0.007	<0.06	<0.03	0.2	0.9	0.7	0.7	0.7	0.7	1.1	0.9

Allergens

Rapeseed oil is one of the oldest vegetable oils, but historically was used in limited quantities due to high levels of erucic acid, which is damaging to [cardiac muscle](#) of animals, and [glucosinolates](#), which made it less nutritious in animal feed. Rapeseed oil can contain up to 54% erucic acid.

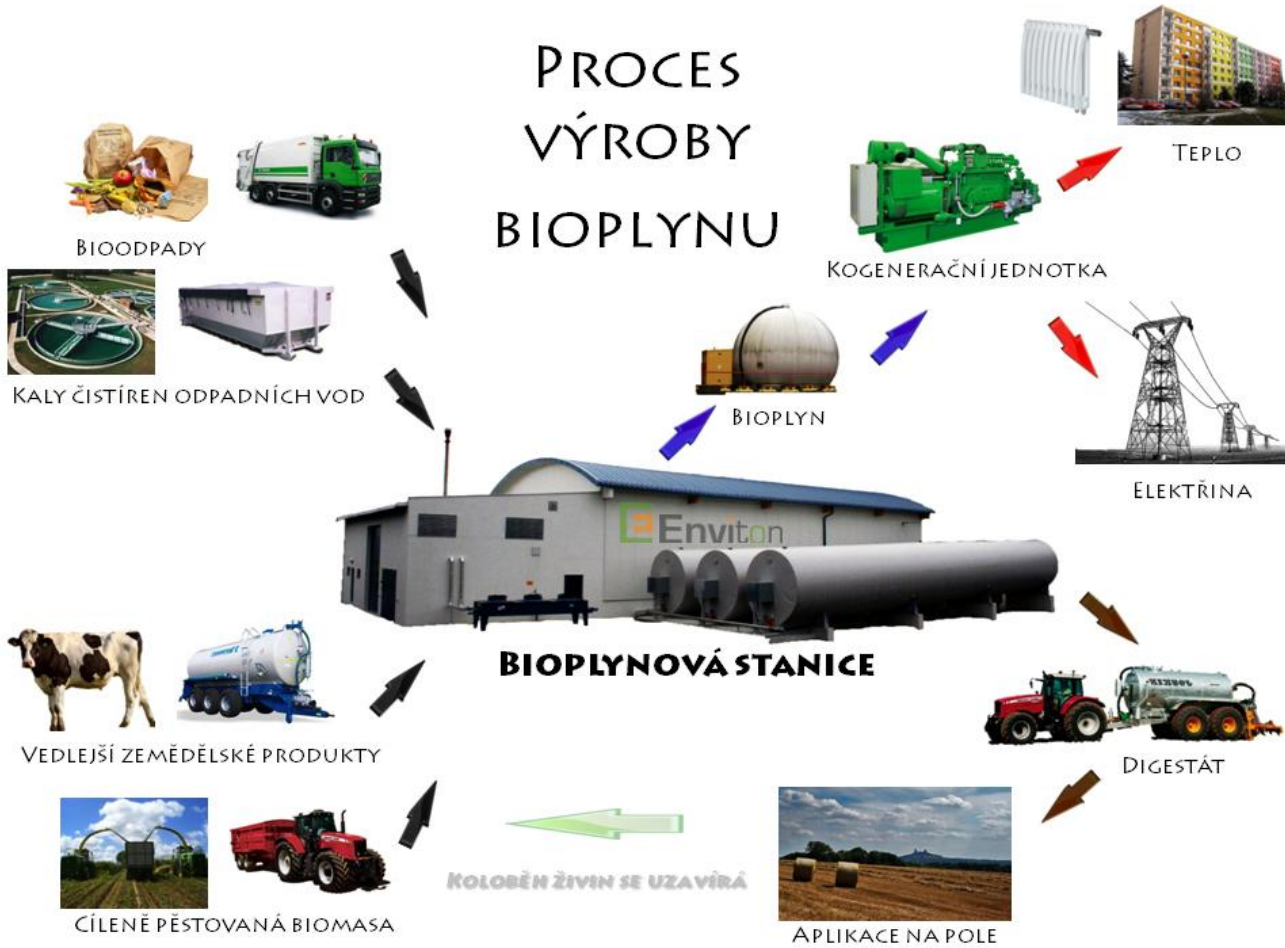
Rapeseed pollen contains known [allergens](#). Whether rape pollen causes [hay fever](#) has not been well established, because rape is an insect-pollinated ([entomophilous](#)) crop, whereas hay fever is usually caused by wind-pollinated plants. The inhalation of oilseed rape dust may cause [asthma](#) in agricultural workers.



Wikipedia.org

Rapeseed is currently grown with high levels of nitrogen-containing **fertilisers**, and the manufacture of these generates [N₂O](#). An estimated 3-5% of nitrogen provided as fertilizer for rapeseed is converted to N₂O

PROCES VÝROBY BIOPLYNU



Production of energy – small sized decentralized energy production units near the place of consumption



Photovoltaics



Grand Valley State University displaying Uni-Solar Thin Film Solar Cells

On the roofs, close to consumption, no fenced areas!!!

Organic solutions to ecological problems -Tourism

Algae in the Lake of Orlik





Bark beetle in Bohemian Forest



www.alamy.com - B7WTYJ



Intensive fish farming



Is it a feasible business

or just torture to animals????



Other business opportunities

- Advanced production of traditional food products – e.g. affinalised cheese
- Nutrition supplements – brewery yeast, **hemp pharmaceuticals**, alga
- Plants for textile – outdoor textile materials, single use materials



tradition in production of textil fibers since middle ages- flax,woole, hemp

South Bohemia is a reaginon with the largest share of oat, hemp and energy crops

„Konopická „ celebration in August

restoration of this tradition

special harvest supper (harvest home)

organized by woman
thanks to woman work on hem
processing



2013-2018

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FP7 – MultiHemp – Multipurpose hemp for industrial bioproducts and biomass

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TRADITION



NEW
BIOCHEMICAL
TECHNOLOGIES

Use synergic effects of cannabis, honey and bee glue, to support treatment of infections of the mammary gland QJ1510047



*Konopická Ve Volarech
Hrají Šumavští Šumaři a ŠUMA BAND*

Zvou svaz žen a Město Volary

V sobotu 16. 8. 2014 v 15.00 vyjde průvod od restaurace Potůček

Vstup na slavnost 20,-Kč, od 19.00 taneční zábava ve Společenském sále vstup 100,-Kč



Key Success Factors

- Promotion and public awareness
- Dedication of politicians, sound and fair legislation
- Involvement of research and development professionals
- Courageous entrepreneurs
- Venture capital financing

WE CAN DO IT!

Thank you for your attention

