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Transformation of rural areas in Czechia 1990-2009

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Czech agriculture till 1989

- Czech agriculture is small in comparison with whole EU, but productivity reached 90% of the EU average
- Specification:
 - Till 1989 98% of production was realized in big coops and state farms
 - High intensity of production, high mechanization and chemization (240 kg NPK/ha in 1988),
 - Czechoslovakia was relatively well selfsupplied (agricultural export – import was balanced)
 - Standard of living in rural areas was comparable with towns
 - Specific forms of all agro-complex

Czech agriculture till 1989

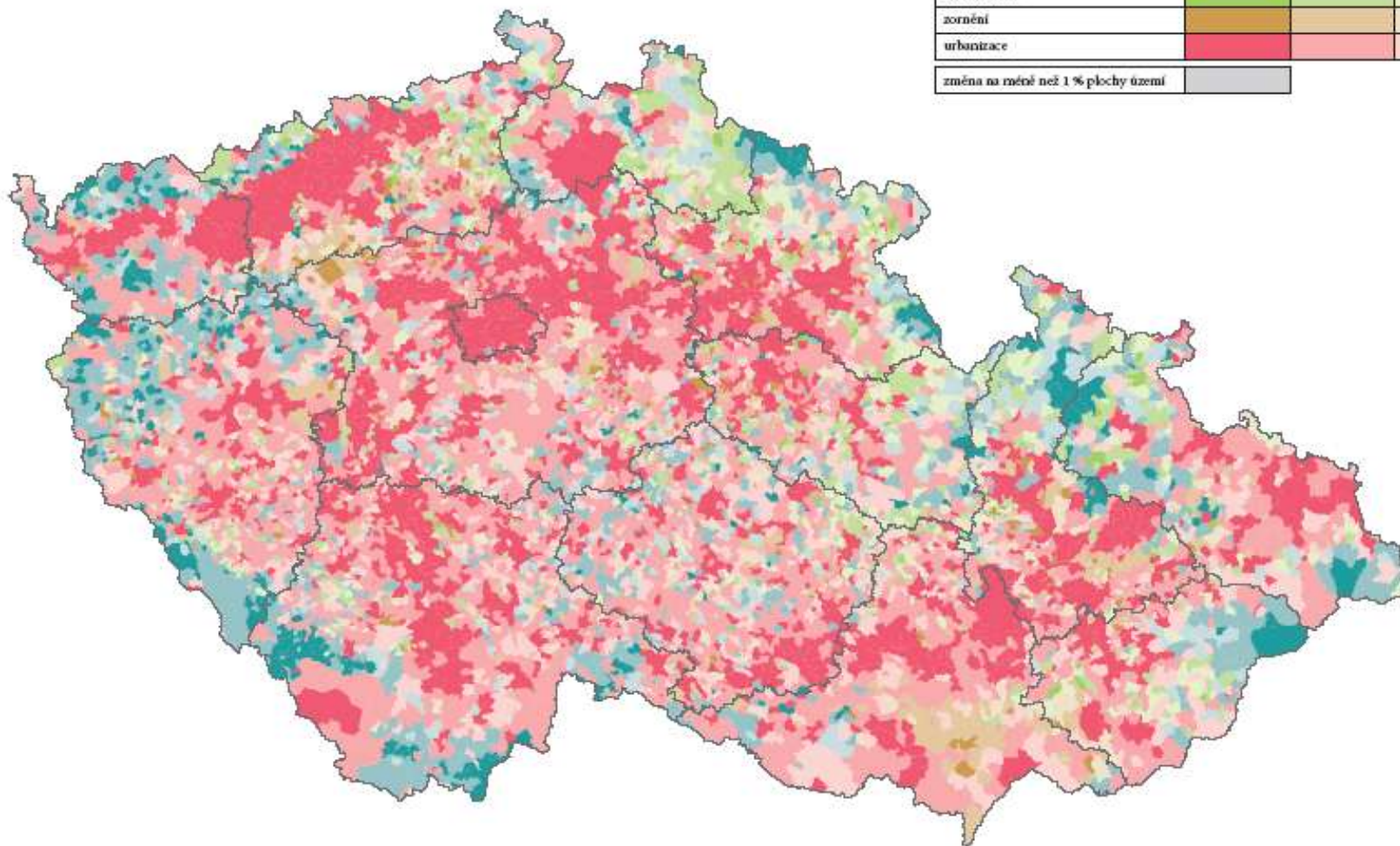
- Big state support of all socialist agrounits
- Many of coops and state farms had high level of mechanization
- Relatively high share of non agricultural activity as in state farms as in socialist cooperatives (construction, montage etc.) giving to many of them welcome financial support
- Bad care for environment in rural areas
- New face of villages (machinery workshop, big stables, storage houses, yards, garages etc.)
- Production function prevailed in this time
- Lost of responsibility because all activities were specialized and realized by specialists
- Well organized middle and university level education for labor forces
- Creation of well organized agricultural lobby joined with local, regional and state administration

Principal landscape processes in the period 1948-1990

ID_866 Hlavní procesy změny krajiny (1948-1990)

doc. RNDr. Ivan Bičík, CSc.; RNDr. Lucie Kupková, Ph.D.

	vysoká míra	střední míra	nízká míra
zalesňování			
zatravňování			
zornění			
urbanizace			
změna na méně než 1 % plochy území			



1 : 2 000 000



Zobrazované jednotky: ZÚJ (základní územní jednotky)

Zdroj dat: Databáze LUCC Czechia PřF UK v Praze

First period of the transformation 1989-1994 I

- **Restitutions** of agricultural property back to old owners or their children/grandchildren represented biggest realized transformational process (some 3 thousand of big land users in totality was changed by restitutions to 3,5 millions of new owners: restituent and privateers). In this period was realized some 75% of all asked individual restitutions;
- Very low share of restituent of land begun to farm
- **Transformation of totalitarian cooperatives** (Unified agricultural cooperatives were changed on the **cooperatives of owners**) after agreement between old management of cooperatives and restituent;
- Privatization of state farms and other agricultural firms owned by state was realized by **privatization projects**; first collapses of new private farms. Big hidden corruption in process of agricultural privatization;
- All **agricultural support from socialist period was abolished !!** (big lost for farms in worse natural condition; mechanization and constructional units in big farms were also privatized – lost of buffer in farm economy realized earlier by nonagricultural activity etc.)

First period of transformation

1989-1994 II

- **Price shock** 1990-1991 of food products, lost of export, and rapid decrease of intensity in all Czech agriculture;
- Using of chemicals decreased to the fifth of the level of the year 1988!! (pure **NPK from 240 to 40 kg in 1992**);
- Decrease of employment in the agricultural sector: **1989 = 600 000**,
2004 = 200 000 employees
2010 = 180 000;
- No problem in food supplying of Czechia, **production and consumption of food decreased** significantly;
- Big changes in the structure of food products consumption
- **Restructuralization of agro-complex**; structure and territorial differentiation in agricultural production and regional organization of the food industry begun;
- **Lower intensity of agriculture** influenced better care and controlling for environment, creation of new preserved areas;
- New owners are having interest to control own property;
- **New social stratification in villages and rural space**;

Agrobrownfields - abandoned stables and other big houses of state farms and coops especially in worse natural condition - **problem of many villages**



Second period of transformation (1995 - 2004) I

- **Creation of special state funds supporting only non-agricultural activity and projects of farms (cutting meadows, care for environment, reconstruction of the ponds and natural banks of streams, afforestation of agricultural land, grassification etc.)**
- **The new territorial structure of agriculture and food industry, (abolishing of the huge food industry plants created in socialist times in different policy and big state support)**
- **Increasing role of EU agrarian policy and import of some products subsidized from EU ceased in some seasons
problems with consumption of home products as in Czechia as in EU markets (pork meat, vegetables, fruits, wine etc.)**
- **Intensification of suburbanization processes in housing, services
and storing, big changes in land use in the metropolitan areas, relatively big size of agricultural land was abandoned**

**Middle Bohemia new wilderness and rape seed (2008);
new wilderness has in Czechia ca 5 % of territory**



Typical process in rural landscape of Czechia – grassification of arable land started on the end of last century, when state farms lost support from the state. On horizon is abandoned arable land with 50 years old forest – after II. world war were moved out Germans and landscape started be more afforested.



Second period of transformation (1995-2004) II

- Different structure of owners and users of agricultural land. Most of restituents did not start to use restituted land but they rented land. Price for **renting or selling 1ha was only ca 5% of the EU average** in this time;
- There is bad care in land use evidence in cadastral office (responsibility of owner) - Czechia had in 2003 some **10% of arable land out of use** which was in socialist time unknown; process of grassification is substantial
- Finishing of the restitutional process till 2004 - we have now **3,5 mil. of new land owners**. But only some thousand started to farm. Some hundred of individual asks are not yet solved
- **State owned in 2008 some 18%** of the agricultural land (especially in frontier regions earlier settled by Czech Germans);
- The agricultural production was composed from ca 53% animal production (earlier almost 60%), share of cereals on rough agricultural production is ca 50%, bigger share of technical plants, decrease of sugar beet, potatoes, and forage in arable land. Milk and

Exotic animals- buffaloes, 4 times higher price of meat, better surviving in worse natural conditions



Second period of transformation (1995-2004) III

- Agriculture had the **highest productivity (90%)** in the year of joining EU in comparison with other branches of the Czech economy;
- **Total different is structure of owners and users of land** (most of farm are using hundred hectares, but most of this land is rented);
- The areas with limited economic activities were increased on ca **20% of all state territory** (national parks, preserved landscape areas, natural reservations, biospheric areas, regions with protection of ground water etc.);
- **Grassing up and afforestation** were typical processes of landscape changes (ca 65% of all cadastres are characterized by one of those processes); Big restructuralization of farming generally as regionally;
- New functions are giving to **rural areas** and they started be **multifunctional** (habitation, recreation, environmental protection, production, water and forest economy etc.);

New functions of countryside in inner periphery (creation of new second houses, southernly of Prague 2006)



Further new function of rural areas in Czechia



Privatization of state farm brought new quality – wellness and sport center in Martinice (Middle Bohemia)

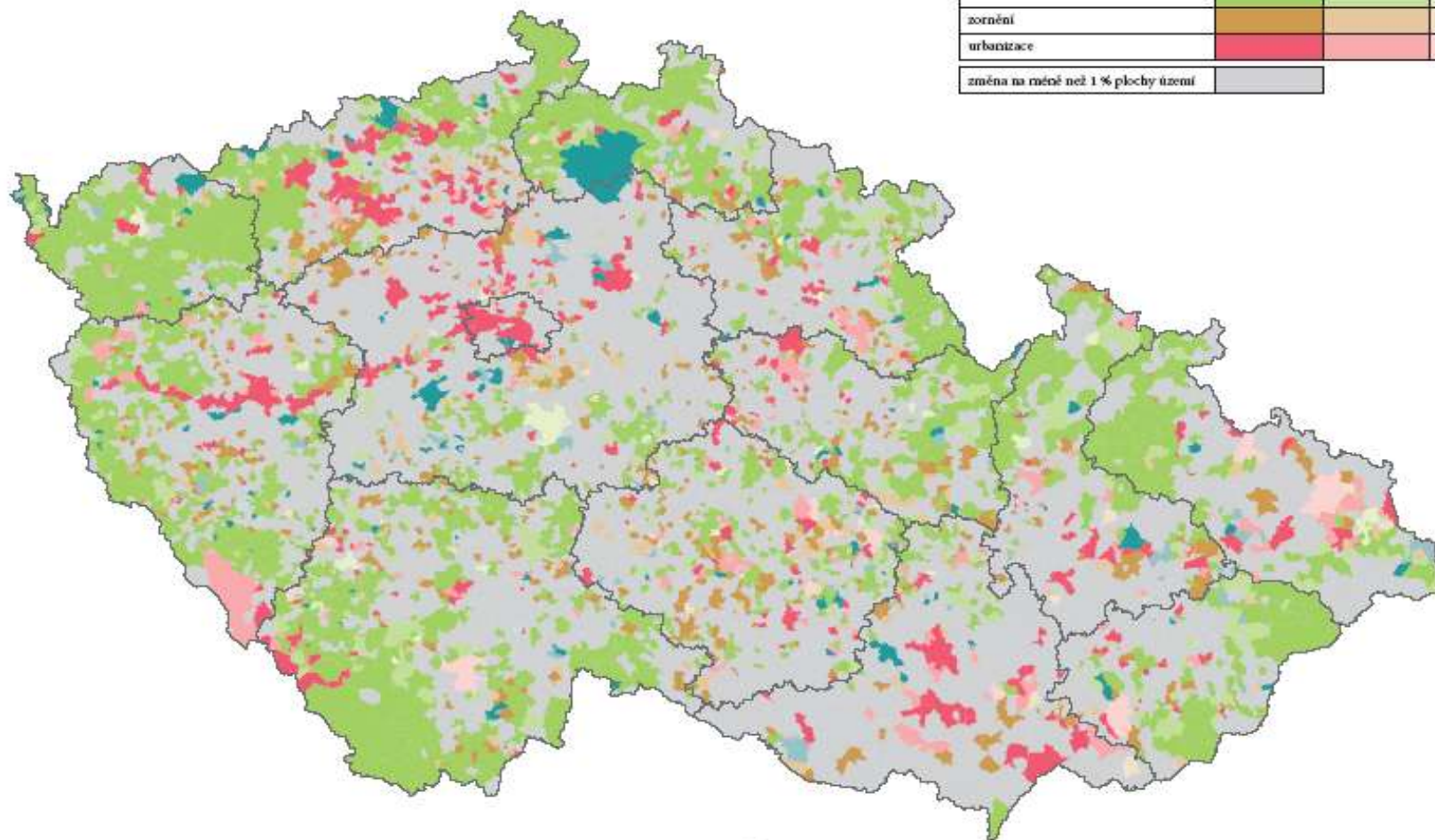


Principal landscape processes in the period 1990-2000

ID_867 Hlavní procesy změny krajiny (1990–2000)

doc. RNDr. Ivan Bičík, CSc.; RNDr. Lucie Kupková, Ph.D.

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Typology of the macrostructural categories development

Agricultural land, Forest, Other areas

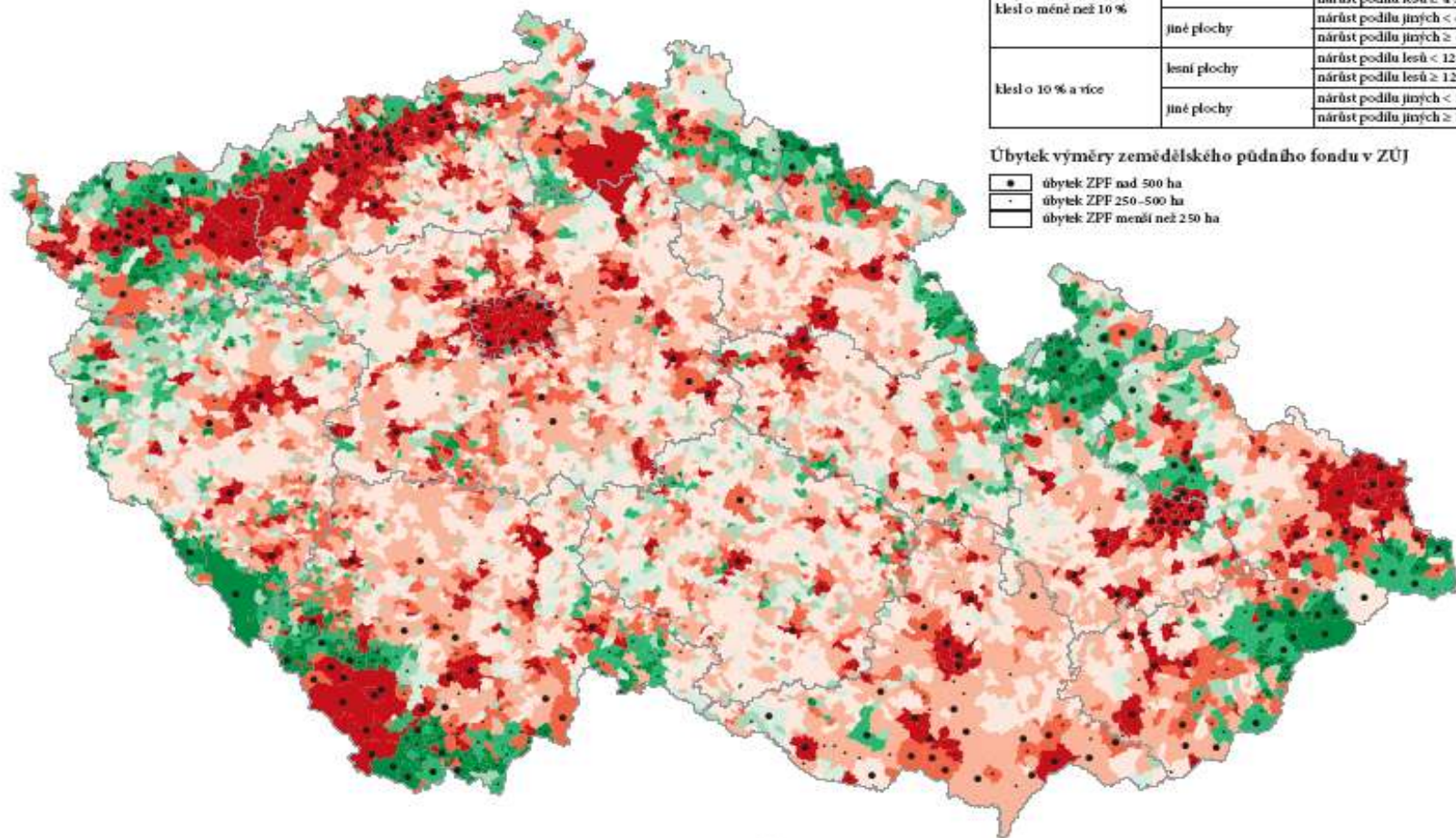
(+ increase of the size, - decrease of the size)

	1845 – 1948			1948–1990			1990 2000		
TYPE	number BTU	% BTU	% area	number BTU	% BTU	% area	number BTU	% BTU	% area
<i>Hlučínsko</i>	18	0,20%	0,33%						
+++	3	0,03%	0,01%	1	0,01%	0,00%	141	1,58%	0,69%
++-	272	3,06%	2,53%	7	0,08%	0,01%	1 904	21,39%	19,03%
+-+	1 608	18,06%	16,64%	12	0,13%	0,07%	490	5,50%	5,30%
+- -	721	8,10%	7,80%	2	0,02%	0,00%	1 234	13,86%	11,48%
-++	4 053	45,52%	46,64%	8 062	90,55%	89,84%	2 543	28,56%	30,03%
-+-	1 286	14,44%	13,20%	47	0,53%	0,42%	905	10,17%	12,00%
--+	942	10,58%	12,85%	772	8,67%	9,64%	1 686	18,94%	21,48%
Total number of BTU	8 903			8 903			8 903		

Change of land use 1948-2000. Types of changes.

ID_863 Změna využití krajiny (1948–2000)

RNDr. Lucie Kupková, Ph.D.; doc. RNDr. Ivan Bičík, CSc.



Typy změn

podíl ZPF	větší relativní nárůst	míra nárůstu podílu	barva
stoupá, nebo zůstal stejný			
klesá o méně než 10 %	lesní plochy	nárůst podílu lesů < 4 %	
		nárůst podílu lesů ≥ 4 %	
	jiné plochy	nárůst podílu jiných < 4 %	
		nárůst podílu jiných ≥ 4 %	
klesá o 10 % a více	lesní plochy	nárůst podílu lesů < 12 %	
		nárůst podílu lesů ≥ 12 %	
	jiné plochy	nárůst podílu jiných < 12 %	
		nárůst podílu jiných ≥ 12 %	

Úbytek výměry zemědělského půdního fondu v ZÚJ

●	úbytek ZPF nad 500 ha
○	úbytek ZPF 250–500 ha
□	úbytek ZPF menší než 250 ha

1 : 2 000 000



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*Pozn.: rozloha ZÚJ (základní územní jednotky) = ZPF + lesní plochy + jiné plochy
ZPF (zemědělský půdní fond) = orná půda + trvalé kultury + trvalé travní porosty
jiné plochy = vodní plochy + zastavěné plochy + ostatní plochy
Porovnání stavů 2000 vůči roku 1948.
V případech, že relativní nárůst lesů a jiných ploch byl signifikantní (typicky se celkem 4 ZÚJ),
o zařazení do typu rozhoduje větší absolutní nárůst výměry.*

Third period of transformation (2004- 2012)

- In 2003 was reached the highest share of fallow. Main reason was **waiting for joining the EU and following subsidies**. Today fallow is ca 3-4 % of arable land;
- In 2005 Czech farmers could obtain **only 25% of the subsidies** given to farms in old 15 EU members countries - the reason is lower total expenditure (renting or buying land etc.); In 2010 year this amount reached ca 65 % of amount given for the same activity in old EU members
- Farmers can obtain in 2006 year only **33% (25 + 8%=** each further year) amount of giving old members of the EU; Czech government could add maximally the same sum of subsidies;
- Bigger **influence of the EU market** of agricultural product (as processes of??? kg/ha of arable land
- Return of the villages society back to structures as was in 1948, bigger producers are relatively rich and rest of people is poor, especially in regions with deeper **restructuralization of economy**

Third period of transformation (2004- 2012) II.

- Some 3% of EAP of the Czechia are employed in agriculture, forestry and fish industry, but sum of all Czech agrocomplex is some 15% EAP;
- Continuation of eco food production; but only 1,5% bioproducts are used in Czech families, most of bioproducts are exported;
- Agricultural and arable land size are decreasing; some years ago was expected until 2012 only 36% of the Czech territory as arable land - decrease some 10-12 % of the arable land area from 2000; Is it real idea looking on the world prices of food products and their perspectives?
- Movement on the land market; effort of big managers to buy agricultural land to create own basic food production for industry and market chains;
- Continuation of suburban activities, creation of new suburbs in the agricultural areas, new housing, trading and storing areas (big chance for corruption especially in the land owned by state or by municipalities);
- Solar electric power station – huge problem of last two years, support for the pure electricity was given too big!
- How to continue in agrarian policy in the EU and in Czechia? Multifunctional

- Struktura využití a vlastnictví půdy v Česku

Fourth period of transformation (2012 -)

- **Free market with agricultural land**; special agreement between Czechia and the EU will finish in 2012 and foreigners will obtain chance to buy land in Czechia;
- New agro-complex structure will be step by step stabilized
- **Stabilization of new agro complex**; there will be applied the same rules for all farmers in the EU; most of farms in Czechia will be private firms (share holding companies); some part of farmers activity will be realized in nonagricultural activities partly supported by government (care for rural ways, care for afforestation, care for environment, care for ponds and stream sides etc.);
- **Structure of owners (3,5 milion) will be deeply changed, number will be lower, big land properties will create; contemporary problem of land concentration; state prepared big project complex parcels unification**
- Will come some bigger amount of **individual farmers from abroad??**;
- New EU agrarian policy in action??
- **Is observed long term development of land use in Czechia with proclaimed policy – multifunctional landscape???**

Consequences of transformational processes on land use structure development in Czechia

- Big change was realized on the end of 19th century - **end of extending agricultural land and decrease of forest areas**
- Socialization after 1948 influenced big lost of arable and agricultural land (**18 % and 20 %** in the period 1948 – 1990)
- Transformational processes partly copied earlier started in EU states
- Transformational processes started also new changes earlier in Czechia very weak or unknown: Creation of **bigger regions with similar land use structure and its development**:
 - Regions characterized by increase of **agglomeration and suburbs** size with big loose of agricultural land
 - Regions with big share of forests and grasslands and their increase in last 20 years (**border areas and inner periphery**)
 - Regions with specific function – intensive agriculture (especially in **lowlands** out of increased agglomerations)
 - Regions with special **ecological functions** -(approximately 20 % of Czechia territory)



Thank you for attention