



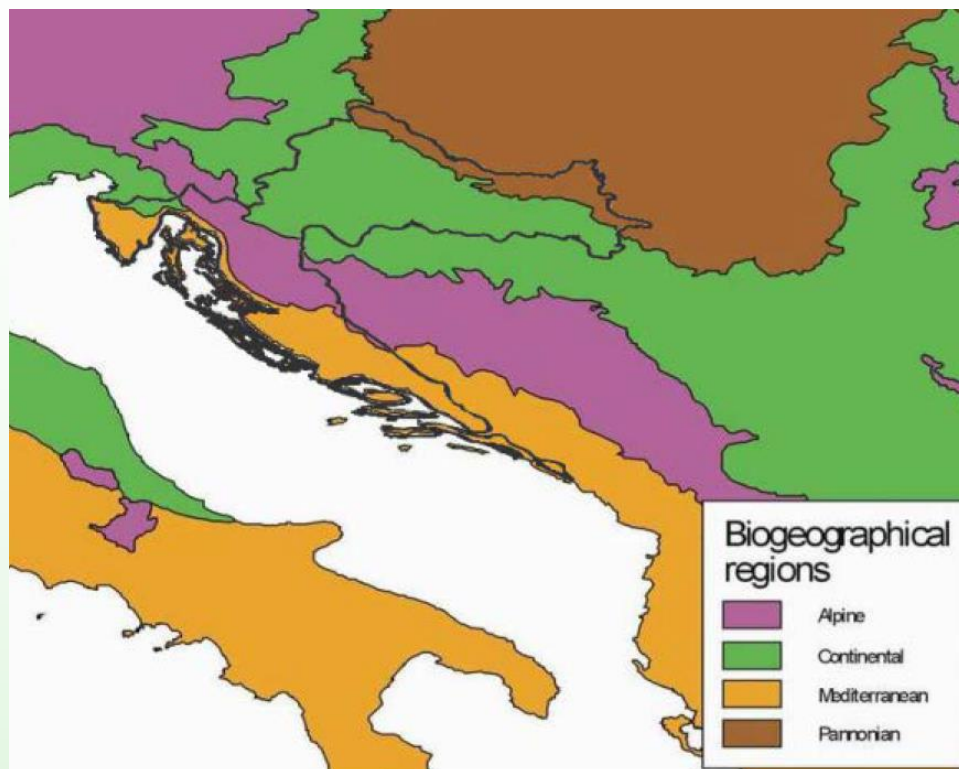
Development of legal framework for SRC in Croatia

Final Workshop of the EU projects SRCplus and SUCELLOG
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Background (1)



Source: Lovrić & Lovrić, 2013

- Forests and forest land - 47%
- Agricultural land – 47.6
- Water surfaces – 1.6%
- Artificial surfaces - 3.6 %

Source: *Izvešće o stanju u prostoru* (2012.)

- NUTS 2 – Continental and Adriatic Croatia (from 01.01. 2013)
- NUTS 3 - 20 counties + city of Zagreb

Background (2) - forests and forest land

Total area 2,688,687 ha

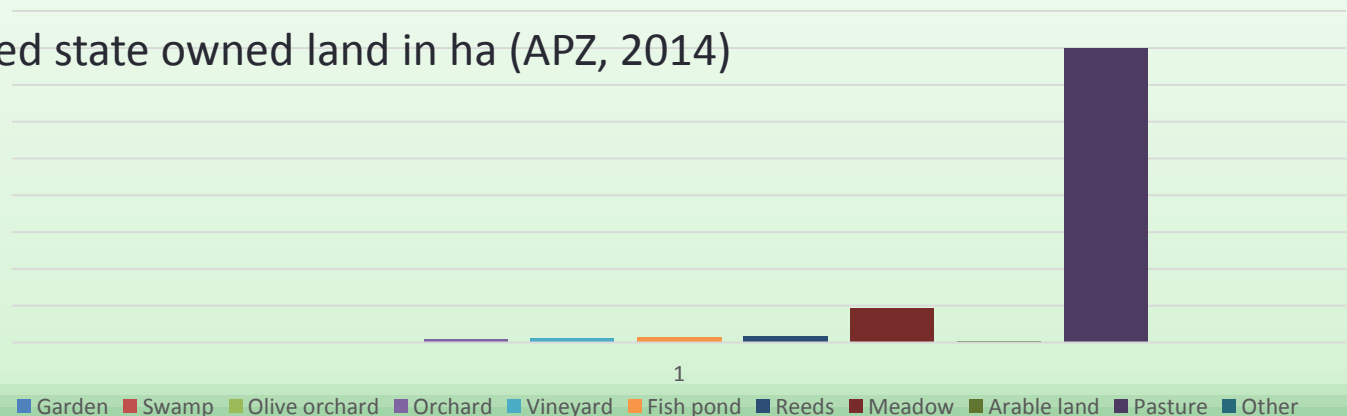
Ownership:

- 75% state-owned managed by **Croatian Forests Ltd** (95% have management plans)
- 3% state owned managed by other legal entity
- 22% privately owned (7% have management plants; average parcel size < 0.5 ha)

Background (3) - agricultural land

- 2,695,037 ha agricultural land in Croatia (AZP)
- Ownership: Private – 67 %; State - 33 %
- State owned agricultural land
 - 738,125.52 ha (Agency for Agricultural land)
 - PŠ (agri-forest): 399,639.53 ha
 - Arable: 261,961.63 ha
- 63% of state owned agricultural land available for usage (mostly in Adriatic Croatia) (AZP)

Categories of unused state owned land in ha (APZ, 2014)

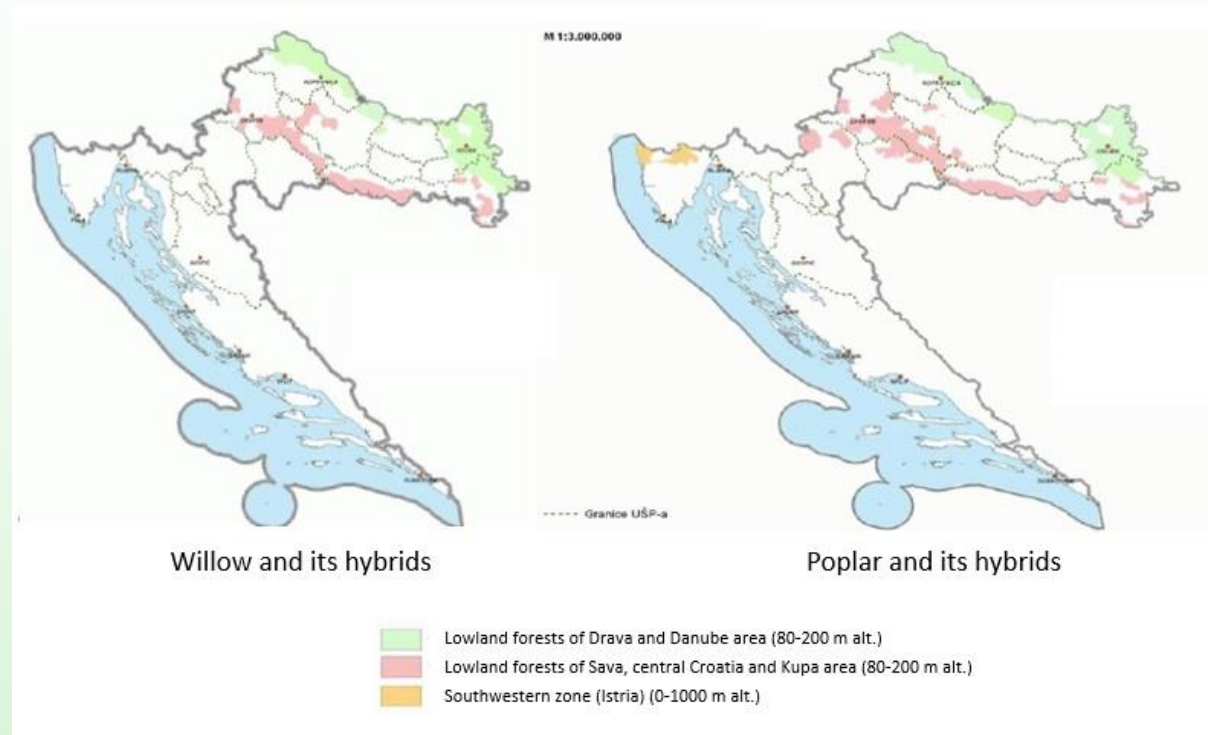


SRC in Croatia

- Study from 2011 (Kajba et al.) provides estimation of theoretical and technical potential of woody SRC in Croatia
- The study identified a total of 282,500 ha of land suitable for SRC production with technical potential for energy production of 60 PJ.
 - 46.850 ha of forest area suitable for energy crops
 - 235.650 ha of agricultural areas with moderately suitable soils and limited soil suitability

SRC in Croatia

- Poplars and willows are the most tested and most promising species in Croatia which naturally grow in certain parts of Croatia and are used for reforestation and afforestation.



SRC in Croatia 2014-2017

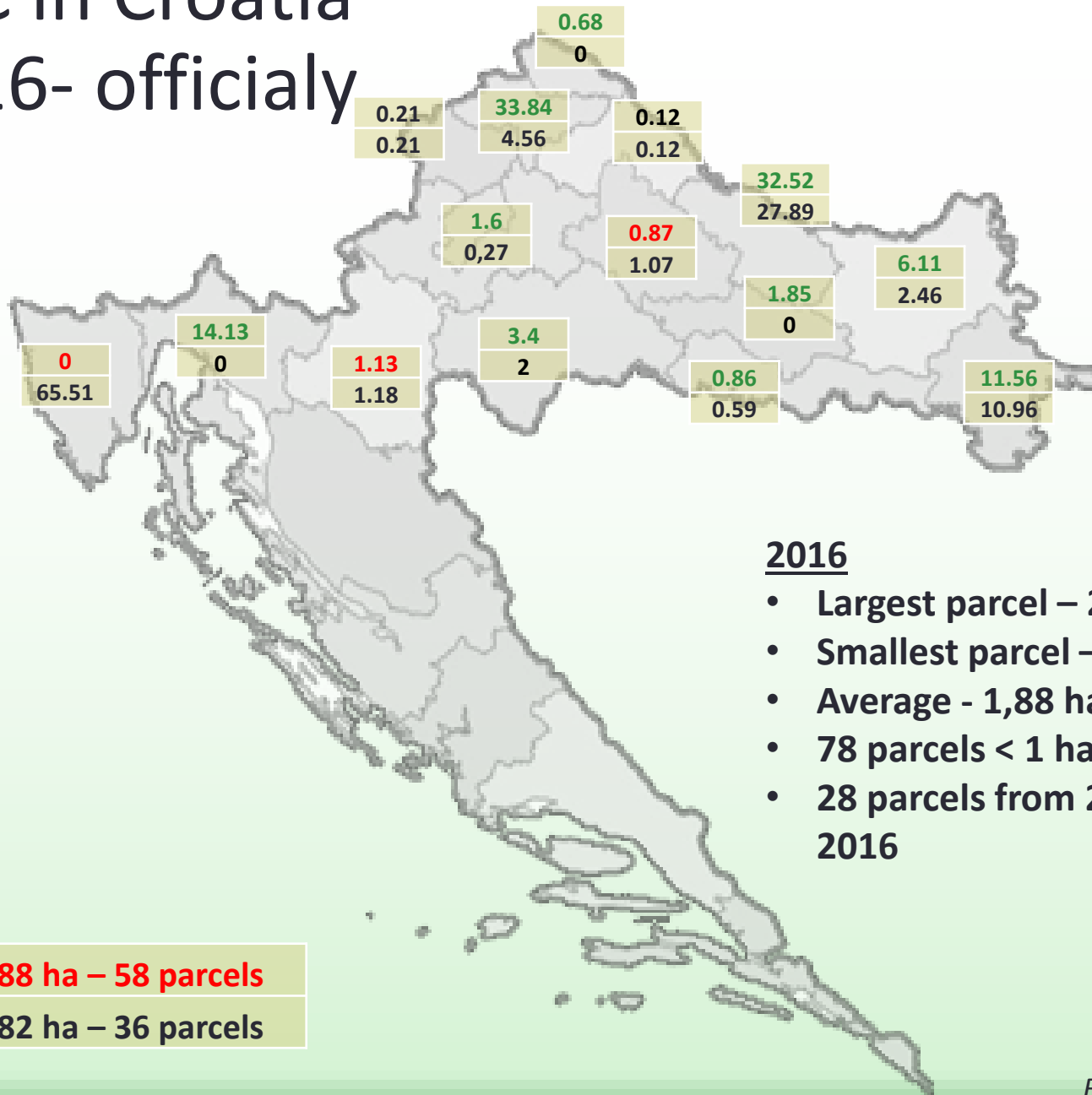
- In 2011, there were more than 16,000 ha of willow and 20,000 ha of poplar (indigenous and planted), mostly in long rotations 20-30 years, for industrial wood (Source: Croatian Poplar Commission, 2012)
- Experimental trials on forest land by Croatian Forests Ltd and Faculty of Forestry, University of Zagreb

Species	Ha (2014)	Ha (2017)	Location
<i>Populus sp.</i>	25,50	25	Osijek –Baranja county
<i>Robinia pseudocacia</i>	67.84	59,09	42 % Osijek –Baranja county, 58% Lika – Senj county
<i>Salix</i>	0.5	-	Osijek –Baranja county

SRC in Croatia 2014-2017

- Ordinance on enforcement of direct payment program for agriculture and IAKS measures of rural development for 2016 (NN 20/16, 39/2016, 91/2016) lists species eligible for direct payment in agriculture.
- **These area:** *Alnus glutinosa*, *Betula sp.*, *Carpinus sp.*, *Castanea*, *Fraxinus*, *Populus*, *Robinia pseudocacia*, *Salix sp.* , with maximum harvest cycle of 8 years.
- Is no mineral fertilisers and no chemical pest control are applied, than these hectares are also eligible for green payments in agriculture.
- The hectares under SRC need to be registered in ARKOD system for evidence of agricultural land usage (code 430) and good agricultural and environmental practice needs to be applied.

SRC in Croatia 2016- officialy



2016 ha

2015 ha

2016

- Largest parcel – 25 ha
- Smallest parcel – 0,06 ha
- Average - 1,88 ha
- 78 parcels < 1 ha
- 28 parcels from 2015 also reported in 2016

108.88 ha – 58 parcels

116.82 ha – 36 parcels

SRC in ARKOD



Information on the parcels are received on the base of farmer statement, and with help of programing support that enables photointerpretation of agriculture surfaces on DOF and determination of ARKOD parcel borders.

Law on woody short rotation coppice

- Under development by the Ministry of Agriculture (Working group on SRC)
- Draft publicly available for comments from 14.06 – 01.07.2016
- Based on experience from SRCplus project, EIHP provided comments and suggestions to the Ministry

Law on woody short rotation coppice

Main aims

- Socio-economic and environmental sustainability
- Biomass production in line with Energy strategy (2009)
- Focus on marginal land of low quality not suitable for agriculture or other, more valuable, forest species
- Development of SRC based on scientific acceptance and with no negative effects on environment

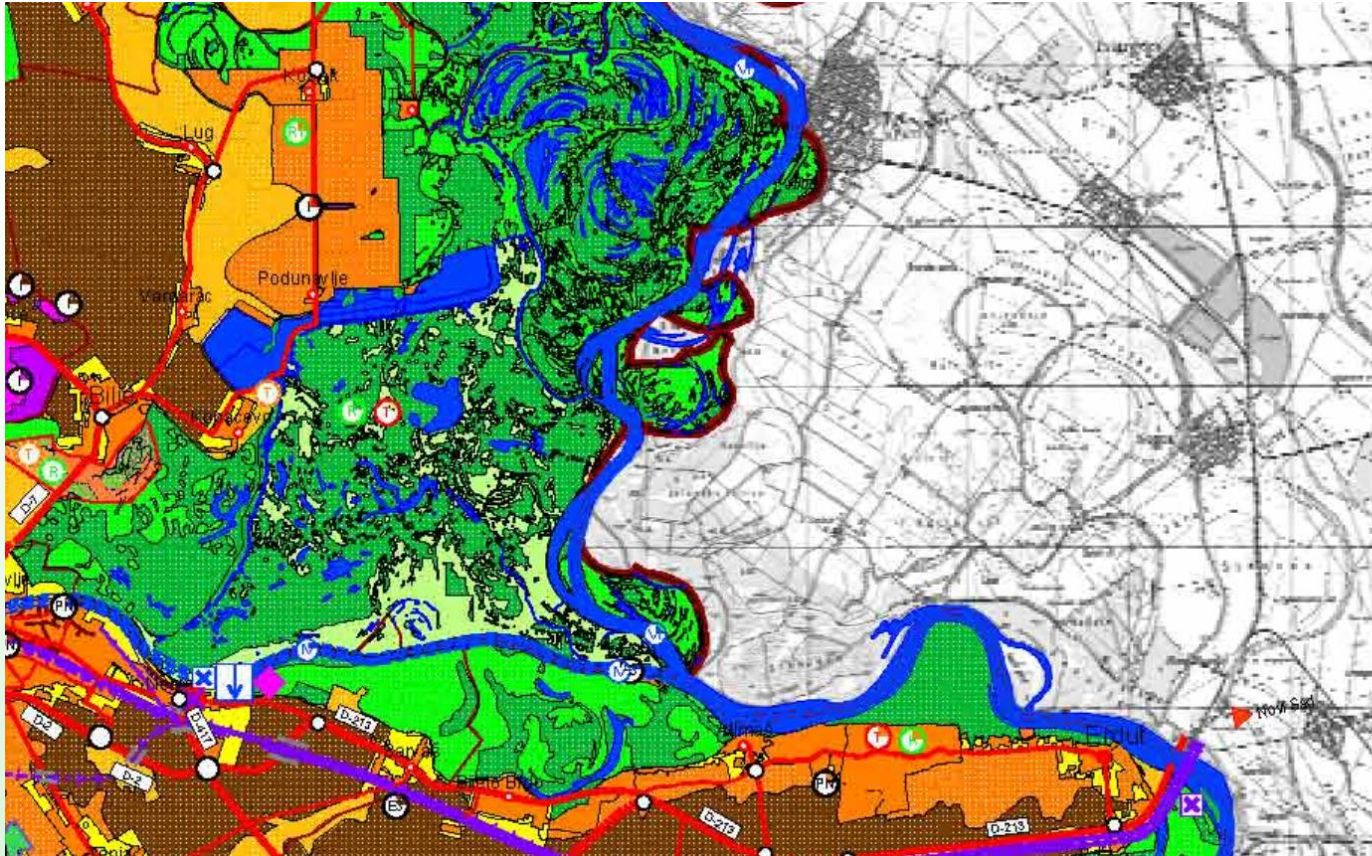
Law on woody short rotation coppice

- SRC species are not defined within the Proposal for the Law. This will be done later on by an ordinance.
- SRC can be grown on following types of land
 - 1) forest land that doesn't serve its purpose
 - 2) forest land if this is indicated in forest management plans
 - 3) agricultural land evaluated as other agricultural land (PŠ) with sizes from 1-5 ha
- Parcels need to be recorded in SRC registry
- Separate inspections for forest land and agriculture land

Major questions

- Why to limit SRC only to PŠ category of land?
- What is exactly PŠ category, and how it is related to marginal land?
- Which types of PŠ can be used for SRC from ecological (soil, climate...) and legal point of view (protected areas).
- How will a farmer know if he is allowed to plant on certain parcels?
- Why to set the limit for the smallest size of plantation?
- What is the overall goal of SRC development?

PŠ category of soil

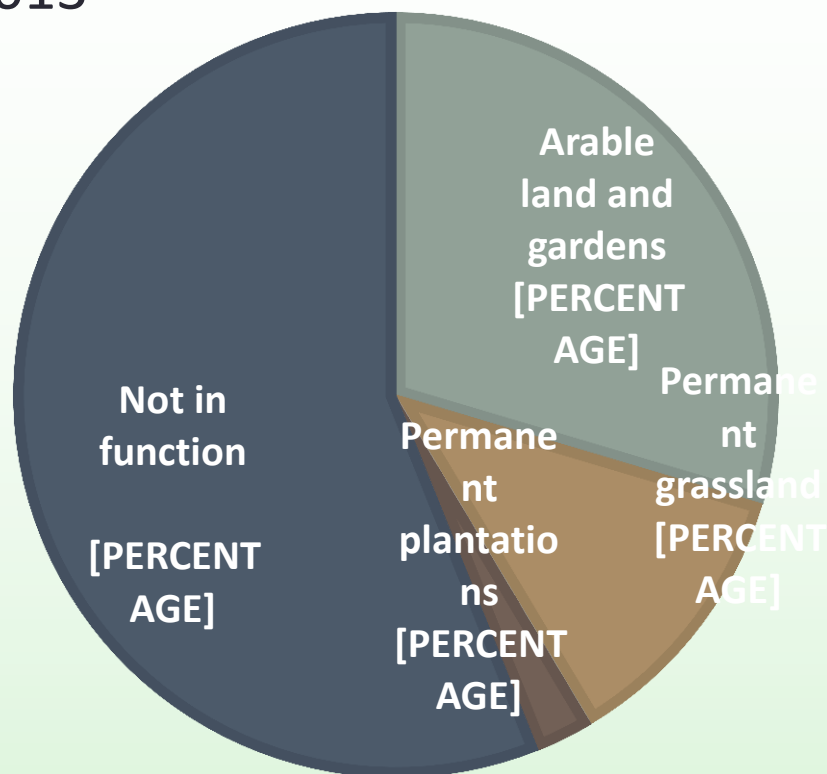


Comments and suggestions

- The proposed Law in the current form doesn't allow farmer to participate greatly in SRC development.
- The proposed Law is not align with already existing legal framework (ARKOD minimal parcel 0,07 ha, Law 1 ha).
- Food vs. Fuel debate → Statistics from 2013 show that area of arable land has decreased for 3.2 % in one year, while meadows are increasing.
- Abandoned land can also fall under P3 category, but it cannot be brought to purpose with SRC according the Law.
- Detailed study is suggested that would determinate:
 - SRC potential on certain type of land
 - Costs of production of SRC on certain type of land
 - Emphasize other benefits from SRC

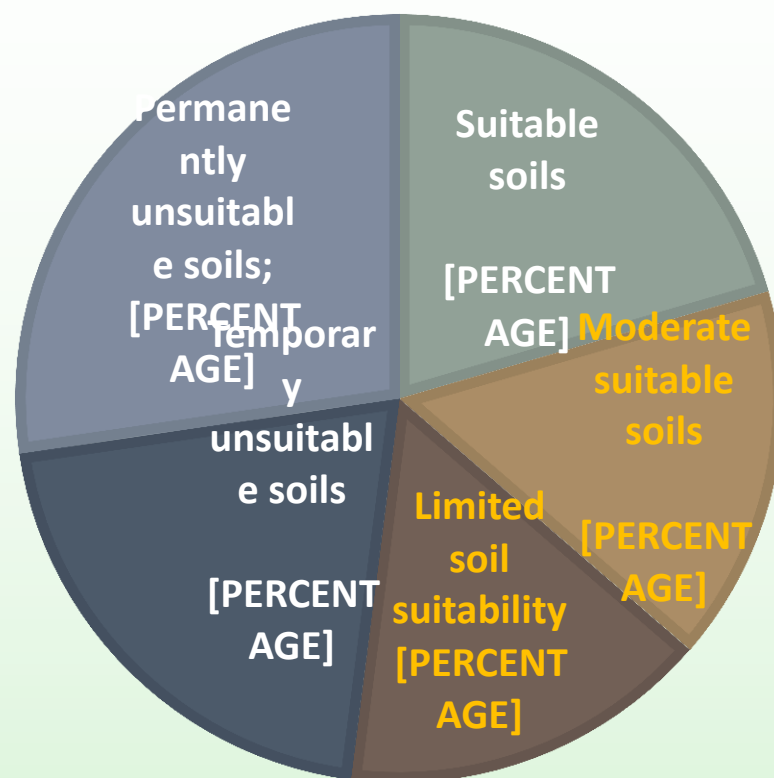
Agricultural land and soils

The use of agricultural land in 2013



Izvor: DZS, 2015.

Classification of soil suitability for agriculture



Source: Tomić, F., T. Krička, S. Matić: Available Agricultural Areas and the Use of Forests for Biofuel Production in Croatia, Šumarski list, UDK 630* 156 (001)

Conclusions

- The interest for SRC woodships does exist, especially in wood based industry as a substitution for more quality woodships from forestry.
- The first clones of willow have been approved recently (4)
- ARKOD needs to be controlled and corrected.
- **Law on SRC must be made in cooperation with experts from different sectors**
- Development of new projects on SRC (EU Programs)
- There is a need for identification and mapping of area/land suitable (ecologically) and permitted for planting SRC

Thank you for your attention!

www.srcplus.eu

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