

# 4F CROPS

## Future Crops for Food, Feed, Fiber and Fuel

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# 4F CROPS Project coordinates

- ➡ The 4FCROPS project is being funded by 7<sup>th</sup> Framework Programme (DG Research, KBBE)
- ➡ 4FCROPS is a coordination and support action project (Grant Agreement no 212811)
- ➡ The project started in the beginning of June 2008 and will last 30 months.
- ➡ The total budget is 998.520 euros
- ➡ The consortium is consisted by 12 partners (six Universities and six research organizations or institutes)
- ➡ The project website is [www.4fcrops.eu](http://www.4fcrops.eu)

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# The Consortium

| Partners  | Country     |
|---|-------------|
| Center for Renewable Energy Sources - <b>CRES</b> (coordinator) | Greece      |
| University of Catania - <b>UNI.CT</b>                           | Italy       |
| Agricultural University of Athens - <b>AUA</b>                  | Greece      |
| Institute for Energy and Environmental Research - <b>IFEU</b>   | Germany     |
| Wageningen UR Food & Biobased Research - <b>WUR</b>             | Netherlands |
| University of Bologna - <b>UNIBO</b>                            | Italy       |
| National Institute for Agricultural Research - <b>INIA</b>      | Spain       |
| University of Lisbon - <b>UnINOVA</b>                           | Portugal    |
| Institute of Natural Fibres and Medicinal Plants - <b>INF</b>   | Poland      |
| University of Agricultural Science in Bucharest - <b>UASB</b>   | Romania     |
| National Agricultural Research Foundation - <b>NAGREF</b>       | Greece      |
| Baltic Renewable Energy Centre - <b>EC BREC</b>                 | Poland      |

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The *main aim* of the 4F CROPS project is to survey and analyze all the parameters that will play an important role in successful non-food cropping systems in the agriculture of EU27 alongside the existing food crop systems

The **expected impact** of the 4F CROPS project through its main objective is to prove that a competitive bioeconomy through the production of biofuels and biobased products is a viable option for Europe.

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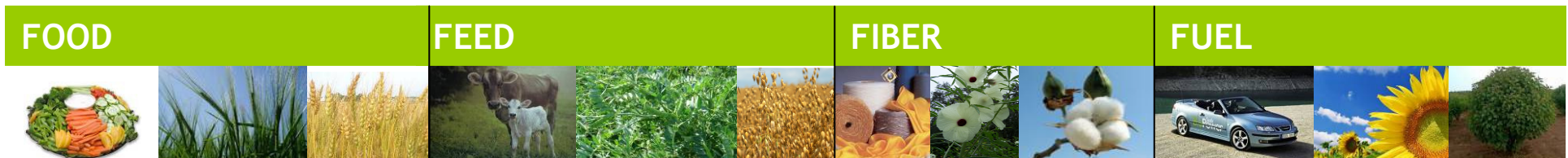
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# The project 4FCROPS provide answers for the need to cultivate the non-food crops (fiber and fuel crops)

*The need for the cultivation of the non-food crops is supported by the following facts:*

- ◉ The reform of **CAP** is going to lead to the release of agricultural arable land
- ◉ There is an **increasing need for fibers crops** (to cover the needs for biobased products)
- ◉ There is a **need for biofuels** that will be produced from dedicated crops (for 2020 the target for biofuels is 10%)
- ◉ The **climate change** is going to force especially the south Europe to shift to other cultivations that will need less water, nitrogen that will have salt tolerance, in other words crops that will not need intensive cultivation





# Specific project objectives and corresponding work packages

- To review of the **current situation of the Land Use in EU 27** (now, 2020 and 2030) and to assess the **land availability for non-food cropping systems** ➔ **WP1 - Land Use in EU27 (EC BREC)**
- To assess the **cropping possibilities of the non-food crops** in the existing agricultural systems ➔ **WP2 - Cropping possibilities (University of Catania)**
- To carry out a comparative **cost analysis of the food and non-food crops** in short and long term consideration and to evaluate the most critical **socio-economic parameters** ➔ **WP3 - Economic analysis (University of Athens)**
- To evaluate of the most important environmental by means of an **Environmental Impact Assessment (EIA)** and a **Life Cycle Analysis (LCA)** and to identify the **best options (WP4 - Environmental analysis)**. ➔ **WP3 - Environmental analysis (ifeu)**

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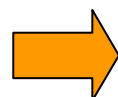


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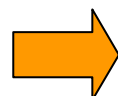


# Specific objectives

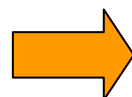
- To record the **existing policies**, the **driving forces** for the future crops and to make recommendations for measures that should be taken for the co-existence of food and non-food crops
- Development of **scenarios for promising non-food cropping alongside food cropping systems**, be defining systems' boundaries and evaluating the priorities and trends, in short and long time frameworks
- To **disseminate the project findings** through the web-site development, the projects workshops, articles, presentations, fact sheets, leaflets, links with previous and on-going activities, etc.



**WP5 - Regulatory framework  
(CRES)**



**WP6 - Best practices scenarios  
(WUR)**



**WP7 - Dissemination and Support  
actions (CRES)**

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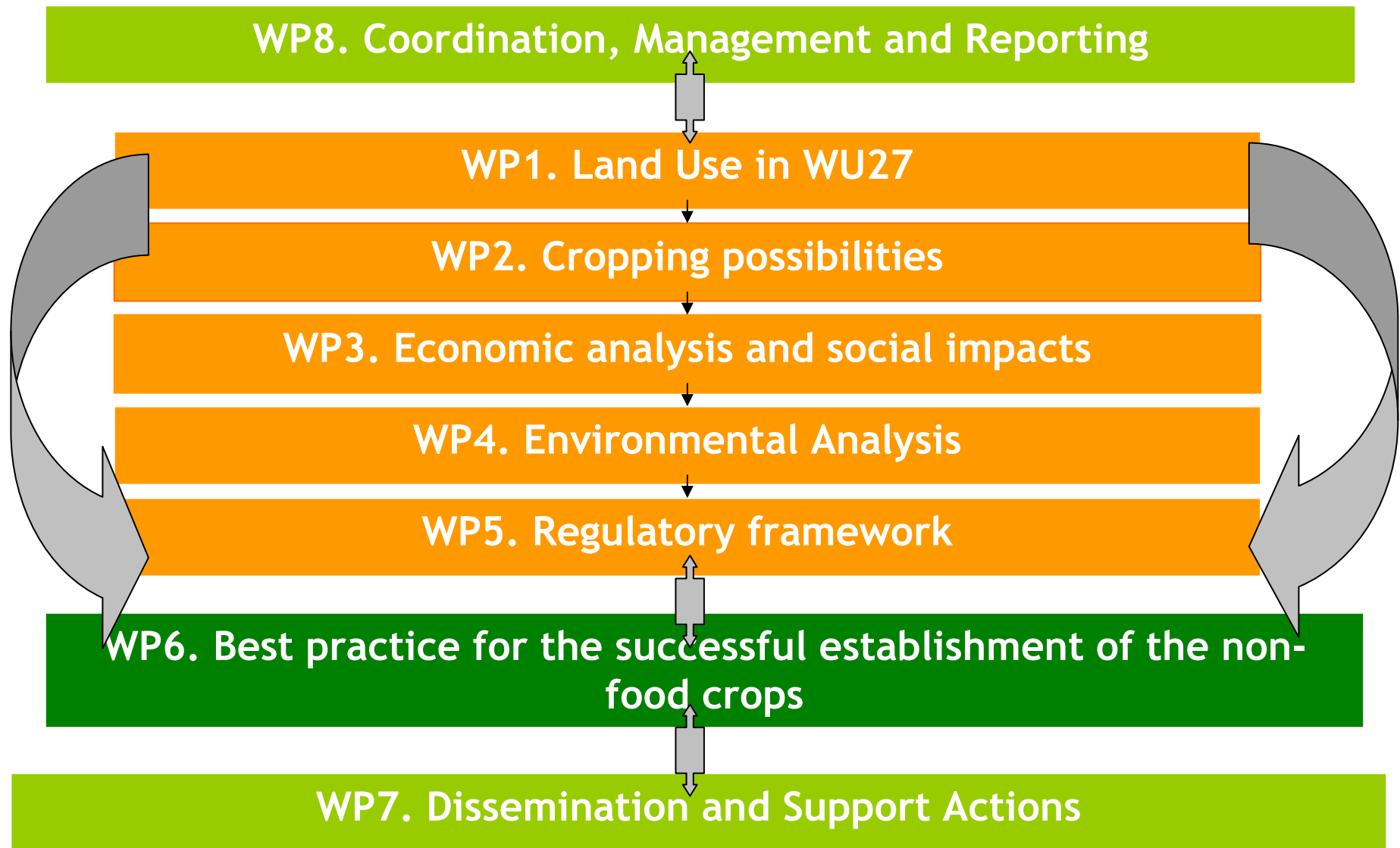


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# The concept

Apart from food and feed crops, there is need for growing non-food crops (fibre and fuel crops)



The “4F CROPS” project will

Survey and analyze all the parameters that will play an important role in a successful non-food cropping systems alongside the existing food crop system



The output of the project will be:

Formation of scenarios for successful food and non-food cropping systems taking under consideration the *technical parameters* (which crops, in which rotation systems, logistics, the role of biotechnology), *socio-economics* aspects (cost analysis, public acceptance, rural development, farmers income etc), *environmental aspects* (sustainability), *regulatory* aspects (co-existence and safety measures when crops using for both food and non-food uses).

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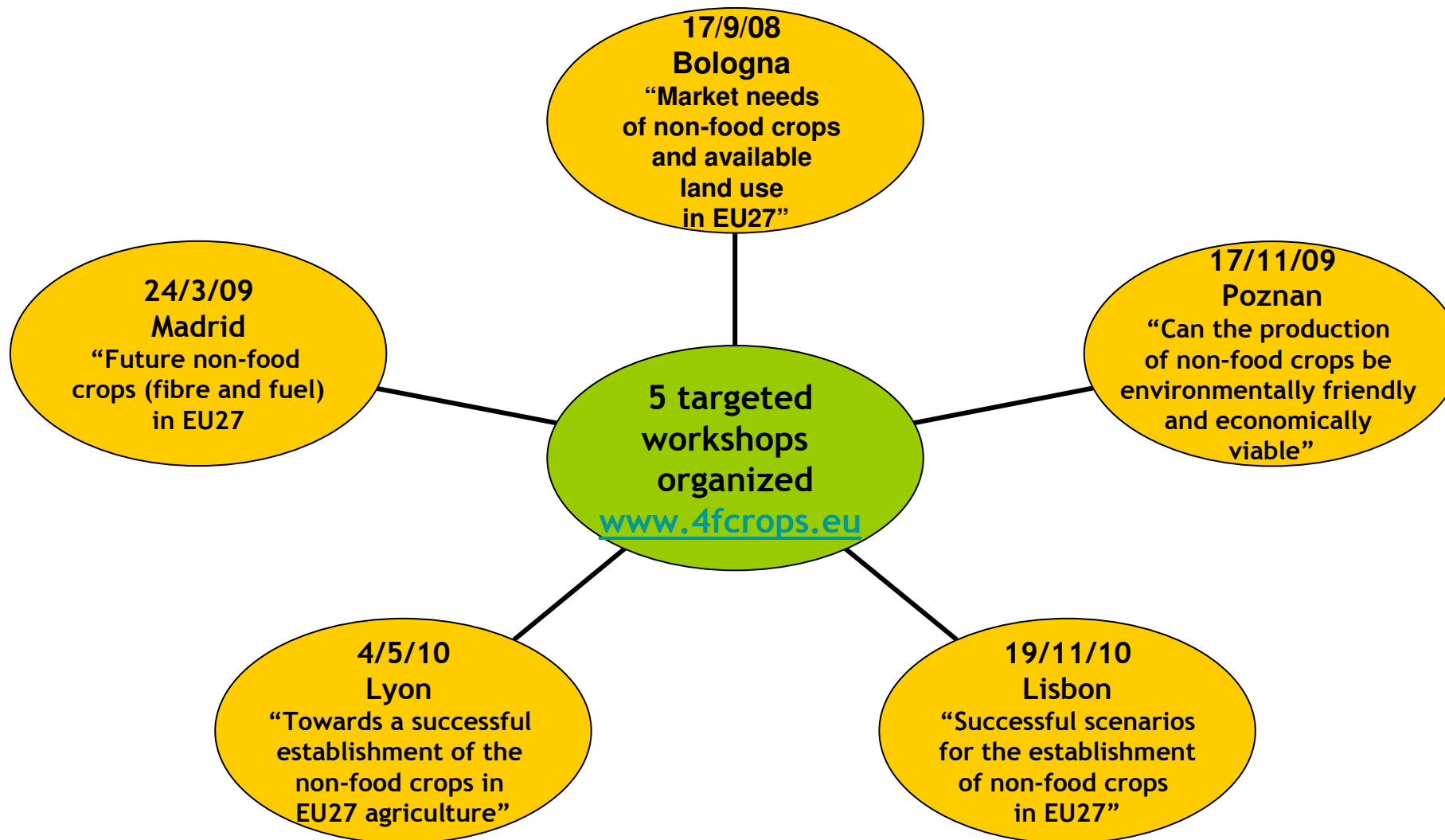
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# Thematic workshops



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# Management of 4FCROPS

- A **Steering Committee (SC)** was nominated made up of Work Packages Leaders and the Coordinator.
- Additionally, to the **Steering Committee** a **Scientific Committee** was proposed in the kick-off meeting and is consisted from the members of the whole consortium and selected invited key players that play an important role to the development of the non-food crops in EU27. The invited key players plays a very important role in the key thematic workshops an in 4FCROPS success.

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# 4FCROPS Scientific committee

## Steering Committee

Dr. Efi Alexopoulou, CRES  
 Dr. Ewa Ganko, EC BREC,  
 Prof. Luciano Cosentino, UNICT  
 Prof. Peter Soldatos, AUA.eco  
 Dr. Guido Reinhardt, IFEU  
 Dr. Wolter Elbersen, A&F

## Invited stakeholders

Dr. Ralph Sims, IEA Bioenergy  
 Dr. Uwe Fritche - OeKO  
 Prof. Yiolanda Papatheohari, AUA  
 Prof. Jesus Fernandez, UPM  
 Dr. Katri Pahkala, MTT  
 Prof. Melvyn Askew, Census-Bio  
 Dr. Neil Harker, LACOMBE-CANADA  
 Dr. Rainer Jannsen, WIP  
 Prof. Spyros Kyritsis, AUA  
 Dr. Eleftheria Athanasiadou, CHIMAR  
 Dr. Luigi Pari, CRA-ING  
 Prof. Anfreia Lazzeri, UNIFI  
 Mr. Nikos Chatziyiannis, Pellets  
 Dr. Massimo Veccheit, CETA  
 Dr. Gail Taylor, SOTON  
 Dr. Valerio Zuccini, KEFI ITALIA  
 Dr. Efthimios Efthimiadis, Bios Agrosystems  
 Dr. Alex Gablenz, Elaion Company  
 Dr. Martin Knapp, KIT  
 Dr. Juan Carrasco, CIEMAT  
 Dr. Serge Braconnier, CIRAD  
 Dr. Nicola di Virgillio, IBEMET

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# Participation of 4FCROPS in the twinning between EU and CANADA

- ✦ At the end of December 2008 **4FCROPS** was selected by DG Research for **twinning opportunities with Canada**. The first meeting took place in **Montreal** (February 2008) with the participation of European and Canadian projects and the second meeting took place in **Pisa** in June 2009
- ✦ In the third workshop that took place in **Saskatoon** (October 2010) the twinning including also Australia and New Zealand.

## *The selected EU projects are:*

4FCROPS ([www.4fcrops.eu](http://www.4fcrops.eu))  
AQUATERRE ([www.aquaterre.info](http://www.aquaterre.info)),  
Global bio-pact ([www.globalbiopact.eu](http://www.globalbiopact.eu)),  
Novel Tree ([www.noveltree.eu](http://www.noveltree.eu))  
FORBIOPLAST ([www.forbioplast.eu](http://www.forbioplast.eu)),  
ENERGYPOPLAR ([www.energypoplar.eu](http://www.energypoplar.eu)),  
AgFood Trade ([www.agfoodtrade.eu](http://www.agfoodtrade.eu)),  
EU-Pearls ([www.eu-pearls.eu](http://www.eu-pearls.eu)),  
ICON ([www.slu.se](http://www.slu.se)),  
DISCO ([www.disco-project.eu](http://www.disco-project.eu)),  
RENEWALL ([www.renewall.eu](http://www.renewall.eu)),  
Lipoyeasts ([www.lipoyeasts.ugent.be](http://www.lipoyeasts.ugent.be)),  
Oxygreen ([www.rug.nl/oxygreen](http://www.rug.nl/oxygreen)),  
Crops2Industry ([www.crops2industry.eu](http://www.crops2industry.eu))  
AgroCos (new project)

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# Participation of 4FCROPS in the twinning between EU and Argentina / MERCOSUR projects

- ⊗ In the beginning of March 2009 4FCROPS was selected for **twinning opportunities** with **Argentina** and **MERCOSUR** projects.
- ⊗ The first meeting of this action took in Buenos Aires in May 2009, while the second in Athens (30/6 and 1/7/2010).

*The selected EU projects are:*

4FCROPS ([www.4fcrops.eu](http://www.4fcrops.eu))

SWEETFUEL ([www.sweetfuel.eu](http://www.sweetfuel.eu))

MycoRed ([www.mycored.com](http://www.mycored.com))

TriticeaeGenome ([www.triticeaegenome.eu](http://www.triticeaegenome.eu)),

VALORAM (<http://valoram.ucc.ie>),

ENDURE ([www.endure-network.eu](http://www.endure-network.eu)),

LEGUMES FUTURES (new project)

AgroCos (new project)



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4FCROPS created the website for both twinning actions (Canada and Argentina)

Twinning Opportunities in **Soil, Plant & Food** research  
Between the **European Union, Argentina & MERCOSUR**



[www.ec-argentina.eu](http://www.ec-argentina.eu)

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4FCROPS created website for both twinning actions  
(Canada and Argentina)



[www.ec-canada.eu](http://www.ec-canada.eu)

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The website that had been created for EU-Canada twinning ([www.ec-canada.eu](http://www.ec-canada.eu)) soon will be replaced by [www.ec-ca-au-nz.net](http://www.ec-ca-au-nz.net) in order to include the two new members in the twinning Australia and New Zealand



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Thank you very much for your attention.

Your active participation in the questions at the end of each session as well as in the round table discussion is very welcomed.

More information about the project can be found in the project website [www.4fcrops.eu](http://www.4fcrops.eu)

Efi Alexopoulou ([ealex@cres.gr](mailto:ealex@cres.gr))

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