

Working at the science & Policy interface

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European Commission – Joint Research Centre,

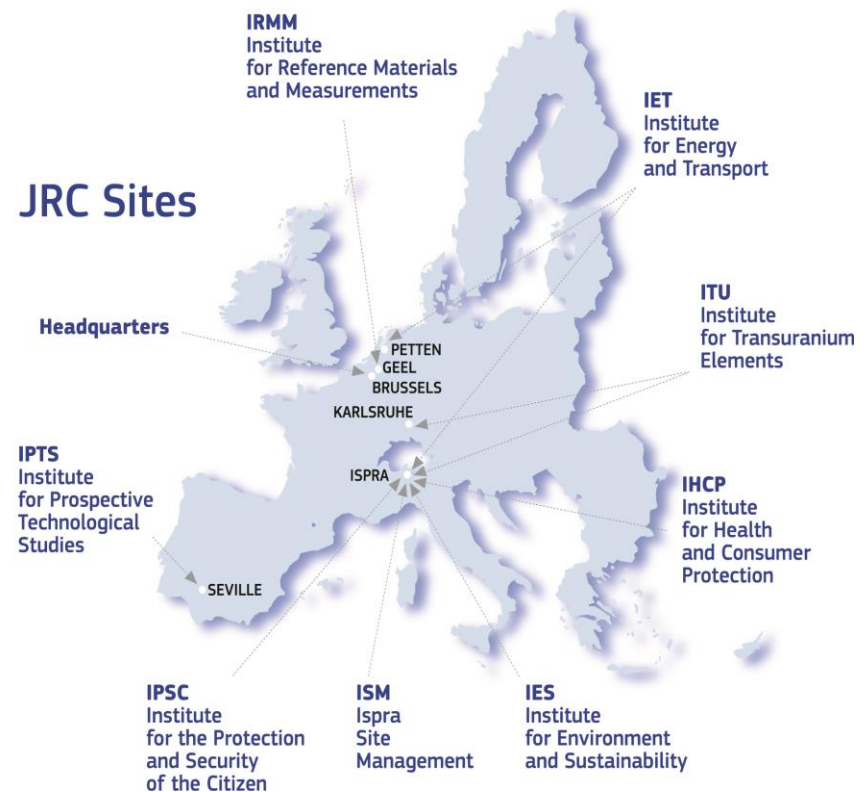
Ispra, ITALY

<https://ec.europa.eu/jrc/>

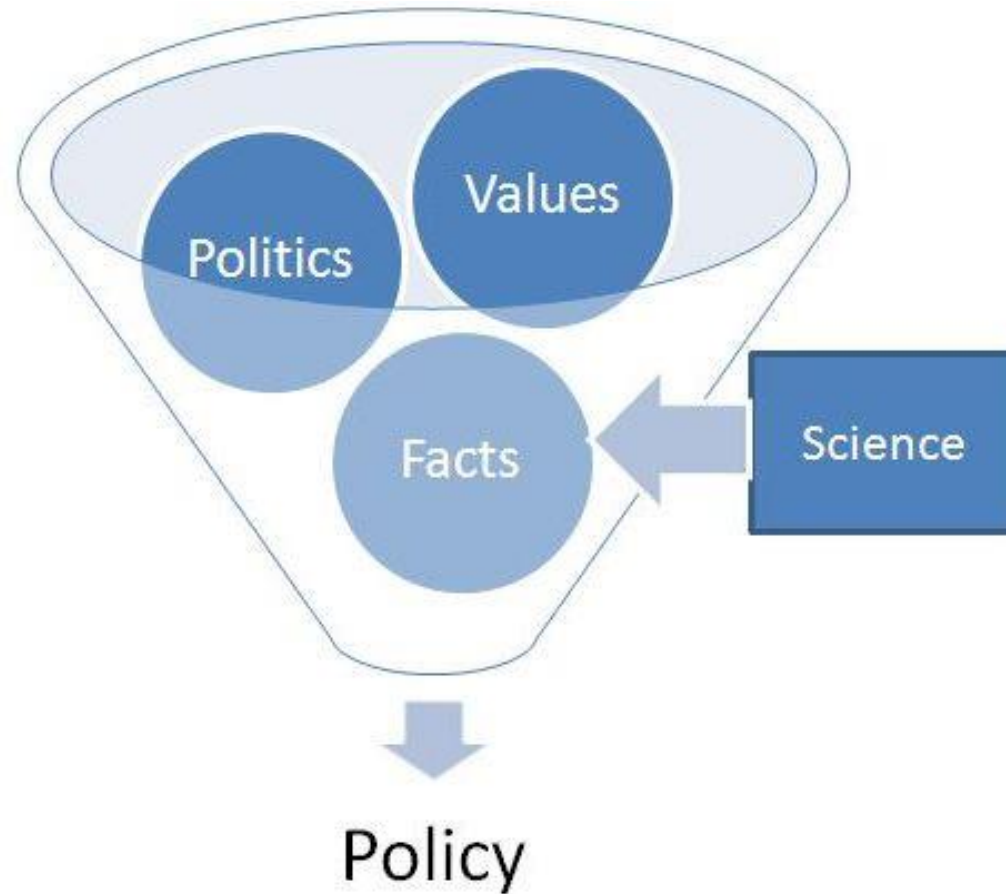


Joint Research Centre

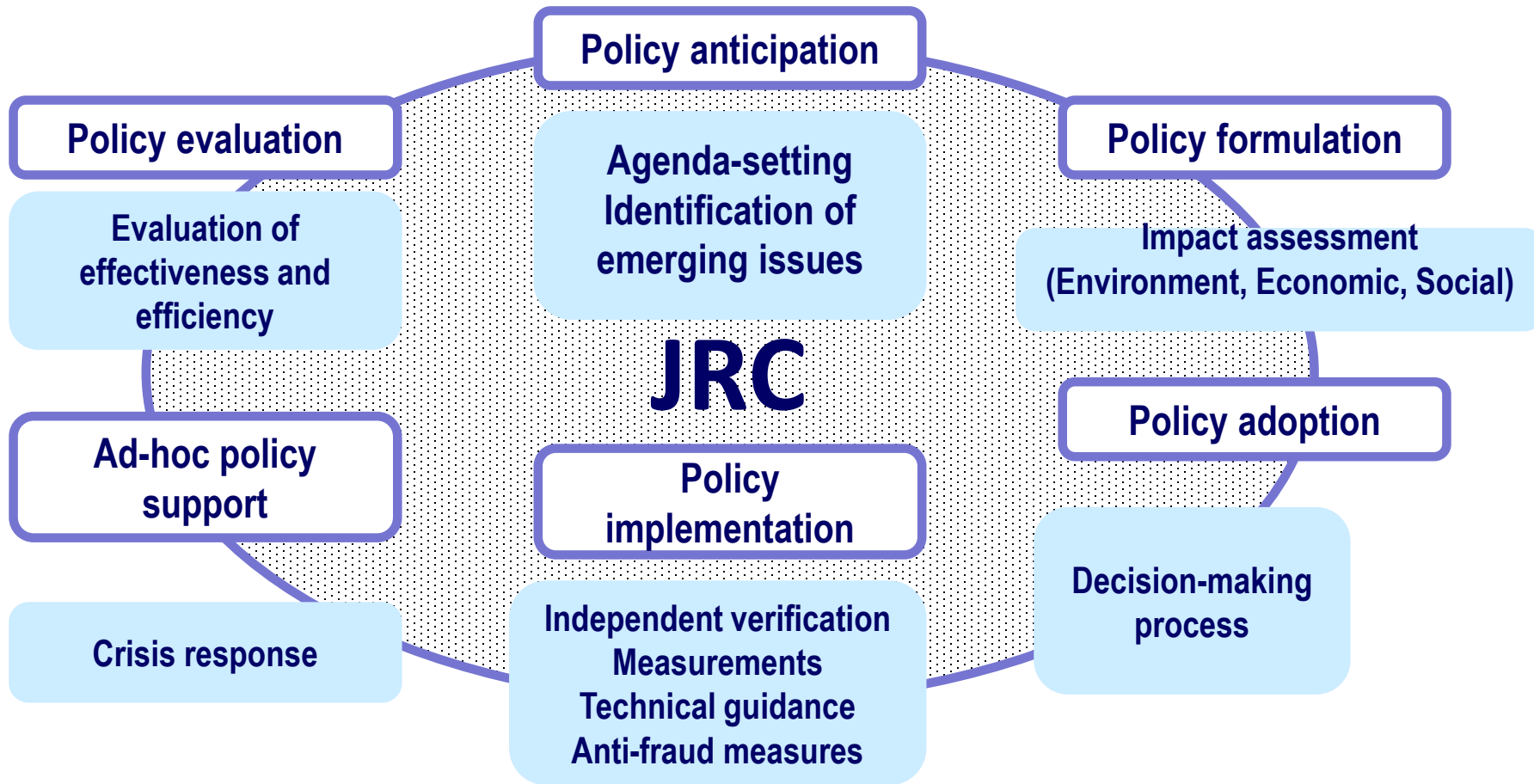
- Established 1957
- DG of European Commission
- 6 institutes in 5 countries
- 3,068 staff (35% short-term)
- 751 peer-reviewed scientific publications in 2015
- Scientific / Technical support to policy makers
- Independent of national or private interests



<https://ec.europa.eu/jrc/>

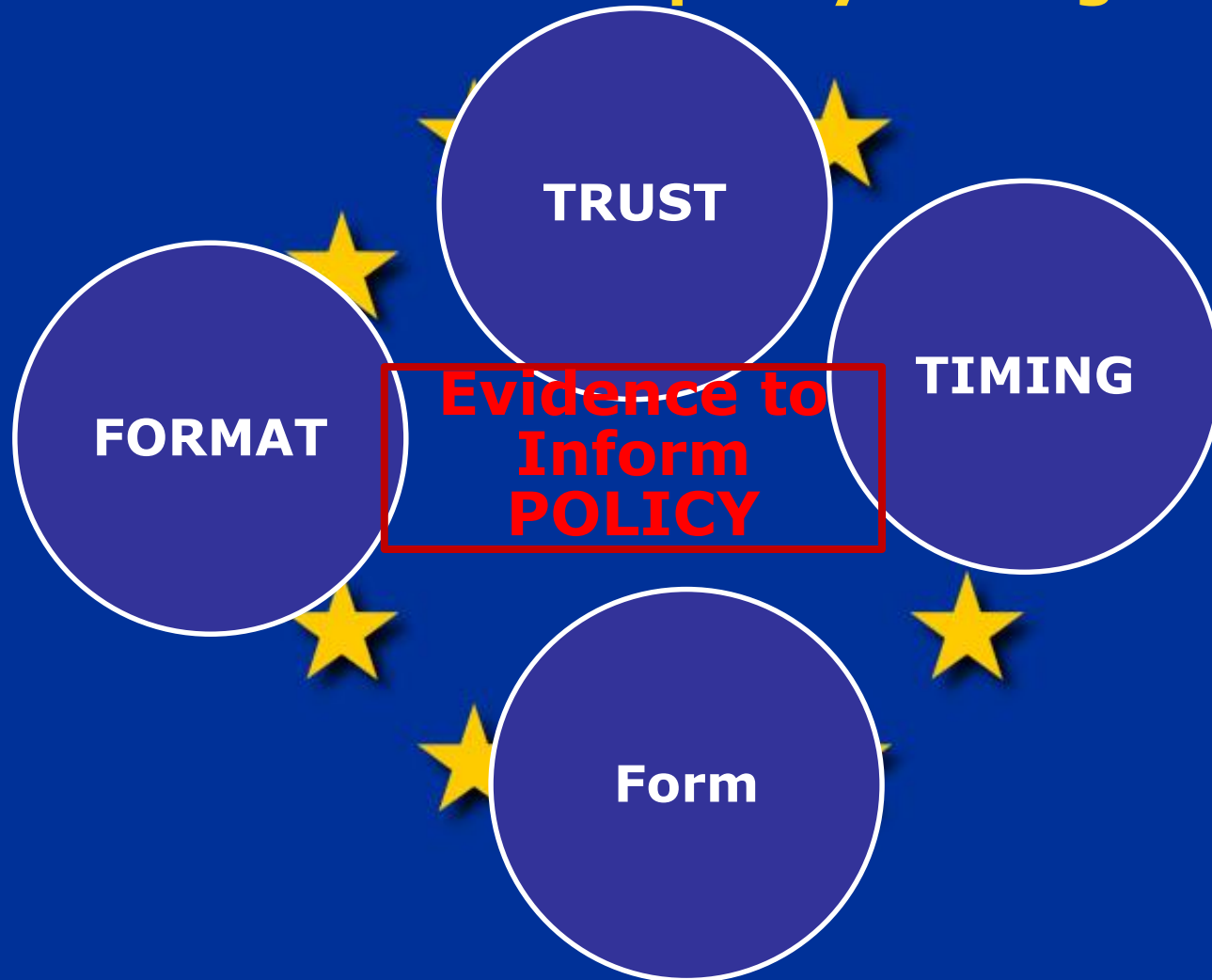


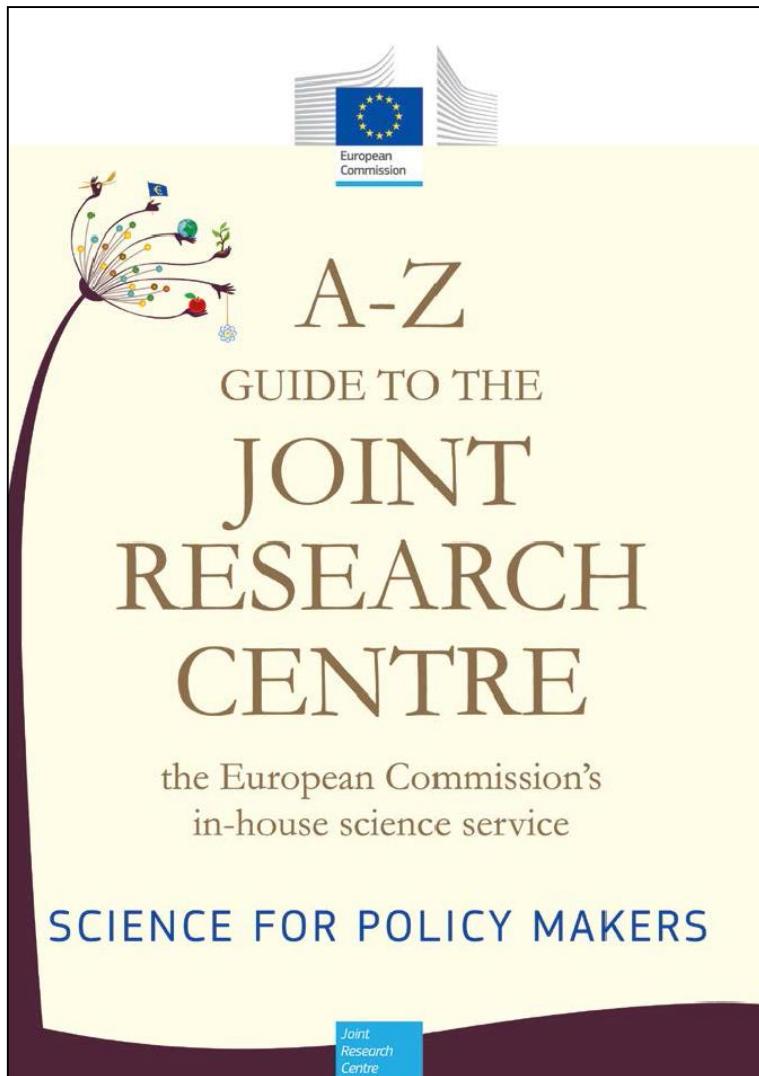
Scientific support to the whole policy cycle





Within EU policymaking





DG JRC supports almost all policies

- Agriculture and food security
- Economic and Monetary Union
- Energy and transport
- Environment and climate change
- Health and consumer protection
- Information society
- Innovation and growth
- Nuclear safety and security
- Safety and security
- Standards

Policy formulation: Banking Union



SINGLE RULEBOOK

New rules to make banks better capitalised and risks better controlled

SINGLE SUPERVISION

ECB directly supervises +/-130 important banks, National supervisors work closely together within an integrated system

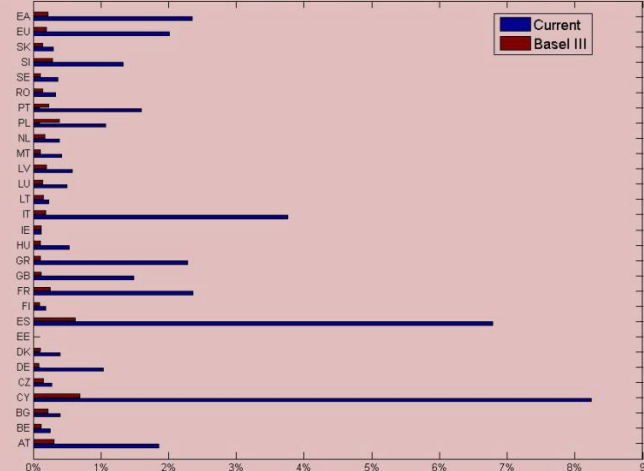
SINGLE RESOLUTION

If all else fails, as a last resort, the Single Resolution Board can decide to resolve a failing banks, backed by a fund that banks themselves pay in to

- Policy (urgent) request: What are the levels in banks' capitals for a stable financial system in EU?
- JRC provided **scientific validation** for proposed rules (Running models for Macro-economic analysis).
- Inter-disciplinary team of Economists, Mathematicians, Statisticians, etc....

"Result: EU regulations on how banks contribute to Resolution funds"

SYMBOL simulation 2012 data:
probability of losses in excess of capital plus recapitalisation need higher than 0.1% GDP



REPORT

SECOND HIGH-LEVEL ROUNDTABLE ON SCIENTIFIC SUPPORT TO FINANCIAL STABILITY
"TOWARDS BANKING UNION: OPEN ISSUES"

BRUGES, APRIL 18, 2013

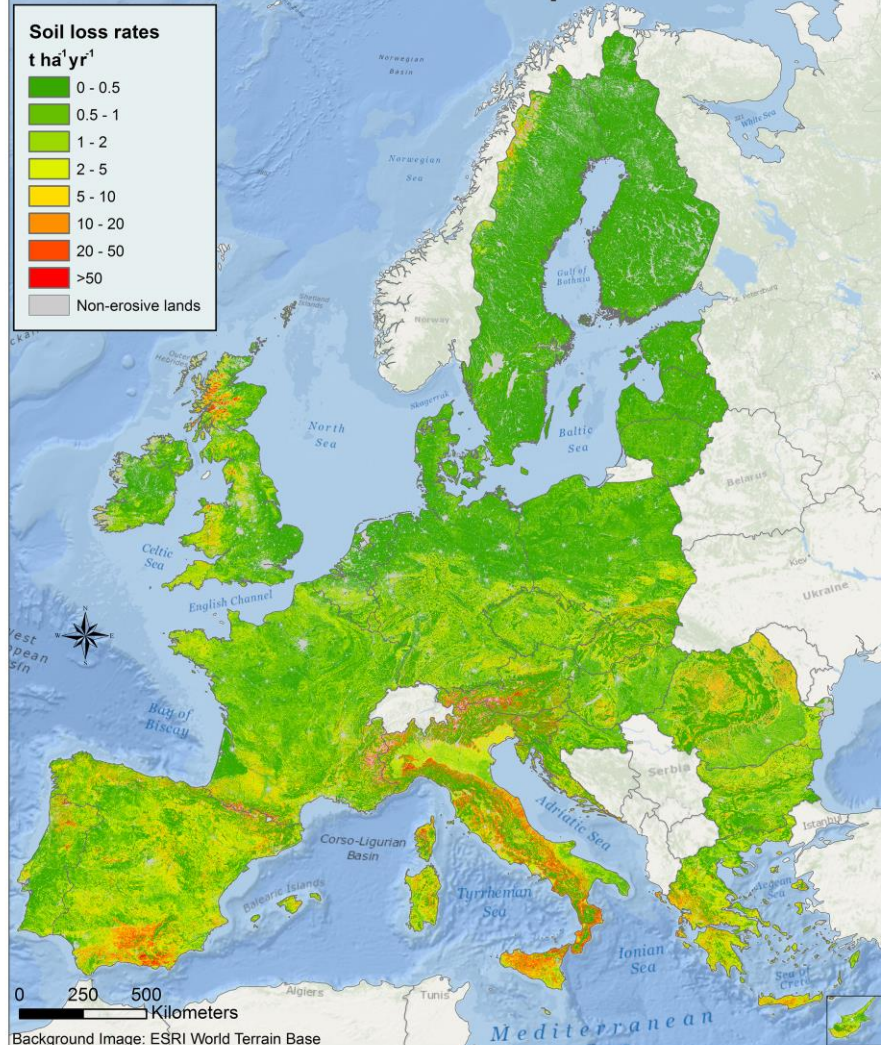
Following the agreement on the creation of the Single Supervisory Mechanism and the recent events in Cyprus, which underlined once again the need to break the negative feedback loop between banks and sovereigns, the Joint Research Centre (JRC) and the College of Europe co-organised on 18 April 2013 the second High-level Roundtable on Scientific Support to Financial Stability "Towards Banking Union: Open Issues". This initiative was planned in the context of the JRC-College of Europe Memorandum of Understanding signed last November.

During the first High-level Roundtable on "How can Science contribute to Financial Stability", experts already recognised the need for further scientific support and advice for the

Policy monitoring & implementation: Common Agricultural Policy (CAP)



Soil loss in the European Union



Soil loss by water erosion

- Average EU-28: **2.46 t ha⁻¹ yr⁻¹** (in the erosive prone areas: 91% of EU)
- Total Soil loss: **970 Mt annually**
- **24%** of EU lands have rates >2 t/ha
- **11% of total area** contributes to almost **70% of total Soil Loss**

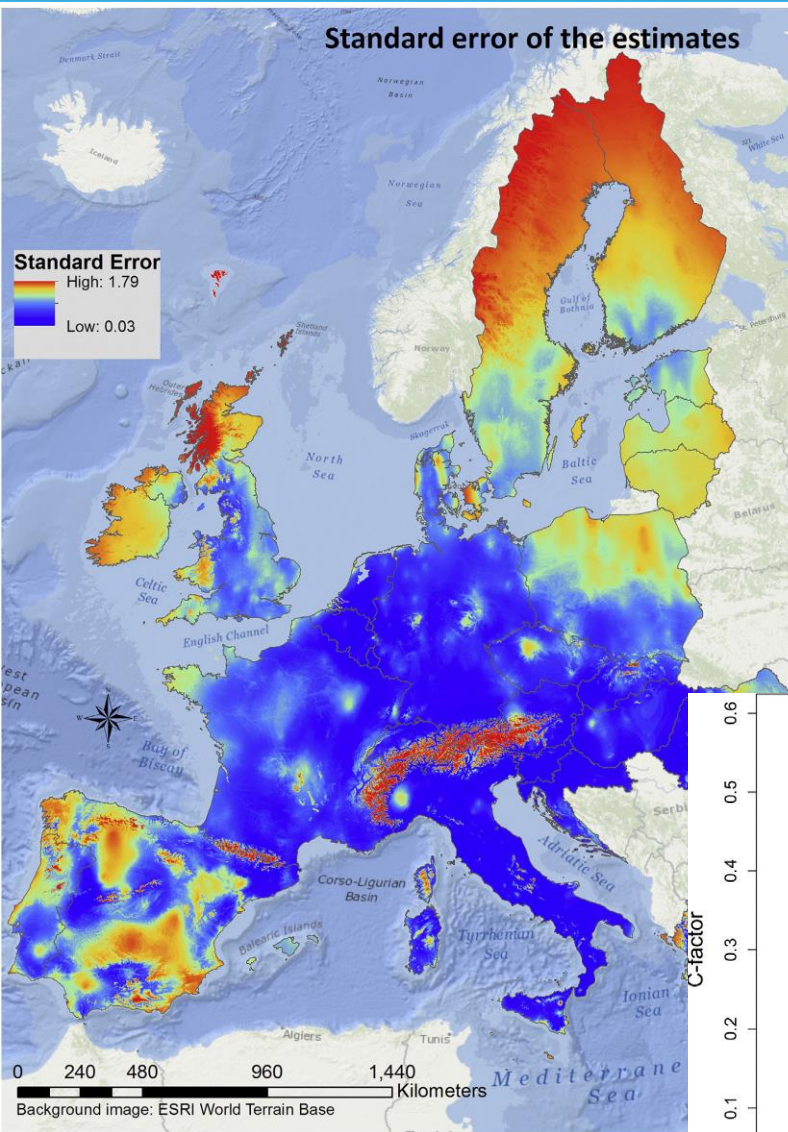
"Between 2000 and 2010, intervention measures through the CAP have reduced the rate of soil erosion by an average of 20% for arable lands"

"Reducing soil erosion is important for reducing carbon emissions (climate change)"

Panagos, et al 2015. NATURE.

Panagos et al (2015) – Environmental Science & Policy
Lugato et al (2016) Global Change Biology

Uncertainties / validation in our research



2014_K-factor.pdf - Adobe Reader

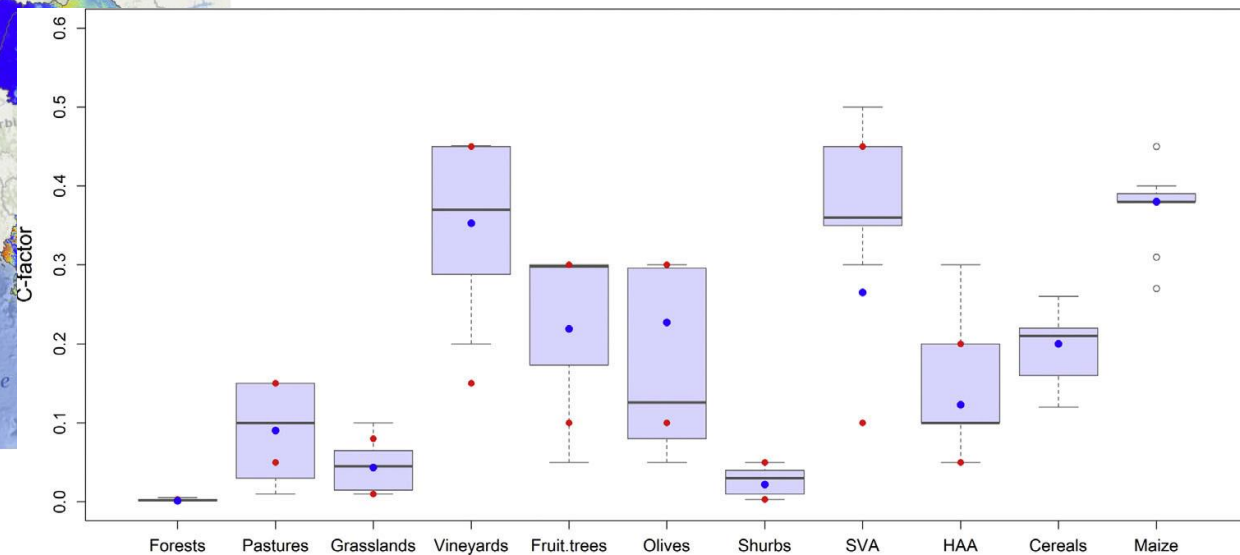
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Table 6
Comparison of K-factor estimates with local/regional/national studies.

Catchment/region (country) (a)	Coverage (no of points) (b)	Reference study (c)	K-factor of reference study (d)	K-factor (Fig. 2) (e)	K _a factor (Fig. 4) (f)	Deviation of K-factor vs. study (g)	Deviation of K _a -factor vs. study (h)
						(%)	(%)
Mean value (t ha h MJ ⁻¹ mm ⁻¹)							
Hungary (HU)	National (2851)	Centeri and Pataki (2000)	0.0293	0.0349	0.0337	16.0%	13.1%
Slovakia (SK)	National	Styk et al. (2008)	0.029	0.0362	0.0321	19.9%	9.7%
Czech Republic (CZ)	National	Dostal et al. (2002)	0.0376	0.0373	0.0342	(-) 0.8%	(-) 9.9%
Lithuania (LT)	National	Mažvila et al. (2010)	0.035	0.0321	0.0309	(-) 9.0%	(-) 13.3%
Hessen federal state (DE)	Regional	Tetzlaff et al. (2013)	0.0400	0.0411	0.0382	2.6%	(-) 4.8%
Bavaria federal state (DE)	Regional (1051)	Auerswald (1992)	0.0331	0.0367	0.0337	9.7%	1.8%
Nordrhein-Westfalen federal state (DE)	Regional	Elhaus (2013)	0.033	0.0370	0.0337	10.7%	2.2%
Brandenburg federal state (DE)	Regional	Deumlich (2009)	0.0163	0.0232	0.0223	29.7%	27.0%
Region of Sicily (IT)	Regional (1813)	Bagarello et al. (2012)	0.0291	0.0300	0.0230	3.2%	(-) 26.7%
Geul catchment (Maastricht, NL)	Regional	de Moor and Verstraeten (2008)	0.0420	0.0449	0.0383	6.5%	(-) 9.6%
Strymonas (GR)	Regional	Panagos et al. (2012b)	0.0241	0.0292	0.0247	17.4%	2.3%
Andalucia (ES)	Regional (8)	Ruiz-Sinoga and Diaz (2010)	0.0303	0.0379	0.0245	20.1%	(-) 23.7%
Sele Catchment, Basilicata (IT)	Regional	Diodato et al. (2011)	0.026	0.0269	0.0230	3.5%	(-) 13.2%
Lautaret, Province Alps-Cote d'Azur (FR)	Local	Bakker et al. (2008)	0.037	0.0344	0.0254	(-) 7.6%	(-) 45.7%
Yialias River Catchment (CY)	Local	Alexakis et al. (2013)	0.0261	0.0378	0.0280	30.9%	6.6%
Gregos (PT)	Local (97)	Ferreira and Panagopoulos (2010)	0.0344	0.0383	0.0215	10.2%	(-) 60.2%
Pico (PT)	Local (25)	Ferreira and Panagopoulos (2010)	0.0290	0.0394	0.0192	26.4%	(-) 50.9%
Roncão (PT)	Local (82)	Ferreira and Panagopoulos (2010)	0.0229	0.0382	0.0201	40.1%	(-) 13.7%
Bogucin, Poznan (PL)	Local	Rejman et al. (2008)	0.0598	0.0623	0.0594	4.1%	(-) 0.7%
Łazy, Carpathian foothill (PL)	Local (7 plots)	Swiechowicz (2010)	0.0738	0.0588	0.0552	(-) 25.6%	(-) 33.8%
Lublin, South Warsaw (PL)	Local	Wawer et al. (2005)	0.0285	0.0267	0.0261	(-) 6.6%	(-) 9.2%
Overall average	21 studies		0.0344	0.0373	0.0308	14.3%	18.0%



Good Agricultural practices against Erosion



Reduced Tillage

Stone Walls



Plant residues

Grass margins



Cover crops

Contour farming





Why JRC can play the role of science to policy interface?

- **Inter-disciplinary teams** with high competences
- **Scientific soundness**
- **Cross policy:** Knowing decision making process & policy developments
- **Context:** Scientists should understand policy questions
- **Continuity:** Framework programme
- **Engagement with stakeholders:** Result of long-term collaborations
- **Harmonisation:** taking into account the geographical differences
- **Independent** of Member States interests
- **Trust** in collaboration & **Networking** development