

# Environmental risk assessment training and capacity building

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# Environmental risk assessment training and capacity building

**Specialization**  
versus  
**multidisciplinarity / broader knowledge**

## Traditional training requires:

**Society perception** of the need

**Interested people** / scientists

University degrees (MSc, PhD)/ R & D projects (in co-promotion with private companies)

Stakeholder involvement: Scientific Societies, NGOs,  
Private Companies, ...

## Beyond traditional learning methods requires:

University involvement

Stakeholder involvement: Scientific Societies, NGOs,  
Private Companies, ...

## Traditional training - Universities

**International MSc in Environmental Risk** - Roskilde University, DK

**MSc in General Toxicology and Environmental Health Risk Assessment**,  
*University* of Eastern Finland, Kuopio, FI

**MSc in Environmental Risk Management**, Cranfield University, GB

**MSc in Toxicology and Environmental Health**, Utrecht University, NL

**MSc In Toxicology and Ecotoxicology**, University of Aveiro, PT

**MSc in Environmental Assessment**, North Carolina State University, NC, US

**MSc in Environmental Toxicology**, Simon Fraser University, BC, CA

**Inter University Post-Graduate Education Program on Environmental Toxicology, Technology and Management (M.Sc. and Ph.D.)**, AIT and Mahidol University, TH

**MSc in Environmental Management and Development**, The Australian National University, Canberra, AU

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ENVIRONMENTAL QUALITY THROUGH SCIENCES®



SETAC Europe Summer Schools

About Summer Schools | About SETAC | Propose a Summer School | Upcoming courses | Previous courses

### SETAC Summer Schools

SETAC is committed to excellence in the environmental sciences. Sharing learning and experience is essential to maintain a high level of knowledge and excellence within the SETAC community and to ascertain the best protection of environmental quality, today and tomorrow.

SETAC Summer Schools are dedicated to supporting the sharing of knowledge and of environmental protection concerns.

**What is a Summer School?**  
Summer schools aim to offer scientists and students training through the best up-to-date knowledge in the areas of

- Environmental quality;
- Environmental chemistry;
- Ecotoxicology;
- Risk assessment within the framework of generic (e.g. Water framework Directive) or dedicated (e.g. REACH, Plant Protection Products...) regulations;
- Handling, monitoring and remediation of pollution;
- Life Cycle Assessment (LCA) and Life Cycle Management (LCM);
- Emerging pollutants; and
- Nanomaterials.

Aim to offer scientists and students training through the best up-to-date knowledge in the areas of

- ✓ Environmental quality;
- ✓ Environmental chemistry;
- ✓ Ecotoxicology;
- ✓ **Risk assessment** within the framework of generic (e.g. Water framework Directive) or dedicated (e.g. REACH, Plant Protection Products...) regulations;
- ✓ Handling, monitoring and remediation of pollution;
- ✓ Life Cycle Assessment (LCA) and Life Cycle Management (LCM);
- ✓ Emerging pollutants; and
- ✓ Nanomaterials.

Include time for teaching, exchanges, self-working on case-studies and knowledge assessment. Principles and methodologies developed are illustrated through worked examples, hands-on or case-studies. **Grants are available for SETAC student members**



# Summer Schools – some examples

**GIS-based modeling of chemical fate, transport and impacts for policy support, Trento, Italy**

**Mechanistic effect modelling for ecological risk assessment of chemicals** Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany

**The Future of Environmental and Human Health Exposure Modelling of Chemicals, Cremona, Italy**

**Biomarkers in ecotoxicology: User-friendly approach, Univ of Aveiro, Portugal**

**PREDITOX - Ecotoxicology and Predictive Modelling, Lyon, France**

**Nanoparticles: Characterization and Environmental Risk Assessment, Univ of Aveiro, Portugal**

# The SETAC Europe Risk assessors Certification Programme



MENU ☰



## The SETAC Europe Risk assessors Certification Programme

### Welcome to the SETAC Europe CRA programme



The programme offers a range of courses for students and professionals.

The CRA programme is an initiative of the Society of Environmental Toxicology and Chemistry – Europe. The SETAC Europe Certification of Environmental Risk Assessors (CRA) programme is established to provide an internationally recognised standard for environmental risk assessors.

The programme offers a range of courses for students and professionals to obtain the level of education and expertise to fulfil the requirements for *SETAC Europe certified Environmental risk assessor*. The CRA examination and certification panels evaluate the candidates and decide on the certification of the successful candidates.

CRA collaborates with Universities and other course organisers in Europe to offer postgraduate courses. Course organisers are invited or can apply to have a course included in the CRA programme. The CRA registration committee decides on the admission of courses in the CRA programme.

<http://certification.setac.eu>

### Propose a course

If your organisation offers courses (in English) covering one or more of the basic CRA topics, you can apply to have this course included in the CRA curriculum.



University degrees (MSc, PhD)/ R & D projects (in co-promotion with private companies)

## Ecosystem services of a farmland: effects of fertilization (MSc project)

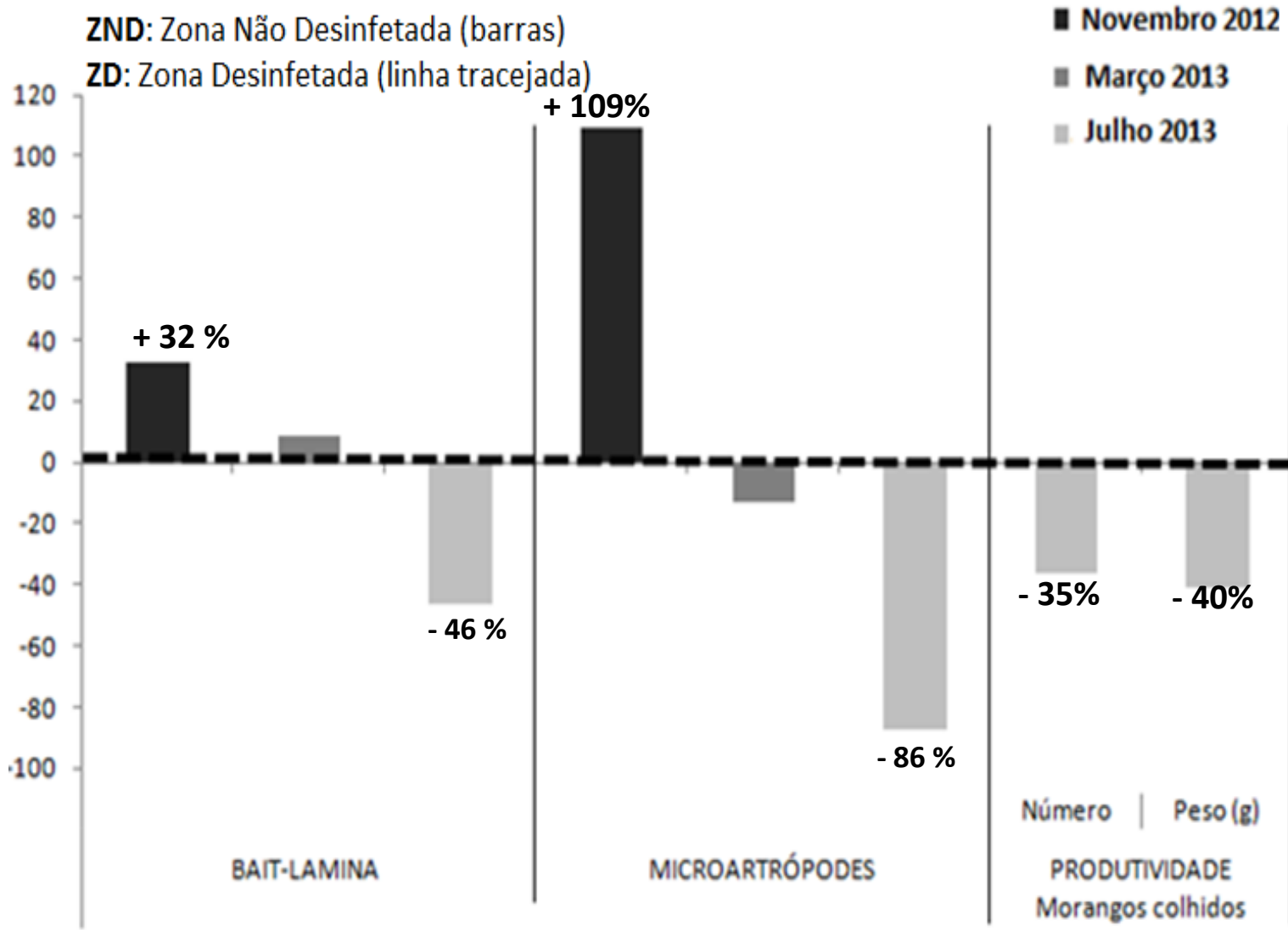


Assessing the effects of the application of different fertilizers in the activity, abundance and distribution of soil edaphic microarthropods and in the productivity of a strawberry production farmland

# Methodology – Farmland and Experimental Design









# NanoFARM- Fate and Effects of Agriculturally Relevant Materials

## The consortium

Number	Country	Funding organisation	Applicant Organisation
1 Coordinator	USA	NSF	Carnegie Mellon University
2	USA	NSF	University of Kentucky
3	Portugal	FCT	Universidade de Aveiro
4	Austria	BMVIT/FFG	University of Vienna

Uncertainty in food safety due to the use of NM-enabled agrochemicals



severe economic consequences to both the US and the EU

### Goal:

to address essential gaps in knowledge about how **soil properties**, **MNM properties**, MNM concentration, and reaction **kinetics** affect the **spatial and temporal** behaviour of metal-oxide **MNM-enabled pesticides and fertilizers** in **soils**.



Relevant "food-safety" models



Relevant environ. models



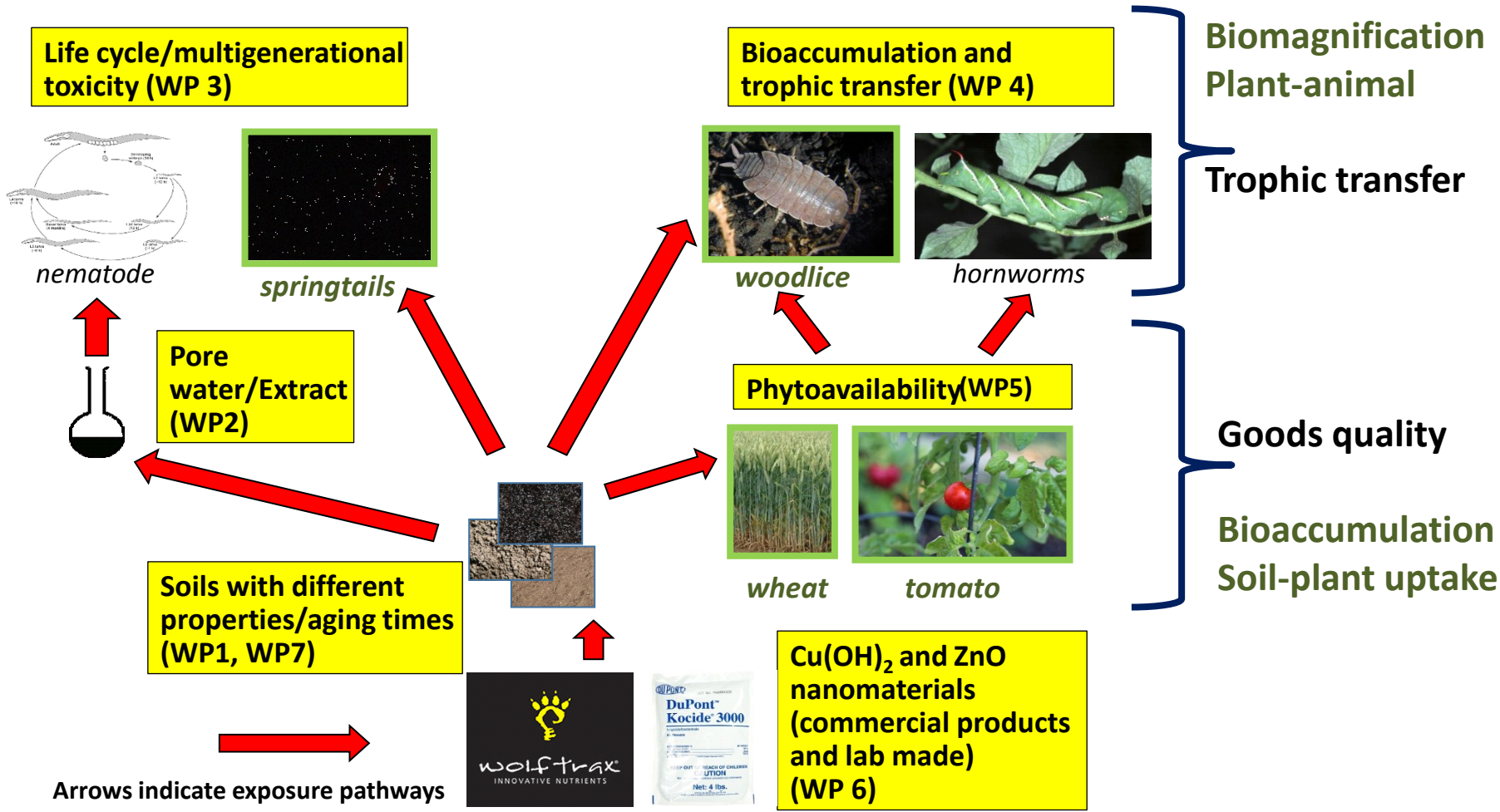
Natural soils



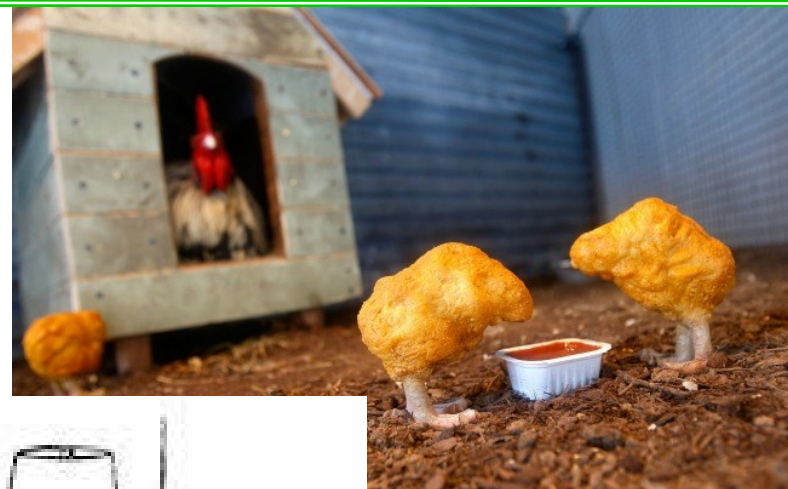
In-the-market products



# NanoFARM- Fate and Effects of Agriculturally Relevant Materials



# Beyond traditional learning methods



"If chickens don't have arms, where do chicken fingers come from?"



# Beyond traditional learning methods



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Partnership with the  
research community

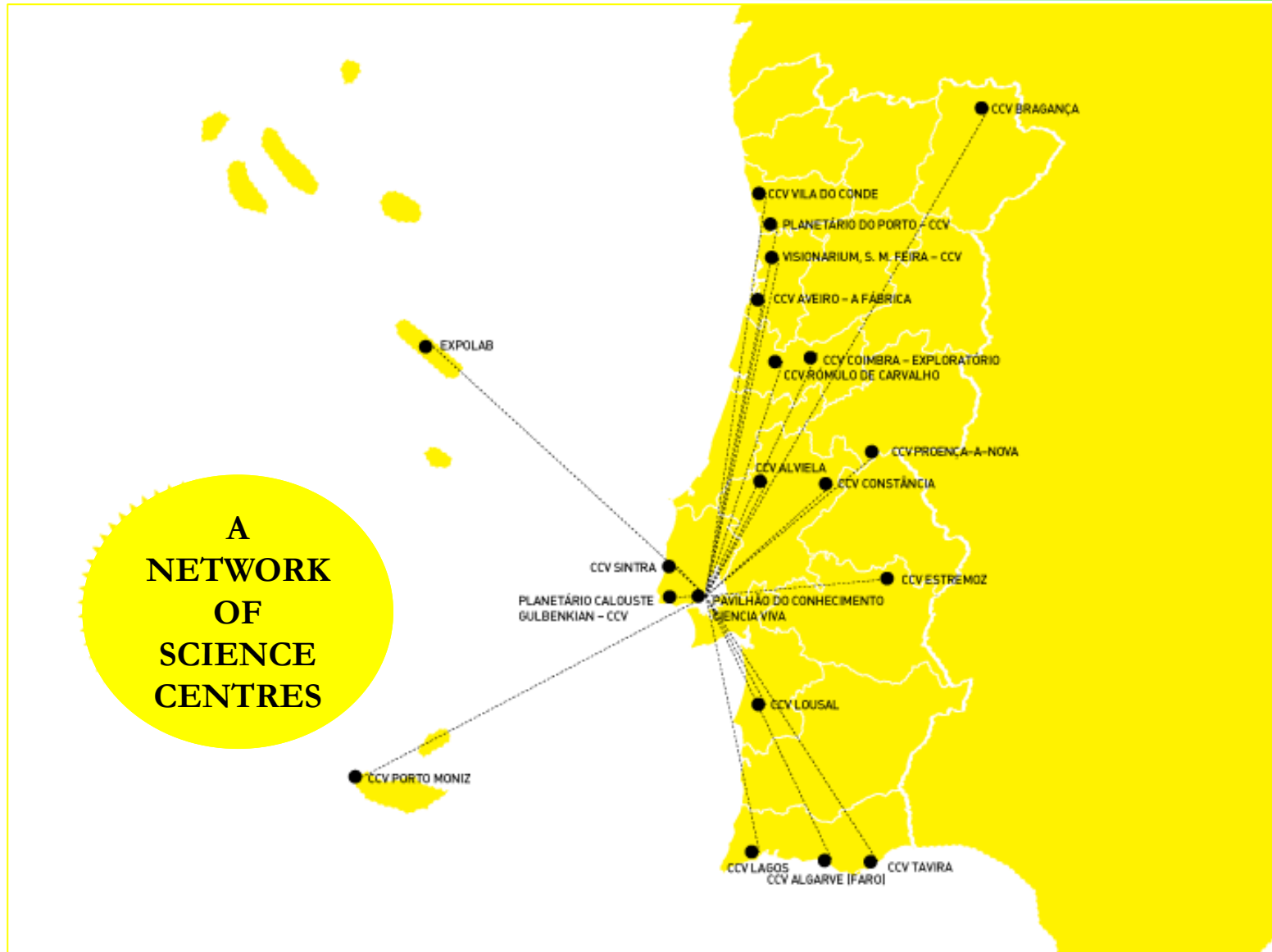
**Ciência Viva | since 1996**

**Science education – *projects, resources, internships***

**Science in / for Society – *engagement and dialogue***

**A network of science centers (20)**

# Beyond traditional learning methods



# Beyond traditional learning methods

# BIO

## DIVERSIDADE no HIPERMERCADO

ESTREIA SIC NOTÍCIAS  
**SÁBADO 1 MARÇO**  
**20H50**



TERRA LÍQUIDA FILMES



universidade de aveiro  
departamento de biologia



Co-financiamento



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UNIÃO EUROPEIA  
Fundo Europeu  
de Desenvolvimento Regional



Danke  
Koszonom  
Bedankt Tak  
Efkaristo  
Paldies  
Tack  
Grazie  
Dacujem  
Dekuji  
Obrigado  
Mulcumesc  
Blagodarya  
Aciu  
Gracias  
Hvala  
Merci  
Kiitos  
Aitah  
Thank You  
Dziecuuj  
Ευχαριστώ

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