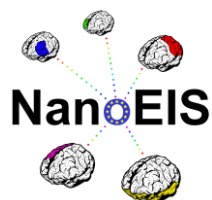


EU 7th FRAMEWORK PROGRAMME

Call FP7-NMP-2012-CSA-6



NanoEIS

Nanotechnology education for industry and society

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Report on overall dissemination activities

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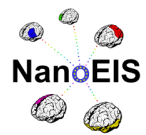
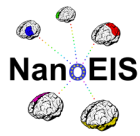


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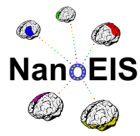
1. Introduction

This document presents the dissemination activities undertaken during the course of the NanoEIS project (1 November 2012-31 October 2015). It includes peer reviewed and other publications, oral and poster presentations during events, conferences and workshops organised for different stakeholder groups, online events, and communication in the media and via social media. In total 35 dissemination activities were undertaken during the project by all partners. As the partners are all active in this field, continuing dissemination of results of the project is foreseeable after the end of the project.

Chapter 2 covers peer reviewed articles and academic book chapters that were published or submitted to the publisher during the NanoEIS project.

Chapter 3 covers dissemination activities targeting the scientific community. This includes oral and poster presentations during events as well as dissemination of news via the website www.nanoeis.eu and social media targeting academics. It excludes activities aimed at promoting of the “Open courseware” model curriculum produced in WP3, because this is covered in the report on dissemination activities focusing on universities (D5.5).

Chapter 4 covers dissemination to wider audiences, while chapter 5 includes conclusions.



2. Publications

During the course of the project, one article was published in a peer reviewed journal and one book chapter was submitted to the editor. Several partners are considering the preparation of other publications of NanoEIS results.

The published article is deliverable D5.4 of NanoEIS, entitled: Nano-education from a European perspective: nano-training for non-R&D jobs, by Ineke Malsch, in *Nanotechnology Reviews*, Vol3, Iss 2, De Gruyter Berlin/Boston dec-13 211-221, <http://www.degruyter.com/view/j/ntrev.2014.3.issue-2/ntrev-2013-0039/ntrev-2013-0039.xml?format=INT>. It is published as open access.

The submitted book chapter is deliverable D5.7 of NanoEIS, entitled: Nanotechnology educational gaps for industry and society, by Ineke Malsch, Dorota Rutkowska-Zbik, Albert Duschl, Martin Himly, Thomas Zadrozny, Costas Kiparissides, Olga Kammona, Moshe Talesnik, Yoel Rothschild, David Rosenberg, Bartlomiej Szafran, Paula Queipo Rodriguez, Iseult Lynch, et al. in the edited volume *Nanotechnology: Risk Governance, Risk Assurance and Risk Transfer*. Book series: *Innovation, Technology and Knowledge Management*, editor Springer. It was submitted to the editor in August 2015.

3. Scientific community

Besides the publications, several presentations have been made to a scientific audience. This includes 14 oral presentations to a scientific event, listed below.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|--|--|------------------|-----------------------|---|------------------|---------------------|
| ORT ISRAEL | Minerva Symposium Nano-education opportunities and challenges | 7-3-2013 | Rehovot, Israel | Scientific community (higher education, Research) - Civil society | 40 | Israel, Germany |
| PARIS-LODRON-UNIVERSITÄT SALZBURG | Nanotechnology Education for Industry and Society: What should be done to match the needs of the job market? | 20-6-2013 | Dublin, Ireland | Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias | 60 | All |
| INSTYTUT KATALIZY I FIZYKOCHEMII POWIERZCHNI IM. JERZEGO HABERA POLSKA AKADEMIA NAUK | Nanotechnology education - current state (Polish language) | 10-7-2013 | Szczecin, Poland | Scientific community (higher education, Research) - Industry - Civil society - Policy makers | 200 | Poland |
| ORT ISRAEL | NanoOpinion teachers` training | 1-10-2013 | Kiryat Bialik, Israel | Scientific community (higher education, Research) - Civil society | 25 | Israel |
| PARIS-LODRON-UNIVERSITÄT SALZBURG | Presentation during the NanoValid project meeting | 17- 19 June 2014 | Tallinn, Estonia | scientific community | 60 | europa |

| | | | | | | |
|--|---|----------------------------|--|--|-----------|------------------------------------|
| ORT ISRAEL | Presentation in a NanOpinion workshop | 5-9- 2014 | | scientific community | 20 | europe |
| PAN, AGH | Recommendations for nanotechnology education in secondary schools level as well as during 1st and 2nd degree of studies. | 14-18 September 2014 | 57th Meeting of The Polish Chemical Society and The Society of Engineers and Technicians of Chemical Industry. | scientific community | unknown | Poland |
| PARIS- LODRON- UNIVERSITÄT SALZBURG | Nanosafety Cluster Review meeting | 9-11 December 2014 | Brussels | scientific community | | europe |
| PARIS- LODRON- UNIVERSITÄT SALZBURG | Sustainable Nanotechnology conference SUN /SNO-GUIDENANO | 9-11 March 2015 | Venice, Italy | scientific community | 100 | europe |
| PAN, PLUS | Euronanoforum session on education | 10-12 June 2015 | Riga, Latvia | scientific community, industry, policy makers | about 100 | europe |
| NFA | 12th International Conference on Nanosciences & Nanotechnologies (NN15) | 7-10 July 2015 | Thessaloniki, Grece | scientific community, industry, policy makers | | europe, USA, Japan, China |

| | | | | | | |
|----------|---|-----------------|---|----------------------|-----|---------------|
| PAN, AGH | Recommendations for nanotechnology education in secondary schools level as well as during 1st, 2nd, 3rd degree of studies | sep-15 | The 58th Meeting of The Polish Chemical Society | scientific community | 600 | Poland |
| PLUS | What demands can you expect in the nanotechnology job market? | 5. October 2015 | Pultusk, Poland | scientific community | 50 | International |
| MTV | Responsive Tertiary Nano-education | 5. October 2016 | Pultusk, Poland | scientific community | 50 | International |

Two partners also targeted the scientific community through internet applications, as listed in the table below.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|-------------|--|---------------|---|----------------------|------------------|---------------------|
| PAN | Project NanoEIS: Nanotechnology Education for Industry and Society | february 2015 | European Chemistry Thematic Network online newsletter | scientific community | 800 | all |
| MTV | Online webinar workshop on Responsive Tertiary Nano-Education | 24-2-2015 | Internet | scientific community | 10 | all |

4. Wider public

In addition to the scientific community, other stakeholders including industry and other employers, government representatives, teachers in secondary education and the general public have been targeted. Since many of these activities targeted more than one audience, they are listed here together. At the beginning of the project, two interviews were given to a radio station and a newspaper, reaching out to a large audience.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|-----------------------------------|--|-----------|----------------------------|------------------|------------------|---------------------|
| PARIS-LODRON-UNIVERSITÄT SALZBURG | Interview on NanoEIS | 16-2-2013 | Ö2, public radio, Salzburg | Civil society | 50000 | Austria |
| PARIS-LODRON-UNIVERSITÄT SALZBURG | Interview on NANOeis project at the university | 16-2-2013 | Salzburger Nachrichten | Civil society | 100000 | Austria |

In addition, partners gave four presentations to a wider public, as indicated in the table below.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|---|---|-----------|------------------------|--|------------------|---------------------|
| NANOTECHNOLOGY INDUSTRIES ASSOCIATION AISBL | La nanotecnología: Eje importante para el futuro de la cooperación CELAC-UE | 28-2-2013 | Brussels | Scientific community (higher education, Research) - Industry - Civil society - Policy makers | 100 | EU, LAC |
| NfA (PROD) | Online NANOPINION Spanish workshop | 9-10-2013 | Gijon, Asturias, Spain | Scientific community (higher education, Research) - Civil society | 25 | Spain |

| | | | | | | |
|------------|---|-----------------|--|---|---------------|--------|
| ORT ISRAEL | presentation in a Scientix conference | 25 October 2014 | Brussels | Educators, policy makers and scientists | a few hundred | europe |
| PAN | a lecture "NanoEIS Project: Nanotechnology Education for Industry and Society - propositions for secondary schools" | 22-nov-14 | Meeting with a local Community of Learners (CoL), acting within IRRESISTIBLE project.: | secondary school teachers, science educators, researchers | 15 | Poland |

The partners organised five workshops for different audiences in the course of the project, as listed below.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|----------------------------|---|-----------|-----------------|---|------------------|---------------------|
| ORT ISRAEL | Scientix workshop | 21-2-2015 | Brussels | teachers | 40 | europe |
| NfA (PROD; microtec) & NIA | Education and Communication Workshop at EuroNanoForum | 20-6-2013 | Dublin, Ireland | Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias | 60 | All |

| | | | | | | |
|-----------------------------------|---|-----------|--------------------------|--|-----|-----------------|
| NFA, PLUS | Value4Nano project workshop on non-technological aspects including education | 12-nov-14 | | industry; RTDs; policy makers | 30 | europe |
| PARIS-LODRON-UNIVERSITÄT SALZBURG | Brokerage Event for Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing | 13-nov-14 | | research, industry and others | 600 | europe |
| MTV | Stakeholder workshop on Responsive Tertiary Nano-Education | 24-nov-14 | Utrecht, The Netherlands | of tertiary education, employers and consultants | 10 | The Netherlands |

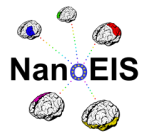
Partners also addressed wider audiences through internet-based approaches, as listed below.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|-------------|-------------------------------------|---|------------------------------------|---|------------------|---------------------|
| NfA | NanoEIS project aims and activities | On regular basis since start of project | Web 2.0 tools (Facebook, LinkedIn) | Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias | 1000 | All |
| NfA | NanoEIS project aims and activities | On regular basis since start of project | NanoFutures Website | Scientific community (higher education, Research) - Industry - Civil society - Policy | 800 | All |

| | | | | | | |
|------------------------|---|-----------------|----------------------|--|-----------------------|---|
| | | | | makers Medias | - | |
| NfA (PROD) & NIA | NanoEIS project summary and industry survey for OECD Nanotechnology Working Party | 1-6-2013 | Internet | Scientific community (higher education, Research) - Industry | 12 | USA, Portugal, Spain, Argentina, Norway, Italy, Australia, South Africa |
| MALSCH TECHNOVALUATION | Assessing the need for nano-training for non-R&D jobs in Europe | 1-12-2013 | Skillsnet e-bulletin | Scientific community (higher education, Research) - Industry - Civil society | 500 | All |
| ORT ISRAEL | On-line publication in Scientix Israel blog | 28 October 2014 | Internet | science teachers | a few hundred | Israel |
| ORT ISRAEL | On line publication on ORT's website | 14-nov-14 | Internet | general public | 40.000 visitors/month | ALL |
| ORT ISRAEL | On line publication on ORT's website | 1-okt-15 | Internet | general public | 40.000 visitors/month | ALL |

Finally, one partner distributed flyers during the Nanosafe 2014 conference.

| Main leader | Title | Date | Place | Type of audience | Size of audience | Countries addressed |
|-------------|---------------|---------------------|------------------|------------------------|------------------|---------------------|
| NFA | Nanosafe 2014 | 18-20 November 2014 | Grenoble, France | different stakeholders | hundreds | Europe |



5. Conclusions

During the project, partners have communicated about the NanoEIS project and its results to the scientific community, mainly through presentations during scientific events, but also through publications and internet. They have also targeted other stakeholders including industry, employers, secondary education teachers and the general public through organising workshops and giving presentations, through internet based methods and interviews for general media. Now that all deliverables have been produced, dissemination of these results will continue after the end of the project.