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Progress made on the implementation of the RTD actions of the Environment & Health Action Plan

Brussels, 22 May 2006

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Slide 1







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Evolution of E&H research: From FP5 to FP7

			FP7
Major funding from	<ul style="list-style-type: none"> Key-action 4 (Environment and health) 	<ul style="list-style-type: none"> Thematic priorities: <ul style="list-style-type: none"> 1 - Health, 5 - Food quality and safety; 6 - Global change and ecosystems 8 - Scientific Support to Policy 	<ul style="list-style-type: none"> Theme 'Environment', Environment and Health area
Nb projects	92	29	?
Average budget per annum	€40M (total €160M for 4 years)	€39M (total €156M for 4 years)	(EP resolution 2005 requested min. €300M for FP7)

Slide 2





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Research themes in the Environment & Health Action Plan

- ❑ Integrating and exploiting research results for policy development (**Action 5**)
- ❑ Analysis of environment/health interactions to improve understanding & prevention of the priority diseases (putting emphasis on children, e.g. asthma, allergy, neuro-immune disorders, cancers, endocrine disruption) (**Action 6**)
- ❑ Developing methodologies to assess better the risks coming from environmental factors and improving economic valuation (externalities concept) and impact analyses of prevention strategies (**Action 7**)
- ❑ Launching research on emerging issues (**Action 8**)
 - climate change & health (e.g. spreading of emerging diseases)
 - water pollution (e.g. emerging pathogens in drinking water)



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Implementing Action 5:

**Integrating and exploiting
research results for policy
development**

Slide 4





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Implementing Action 5

FP5 projects

**Dissemination and exploitation of research results of FP5 projects of
Key Action: Environment and Health (92 projects, Euro 160 M)**

▶ **ENVIRONMENTAL STRESSORS COVERED:**

- ❖ Chemicals, especially endocrine disrupters, but also heavy metals and others (40 projects)
- ❖ Air pollutants (13 projects)
- ❖ EMF (8 projects)
- ❖ UV light (3 projects)
- ❖ Noise (4 projects)

▶ **EFFECTS STUDIED:**

- ❖ Cancer
- ❖ Reproductive parameters
- ❖ Neurodevelopmental effects
- ❖ Allergy/asthma
- ❖ Cardiovascular disease etc

Final results available: http://europa.eu.int/comm/research/quality-of-life/ka4/index_en.html





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Implementing Action 5

FP5 projects

- ▶ Many FP5 projects are policy relevant. Dissemination activities are currently underway.
- ▶ 2 projects aimed at collecting results of past and ongoing research:

- ▶ **CHILDRENGENONETWORK: European network on children's susceptibility and exposure to environmental genotoxics** [2003-2005, €1.1M]

<http://cgn.pubhealth.ku.dk/childrengenoen/>

- ❖ Concerted action exploring gene-environment interactions during the foetal, neonatal and infancy developmental periods
- ❖ Focus on genotoxic exposures and environmental factors with focus on air pollution (traffic and tobacco)
- ❖ Database European mother/child cohorts with biobanks (www.birthcohorts.net)

- ▶ **PINCHE: Policy interpretation network on children's health and environment** [2003-2005, €1M]

www.pinche.hvdgm.nl/index.html

- ❖ Thematic network analysing studies related to children's health and environment
- ❖ Analysis and interpretation of research results of FP4 & FP5, as well as projects funded at the national level
- ❖ Policy-relevant recommendations and identification of research gaps related to children, health and the environment

Slide 6





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Implementing Action 5

FP6 projects (2002-2006)

HENVINET: *Health and Environment Network* [Coordination action; €3.2M; 2006-2010] - under negotiation

- To establish expert teams for each of the four priority diseases of the E&H Action Plan
- To identify and evaluate the methods and tools for describing interlinkages between health effects & environmental stressors
- To prepare policy-relevant material for dissemination to decision makers and other stakeholders
- To create a dynamic web-based information system





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Implementing Action 5

SSP - FP6 projects (2002-2006)

- SSP= Scientific Support to Policy
- Two projects evaluated in the last SSP call, one of which aimed at supporting the Integrated Information System on Environment and Health
- Relevant ongoing projects:
 - **AIR4EU: Air Quality Assessment for Europe: from local to continental scale** (2004-2006) - www.air4eu.nl
Best practices for the combined use of monitoring methods and models to assess air quality from hotspot/street level for various users (local, regional, national and EU)
 - **EMF-NET: Effects of the exposure to electromagnetic fields: From science to public health and safer workplace** (2004-2008)
www.jrc.cec.eu.int/emf-net
Coordination Action for the coordination of the results of the research activities related to the biological effects of EMF, including occupational exposure
 - **ENVIE: Coordination action on indoor air quality and health effects** (2004-200?) <http://indoorairenvie.cstb.fr>
Co-ordination Action in the field of indoor air quality. Collecting and interpreting scientific knowledge from on-going research (EU funded projects, JRC activities) & preparing policy relevant recommendations.





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Action 6

Analysis of environment/health interactions to improve understanding & prevention of the priority diseases (putting emphasis on children, e.g. asthma, allergy, neuro-immune disorders, cancers, endocrine disruption)





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Implementing Action 6

asthma and allergies and children's
health

- **11 FP5 projects – finished or ongoing**
- **2 FP6 projects:**
 - **GA2LEN:** *Global allergy and asthma European network*
[Network of excellence ; 2004-2009; €14.4M] www.ga2len.com
Consortium of 26 leading European research teams and two societies (EAACI and EFA) committed to work with each other and to establish an European Research Area of excellence in the field of allergy and asthma
 - **EUROPREVALL:** *The prevalence, cost and basis of food allergies across Europe* [Integrated project; 2005-2009, €14M]
www.ifr.bbsrc.ac.uk/Science/ScienceBriefs/europrevall.html





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Implementing Action 6 neuroimmune disorders

- **8 FP5 projects – finished or ongoing**
- **5 FP6 projects:**
 - **CASCADE:** *Chemicals as contaminants in the food chain: a NoE for research, risk assessment and education* [NoE; €14.4M; 2004-2009]
www.cascadenet.org
 - **PHIME:** *Public health impact of long-term, low-level mixed element exposure in susceptible population strata* [IP; €13M; 2006-2011;
www.med.lu.se/english/research/phime]
 - **NEWGENERIS:** *Newborns and genotoxic exposure risks: Development and application of biomarkers of dietary exposure to genotoxic and immunotoxic chemicals and of biomarkers of early effects, using mother-child birth cohorts and biobanks* [IP; €13.6M; 2006-2011]
 - **DEVNERTOX:** *Toxic threats to the developing nervous system: in vivo and in vitro studies on the effects of mixture of neurotoxic substances potentially contaminating food* [Specific targeted research project (STREP); €2.4M; 2003-2006; www.imm.ki.se/devnertox]
- **ATHON:** *Assessing the toxicity and hazard of non-dioxin-like PCBs present in food* [STREP; 4.6M; 2006-2010]

Slide 11





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Implementing Action 6 cancer

- **31 FP5 projects – finished or ongoing**
 - **CANCERRISKBIOMARKERS:** *chromosomal aberrations - are they predictive of later cancer risk? [2001-2005; €1.3M]*
 - **INTERPHONE** *International case-control studies of cancer in relation to mobile telephone use [€3.9M; 2000-2006]*
- **5 FP6 projects:**
 - **ECNIS:** *Investigating the role of diet, air pollution, other exposures in cancer development, taking into account individual susceptibility [NoE; €14.4M; 2005-2009] www.imp.lodz.pl/ecnis/ecnis_pod.htm*
 - **CCPRB:** *Cancer control using population based registeries and biobanks (NoE; €6M; 2004-2009) www.cancerbiobank.org*
 - **CASCADE, NEWGENERIS, ATHON:** *Examples of projects with cancer-related aspects*





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Implementing Action 6

Endocrine mediated effects

- **28 FP5 projects – finished or ongoing**
- **CREDO** - *The cluster of research into endocrine disruption in Europe* [€20M; 2002-2006; www.credocluster.info]
 - Created in 2002 to integrate environmental and human aspects of endocrine disruption; drafted 'Prague declaration on endocrine disruptors' on research priorities in 2005
 - All groups of industrial chemicals studied, including emerging compounds (brominated flame retardants...)
 - Focused mostly on reproductive (e.g., **ENVIR.REPROD. HEALTH**) and neuroendocrine effects (**COMPARE**); some on multi-organ effects (**EURISKED**)
 - New testing methods developed in many projects - relevant to OECD testing programme and ECVAM (*European centre for the Validation of Alternative Methods*) activities
- **4 FP6 projects:**
- **PIONEER**- *Puberty onset - influence of nutritional, environmental and endogenous regulators* [STREP; €3M, 2005-2008]
- **F&F** - *Pharmaceutical products in the environment: Development and employment of novel methods for assessing their origin, fate and effects on human fecundity* [STREP; €1.75M; 2005-2008] <http://foodandfecundity.factlink.net/182059.0/>
- Projects with endocrine related effects: **ATHON** and **CASCADE**

Slide 13





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Implementing Action 7

Developing methodologies to assess better the risks coming from environmental factors and improving economic valuation (externalities concept) and impact analyses of prevention strategies





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Implementing Action 7 FP6 projects (2002-2006)

- **5 FP6 projects:**
 - **INTARESE** - *Integrated assessment of health risks from environmental stressors in Europe* [IP; €12M; 2005-2010] www.imperial-consultants.co.uk/intarese.org/home.htm
 - **NOMIRACLE** - *Novel methods for integrated risk assessment of cumulative stressors in Europe* [IP; €10M, 2005-2009] <http://viso.jrc.it/nomiracle>
 - **HEIMTSA**: *Health and Environment Integrated Methodology and Toolbox for Scenario Assessment* [IP; €5M, 2006-2010] (under negotiation)
 - *Related projects on Externalities: **METHODEX** and **EXIOPOL** (under negotiation)*





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Implementing Action 7

SSP - FP6 projects (2002-2006)

- **ESPROME:** *Reducing the environmental impact of heavy metals (2004-2006)*
- **DROPS:** *Development of macro and sectoral economic models aiming to evaluate the role of public health externalities on society (2006-2008)*
- **VERHI CHILDREN:** *Valuation of environment-related health impacts (2006-2008)*





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Action 8

Launching research on emerging issues

- climate change & health (e.g., spreading of emerging diseases)
- water pollution (e.g., emerging pathogens in drinking water)





Implementing Action 8

FP6 projects (2002-2006)

- **EDEN:** *Emerging diseases in a changing European environment* [IP, €11.5M, 2004-2009] www.eden-fp6project.net
- **EPI-BATHE:** *Assessment of human health effects caused by bathing waters* [STREP; €2.3M; 2005-2008]
- **VIROBATHE:** *AEPI-BATHE: A Methods for the detection of Adenoviruses and Noroviruses in European bathing waters with reference to the revision of the Bathing Water Directive 76/160/EEC* [STREP; €2.8M; 2005-2008] www.virobathe.org
- **HEALTHY WATER** *Assessment of human health impacts from emerging microbial pathogens in drinking water by molecular and epidemiological studies* [STREP; €2.4M; 2006-2009]
- **HI-WATE:** *Health impacts of long-term exposure to disinfection by-products in drinking water* [STREP; €3.5M; 2006-2009]





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Research project especially relevant to Action 3 (biomonitoring)





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Contributing to Action 3

- **ESBIO:** Expert team to support Human Biomonitoring in Europe (STREP, €2M, SSP project) <http://www.eu-humanbiomonitoring.org/>
- **POPULATION BIOBANKS** *Harmonising population-based biobanks and cohort studies to strengthen the foundation of biomedical science in the post-genome era* (Coordination action; €0.8M, 2006-2009; www.populationbiobanks.org)
- Other projects contributing to Action 3: **CCPRB, NEWGENERIS**





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Information

Dissemination via internet



KA4 website on FP5
E&H projects

http://europa.eu.int/comm/research/quality-of-life/ka4/index_en.html



Endocrine disrupter
research website

http://europa.eu.int/comm/research/endocrine/index_en.html

Food quality and safety

Website on
major projects
funded by Priority 5 of FP6

<http://europa.eu.int/comm/research/fp6/projects.cfm?p=5>

Sustainable development, global change and ecosystems
Global change and ecosystems

Website on
major projects
funded by Priority 6 of FP6

<http://www.cordis.lu/sustdev/environment/projects.htm>

