

## First Call Global Change and Ecosystems – Complete overview

(in **bold** forest related opportunities for 2003)

**Specific Programme** : Integrating and Strengthening the ERA

**Priority Area 6**: Sustainable Development, Global Change and Ecosystems

**Sub-priority 3**: Global Change and Ecosystems

**Call Identifier**: FP6-2002-Global-1 ([http://fp6.cordis.lu/fp6/call\\_details.cfm?CALL\\_ID=24](http://fp6.cordis.lu/fp6/call_details.cfm?CALL_ID=24))

**Call period**: 17 December 2002 – 8 April 2003

### Budget first Call 2003:

Instrument	E (millions)
IP and NoE	140
STREP and CA	25
SSA	5
<b>Total</b>	<b>170</b>

### Areas of the first Call for Proposals (17 December 2002) related to Global Change and Ecosystems

Area	Topic category	Topic 2003 (first call)	Instruments (first call)	Topic 2004
I. Impact and mechanisms of greenhouse gas emissions and atmospheric pollutants on climate, ozone depletion and carbon sinks	<b>I.1. Carbon and Nitrogen cycles: sources and sinks</b>	1a. Assessment of the European carbon balance	1 IP or NoE	1b. Assessment of marine carbon courses and sinks
	I.2. Atmospheric pollutants and their regional impacts	2a. Integration of European atmospheric composition research	1 IP or NoE	2b. Atmospheric pollutants and climate forcing
	I.3. Climate dynamics and variability	3a. Hot spots in the earth system (tropical and Mediterranean areas)	1 IP or NoE	3b. Coupled climate system 3c. Novel palaeoreconstruction methods
	I.4. Prediction of climatic change and its impacts	4a. Integrated climate change scenarios	1 IP or NoE	
	I.5. Stratospheric ozone and climate interactions	5a. Ozone-climate links	1 IP or NoE	5b. Aviation and surface transport impacts
	I.6. Adaptation and mitigation strategies	6a. Adaptation and mitigation strategies	1 IP or NoE	

Area	Topic category	Topic 2003 (first call)	Instruments (first call)	Topic 2004
II. Water cycle, including soil-related aspects	II.1. Hydrology and climate processes			
	1.1. Climate modelling at catchment-regional scale	1.1a. Improved modelling of climate-water interactions at catchment-regional scale	1 IP or NoE	
	1.2. Climate variability, floods and droughts	1.2a. Development of an European (Virtual) Centre for Flood and Drought Studies	1 IP or NoE	
	II.2. Ecological impact of global change, soil functioning and water quality			
	2.1. Impacts of global change on the ecology of surface water bodies	2.1a. Assessment of ecological impact of global change on freshwater bodies, development of ecological indicators of ecosystem "health" and related remediation strategies	1 IP or NoE	
	2.2. Water-soil system functioning and management	2.2a. River-soil-groundwater system functioning	1 IP or NoE	2.2b. Soil-groundwater protection
	II.3. Integrate management strategies and mitigation technologies			
	3.1. Integrated water management at catchment scale	3.1a. Twinning European/third countries river basins	STREPs and CAs	3.1b. Methodologies of Integrated Water Resource Management and Transboundary issues
	3.2. Integrated urban water management and mitigation technologies			3.2a. Wastewater re-use
	3.3. Management of scarce water resources and mitigation technologies	3.3a. Technologies for monitoring and mitigating the impact of water scarcity	STREPs and CAs	3.3b. New approaches to water stress
II.4. Scenarios of water demand and availability			4.1a. Water scenarios for Europe and for neighbouring countries	

Area	Topic category	Topic 2003 (first call)	Instruments (first call)	Topic 2004
III. Biodiversity and ecosystems	III.1. Assessing and forecasting changes in <b>biodiversity</b> , structure, function and dynamics of ecosystems and their services, with emphasis on marine ecosystem functioning	1.1. Developing a network for European long-term terrestrial and freshwater biodiversity and ecosystem research	1 NoE	
		1.2. Developing a network to structure and integrate European research on marine biodiversity and ecosystems	1 NoE	
		1.3. Developing genomic approaches	1 IP or NoE	
		1.4. Development of cost effective, reliable and efficient technologies for enabling progress in biodiversity and ecosystem science (esp. marine ecosystems)	STREPs and CAs	
				1.5. Integrated research on ecosystems lying in the deeper ocean section
	III.2. <b>Relationships between society, economy, biodiversity and habitats</b>	2.1. Generating models of socio-economic impacts on biodiversity and ecosystems	STREPs and CAs	
	III.3. Integrated assessment of drivers affecting ecosystems functioning and biodiversity, and mitigation options			3.1. Develop models and simulations to assess and forecast changes in terrestrial and fresh water biodiversity and ecosystems 3.2. Develop models for assessing and forecasting the impacts of climate and anthropogenic forcing on pelagic ecosystem (open ocean)
	III.4. Risk assessment, management, <b>conservation and rehabilitation</b> options in relation to terrestrial and marine ecosystems	4.1. Assessing large-scale environmental risks	1 IP or NoE	4.2. Develop models for assessing and forecasting the impact of environmental pollution on fresh water and marine ecosystems and their biodiversity 4.3. Create an inventory of invasive species 4.4. Harmful algal blooms in European marine and brackish waters

Area	Topic category	Topic 2003 (first call)	Instruments (first call)	Topic 2004
IV. Mechanisms of desertification and natural disasters	IV.1. Mechanisms of <b>desertification</b>	1a. Research on mechanisms of desertification and soil quality (STREP, CA)	STREPs and CAs	1b. Assessment of the vulnerability to desertification 1c. Combating desertification
	IV.2. <b>Natural disasters</b>	2a. Integrated earthquake and landslide disaster management methodologies 2b. Integrated flood risk management methodologies	1 IP or NoE	2c. Seismic hazard, flood, storms, forest fire, volcanic and avalanche risk assessment
V. Strategies for sustainable land management, including coastal zones, agricultural land and forests	V.1. Sustainable use of land			
	V.1.1. Land-use and landscapes in sensitive regions			1a. Methods for sustainable regional development assessment 1b. Development of new concepts, strategies and tools 1c. Land-use modelling
	V.1.2. Integrated Coastal Zone Management considering spatial and temporal integration and stakeholders involvement for Sustainable Development			2a. Establishment of a long-lasting network
	V.2. Qualitative and quantitative aspects of multi-functionality of agriculture and forestry/wood chain			
	V.2.1. Agriculture for sustainable development (subject to later call)			
	V.2.2. <b>Forestry/wood chain for sustainable development</b>	2.2a. Development and application of integrated approach and tools for long-term sustainability of forest status and productivity (role and impact of complete forestry/wood chain in the context of the EU sustainable development strategy)	1 IP or NoE	
VI. Operational forecasting and modelling including global climatic change observation systems	VI.1. Development of observing and forecasting systems			1a. Earth system observations

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VII. Complementary research	VII.1. Development of advances methodologies for risk assessment			
	1.1. Integrated Risk Assessment			1.1a. Development of risk assessment methodologies 1.1b. Methods for risk assessment of pharmaceuticals in the environment
	1.2. Assessment of product life cycle (subject of later call)			
	VII.2. Appraisal of environmental quality, population health and monitoring tools			
	2.1. Methods for appraising environmental quality and health			2.1a. Assessment of global change-driven environmental factors linked to the risk of introducing or spreading emerging diseases in Europe
	2.2. Environmental monitoring tools (standards, measurement and testing) (subject of later call)			
VIII. Cross-cutting issues: sustainable development concepts and tools	VIII.1. Estimating thresholds of sustainability and externalities	1a. Harmonising and sharing of methods and data	STREPs and CAs	1b. Thresholds 1c. Elaborating new accounting frameworks of externalities
	VIII.2. Developing tools for <b>integrated sustainability assessment</b> and for the incorporation of sustainability in decision making processes	2a. High level scientific validation of methodologies, tool and appraisals 2b. Ecological, environmental and social indicators to monitor sustainable development	STREPs and CAs	2c. Innovative methods and tools for integrated assessment of environmental, economic and social components of SD 2d. Integrated modelling and quantitative tools development and application 2e. Education programmes (to stakeholders and decision-makers)

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Specific Support Actions		European Network for Research in Global Change (ENRICH)	SSA	European Network for Research in Global Change (ENRICH)
		Consolidating knowledge on the role of wetlands in the water cycle	SSA	Providing support for the activities and further development of the European Platform for Biodiversity Research Strategy (EPBRS)
		European contribution to international observation systems	SSA	
		Capitalisation of results from the past research on sustainable agriculture	SSA	
		<b>Lessons from past research on sustainable production and utilisation of forests</b> (multi-functionality aspects of forestry/wood chain with regard to natural resource conservation, landscape creation and land-use)	SSA	

#### Minimum number of participants

Instrument	Minimum number of participants
IP, NoE, STREP, CA	3 independent legal entities from 3 different member states (MS) or Associated States (AS), with at least 2 MS or Associated Candidate Countries (ACC)
SSA	1 legal entity, 1 from a MS or AS

#### Links to other research topics

- Priority Global Change and Ecosystems (1.1.6.3) will contribute to Global Monitoring for Environment and Security (GMES), although main research contribution will come from Priority Aeronautics and Space (1.1.4)
- Natural disasters, Coastal management, Water management systems will be co-ordinated with Priority Information Society Technologies (1.1.2)
- Sustainable Development and foresight of the cross-cutting issue will be co-ordinated with Priority Citizens and Governance in a Knowledge-based Society (1.1.7), and co-ordinated with Sub-priority Sustainable Energy (1.1.6.1).
- Forestry/wood chain will be co-ordinated with Priority Nano-technology and Nano-sciences, Knowledge-based Multifunctional materials, New Production Processes and Devices (1.1.3)
- Agricultural research for SD will be co-ordinated with Priority Food Quality and Safety (1.1.5)
- General co-ordination for all areas with Specific activities covering a wider field of research (Cross-cutting issues), including INCO.

#### Estimated time table:

- evaluation results: within 2-3 months after closure date
- first contract signature: before end 2003