

Appendix 1

Annex 1

Structure of the research programmes of the fifth framework programme 1998-2002 (indirect actions) and their thematic priorities according to their workprogrammes

Thematic priorities are subject to regular updates in line with the revision of the workprogrammes.

Proposers should always check that they use the latest version.

Latest information on programmes' thematic priorities are available on the following Website:

http://www.cordis.lu/fp5/src/forms_a.htm

Version of 20 December, 1999

Reference No. annex_formsa1_en.pdf

**Structure of the research programmes of the fifth framework programme 1998-2002:
(indirect actions):**

1. 5th EC Framework programme

1.1. *First activity*

QOL Quality of Life and Management of Living Resources

IST User-friendly Information society

GROW Competitive and Sustainable Growth

EESD Energy, Environment and Sustainable Development

1.2. *Second activity*

INCO Confirming the International Role of Community Research

1.3. *Third activity*

IPS Promotion of Innovation and Encouragement of SME participation

1.4. *Fourth activity*

IHP Improving the Human Research Potential & the Socio-Economic Knowledge Base

2. Euratom Framework Programme

NUC *Nuclear Energy*

**Structure of the thematic priorities of the fifth framework programme 1998-2002:
(indirect actions):**

1. EC Framework programme

1.1. First activity

QOL Quality of Life and Management of Living Resources

QOL-2000-1. Key action Food, Nutrition and Health

QOL-2000-1.1 Development of safe and flexible and new and/or improved manufacturing processes and technologies

QOL-2000-1.1.1. Novel and improved biological raw materials for high quality food

QOL-2000-1.1.2. Advanced and optimised food technologies, packaging systems and process control

QOL-2000-1.1.3. Quality monitoring and traceability throughout the food chain

QOL-2000-1.2 Development of tests to detect and processes to eliminate infectious and toxic agents throughout the food chain

QOL-2000-1.2.1. Improved understanding and control of contamination conditions arising along the entire food chain from primary producer to consumer

QOL-2000-1.2.2. Rapid detection tests particularly for pathogens and hormones.

QOL-2000-1.2.3. New and safer methods of food production and distribution

QOL-2000-1.2.4. New methodologies for assessing microbial, chemical and allergenic risks and exposures

QOL-2000-1.3. Research into the role of food in promoting and sustaining health with respect to diet and nutrition, toxicology, epidemiology, environmental interaction, consumer choice and public health

QOL-2000-1.3.1. Consumer needs, attitudes and responses with regard to food products, food processing and labelling

QOL-2000-1.3.2. Role and impact of food on physiological functions, physical and mental performance

QOL-2000-1.3.3. Particular nutritional needs of defined population groups

QOL-2000-1.3.4. Links between diet and chronic diseases and disorders including the genetic factors involved

QOL-2000-2. Key action Control of Infectious Diseases

QOL-2000-2.1. Development of improved or novel mono-component, multi-component and combined vaccines

QOL-2000-2.1.1. New vaccination strategies

QOL-2000-2.1.2. Discovery phase and pre-clinical development of preventive and therapeutic vaccines

QOL-2000-2.1.3. Clinical evaluation of vaccines

QOL-2000-2.2. Strategies to identify and control infectious diseases

QOL-2000-2.2.1. Treatment of, and protection against, human and animal infectious diseases

QOL-2000-2.2.2. Antimicrobial drug resistance and changes in virulence

QOL-2000-2.2.3. Diagnostic tests for humans and animals

QOL-2000-2.3. Aspects of public health and care delivery systems

QOL-2000-2.3.1. Risk assessment, transmission and surveillance

QOL-2000-2.3.2. Methodologies for medicinal product safety surveillance in the market place

QOL-2000-2.3.3. Organisational and economic aspects of human and animal health

QOL-2000-3. Key action The "Cell factory"

QOL-2000-3.1. Improving the diagnostic and therapeutic arsenal for health care

QOL-2000-3.1.1. Development of new diagnostics

QOL-2000-3.1.2. Therapeutic substances

QOL-2000-3.1.3. Therapeutic strategies

QOL-2000-3.1.4. Novel *in-vitro* testing as alternatives to animal testing

QOL-2000-3.2. Improving environmental sustainability

QOL-2000-3.2.1. New bioprocesses for industrial efficiency, to avoid pollution, make use of bioaccumulable wastes and by-products, and treat wastewater

QOL-2000-3.2.2. Bioassays and biosensors.

QOL-2000-3.2.3. Biodegradation of recalcitrant chemicals and bioremediation

QOL-2000-3.2.4. Biodiversity and ecological dynamics of natural and introduced populations

QOL-2000-3.2.5. Methods and strategies for safe use of new biomolecules and bioprocesses, for identifying recombinant organisms and their residues in the environment and assessing their impact on human and animal health, to support Community policies

- QOL-2000-3.3.** New biological and biotechnological products and processes for agro-industry, agri-food and high value added chemicals
- QOL-2000-3.3.1.** Exploiting the cellular and molecular characteristics of organisms
- QOL-2000-3.3.2.** High value-added products and processes involving / derived from micro-organisms, plants and animals.
- QOL-2000-3.3.3.** Functional biomolecules and biocatalysts.
- QOL-2000-3.3.4.** Identification and sustainable use of metabolic and genetic diversity as a source of new valuable products
- QOL-2000-4.** Key action Environment and Health
- QOL-2000-4.1.** Diseases and allergies related to or influenced by the environment, their prevention and treatment
- QOL-2000-4.1.1.** Analysis and quantification of the impact of environmental factors on human health.
- QOL-2000-4.1.2.** Assessment of the relative importance of, and the interactions between, factors impinging on health.
- QOL-2000-4.1.3.** Development of an integrated approach to risk management taking into account environmental and public health aspects
- QOL-2000-4.2.** Development of new methods of diagnosis, risk assessment and processes to reduce causes and harmful environmental health effects
- QOL-2000-4.2.1.** Development of methods to assess environmental hazards including mixed exposures, cumulative and low dose effects
- QOL-2000-4.2.2.** Improvement of predictive toxicity testing and mechanism-based risk assessment consistent with the aim of the reduction and eventual replacement of animal testing
- QOL-2000-4.2.3.** Improved methods and technologies for long and short-term exposure and effects assessment including biomarkers (and bio-indicators) of environmental exposure, and susceptibility to environmental agents
- QOL-2000-5.** Key action Sustainable Agriculture, Fisheries and Forestry, and integrated development of rural areas including mountain areas
- QOL-2000-5.1.** New and sustainable systems of production, including breeding methods and exploitation in agriculture, fisheries and aquaculture, taking into account profitability, the sustainable management of resources, product quality and employment as well as animal health and welfare
- QOL-2000-5.1.1.** Sustainable agriculture
- QOL-2000-5.1.2.** Sustainable fisheries and aquaculture
- QOL-2000-5.2.** The integrated production and exploitation of biological materials for non-food uses
- QOL-2000-5.3.** Sustainable and multi-purpose utilisation of forest resources; the integrated forestry-wood chain
- QOL-2000-5.3.1** Multifunctional management of forests
- QOL-2000-5.3.2** Strategies for the sustainable and multipurpose utilisation of forest resources; the forestry-wood chain
- QOL-2000-5.4.** Support for common policies – Development of methods of control, surveillance and protection including protection of land and prevention of soil erosion. Pre-legislative research designed to provide a scientific basis for Community legislation
- QOL-2000-5.4.1** Community agriculture and the international context
- QOL-2000-5.4.2** CAP measures and related activities including agri-environmental and socio-economic aspects
- QOL-2000-5.4.3** Monitoring and enforcement of the CFP
- QOL-2000-5.4.4** Social and economic basis of the CFP
- QOL-2000-5.5.** New tools and models for the integrated and sustainable development of rural and other relevant areas
- QOL-2000-5.5.1** Analysing rural situations, changes and trends
- QOL-2000-5.5.2** Conceptualising integrated development of rural and other relevant areas
- QOL-2000-5.5.3** Assessing rural and coastal development performance and policies
- QOL-2000-6.** Key action The Ageing Population and Disabilities
- QOL-2000-6.1.** Age-related illnesses and health problems
- QOL-2000-6.2.** Determinants of healthy ageing and of well-being in old age
- QOL-2000-6.3.** Demographic and social policy aspects of population ageing
- QOL-2000-6.4.** Coping with functional limitations in old age
- QOL-2000-6.5.** Health and social care services to older people
- QOL-2000-7** Chronic and Degenerative Diseases, Cancer, Diabetes, Cardiovascular Diseases and Rare Diseases

- QOL-2000-7.1.** Elucidation of the common underlying pathogenic mechanisms involved in disease initiation, progression and maintenance
- QOL-2000-7.2.** Evaluation of conventional and non-conventional therapies through multinational, large scale studies/trials (open in 2001)
- QOL-2000-7.3.** Optimised use of relevant databases, registries, repositories (open in 2001, but see area 14)
- QOL-2000-8.** Research into genomes and diseases of genetic origin
- QOL-2000-8.1.** Genome analysis
- QOL-2000-8.2.** Functional genomics and proteomics
- QOL-2000-8.3.** Development of novel expression systems, model organisms, mutant, transgenic and hybrid organisms (open in 2001)
- QOL-2000-8.4.** Development and application of underpinning biochemistry, biophysical, statistical and computational approaches (open in 2001, but see area 14)
- QOL-2000-9.** Neurosciences
- QOL-2000-9.1.** Cell communication
- QOL-2000-9.2.** Brain theories, computational neuroscience and neuroinformatics
- QOL-2000-9.3.** Brain development, disorders and repair and their clinical, epidemiological and social implications (open in 2001)
- QOL-2000-9.4.** Behaviour, cognition and functional mapping of the brain (open in 2001)
- QOL-2000-10.** Public health and health services research
- QOL-2000-10.1.** Health services research and health and safety at work
- QOL-2000-10.2.** Fighting drug related problems
- QOL-2000-11.** Research relating to the persons with disabilities
- QOL-2000-11.1.** Determinants of impairment, disability and handicap
- QOL-2000-11.2.** Methodologies for the assessment of quality of life
- QOL-2000-11.3.** Innovative technological research for the rehabilitation and assistance
- QOL-2000-11.4.** Health and social care delivery
- QOL-2000-12.** Bioethics
- QOL-2000-12.1.** Ethical aspects of scientific and technological developments
- QOL-2000-12.2.** Ethical framework for life sciences
- QOL-2000-12.3.** Public policies, law and bioethics
- QOL-2000-12.4.** Bioethics infrastructures and methodologies
- QOL-2000-13.** Socio-economic aspects of life sciences and technologies
- QOL-2000-13.1.** Development of indicators and knowledge bases relevant to public policy making
- QOL-2000-13.2.** Managing technology in society
- QOL-2000-13.3.** Analysis of social and economic driving forces and of new opportunities in the bioindustries
- QOL-2000-14.** Support for research infrastructures
- QOL-2000-14.1.** Biological collections
- QOL-2000-14.2.** Biological information resources
- QOL-2000-14.3.** Clinical research facilities
- QOL-2000-14.4.** Pre-clinical research facilities
- QOL-2000-14.5.** Facilities for aquaculture and fishery research
- IST** **User-friendly Information society (IST)**
- IST-1999-1.** Key action Systems and services for the citizen
- IST-1999-1.1.** RTD spanning key action 1
- IST-1999-1.1.1.** New models for providing services to citizens
- IST-1999-1.2.** Health
- IST-1999-1.2.1.** Personal health systems
- IST-1999-1.2.2.** Clinical, biological, managerial and imaging systems for health professionals
- IST-1999-1.2.3.** New generation tele-medicine services
- IST-1999-1.3.** Persons with special needs, including the disabled and the elderly
- IST-1999-1.3.1.** Systems and services for independent living
- IST-1999-1.4.** Administrations
- IST-1999-1.4.1.** Systems enhancing the efficiency and user-friendliness of administrations
- IST-1999-1.4.2.** On-line support to democratic processes
- IST-1999-1.5.** Environment
- IST-1999-1.5.1.** Intelligent environmental monitoring and management systems

- IST-1999-1.5.2. Environment risk and emergency management systems
- IST-1999-1.6. Transport and tourism
- IST-1999-1.6.1. Intelligent infrastructure and mobility management
- IST-1999-1.6.2. Systems for intelligent vehicles
- IST-1999-1.6.3. Systems and services for tourism
- IST-1999-2. Key action New Methods of Work and Electronic Commerce
- IST-1999-2.1. RTD spanning key action 2
- IST-1999-2.1.1. New perspectives for work and business
- IST-1999-2.1.2. Corporate knowledge management
- IST-1999-2.2. Flexible, mobile and remote working methods and tools
- IST-1999-2.2.1. Workplace design
- IST-1999-2.2.2. Team work
- IST-1999-2.2.3. Dynamic networked organisations
- IST-1999-2.3. Management systems for suppliers and consumers
- IST-1999-2.3.1. Digital design and life-cycle management for products and services
- IST-1999-2.3.2. New market mediation systems
- IST-1999-2.3.3. Enhanced consumer-supplier relationships
- IST-1999-2.4. Information and network security and other confidence-building technologies
- IST-1999-2.4.1. Identification and authentication
- IST-1999-2.4.2. Secure electronic financial transactions
- IST-1999-2.4.3. Digital object transfer
- IST-1999-3. Key action Multimedia Content and Tools
- IST-1999-3.1. RTD spanning key action 3
- IST-1999-3.1.1. Social and business models for multimedia content
- IST-1999-3.2. Interactive publishing, digital content and cultural heritage
- IST-1999-3.2.1. Authoring and design systems
- IST-1999-3.2.2. Content management and personalisation
- IST-1999-3.2.3. Access to scientific and cultural heritage
- IST-1999-3.2.4. Digital preservation of cultural heritage
- IST-1999-3.3. Education and training
- IST-1999-3.3.1. Open platforms and tools for personalised learning
- IST-1999-3.3.2. The flexible university
- IST-1999-3.3.3. Advanced training systems
- IST-1999-3.4. Human language technologies
- IST-1999-3.4.1. Multilinguality in digital content and services
- IST-1999-3.4.2. Natural interactivity
- IST-1999-3.5. Information access, filtering, analysis and handling
- IST-1999-3.5.1. Multi-sensory forms of content
- IST-1999-3.5.2. Media representation and access: new models and standards
- IST-1999-4. Key action Essential Technologies and Infrastructures
- IST-1999-4.1. RTD spanning key action IV
- IST-1999-4.1.1. Convergence and integration: scenarios and analyses
- IST-1999-4.2. Technologies for management of information processing, communications and networks, including broad-band, together with their implementation, interoperability and application
- IST-1999-4.2.1. Concurrent systems
- IST-1999-4.2.2. Real-time systems
- IST-1999-4.2.3. Network integration, interoperability and interworking
- IST-1999-4.2.4. Technologies for network management and service-level interworking
- IST-1999-4.2.5. All-optical and terabit networks
- IST-1999-4.3. Technologies and engineering for software, systems and services, including high-quality statistics
- IST-1999-4.3.1. Component-based software engineering
- IST-1999-4.3.2. Engineering of intelligent services
- IST-1999-4.3.3. Methods and tools for intelligence and knowledge sharing
- IST-1999-4.3.4. Information management methods
- IST-1999-4.4. Real-time and large-scale simulation and visualisation technologies
- IST-1999-4.4.1. Real-time simulation and visualisation technologies
- IST-1999-4.4.2. Large scale shared virtual and augmented environments
- IST-1999-4.5. Mobile and personal communications and systems, including satellite-related systems and services

IST-1999-4.5.1	Re-configurable radio systems and networks
IST-1999-4.5.2	Terrestrial wireless systems and networks
IST-1999-4.5.3	Integrated satellite systems and services
IST-1999-4.5.4	Advanced tools and technologies for wireless communications
IST-1999-4.6	Interfaces making use of the various senses
IST-1999-4.6.1	Adaptable multi-sensory interfaces
IST-1999-4.7	Peripherals, sub-systems and microsystems
IST-1999-4.7.1	Peripherals technologies
IST-1999-4.7.2	Subsystems technologies
IST-1999-4.7.3	Microsystems
IST-1999-4.8	Microelectronics
IST-1999-4.8.1	Microelectronics and opto-electronics design
IST-1999-4.8.2.	Application competencies
IST-1999-4.8.3	Processes, equipment and materials
IST-1999-4.8.4	Advanced opto-electronics and microelectronics
IST-1999-5	<u>Cross programme themes</u>
IST-1999-5.1	Cross programme actions
IST-1999-5.1.1	CPA1: Integrated applications platforms and services
IST-1999-5.1.2	CPA2: Dependability in services and technologies
IST-1999-5.1.3	CPA3: Design-for-all for an inclusive information society
IST-1999-5.1.4	CPA4: New indicators and statistical methods
IST-1999-5.2	Cross-programme clusters
IST-1999-5.2.1	CPCO: Open Cross-programme clusters
IST-1999-6	<u>Generic activities: Future and emerging technologies</u>
IST-1999-6.1	FET O: Open domain
IST-1999-6.2	Proactive Initiatives
IST-1999-6.2.1	FET P1: Quantum information processing and communications
IST-1999-6.2.2	FET P2: Universal information ecosystems
IST-1999-6.2.3	FET P3: Nanotechnology information devices
IST-1999-7	<u>Support for research infrastructures: research networking</u>
IST-1999-7.1	RN1: Broad-band interconnection of national research, education and training networks, and testbeds
IST-1999-7.2	RN2: Testbeds for advanced networking and application experiments
IST-1999-8	<u>IST support measures</u>
IST-1999-8.1.1	Take-up Measures
IST-1999-8.2.1	Concerted actions and thematic networks
IST-1999-8.3.1	Accompanying measures
IST-1999-8.4.1	Technology stimulation projects to encourage and facilitate SME participation
IST-1999-8.5.1	Training Fellowships
GROW	Competitive and Sustainable Growth
GROW-2000-1	<u>Key Action Innovative Products, Processes and Organisation</u>
GROW-2000-1.1	Efficient production, including design, manufacturing and control
GROW-2000-1.2	Intelligent production
GROW-2000-1.3	Eco-efficient processing and design
GROW-2000-1.4	Organisation of production and work
GROW-2000-1.5	TRA “ products ”: evolutionary value-added and resource-saving products-services, including miniaturised systems
GROW-2000-1.6	TRA “ machines ”: new generation of machinery, production equipment and systems for manufacturing
GROW-2000-1.7	TRA “ extended enterprise ”: the knowledge based extended manufacturing enterprise
GROW-2000-1.8	TRA “ modern factory ”: customer oriented, high tech, agile and towards zero-waste production
GROW-2000-1.9	TRA “ infrastructure ”: safe and cost effective industrial facilities, construction and civil infrastructures
GROW-2000-2	<u>Key Action Sustainable Mobility and Intermodality</u>
GROW-2000-2.1	Socio-economic scenarios for mobility of people and goods
GROW-2000-2.1.1	Quantitative tools for decision-making
GROW-2000-2.1.2	Driving forces in transport

- GROW-2000-2.1.3 Policies for sustainable mobility
- GROW-2000-2.2 Infrastructures and their interfaces with transport means and systems
 - GROW-2000-2.2.1 Infrastructure development and maintenance
 - GROW-2000-2.2.2 Environment
 - GROW-2000-2.2.3 Safety
 - GROW-2000-2.2.4 Security
 - GROW-2000-2.2.5 Human factors
- GROW-2000-2.3 Modal and intermodal transport management systems
 - GROW-2000-2.3.1 Traffic management systems
 - GROW-2000-2.3.2 Transport and mobility services
 - GROW-2000-2.3.3 Second generation satellite navigation and positioning systems
- GROW-2000-3 Key Action Land Transport and Marine Technologies
 - GROW-2000-3.1 Critical technologies for road and rail transport
 - GROW-2000-3.1.1 Efficient, clean and intelligent road and rail transport vehicle technologies
 - GROW-2000-3.1.2 Innovative and safe road and rail transport vehicle concepts
 - GROW-2000-3.1.3 Human/vehicle interaction
 - GROW-2000-3.2 Critical marine technologies
 - GROW-2000-3.2.1 Efficient, safe and environmentally friendly ships and vessels
 - GROW-2000-3.2.2 Maximising interoperability and vessel performances
 - GROW-2000-3.2.3 Innovative technologies for the monitoring, exploration and sustainable exploitation of the sea
 - GROW-2000-3.3 **TP1:** New land transport vehicle concepts; Enhanced systems efficiency
 - GROW-2000-3.4 **TP2:** Advanced concepts for ships and vessels; Competitive shipbuilding
 - GROW-2000-3.5 **TP3:** Enhanced design and manufacturing for road vehicles
 - GROW-2000-3.6 **TP4:** Sustainable and modular train
 - GROW-2000-3.7 **TP5:** Safe, efficient and environmentally friendly vessels and platforms
 - GROW-2000-3.8 **TP6:** Efficient interoperability and transshipment
- GROW-2000-4 Key Action New Perspectives in Aeronautics
 - GROW-2000-4.1 Reducing aircraft development cost and time to market
 - GROW-2000-4.1.1 Advanced design systems and tools
 - GROW-2000-4.1.2 Manufacturing
 - GROW-2000-4.1.3 Product quality control
 - GROW-2000-4.2 Improving aircraft efficiency
 - GROW-2000-4.2.1 Aerodynamics
 - GROW-2000-4.2.2 Structures and materials application
 - GROW-2000-4.2.3 Propulsion
 - GROW-2000-4.2.4 Systems and equipment
 - GROW-2000-4.2.5 Configurational and interdisciplinary aspects
 - GROW-2000-4.3 Improving environmental friendliness of aircraft
 - GROW-2000-4.3.1 Low pollutant emissions
 - GROW-2000-4.3.2 External noise
 - GROW-2000-4.3.3 Cabin environment
 - GROW-2000-4.4 Improving operational capability and safety of aircraft
 - GROW-2000-4.4.1 Air traffic management (ATM) related air borne systems
 - GROW-2000-4.4.2 Operational Maintenance
 - GROW-2000-4.4.3 Accident prevention
 - GROW-2000-4.4.4 Accident survivability
 - GROW-2000-4.5 **TP1:** Low-cost, low-weight primary structures
 - GROW-2000-4.6 **TP2:** Efficient and environmentally friendly aero-engine
 - GROW-2000-4.7 **TP3:** Novel rotary-wing aircraft configuration
 - GROW-2000-4.8 **TP4:** More autonomous aircraft in the future air-traffic management system
 - GROW-2000-4.9 **TP5:** Power-optimised aircraft
 - GROW-2000-4.10 **TP6:** Low external noise aircraft
 - GROW-2000-4.11 **TP7:** Low noise aircraft cabin
 - GROW-2000-4.12 **TP8:** Novel fixed-wing aircraft configuration
 - GROW-2000-4.13 **TP9:** Integrated and modular aircraft electronic systems
- GROW-2000-5 RTD Activities of a Generic Nature : materials and their technologies for production and transformation and new and improved materials and production technologies in the steel field
 - GROW-2000-5.1 Cross-cutting generic materials technologies

- GROW-2000-5.2 Advanced functional materials
- GROW-2000-5.3 Sustainable chemistry
- GROW-2000-5.4 Expanding the limits and durability of structural materials
- GROW-2000-5.5 Iron and steel production
- GROW-2000-5.6 Steel casting, rolling and downstream treatment
- GROW-2000-5.7 Steel utilisation
- GROW-2000-6 RTD Activities of a Generic Nature : Measurements and Testing
- GROW-2000-6.1 Instrumentation
- GROW-2000-6.1.1 Instrumentation in support of standardisation (**not foreseen**)
- GROW-2000-6.1.2 Sensors, screening systems and instruments for the fight against fraud
- GROW-2000-6.1.3 Instrumentation for improvement of quality
- GROW-2000-6.2 Methodologies for measurements and testing
- GROW-2000-6.2.1 Methodologies to support standardisation and Community policies
- GROW-2000-6.2.2 Measurement and testing anti-fraud methodologies
- GROW-2000-6.2.3 Measurement and testing methodologies in support of quality
- GROW-2000-6.3 Support to the development of certified reference materials (CRMs)
- GROW-2000-6.3.1 CRMs to support standardisation and Community policies
- GROW-2000-6.3.2 Reference substances and materials for anti-fraud
- GROW-2000-6.3.3 CRMs for traceability and calibration
- GROW-2000-7 Support to Research Infrastructures
- GROW-2000-7.1 Support activities to medium and large scale facilities
- GROW-2000-7.2 Setting up of virtual institutes
- GROW-2000-7.3 Reference databases
- GROW-2000-7.4 Measurement and quality management infrastructures

EESD. Energy, Environment and Sustainable Development

Part A. Environment and Sustainable Development

- EESD-1999-1. Key action Sustainable Management and Quality of Water
- EESD-1999-1.1. Integrated management and sustainable use of water resources at catchment scale
- EESD-1999-1.1.1. Strategic planning and integrated management methodologies and tools at catchment scale
- EESD-1999-1.1.2. Socio-economic aspects of sustainable use of water
- EESD-1999-1.1.3. Operational management schemes and decision support systems
- EESD-1999-1.2. Ecological quality of freshwater ecosystems and wetlands
- EESD-1999-1.2.1. Ecosystem functioning
- EESD-1999-1.2.2. Ecological quality targets
- EESD-1999-1.3. Treatment and purification technologies
- EESD-1999-1.3.1. Management of water in the city
- EESD-1999-1.3.2. Waste water treatment and re-use
- EESD-1999-1.4. Pollution prevention
- EESD-1999-1.4.1. Abatement of water pollution from contaminated land, landfills and sediments
- EESD-1999-1.4.2. Combating diffuse pollution
- EESD-1999-1.5. Surveillance, early warning and communication systems
- EESD-1999-1.5.1. Pollution surveillance and control
- EESD-1999-1.5.2. Improved flood and drought forecasting
- EESD-1999-1.6. Regulation of stocks and technologies for arid and semi-arid regions and generally water deficient regions
- EESD-1999-1.6.1. Water resources use and management
- EESD-1999-1.6.2. Prevention and mitigation of saline water intrusion
- EESD-1999-1.6.3. Technological development and management tools
- EESD-1999-2 Key action Global Change, Climate and Biodiversity
- EESD-1999-2.1 To understand, detect, assess and predict global change processes
- EESD-1999-2.1.1. Atmospheric composition change
- EESD-1999-2.1.2. Stratospheric ozone depletion
- EESD-1999-2.1.3. Climate change prediction and scenarios
- EESD-1999-2.1.4. Climate variability and abrupt climate changes
- EESD-1999-2.2. To foster better understanding of terrestrial (including freshwater) and marine ecosystems and their interactions
- EESD-1999-2.2.1. Ecosystem vulnerability

- EESD-1999-2.2.2. Interactions between ecosystems and the carbon and nitrogen cycles
- EESD-1999-2.2.3. Assessing and conserving biodiversity
- EESD-1999-2.3. Scenarios and strategies for responding to global issues
- EESD-1999-2.3.1 Mitigation and adaptation to global change
- EESD-1999-2.3.2. Reconciling the conservation of biodiversity with economic development
- EESD-1999-2.3.3. Fighting land degradation and desertification
- EESD-1999-2.3.4. Compatibility between EU and international environmental policies and links with trade
- EESD-1999-2.4. European component of the global observing systems
- EESD-1999-2.4.1. Better exploitation of existing data and adaptation of existing observing systems
- EESD-1999-2.4.2. Development of new long-term observing capacity
- EESD-1999-3. Key action Sustainable Marine Ecosystems
- EESD-1999-3.1. Improved knowledge of marine processes, ecosystems and interactions
- EESD-1999-3.1.1. Better assessment of naturally occurring mechanisms of ecosystem functioning
- EESD-1999-3.1.2. Assessment of sedimentary systems for the sustainable management and use of the shelf, slope and deep-sea floor
- EESD-1999-3.1.3. Transport pathways and impacts of pollutants, key elements and nutrients in the marine environment
- EESD-1999-3.2. Reducing the anthropogenic impact on biodiversity and the sustainable functioning of marine ecosystems, and facilitating the development of safe, economic and sustainable exploitation technologies
- EESD-1999-3.2.1. Reversing the trend in loss of marine biodiversity
- EESD-1999-3.2.2. Reducing the effects of anthropogenic activities on the marine environment and recovering degraded marine systems
- EESD-1999-3.2.3. Technologies for safe, sustainable and economic exploitation of marine resources
- EESD-1999-3.3. Monitoring and managing coastal processes and the coastal zone
- EESD-1999-3.3.1. Integrated studies on land-ocean interaction
- EESD-1999-3.3.2. Coastal zone changes
- EESD-1999-3.3.3. Coastal protection against flooding and erosion
- EESD-1999-3.3.4. Coastal processes monitoring
- EESD-1999-3.4. Operational forecasting of environmental constraints of offshore activities
- EESD-1999-4. Key action City of Tomorrow and Cultural Heritage
- EESD-1999-4.1. Sustainable city planning and rational resource management
- EESD-1999-4.1.1. Improving urban governance and decision making
- EESD-1999-4.1.2. Improving the quality of urban life
- EESD-1999-4.1.3. Waste reduction and its life cycle management
- EESD-1999-4.1.4. Economic development, competitiveness and employment
- EESD-1999-4.2. Protection, conservation and enhancement of European cultural heritage
- EESD-1999-4.2.1. Improved damage assessment on cultural heritage
- EESD-1999-4.2.2. Development of innovative conservation strategies
- EESD-1999-4.2.3. Foster integration of cultural heritage in the urban setting
- EESD-1999-4.3. Development and demonstration of technologies for safe, economic, clean, effective and sustainable preservation, recovery, renovation, construction, dismantling and demolition of the built environment, in particular for large groups of buildings
- EESD-1999-4.3.1. Revitalisation of city centres and neighbourhoods
- EESD-1999-4.4. Comparative assessment and cost effective implementation of strategies for sustainable transport systems in an urban environment
- EESD-1999-4.4.1. Strategic approaches and methodologies in urban planning towards sustainable urban transport
- EESD-1999-4.4.2. Comparative assessment and demonstration of new transport technologies and related infrastructure
- EESD-1999-7 RTD activities of a generic nature
- EESD-1999-7.1. The fight against major natural and technological hazards
- EESD-1999-7.2. The development of generic Earth observation satellite technologies
- EESD-1999-7.3. Socio-economic aspects of environmental change in the perspective of sustainable development
- EESD-1999-9 Support for research infrastructures

Part B. Energy

- EESD-1999-5 Key action Cleaner Energy Systems, including Renewable Energies

- EESD-1999-5.1** Large scale generation of electricity and/or heat with reduced CO₂ emissions from coal, biomass and other fuels, including combined heat and power
- EESD-1999-5.1.1.** Cleaner fuels by substitution and treatment
- EESD-1999-5.1.2.** More efficient energy conversion processes or cycles, including combustion efficiency
- EESD-1999-5.1.3.** More efficient gas turbines
- EESD-1999-5.1.4.** Optimisation of CHP systems
- EESD-1999-5.2** Development and demonstration, including for decentralised generation, of the main new and renewable energy sources, in particular, biomass, wind and solar technologies, and of fuel cells
- EESD-1999-5.2.1.** Biomass (including waste) conversion systems
- EESD-1999-5.2.2.** Wind energy optimisation
- EESD-1999-5.2.3.** Cost efficient photovoltaic
- EESD-1999-5.2.4.** Solar thermal concentrating systems
- EESD-1999-5.2.5.** Other renewable energies
- EESD-1999-5.2.6.** Efficient, reliable and cost effective fuel cell systems
- EESD-1999-5.3.** Integration of new and renewable energy sources into energy systems
- EESD-1999-5.3.1.** Integrating renewable energy sources into the grid and stand alone systems
- EESD-1999-5.3.2.** Hybrid systems
- EESD-1999-5.3.3.** Improving the acceptability of renewables
- EESD-1999-5.4.** Cost effective environmental abatement technologies for power production
- EESD-1999-5.4.1.** Reduction of local and global environment degrading emissions
- EESD-1999-6** Key action Economic and Efficient Energy for a Competitive Europe
- EESD-1999-6.1** Technologies for the rational and efficient end use of energy
- EESD-1999-6.1.1.** Spatial integration
- EESD-1999-6.1.2.** Building sustainability
- EESD-1999-6.1.3.** Efficient space heating, cooling, ventilation, lighting systems and domestic appliances, and integration of renewables into buildings
- EESD-1999-6.1.4.** Transport combustion optimisation with cleaner hydrocarbon and alternative transport fuels
- EESD-1999-6.1.5.** Hybrid and electric drivelines, and energy storage and conversion devices
- EESD-1999-6.1.6.** Proving innovative public and private transport means
- EESD-1999-6.1.7.** Efficient cross-sectoral technologies and better managed industrial processes
- EESD-1999-6.2.** Technologies for the transmission and distribution of energy
- EESD-1999-6.2.1.** Assuring electric power flow reliability and stability and increasing power line efficiency
- EESD-1999-6.2.2.** Interconnection and load shaping
- EESD-1999-6.2.3.** More efficient and safer transport of gas
- EESD-1999-6.2.4.** Cost effective heating and cooling distribution
- EESD-1999-6.3** Technologies for the storage of energy on both macro and micro scale
- EESD-1999-6.3.1.** Optimising power quality, by means of energy storage, for stand-alone renewable and hybrid systems and for transport
- EESD-1999-6.3.2.** Stability related electrical energy storage
- EESD-1999-6.3.3.** Intermittent storage of energy, including heat and cold storage
- EESD-1999-6.3.4.** Safer, lighter and more energy-efficient gas storage
- EESD-1999-6.3.5.** Reliable high capacity microstorage
- EESD-1999-6.4** More efficient exploration, extraction and production technologies for hydrocarbons
- EESD-1999-6.4.1.** Cost effective and more efficient exploration and production of hydrocarbons
- EESD-1999-6.4.2.** Deepwaters, marginal fields and new frontiers, including Arctic
- EESD-1999-6.4.3.** Reduced environmental impact and improved safety in exploration and production
- EESD-1999-6.5.** Improving the efficiency of new and renewable energy sources
- EESD-1999-6.5.1.** Cost effective wind turbine components
- EESD-1999-6.5.2.** Cost effective components for photovoltaic module systems and solar thermal concentrating systems
- EESD-1999-6.5.3.** Cost effective components for biomass and waste
- EESD-1999-6.5.4.** Other renewable energy sources
- EESD-1999-6.6.** The elaboration of scenarios on supply and demand technologies in economy/environment/energy (E3) systems and their interactions, and the analysis of the cost effectiveness (based on whole life costs) and efficiency of all energy sources
- EESD-1999-6.6.1.** Technological change anticipation
- EESD-1999-6.6.2.** Prospective and policy impact analysis

- EESD-1999-6.6.3. Market changes and technology absorption
- EESD-1999-8 RTD activities of a generic nature
- EESD-1999-8.1 Socio Economic aspects of energy within the perspective of sustainable development:
Tools for technology assessment
- EESD-1999-8.1.1. Acceptability and choices
- EESD-1999-8.1.2. Innovation
- EESD-1999-8.1.3. Externalities
- EESD-1999-8.2 Socio Economic aspects of energy within the perspective of sustainable development:
Methodologies for global systems analysis
- EESD-1999-8.2.1. Economy-environment-energy modelling framework
- EESD-1999-8.2.2. Matching technology implementing potentials

1.2. Second activity

INCO. Confirming the International Role of Community Research

- INCO-1999.-1. Co-operation with certain categories of third countries
- INCO-1999.-1.1. States in the pre-accession phase
- INCO-1999.-1.2. NIS and CEECs not in the pre-accession phase
- INCO-1999.-1.3. Mediterranean partner countries
- INCO-1999.-1.4. Research for development
- INCO-1999.-1.5. Emerging economies and industrialised countries

INCO-1999.-2. Training for researchers

INCO-1999.-3. Co-ordination

1.3. Third activity

IPS. Promotion of Innovation and Encouragement of SME Participation

- IPS-1999.-1. Promotion of Innovation
- IPS-1999.-1.1. Studies and Good Practices
- IPS-1999.-1.2. New approaches to technology transfer
- IPS-1999.-2. Encouraging SME participation
- IPS-1999.-2.1. A single complementary entry point
- IPS-1999.-2.2. Joint support and assistance instruments
- IPS-1999.-2.3. Economic and technological intelligence
- IPS-1999.-3. Joint Innovation/SME activities
- IPS-1999.-3.1. European support network for the promotion of research, technology transfer and innovation
- IPS-1999.-3.2. Electronic information services and other means of dissemination
- IPS-1999.-3.3. Intellectual property
- IPS-1999.-3.4. Access to private innovation financing
- IPS-1999.-3.5. Mechanisms to facilitate the setting-up and development of innovative firms
- IPS-1999.-4. Co-ordination and support activities
- IPS-1999.-4.1. Support activities relating to Innovation
- IPS-1999.-4.2. Support activities relating to SME Participation

1.4. Fourth activity

IHP. Improving the Human Research Potential & the Socio-Economic Knowledge Base

- IHP-1999.-1. Training and Mobility of Researchers
- IHP-1999.-1.1. Research Training Networks
- IHP-1999.-1.2. Marie Curie Fellowships
- IHP-1999.-2. Access to Research Infrastructures
- IHP-1999.-3. Promotion of S/T Excellence
- IHP-1999.-3.1. High-level Scientific Conferences
- IHP-1999.-3.2. Distinctions for high-level research work

IHP-1999.-3.3.	Raising Public Awareness
IHP-1999.-4.	<u>Key action Socio-Economic Knowledge Base</u>
IHP-1999.-5.	<u>Development of S/T Policies</u>
IHP-1999.-5.1.	Strategic Analysis of Specific Political Issues
IHP-1999.-5.2.	Common Basis of Science, Technology and Innovation
IHP-1999.-6.	<u>Accompanying measures for the programme</u>
IHP-1999.-7.	<u>Indicative breakdown of funds for the programme</u>
IHP-1999.-8.	<u>Indicative timetable for the programme</u>

2. Euratom Framework Programme

NUC	<i>Nuclear Energy</i>
NUC-1999-1	<u>Key action Controlled Thermonuclear Fusion</u>
NUC-1999-1.1.	Fusion physics (theoretical, modelling and experimental work), physics of production, fuelling, heating and confinement of fusion plasmas, and of particle and energy removal.
NUC-1999-1.2.	Physics and technology of higher-power plasma heating systems (using high frequency waves or neutral particles, non-inductive plasma current drive methods, and plasma fuelling and exhaust systems).
NUC-1999-1.3.	Advanced plasma diagnostics, data acquisition, exploitation and interpretation.
NUC-1999-1.4.	Technologies for a future experimental reactor (including e.g. superconductors, remote handling).
NUC-1999-1.5.	Long-term technology R&D (including e.g. low-activation materials, tritium breeding blankets, safety and environmental aspects, conceptual reactor reference design studies).
NUC-1999-1.6.	Analysis of Socio-economic aspects of fusion
NUC-1999-2	<u>Key action Nuclear Fission</u>
NUC-1999-2.1	Operational safety of existing installations
NUC-1999-2.2	Safety of the fuel cycle
NUC-1999-2.3	Safety and efficiency of future systems
NUC-1999-2.4	Radiation protection
NUC-1999-3	<u>RTD activities of a generic nature</u>
NUC-1999-3.1	Radiation protection and health
NUC-1999-3.2	Environmental transfer of radioactive material
NUC-1999-3.3	Industrial and medical uses and natural sources of radiation
NUC-1999-3.4	Internal and external dosimetry
NUC-1999-4	<u>Support for research infrastructures</u>