

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**

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**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-2001-1** Key action Food, Nutrition and Health
- QOL-2001-1.1** Development of safe and flexible and new and/or improved manufacturing processes and technologies
- QOL-2001-1.1.1** Novel and improved biological raw materials for high quality food
- QOL-2001-1.1.2** Advanced and optimised food technologies, packaging systems and process control
- QOL-2001-1.1.3** Quality monitoring and traceability throughout the food chain
- QOL-2001-1.2** Development of tests to detect and processes to eliminate infectious and toxic agents throughout the food chain technologies
- QOL-2001-1.2.1** Improved understanding and control of contamination conditions arising along the entire food chain from primary producer to consumer
- QOL-2001-1.2.2** Rapid detection tests particularly for pathogens and hormones
- QOL-2001-1.2.3** New and safer methods of food production and distribution
- QOL-2001-1.2.4** New methodologies for assessing microbial, chemical and allergenic risks and exposures
- QOL-2001-1.3** 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-2001-1.3.1** Consumer needs, attitudes and responses with regard to food products, food processing and labeling
- QOL-2001-1.3.2** Role and impact of food on physiological functions, physical and mental performance
- QOL-2001-1.3.3** Cellular and molecular mechanisms underlying links between diet and chronic diseases and disorders
- QOL-2001-2** Key action Control of Infectious Diseases
- QOL-2001-2.1** Development of improved or novel mono-component, multi-component and combined vaccines
- QOL-2001-2.1.1** New vaccination strategies
- QOL-2001-2.1.2** Discovery phase and pre-clinical development of preventive and therapeutic vaccines
- QOL-2001-2.1.3** Clinical evaluation of vaccines
- QOL-2001-2.2** Strategies to identify and control infectious diseases
- QOL-2001-2.2.1** Treatment of, and protection against, human and animal infectious diseases
- QOL-2001-2.2.2** Antimicrobial drug resistance and changes in virulence
- QOL-2001-2.2.3** Diagnostic tests for humans and animals
- QOL-2001-2.3** Aspects of public health and care delivery systems
- QOL-2001-2.3.1** Risk assessment, transmission and surveillance
- QOL-2001-2.3.2** Methodologies for medicinal product safety surveillance in the market place
- QOL-2001-2.3.3** Organisational and economic aspects of human and animal health
- QOL-2001-3** Key action The "Cell factory"
- QOL-2001-3.1** Improving the diagnostic and therapeutic arsenal for health care
- QOL-2001-3.1.1** Development of new diagnostics
- QOL-2001-3.1.2** Therapeutic substances
- QOL-2001-3.1.3** Therapeutic strategies
- QOL-2001-3.1.4** Novel in-vitro testing as alternatives to animal experimentation
- QOL-2001-3.2** Improving environmental sustainability
- QOL-2001-3.2.1** New bioprocesses for industrial efficiency, to avoid pollution, make use of bioaccumulable wastes and by-products, and treat wastewater
- QOL-2001-3.2.2** Bioassays and biosensors
- QOL-2001-3.2.3** Biodegradation of recalcitrant chemicals and bioremediation
- QOL-2001-3.2.4** Biodiversity and ecological dynamics of natural and introduced populations
- QOL-2001-3.2.5** 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-2001-3.3** New biological and biotechnological products and processes for agro-industry, agri-food and high value added chemicals

- QOL-2001-3.3.1** Exploiting the cellular and molecular characteristics of organisms for new nano- and microtechnologies
- QOL-2001-3.3.2** High value-added products and processes involving / derived from micro-organisms, plants and animals
- QOL-2001-3.3.3** Functional biomolecules and biocatalysts
- QOL-2001-3.3.4** Identification and sustainable use of metabolic and genetic diversity as a source of new valuable products
- QOL-2001-4** Key action Environment and Health
- QOL-2001-4.1** Diseases and allergies related to or influenced by the environment and their prevention
- QOL-2001-4.1.1** Analysis and quantification of the impact of environmental factors on human health.
- QOL-2001-4.1.2** Assessment of the relative importance of, and the interactions between, factors impinging on health
- QOL-2001-4.1.3** Development of an integrated approach to risk management taking into account environmental and public health aspects
- QOL-2001-4.2** Development of new methods of diagnosis, risk assessment and processes to reduce causes and harmful environmental health effects
- QOL-2001-4.2.1** Development of methods to assess environmental hazards including mixed exposures, cumulative and low dose effects
- QOL-2001-4.2.2** Improvement of predictive toxicity testing and mechanism-based risk assessment consistent with the aim of the reduction and eventual replacement of animal testing
- QOL-2001-4.2.3** 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-2001-5** Key action Sustainable Agriculture, Fisheries and Forestry, and integrated development of rural areas including mountain areas
- QOL-2001-5.1** 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-2001-5.1.1** Sustainable agriculture
- QOL-2001-5.1.2** Sustainable fisheries and aquaculture
- QOL-2001-5.2** The integrated production and exploitation of biological materials for non-food uses
- QOL-2001-5.3** Sustainable and multi-purpose utilisation of forest resources; the integrated forestry-wood chain
- QOL-2001-5.3.1** Multifunctional management of forests
- QOL-2001-5.3.2** Strategies for the sustainable and multipurpose utilisation of forest resources; the forestry-wood chain
- QOL-2001-5.4** 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-2001-5.4.1** Community agriculture and the international context
- QOL-2001-5.4.2** CAP measures and related activities including agri-environmental and socio-economic aspects
- QOL-2001-5.4.3** Monitoring and enforcement of the CFP
- QOL-2001-5.4.4** Social and economic basis of the CFP
- QOL-2001-5.5** New tools and models for the integrated and sustainable development of rural and other relevant areas
- QOL-2001-5.5.1** Analysing rural situations, changes and trends
- QOL-2001-5.5.2** Conceptualising integrated development of rural and other relevant areas
- QOL-2001-5.5.3** Assessing rural and coastal development performance and policies
- QOL-2001-6** Key action The Ageing Population and Disabilities
- QOL-2001-6.1** Age-related illnesses and health problems
- QOL-2001-6.2** Determinants of healthy ageing and of well-being in old age
- QOL-2001-6.3** Demographic and social policy aspects of population ageing
- QOL-2001-6.4** Coping with functional limitations in old age
- QOL-2001-6.5** Health and social care services to older people
- QOL-2001-7** Chronic and Degenerative Diseases, Cancer, Diabetes, Cardiovascular Diseases and Rare Diseases
- QOL-2001-7.1** Elucidation of the common underlying pathogenic mechanisms involved in disease initiation, progression and maintenance

QOL-2001-7.2	Evaluation of conventional and non-conventional therapies and diagnostic methods through multinational, large scale studies/trials
QOL-2001-7.3	Optimised use of databases, registries, reagents and sample banks
QOL-2001-8	<u>Research into genomes and diseases of genetic origin</u>
QOL-2001-8.1	Genome analysis
QOL-2001-8.2	Functional genomics and proteomics
QOL-2001-8.3	Development of novel expression systems, model organisms, mutant, transgenic and hybrid organisms
QOL-2001-8.4	Development and application of underpinning biochemistry, biophysical, statistical and computational approaches
QOL-2001-8.5	Integrated projects in “genomics and human health”
QOL-2001-9	<u>Neurosciences</u>
QOL-2001-9.1	Cell communication
QOL-2001-9.2	Brain theories, computational neuroscience and neuroinformatics
QOL-2001-9.3	Brain development, disorders and repair and their clinical, epidemiological and social implications
QOL-2001-9.4	Behaviour, cognition and functional mapping of the brain
QOL-2001-10	<u>Public health and health services research</u>
QOL-2001-10.1	Health services research and health and safety at work
QOL-2001-10.2	Fighting drug related problems
QOL-2001-11	<u>Research relating to persons with disabilities</u>
QOL-2001-11.1	Determinants of impairment, disability and handicap
QOL-2001-11.2	Methodologies for the assessment of quality of life
QOL-2001-11.3	Innovative technological research for the rehabilitation and assistance
QOL-2001-11.4	Health and social care delivery
QOL-2001-12	<u>Bioethics</u>
QOL-2001-12.1	Ethical aspects of scientific and technological developments
QOL-2001-12.2	Ethical framework for life sciences
QOL-2001-12.3	Public policies, law, human rights and bioethics
QOL-2001-12.4	Bioethics infrastructures and methodologies
QOL-2001-13	<u>Socio-economic evaluation of life sciences and health care technologies</u>
QOL-2001-13.1	Development of indicators and knowledge bases relevant to public policy making
QOL-2001-13.2	Managing technology in society
QOL-2001-13.3	Analysis of social and economic driving forces and of new opportunities in the bioindustries
QOL-2001-14	<u>Support for research infrastructures</u>
QOL-2001-14.1	Biological collections
QOL-2001-14.2	Biological information resources
QOL-2001-14.3	Clinical research facilities
QOL-2001-14.4	Pre-clinical research facilities
QOL-2001-14.5	Facilities for aquaculture and fishery research
QOL-2001-14.6	Exploiting high-bandwidth communication networks (multigigabit/s)
IST	User-friendly Information society (IST)
IST-2001	IST WORKPROGRAMME 2001
IST-2001-1	<u>Key action 1: Systems and services for the citizen</u>
IST-2001-1.1	Health
IST-2001-1.1.1	Intelligent environment for citizen centred health management
IST-2001-1.1.2	Intelligent collaborative environments supporting continuity of care
IST-2001-1.1.3	Best practice and trials in e-Health
IST-2001-1.2	Persons with special needs, including the disabled and the elderly
IST-2001-1.2.1	Intelligent assistive systems for social inclusion
IST-2001-1.3	Administrations
IST-2001-1.3.1	Intelligent environment for public sector employees at all levels
IST-2001-1.3.2	Best practice and trials in Administration systems
IST-2001-1.4	Environment
IST-2001-1.4.1	Best practice and trials in Environment Management
IST-2001-1.5	Transport and tourism
IST-2001-1.5.1	Intelligent transport systems
IST-2001-1.5.2	Integrated vehicle infrastructure systems

IST-2001-1.5.3	Ambient intelligence application systems for mobile users and travel /tourism...
IST-2001-1.5.4	Best practice and trials in transport and tourism
IST-2001-2	<u>Key action 2: New Methods of Work and Electronic Commerce</u>
IST-2001-2.1	Work spanning Key action 2
IST-2001-2.1.1	Socio-economic analysis
IST-2001-2.1.2	Knowledge Management
IST-2001-2.1.3	Mobile and Ubiquitous eCommerce and eWork
IST-2001-2.1.4	Exploratory high risk/long term research
IST-2001-2.1.5	High impact Take-up, dissemination, and training
IST-2001-2.1.6	Large scale demonstrators
IST-2001-2.2	Flexible, mobile and remote working methods and tools
IST-2001-2.2.1	Intelligent workplaces for all
IST-2001-2.2.2	Smart organisations
IST-2001-2.3.	Management systems for suppliers and consumers
IST-2001-2.3.1	Dynamic value constellations
IST-2001-2.4	Information and network security and other confidence-building technologies
IST-2001-2.4.1	Trust in information infrastructures
IST-2001-2.4.2	Enhancing security in electronic transactions
IST-2001-3	<u>Key action 3: Multimedia Content and Tools</u>
IST-2001-3.1	Interactive publishing, digital content and cultural heritage
IST-2001-3.1.1	Publishing digital content
IST-2001-3.1.2	Heritage for all
IST-2001-3.1.3	Next generation digital collections
IST-2001-3.2	Education and training
IST-2001-3.2.1	Self learning for work
IST-2001-3.2.2	e-Learning futures
IST-2001-3.3	Human language technologies
IST-2001-3.3.1	Multilingual Web
IST-2001-3.3.2	Natural and multilingual interactivity
IST-2001-3.4	Information access, filtering, analysis and handling
IST-2001-3.4.1	Semantic Web technologies
IST-2001-3.5.1	x-Content futures
IST-2001-3.5.2	Competence building
IST-2001-3.5.3	KA III specific support measures
IST-2001-4	<u>Key action 4: Essential Technologies and Infrastructures</u>
IST-2001-4.1	Implications Assessment
IST-2001-4.1.1	Design of networked embedded systems
IST-2001-4.1.2	Multiservice networks - middleware for seamless access to services
IST-2001-4.1.3	Development of skills in micro- and opto-electronics
IST-2001-4.2	Computing, Communications and Networks
IST-2001-4.2.1	Real time distributed systems
IST-2001-4.2.2	Network and services interoperability, interworking and management
IST-2001-4.2.3	Terabit core networks
IST-2001-4.2.4	Computing, communications and networks – Take-up measures
IST-2001-4.3	Technologies and Engineering for Software, Systems and Services
IST-2001-4.3.1	Software architecture
IST-2001-4.3.2	Functionality models and building blocks for end user services
IST-2001-4.3.3	Free software development: towards critical mass
IST-2001-4.4	Real-time and large-scale simulation and visualisation technologies
IST-2001-4.4.1	Simulation and visualisation
IST-2001-4.4.2	Mixed realities and new imaging frontiers
IST-2001-4.5	Mobile and personal communications and systems, including satellite-related systems and services
IST-2001-4.5.1	Reconfigurable radio systems & networks
IST-2001-4.5.2	Terrestrial wireless systems and networks
IST-2001-4.5.3	Satellite systems and services
IST-2001-4.6	Interfaces making use of the various senses
IST-2001-4.6.1	Advanced displays and sensors
IST-2001-4.6.2	Interfaces and buffers for seamless end to end services
IST-2001-4.7	Peripherals, sub-systems and microsystems

IST-2001-4.7.1	Subsystems
IST-2001-4.7.2	Microsystems
IST-2001-4.7.3	Subsystems and microsystems – take-up measures
IST-2001-4.8	Microelectronics - optoelectronics
IST-2001-4.8.1	Microelectronics design and test & application specific microelectronics
IST-2001-4.8.2	Microelectronics technologies: processes, equipment and devices
IST-2001-4.8.3	Optical and opto-electronic technologies
IST-2001-4.8.4	Industrial microelectronics technologies - take-up measures
IST-2001-5	<u>Cross Programme Actions (CPA)</u>
IST-2001-5.1.1	CPA1: Home environments
IST-2001-5.1.2	CPA2: Multimodal and multisensorial dialogue modes
IST-2001-5.1.3	CPA3: Use of Geographic Information
IST-2001-5.1.4	CPA4: Towards dependable and survivable systems and infrastructure
IST-2001-5.1.5	CPA5: Smart cards
IST-2001-5.1.6	CPA6: Next generation networks
IST-2001-5.1.7	CPA7: Socio-economic analysis and indicators for the information society
IST-2001-5.1.8	CPA8: eLearning for European youth in a digital age
IST-2001-5.1.9	CPA9: Grid test beds, deployment and technologies
IST-2001-5.1.10	CPA10: Next generation micro- and nano-technologies for highly integrated...
IST-2001-5.1.11	CPA11: Regional and sectoral pilot actions and demonstrations for the digital.
IST-2001-5.1.12	CPA12: Application services provision
IST-2001-5.1.13	CPA13: Advanced signal processing systems and applications
IST-2001-6	<u>Generic activities: Future and emerging technologies</u>
IST-2001-6.1.1	Open domain
IST-2001-6.2.1	Nanotechnology information devices
IST-2001-6.2.2	Global computing: co-operation of autonomous and mobile entities in dynamic...
IST-2001-6.2.3	Lifelike perception systems
IST-2001-7	<u>Support for research infrastructures: Research Networking</u>
IST-2001-7.1.1	RN1: Interconnection of Research Networks
IST-2001-7.1.2	RN2: Technology and Application Experiments
IST-2001-8	<u>IST support activities</u>
IST-2001-8.1.1	Clustering of Projects
IST-2001-8.1.2	Networks of Excellence and working groups
IST-2001-8.1.3	Channelling of Standardisation and Interoperability initiatives
IST-2001-8.1.4	Improving human capital in IT by competence building (IHC)
IST-2001-8.1.5	Bridging the IT skills gap through development of Training Infrastructures
IST-2001-8.1.6	Enabling RTD Co-operation with Newly Associated States
IST-2001-8.1.7	Enabling RTD Co-operation with 3rd Countries
IST-2001-8.1.8	Dissemination and awareness of IST programme results
IST-2001-8.1.9	Studies
IST-2002	IST WORKPROGRAMME 2002
IST-2002-1	<u>Key action 1: Systems and services for the citizen</u>
IST-2002-1.1	Health
IST-2002-1.1.1	Intelligent systems for the monitoring of health status
IST-2002-1.1.2	Systems for health professionals: creating a "Health knowledge info-structure"
IST-2002-1.2	Persons with special needs, including the disabled and the elderly
IST-2002-1.2.1	Systems for independent living
IST-2002-1.4	Environment
IST-2002-1.4.1	Intelligent systems and services for civilian and environmental crises management
IST-2002-1.5	Transport and tourism
IST-2002-1.5.1	Systems for mobility: take up and clustering activities
IST-2002-2	<u>Key action 2: New Methods of Work and Electronic Commerce</u>
IST-2002-2.1	Work spanning Key action 2
IST-2002-2.1.1	Exploratory high risk/long term research
IST-2002-2.1.2	Strategic roadmaps for applied research
IST-2002-2.1.3	Addressing eEurope and eEurope+ objectives
IST-2002-3	<u>Key action 3: Multimedia Content and Tools</u>
IST-2002-3.5.1	KA3 specific Support Measures
IST-2002-3.5.2	Preparing for future research activities

IST-2002-3.5.3	KA3 pioneering research
IST-2002-4	<u>Key action 4: Essential Technologies and Infrastructures</u>
IST-2002-4.2	Computing, Communications and Networks
IST-2002-4.2.1	Cognitive vision systems
IST-2002-4.2.2	Advanced control systems
IST-2002-4.2.3	Networks and technologies for distributed services and applications
IST-2002-4.2.4	Computing, communications and networks – Take-up measures
IST-2002-4.3	Technologies and Engineering for Software, Systems and Services
IST-2002-4.3.1	Composability and dynamic adaptability in software, systems and services
IST-2002-4.4	Real-time and large-scale simulation and visualisation technologies
IST-2002-4.4.1	Simulation and visualisation technologies
IST-2002-4.5	Mobile and personal communications and systems, including satellite-related systems and services
IST-2002-4.5.1	Towards technologies, systems and networks beyond 3G
IST-2002-4.5.2	Validation of wireless and mobile systems and technologies
IST-2002-4.6	Interfaces making use of the various senses
IST-2002-4.6.1	Networked audio-visual systems and services
IST-2002-4.7	Peripherals, sub-systems and microsystems
IST-2002-4.7.1	Microsystems and miniaturised subsystem modules for portable applications
IST-2002-4.7.2	Integration of sensors and actuators for increased intelligence, interaction
IST-2002-4.8	Microelectronics - optoelectronics
IST-2002-4.8.1	Microelectronics design and IP re-use
IST-2002-4.8.2	Microelectronics technologies – processes, equipment and devices
IST-2002-4.8.3	Optical and opto-electronic technologies
IST-2002-4.8.4	Industrial micro- and opto-electronic technologies - take-up/ assessment actions
IST-2002-5	<u>Cross Programme Actions (CPA)</u>
IST-2002-5.1.9	CPA9 : GRID Technologies and their applications
IST-2002-5.1.10	CPA10: Sensor technologies and applications
IST-2002-5.1.14	CPA14: Mobile applications and services
IST-2002-5.1.15	CPA15: Technology platforms for cultural and arts creative expressions
IST-2002-6	<u>Generic activities: Future and emerging technologies</u>
IST-2002-6.1.1	FET Open domain
IST-2002-6.2.1	Quantum Information Processing and Communication (QIPC)
IST-2002-6.2.2	Presence Research: Cognitive sciences and future media
IST-2002-8	<u>IST support activities</u>
IST-2002-8.1.1	Clustering of Projects
IST-2002-8.1.2	Networks of Excellence and working groups in IST
IST-2002-8.1.3	Channelling of standardisation and interoperability initiatives
IST-2002-8.1.4	Improving human capital in IT by competence building (IHC)
IST-2002-8.1.6	Enabling RTD co-operation with Newly Associated States
IST-2002-8.1.7	Enabling RTD Co-operation with 3rd Countries
IST-2002-8.1.8	Dissemination and awareness of IST research results
IST-2002-8.1.9	Studies
IST-2002-8.1.10	Strengthening the European Research Area (ERA) in IST Domains
IST-2002-8.1.11	“Exploratory awards” specific measure
GROW	Competitive and Sustainable Growth
GROW-2001-1	<u>Key Action Innovative Products, Processes and Organisation</u>
GROW-2001-1.1	Efficient production, including design, manufacturing and control
GROW-2001-1.2	Intelligent production
GROW-2001-1.3	Eco-efficient processing and design
GROW-2001-1.4	Organisation of production and work
GROW-2001-1.5	TRA “products” : evolutionary value-added and resource-saving products-services, including miniaturised systems
GROW-2001-1.6	TRA “machines” : new generation of machinery, production equipment and systems for manufacturing
GROW-2001-1.7	TRA “extended enterprise” : the knowledge based extended manufacturing enterprise
GROW-2001-1.8	TRA “modern factory” : customer oriented, high tech, agile and towards zero-waste production
GROW-2001-1.9	TRA “infrastructure” : safe, sustainable and cost effective construction

- GROW-2001-2** Key Action Sustainable Mobility and Intermodality
- GROW-2001-2.1** Socio-economic scenarios for mobility of people and goods
 - GROW-2001-2.1.1** Quantitative tools for decision-making
 - GROW-2001-2.1.2** Driving forces in transport
 - GROW-2001-2.1.3** Policies for sustainable mobility, including CIVITAS
- GROW-2001-2.2** Infrastructures and their interfaces with transport means and systems
 - GROW-2001-2.2.1** Infrastructure development and maintenance
 - GROW-2001-2.2.2** Environment
 - GROW-2001-2.2.3** Safety, including safety components of SMART RAIL
 - GROW-2001-2.2.4** Security
 - GROW-2001-2.2.5** Human factors
- GROW-2001-2.3** Modal and intermodal transport management systems
 - GROW-2001-2.3.1** Traffic management systems, including demonstrator of SMART RAIL
 - GROW-2001-2.3.2** Transport and mobility services, including demonstrator of SMART RAIL
 - GROW-2001-2.3.3** Second generation satellite navigation and positioning systems (GALILEO)
- GROW-2001-3** Key Action Land Transport and Marine Technologies
- GROW-2001-3.1** Critical technologies for road and rail transport
 - GROW-2001-3.1.1** Efficient, clean and intelligent road and rail transport vehicle technologies
 - GROW-2001-3.1.2** Innovative and safe road and rail transport vehicle concepts
 - GROW-2001-3.1.3** Human/vehicle interaction
- GROW-2001-3.2** Critical marine technologies
 - GROW-2001-3.2.1** Efficient, safe and environmentally friendly ships and vessels
 - GROW-2001-3.2.2** Maximising interoperability and vessel performances
 - GROW-2001-3.2.3** Innovative technologies for the monitoring, exploration and sustainable exploitation of the sea
- GROW-2001-3.3** **TP1:** New land transport vehicle concepts; Enhanced systems efficiency
- GROW-2001-3.4** **TP2:** Advanced concepts for ships and vessels; Competitive shipbuilding
- GROW-2001-3.5** **TP3:** Enhanced design and manufacturing for road vehicles
- GROW-2001-3.6** **TP4:** Sustainable and modular train
- GROW-2001-3.7** **TP5:** Safe, efficient and environmentally friendly vessels and platforms
- GROW-2001-3.8** **TP6:** Efficient interoperability and transshipment
- GROW-2001-4** Key Action New Perspectives in Aeronautics
- GROW-2001-4.1** Reducing aircraft development cost and time to market
 - GROW-2001-4.1.1** Advanced design systems and tools
 - GROW-2001-4.1.2** Manufacturing
 - GROW-2001-4.1.3** Product quality control
- GROW-2001-4.2** Improving aircraft efficiency
 - GROW-2001-4.2.1** Aerodynamics
 - GROW-2001-4.2.2** Structures and materials application
 - GROW-2001-4.2.3** Propulsion
 - GROW-2001-4.2.4** Systems and equipment
 - GROW-2001-4.2.5** Configurational and interdisciplinary aspects
- GROW-2001-4.3** Improving environmental friendliness of aircraft
 - GROW-2001-4.3.1** Low pollutant emissions
 - GROW-2001-4.3.2** External noise
 - GROW-2001-4.3.3** Cabin environment
- GROW-2001-4.4** Improving operational capability and safety of aircraft
 - GROW-2001-4.4.1** Air traffic management (ATM) related air borne systems
 - GROW-2001-4.4.2** Operational Maintenance
 - GROW-2001-4.4.3** Accident prevention
 - GROW-2001-4.4.4** Accident survivability
- GROW-2001-4.5** **TP1:** Low-cost, low-weight primary structures
- GROW-2001-4.6** **TP2:** Efficient and environmentally friendly aero-engine
- GROW-2001-4.7** **TP3:** Novel rotary-wing aircraft configuration
- GROW-2001-4.8** **TP4:** More autonomous aircraft in the future air-traffic management system
- GROW-2001-4.9** **TP5:** Power-optimised aircraft
- GROW-2001-4.10** **TP6:** Low external noise aircraft
- GROW-2001-4.11** **TP7:** Friendly aircraft cabin environment
- GROW-2001-4.12** **TP8:** Advanced wing configuration
- GROW-2001-4.13** **TP9:** Integrated and modular aircraft electronic systems

- GROW-2001-5** 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-2001-5.1** Cross-cutting generic materials technologies
- GROW-2001-5.2** Advanced functional materials
- GROW-2001-5.3** Sustainable chemistry
- GROW-2001-5.4** Expanding the limits and durability of materials
- GROW-2001-5.5** Iron and steel production
- GROW-2001-5.6** Steel casting, rolling and downstream treatment
- GROW-2001-5.7** Steel utilisation
- GROW-2001-6** RTD Activities of a Generic Nature : Measurements and Testing
- GROW-2001-6.1** Instrumentation
- GROW-2001-6.1.1** Instrumentation in support of standardisation (**not foreseen**)
- GROW-2001-6.1.2** Sensors, screening systems and instruments for the fight against fraud
- GROW-2001-6.1.3** Instrumentation for improvement of quality
- GROW-2001-6.2** Methodologies for measurements and testing
- GROW-2001-6.2.1** Methodologies to support standardisation and Community policies
- GROW-2001-6.2.2** Measurement and testing anti-fraud methodologies
- GROW-2001-6.2.3** Measurement and testing methodologies in support of quality
- GROW-2001-6.3** Support to the development of certified reference materials (CRMs)
- GROW-2001-6.3.1** CRMs to support standardisation and Community policies
- GROW-2001-6.3.2** Reference substances and materials for anti-fraud
- GROW-2001-6.3.3** CRMs for traceability and calibration
- GROW-2001-7** Support to Research Infrastructures
- GROW-2001-7.1** Support activities to medium and large scale facilities
- GROW-2001-7.2** Setting up of virtual institutes
- GROW-2001-7.3** Reference databases
- GROW-2001-7.4** Measurement and quality management infrastructures

EESD.	Energy, Environment and Sustainable Development
Part A.	<u>Environment and Sustainable Development</u>
EESD-2000-1	<u>Key action 1: Sustainable Management and Quality of Water</u>
EESD-2000-1.1	Integrated management and sustainable use of water resources at catchment / river basin or sub-basin scale
EESD-2000-1.1.1	Strategic planning and integrated management methodologies and tools at catchment / river basin scale
EESD-2000-1.1.2	Socio-economic aspects of sustainable use of water
EESD-2000-1.1.3	Operational management schemes and decision support systems
EESD-2000-1.2.	Ecological quality of freshwater ecosystems and wetlands
EESD-2000-1.2.1	Ecosystem functioning
EESD-2000-1.2.2	Ecological quality targets
EESD-2000-1.3	Treatment and purification technologies
EESD-2000-1.3.1	Management of water in the city
EESD-2000-1.3.2	Waste water treatment and re-use
EESD-2000-1.4	Pollution prevention
EESD-2000-1.4.1	Abatement of water pollution from contaminated land, landfills and sediments
EESD-2000-1.4.2	Combating diffuse pollution
EESD-2000-1.5	Surveillance, early warning and communication systems
EESD-2000-1.5.1	Pollution surveillance and control
EESD-2000-1.5.2	Improved flood and drought forecasting
EESD-2000-1.6	Regulation of stocks and technologies for arid and semi-arid regions and generally water deficient regions
EESD-2000-1.6.1	Improving knowledge on water resources and management
EESD-2000-1.6.2	Prevention and mitigation of saline water intrusion
EESD-2000-1.6.3	Technological development and management tools
EESD-2000-1.7	Pre-normative, co-normative research and standardisation
EESD-2000-2	<u>Key action 2: Global Change, Climate and Biodiversity</u>
EESD-2000-2.1	To understand, detect, assess and predict global change processes
EESD-2000-2.1.1	Atmospheric composition change
EESD-2000-2.1.2	Stratospheric ozone depletion
EESD-2000-2.1.3	Climate change prediction and scenarios
EESD-2000-2.1.4	Climate variability and abrupt climate changes
EESD-2000-2.2	To foster better understanding of terrestrial (including freshwater) and marine ecosystems and their interactions
EESD-2000-2.2.1	Ecosystem vulnerability
EESD-2000-2.2.2	Interactions between ecosystems and the carbon and nitrogen cycles
EESD-2000-2.2.3	Assessing and conserving biodiversity
EESD-2000-2.3	Scenarios and strategies for responding to global change issues
EESD-2000-2.3.1	Mitigation and adaptation to global change and ozone depletion mitigation
EESD-2000-2.3.2	Reconciling the conservation of biodiversity with potentially conflicting activities
EESD-2000-2.3.3	Fighting land degradation and desertification
EESD-2000-2.3.4	Compatibility between EU and international environmental policies and links with trade
EESD-2000-2.4	European component of the global observing systems
EESD-2000-2.4.1	Better exploitation of existing data and adaptation of existing observing systems
EESD-2000-2.4.2	Development of new long-term observing capacity
EESD-2000-3	<u>Key action 3: Sustainable Marine Ecosystems</u>
EESD-2000-3.1	Improved knowledge of marine processes, ecosystems and interactions
EESD-2000-3.1.1	Better assessment of naturally occurring mechanisms of ecosystem functioning
EESD-2000-3.1.2	Assessment of sedimentary systems for the sustainable management and use of the shelf, slope and deep-sea floor
EESD-2000-3.2	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-2000-3.2.1	Reducing the rate of marine biodiversity loss
EESD-2000-3.2.2	Understanding and reducing the anthropogenic impact on the marine environment and the recovery of degraded systems
EESD-2000-3.2.3	Technologies for safe, sustainable and economic exploitation and exploitation of marine resources
EESD-2000-3.3	Monitoring and managing coastal processes and the coastal zone

- EESD-2000-3.3.1 Integrated studies on coastal zone changes
- EESD-2000-3.3.2 Coastal protection against flooding and erosion
- EESD-2000-3.3.3 Coastal processes monitoring
- EESD-2000-3.4 Operational forecasting of environmental constraints of offshore activities
- EESD-2000-4. Key action 4: City of Tomorrow and Cultural Heritage
- EESD-2000-4.1 Sustainable city planning and rational resource management
 - EESD-2000-4.1.1 Improving urban governance and decision making
 - EESD-2000-4.1.2 Improving the quality of urban life
 - EESD-2000-4.1.3 Improving economic development, competitiveness and job creation in city centres and neighbourhoods Waste reduction and its life cycle management
- EESD-2000-4.2 Protection, conservation and enhancement of European cultural heritage
 - EESD-2000-4.2.1 Improved damage assessment on cultural heritage
 - EESD-2000-4.2.2 Development of innovative conservation strategies
 - EESD-2000-4.2.3 Foster integration of cultural heritage in the urban setting
- EESD-2000-4.3 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-2000-4.3.1 Sustainable construction and reconstruction of large groups of buildings and urban infrastructure
 - EESD-2000-4.3.2 Optimum use of urban land and rehabilitation of brownfield sites
- EESD-2000-4.4 Comparative assessment and cost effective implementation of strategies for sustainable transport systems in an urban environment
 - EESD-2000-4.4.1 Strategic approaches and methodologies in urban planning towards sustainable urban transport
 - EESD-2000-4.4.2 Comparative assessment and demonstration of novel transport forms and related infrastructure
- EESD-2000-7 RTD activities of a generic nature
- EESD-2000-7.1 The fight against major natural and technological hazards
- EESD-2000-7.2 Development of generic Earth observation technologies
- EESD-2000-7.3 Socio-economic aspects of environmental change in the perspective of sustainable development
- EESD-2000-9 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 modeling 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-2000-1 Training and Mobility of Researchers
 IHP-2000-1.1 Research Training Networks
 IHP-2000-1.2 Marie Curie Fellowships
 IHP-2000-2 Access to Research Infrastructures
 IHP-2000-3 Promotion of S/T Excellence
 IHP-2000-3.1 High-level Scientific Conferences
 IHP-2000-3.2 Distinctions for high-level research work
 IHP-2000-3.3 Raising Public Awareness
 IHP-2000-4 Key action Socio-Economic Knowledge Base
 IHP-2000-5 Development of S/T Policies
 IHP-2000-5.1 Strategic Analysis of Specific Political Issues
 IHP-2000-5.2 Common Basis of Science, Technology and Innovation
 IHP-2000-6 Accompanying measures for the programme
 IHP-2000-7 Indicative breakdown of funds for the programme
 IHP-2000-8 Indicative timetable for the programme

2. Euratom Framework Programme

NUC Nuclear Energy

NUC-1999-1 Key action Controlled Thermonuclear Fusion
 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>