



**European COoperation in the field of Scientific and Technical research**

# **Cooperation with COST**

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## The COST mission

**Strengthen Europe in scientific and technical research for peaceful purposes through the support of cooperation and interaction between European researchers**

*The COST programme is a long-running, economical and highly successful way to spread awareness and build networks between Europe's researchers. It reflects the human dimension of science, helping researchers to share not only the results of their work but also their aims and methods.*

# What is COST?

- **Intergovernmental cooperation**
  - Started 1971
  - At present 12 Scientific & Technical Domains
- **Participation**
  - 34 COST Member States + 1 cooperating country (Israel)
  - International organisations and research establishments from non-COST countries
  - The European Commission
- **COST Actions**
  - Concerted Actions (Networks) of nationally funded R&D

# COST Characteristics

- **Co-ordination through networking**
- **Pan-European**
- **Multi-disciplinary**  
**“Non-competitive”**  
(pre-normative; public utility)
- **National financing of researchers and projects**  
– national responsibility
- **Bottom-up**  
– no fixed programme
- **Flexible participation – join in if you are interested**
- **“Interdisciplinary Exploratoria”**
- **Enabling agent: focus on younger researchers**
- **Open to wider cooperation**

# Advantages of COST

- **Fosters S&T Co-operation across Europe by creating lasting networks of scientists & researchers**
- **Promotes cooperation within EU, between the EU and Candidate Countries (particularly those in the Framework Programme) and with Europe's neighbours**
- **Explores new areas of co-operative research endeavour**

# COST History

- **In 1971 COST Actions only form of cooperation in science and technology in Europe**
- **In 1974 the European Science Foundation, in 1983 the First Framework Programme and in 1985 the EUREKA Programme**
- **The existence of these initiatives notwithstanding, the interest of the European scientific community in COST constantly increased**
- **From 19 countries in 1971 to the present 35 countries**
- **From 7 Actions in 1971 to an average of 200 Actions each year**
- **From 7 research domains in 1971 to the present 9 domains**

# **New COST Action**

## **Domain Forests, their Products and Services (FPS)**

**ACTION FP0601:**  
**«Forest Management and the Water Cycle - FORMAN»**

# Background: Forests and Water - **Water Hazards**





# OBJECTIVES

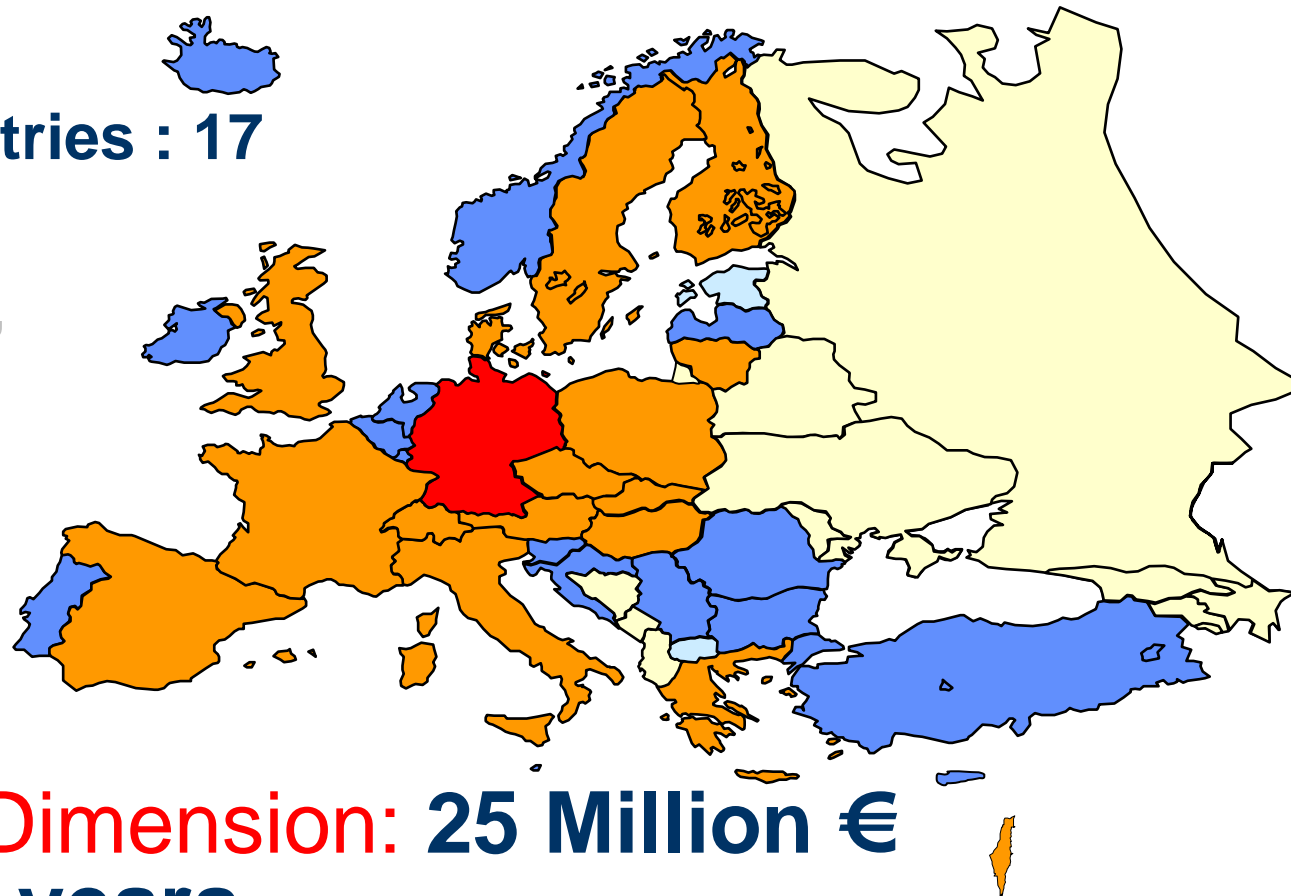
The main objective of the Action is to enhance the knowledge on forest–water interactions in Europe, and to elaborate science-based guidelines for the improvement of the management of forests predominantly designated for the production and storage of water.

# FP0601: «Forest Management and the Water Cycle - FORMAN»

Interested Countries : 17

Proposer : DE

AT, CH, CS, DK, ES,  
FI, FR, GR, HU, IL,  
IT, LT, PL, SE, SK,  
UK



Economic Dimension: 25 Million €

Duration: 4 years

# 9 Scientific and Technical Domains

1. Biomedicine and Molecular Biosciences
2. Food and Agriculture
3. Forests, their Products and Services
4. Materials, Physical & Nanosciences
5. Chemistry and Molecular Sciences & Technologies
6. Earth System Science & Environmental Management
7. Information & Communication Technologies
8. Transport & Urban Development
9. Individuals, Society, Culture & Health

## Bulgarian Participation

DC	Nr of Actions	BG
<b>Biomedicine and Molecular Biosciences</b>	19	6
<b>Chemistry and Molecular Sciences &amp; Technologies</b>	17	5
<b>Earth System Science &amp; Environmental Management</b>	22	13
<b>Food and Agriculture</b>	28	17
<b>Forests, their Products and Services</b>	26	9
<b>Information &amp; Communication Technologies</b>	19	7
<b>Individuals, Society, Culture &amp; Health</b>	20	10
<b>Materials, Physical &amp; Nanosciences</b>	29	15
<b>Transport &amp; Urban Development</b>	20	6
<b>Total</b>	<b>200</b>	<b>88</b>

# Biomedicine and Molecular Biosciences (BMBS)

This Domain covers all areas of medicine as practiced in Europe, that means basic, preclinical and clinical medical research aiming at the acquisition of knowledge of normal functions of the human body and alterations of them in the case of diseases taking also into consideration environment related aspects (food, water supply, pollutants, forests, urban environment, etc.).

- Molecular Biosciences
- Biomedicine and Specific Technologies
- Micro- and Nanomedicine

# Food and Agriculture (FA)

This Domain covers all aspects of research in the field of agricultural and food sciences in its widest sense

- The Biological Functions of Organisms
- Human Nutrition and the Food Chain
- Agriculture as a Human Activity
- Agriculture and Environment

# Forests, Their Products and Services (FPS)

This Domain has the mission to promote research along the whole forest-wood-chain by providing a platform for the effective coordination of nationally funded research activities in the areas of:

- Forestry Research
- Forest and Environment
- Wood Technology
- Pulp and Paper

# Materials, Physical And Nanosciences (MPNS)

This Domain is home to material science, covering the whole area, from conception through production, characterization, examination, evaluation, fabrication, joining, to actual application and service, including related databases, codes, standards and inspections. The Domain supports exploratory basic research in physics as a key to understanding the laws governing the behaviour of matter and energy

- New developments in industrial technology
- Emerging Technologies
- Cultural Heritage



# Chemistry and Molecular Sciences and Technologies (CMST)

The Mission of this Domain is to foster European expertise in discovering, understanding, producing and manipulating molecular species. Furthermore, CMST is actively promoting the transfer of the generated knowledge and innovation to industrial processes and production

- Chemistry for life
- Manipulating molecular matter
- Energy production
- Caring for the planet
- Space understanding and exploitation

# Earth System Science and Environmental Management (ESSEM)

The Domain encompasses the rapidly-growing science and technology agendas relating to a better understanding and a more effective management of the Earth's resources and environmental conditions, such as deleterious changes in climate, availability of freshwater, altered cycling of carbon and nitrogen, transfer of contaminants to air, land and aquatic systems, biodiversity, land cover and soils

- Modelling and observing of Earth systems
- Prediction and mitigation of hydro-meteorological and other hazards
- Environmental Management

# Information and Communication Technologies (ICT)

The Domain covers scientific and technical research in all areas of information and communication science and technologies, focusing on an improvement of the processing, transmission, storage, retrieval, and exchange of information and knowledge, with particular emphasis on fundamental aspects and pre-competitive technology development.

- Information and Communication Technologies
- Information science and technologies
- Communication technologies
- Societal aspects of ICT

# Transport and Urban Development (TUD)

The Domain covers basic and applied research activities including technical developments of transport, urban and civil engineering issues, focusing on new technical and technological solutions including prenormative and process-oriented aspects, thus providing support for policy and decision-making processes.

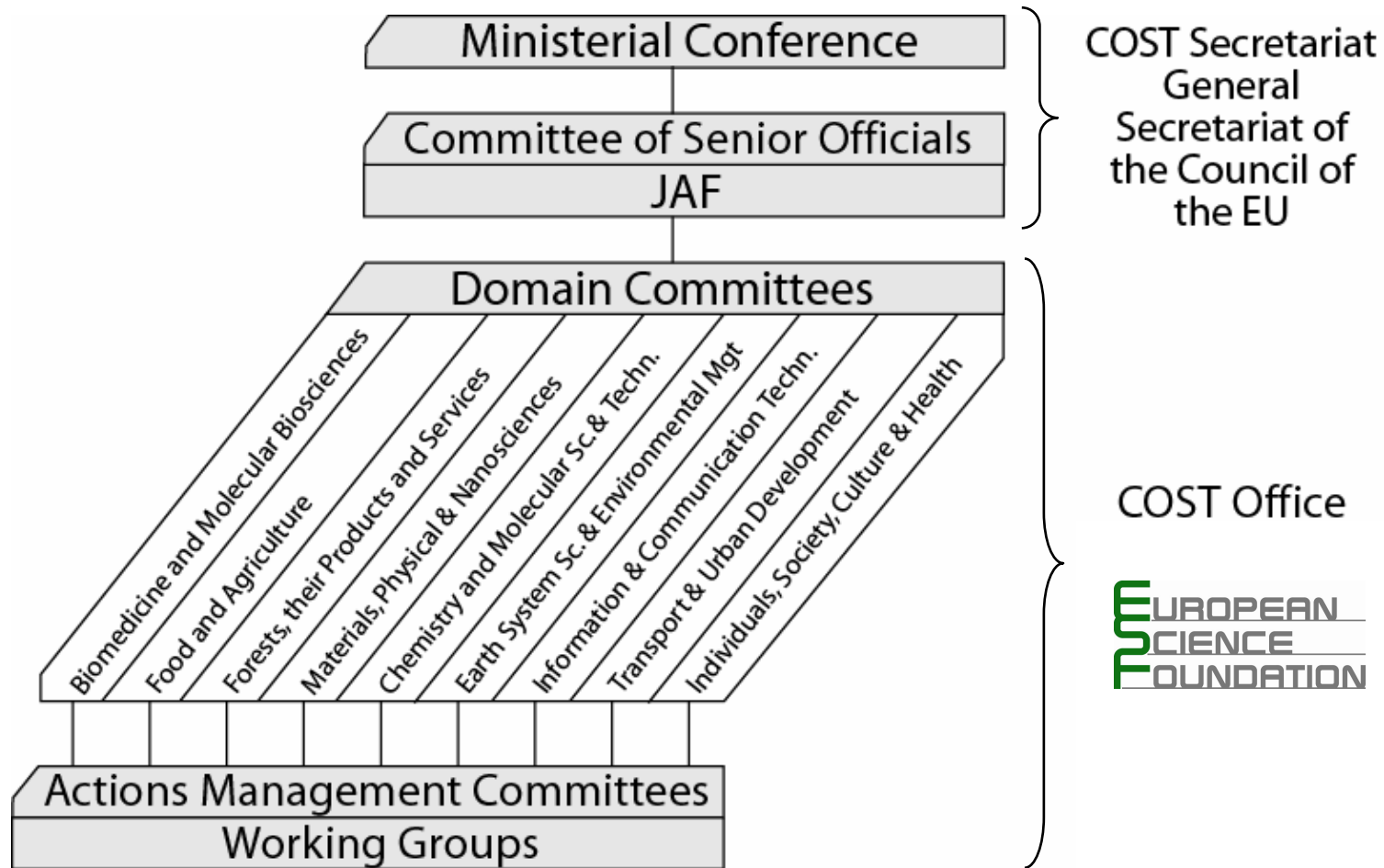
- Sustainable transport and urban planning policy
- Design of transport systems and development of urban infrastructures
- Urban architecture and civil constructions: planning and design
- The management of the transport systems, infrastructures and urban structures

# Individuals, Societies, Cultures & Health (ISCH)

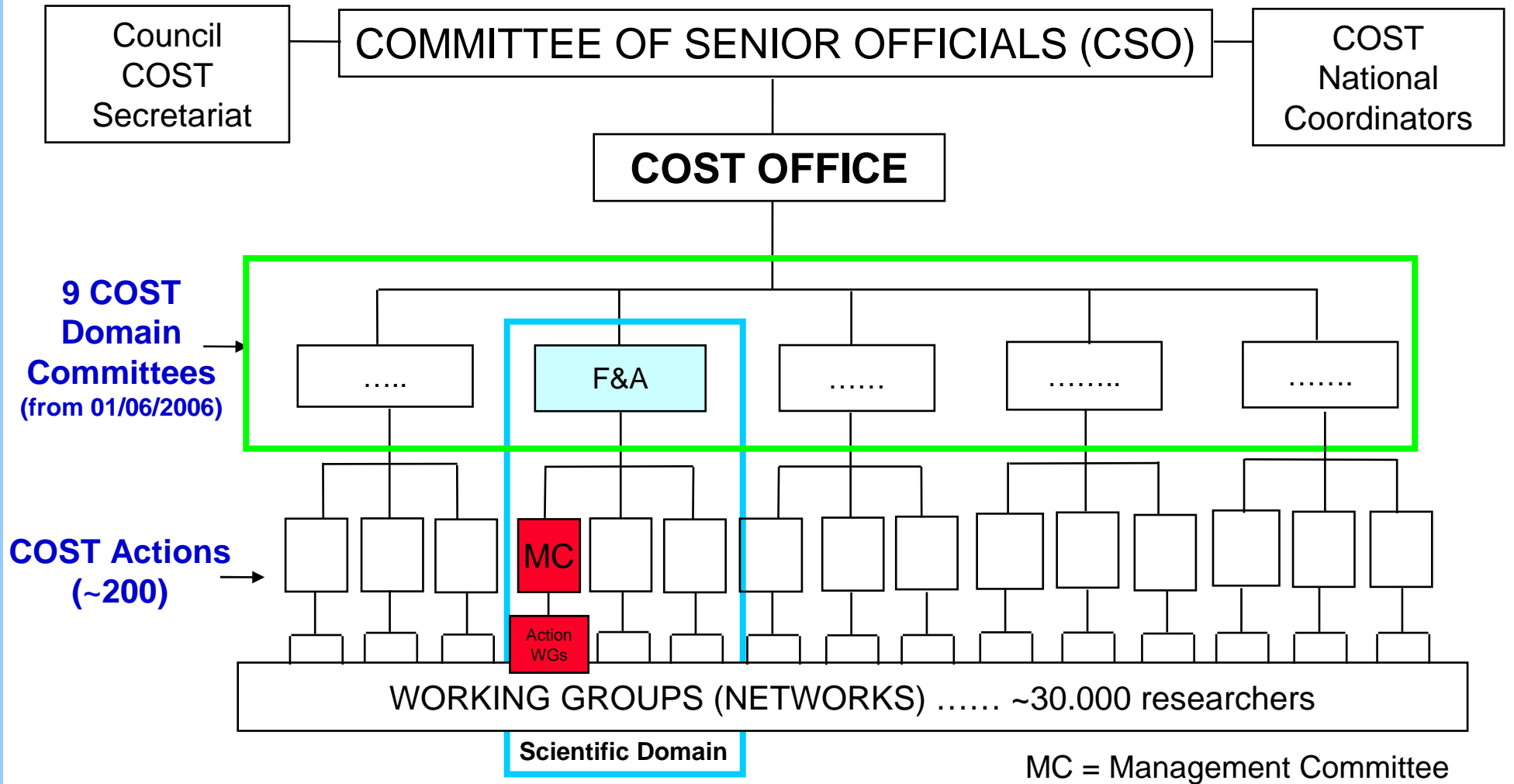
The Domain supports the development of knowledge and insights for citizens, democratic debate and decision making in the public, private and voluntary spheres

- Development and behaviour of individuals and groups
- Social, Economic, Political, Cultural, Historical and Technological Structures and Processes
- Cultural Diversity and a Common European Future

# COST Governance



# COST Structure



# Committee of Senior Officials (CSO)

*2 representatives per COST Country*

**Responsible for:**

- **the overall strategy and steering of COST**
- **deciding on the launching of individual Actions**
- **approving participation of institutes from non-COST countries**
- **approving the prolongation/extension of Actions**



# Domain Committees (DC)

*Up to 2 representatives per country*

**Responsible for:**

- **selection of new COST Actions (quality control)**
- **monitoring of ongoing COST Actions**
- **evaluation of completed COST Actions**
- **dissemination and valorisation of COST activities**
- **strategic developments in its domain**
- **synergies**

# Management Committee (MC)

- **Maximum of 2 representatives per signatory country**
- **1 representative per non-COST institution**
- **Representatives of the European Commission (observer)**
- **Observers from other organisations**

## **Responsible for :**

- **supervising and co-ordinating implementation of the Action**
- **ensuring scientific coordination at a national level**

# Working Group (WG)

- **a small number of researchers working together per WG**
- **MC members or other scientists from the signatory countries**
- **Invited experts**
- **Members from non-COST countries**

## Rules and Procedures for Implementing COST Actions

### **Procedure for the approval of New COST Actions**

- Recommendation by the Domain Committee
- Examination by the JAF Group
- CSO approval

### **Memorandum of Understanding and Start of an Action**

- Structure of the Memorandum of Understanding (MoU)
- Signing of the Memorandum of Understanding
- Start of an Action

## Rules and Procedures for Implementing COST Actions (cont.)

**Participation of Non-COST Countries**

**The Management Committee**

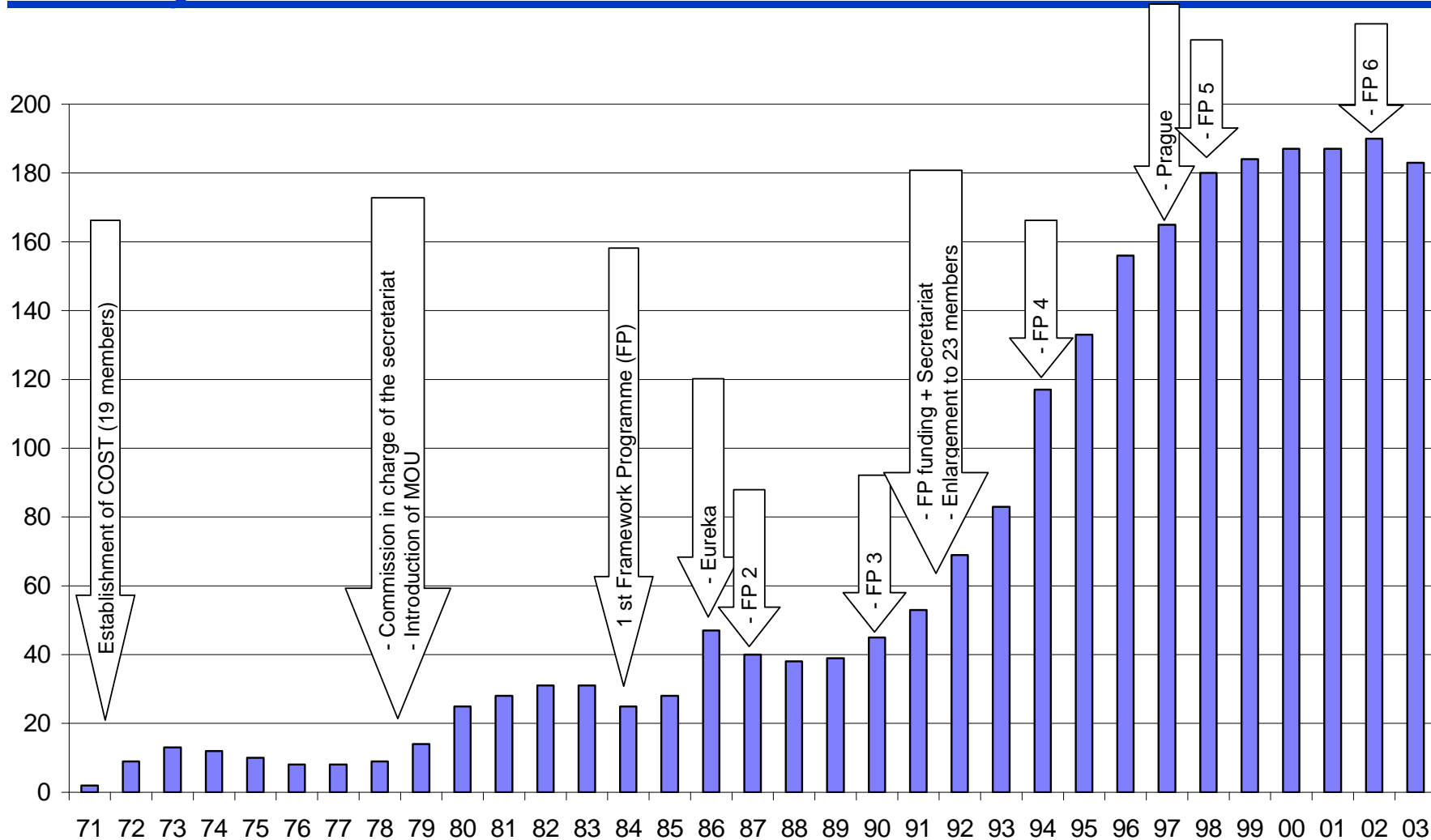
**Reports**

**Property Rights**

**European Charter for Researchers**

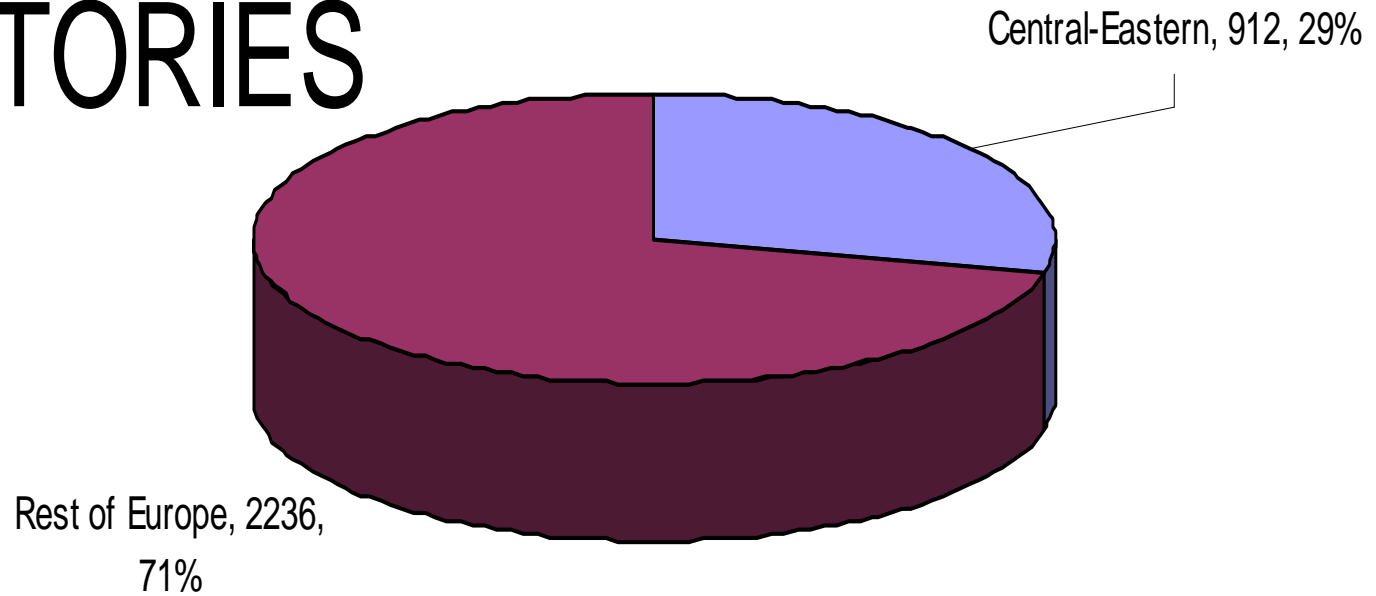
**Specific Rules for Management Committees**

# Yearly Evolution of the Number of COST Actions



# COST SIGNATORIES

## Central and Eastern Europe Participation - All Domains



# **COST Actions – what activities?**

**Nationally funded projects (min. 5 signatories) with a joint work programme are receiving finance for:**

- **Science management meetings**
- **Scientific workshops and seminars**
- **Short Term Scientific Missions (STSMs)**
- **Training Schools and Research Conferences**
- **Dissemination**



# Support for Participation in Meetings

**On the *principle of the most economical overall expenditure***

**experts eligible for reimbursement are entitled to ask for support concerning:**

- **Travelling (Plan, train, car)**
- **Accommodation (110 Euro per night)**
- **Subsistence (20 Euro per meal)**
  
- **No insurances**
- **Costs of travel arrangements have to be proven**

# Workshop Subvention

**After a request of a local organiser for a workshop subvention has been approved the management Committee the COST Office can be asked for support of**

- **Rental of rooms and technical equipment**
- **Printing (announcements, proceedings, ect.)**
- **Communication (phone, fax, mailing)**
- **Administrative staff and services**
- **Transport (bus for field trips)**
- **Refreshment (coffee breaks) and Conference Dinner**

# Short Term Scientific Mission

## Aim:

- promote exchange within an Action's scientific objectives.

## How:

- by supporting a scientist (especially a junior researcher) to visit a laboratory in another COST country to learn a new technique or to make measurements using instruments and/or methods not available in their own laboratory.

## Means:

- Average contribution for a mission (between 5 days and 3 month) will normally not exceed € 2,500

# Training Schools

## **Aim:**

- Promote dissemination of new knowledge generated by an Action

## **How:**

- by supporting scientist (especially a junior researcher) to attend a Training School organized by one of the laboratories involved in the Action to learn new techniques by using unique equipment

## **Means:**

- General support for the organizing institution
- Fixed grant for attendees of normally 600 Euro
- Travel and subsistence for lecturers

# Support Measures for young Researchers

- **Short Term Scientific Mission**
- **Training Schools**
- **Action Think Tank**
- **Conference Grant**
- **Selection of Chairs**
- **Open Call**
- **Early stage researchers as national MC delegates**

# Dissemination

**Dissemination and transfer of knowledge is a key value of COST and the use of results by industry, policy-makers and society is vital. Therefore COST supports the production of all kinds of dissemination tools:**

- **books, proceedings**
- **brochures, flyers, posters**
- **electronic devices such as CD-ROMs**
- **films**

**COST recommends the cooperation with renowned publisher**

# Strategic Workshops

**Strategic Workshops are an important new element in the positioning of COST. The aim is to bring researchers and decision makers together to discuss forefront topics, principally of an inter-disciplinary nature, which can be used in the future development of the topic and which may form the basis of future proposals, not only to COST, but also to the Framework Programme and to other European organisations responsible for research networking.**

**The support for Strategic Workshops provided by the COST is following the rules for the reimbursement of experts and workshop subventions.**

# Guidelines for Assessment, Monitoring and Evaluation of COST Actions (doc. 203/07)

**These guidelines are addressing:**

- **Conflict of Interest**
- **Assessment of new Action Proposals/Open Call**
- **Open Call Process for New COST Actions**
- **Monitoring of Actions in Progress**
- **Evaluation of completed Actions**
- **Dissemination of results**



# Selection of New Actions

## ”Open Call“

- COST operates with a continuously Open Call
- selection criteria published in a transparent way
- there will be specific collection dates (i.e. 31 March 2008)
- 2 stage process / peer reviewed
- new Actions to start end of 2008

# Open Call Process for new COST Actions

In assessing a preliminary proposal for a new COST Action the following criteria have to be applied:

- Right for COST
- Science
- Innovation
- Impact
- Presentation

The preliminary proposals have to be assessed by at least 6 DC members using the recently developed IT tool

## Open Call Process for new COST Actions (cont. I)

In assessing a full proposal for a new COST Action the following criteria have to be applied:

### A. Critical Criteria

- Is this right for COST
- Does the Presentation meet the Standard of a COST MoU

### B. Science

- Does the proposed Action address real current problems/scientific issues
- Does the proposed Action show awareness of the state-of-the-art of relevant scientific/technical fields
- Is the proposed Action innovative

## Open Call Process for new COST Actions (cont. II)

### **C. Impact**

- **If the proposed Action aims primarily to meet European economic or societal needs (to contribute to the development of the scientific and technological field), how likely is it to achieve useful impacts**
- **Are there clear plans for stimulating the production of high quality outputs**
- **Is attention given to the potential application of results**

### **D. Structure and Organisation**

- **Are the workplan and organisation appropriate**
- **Are the time schedule and the setting of milestones appropriate**
- **Are appropriate plans made for monitoring and evaluating the achievements of objectives**

## Open Call Process for new COST Actions (cont. III)

### **E. Contribution to wider COST Goals**

- **How well does the proposed Action aim to involve early stage researchers**
- **How well does the proposed Action aim at gender balance**
- **Will the proposed Action attract interest from a wide range of European countries**

**The full proposals have to be assessed by an External Expert Panel**

# MoU – Legal Basis of an Action

## **A. Abstract**

## **B. Background**

- **General Background**
- **Current State of Knowledge**
- **Reasons for the Action**
- **Complementarity with other research programmes**

## **C. Objectives and Benefits**

- **Main/primary objectives**
- **Secondary objectives**
- **How will the objective be achieved**
- **Benefits of the Action**
- **Target groups/end users**

# MoU – Legal Basis of an Action (cont. I)

## **D. Scientific Programme**

- **Scientific focus**
- **Scientific workplan – methods and means**

## **E. Organisation**

- **Coordination and organisation**
- **Working Groups**
- **Liaison and interaction with other programmes**
- **Gender balance and involvement of early stage researchers**

## **F. Time Table**

## **G. Economic Dimension**

# MoU – Legal Basis of an Action (cont. II)

## H. Dissemination Plan

- Who
- What
- How

## Part II – Additional Information

### A. List of Experts

### B. History of the Proposal

### C. Preliminary Work Programme

### D. Recent Publications

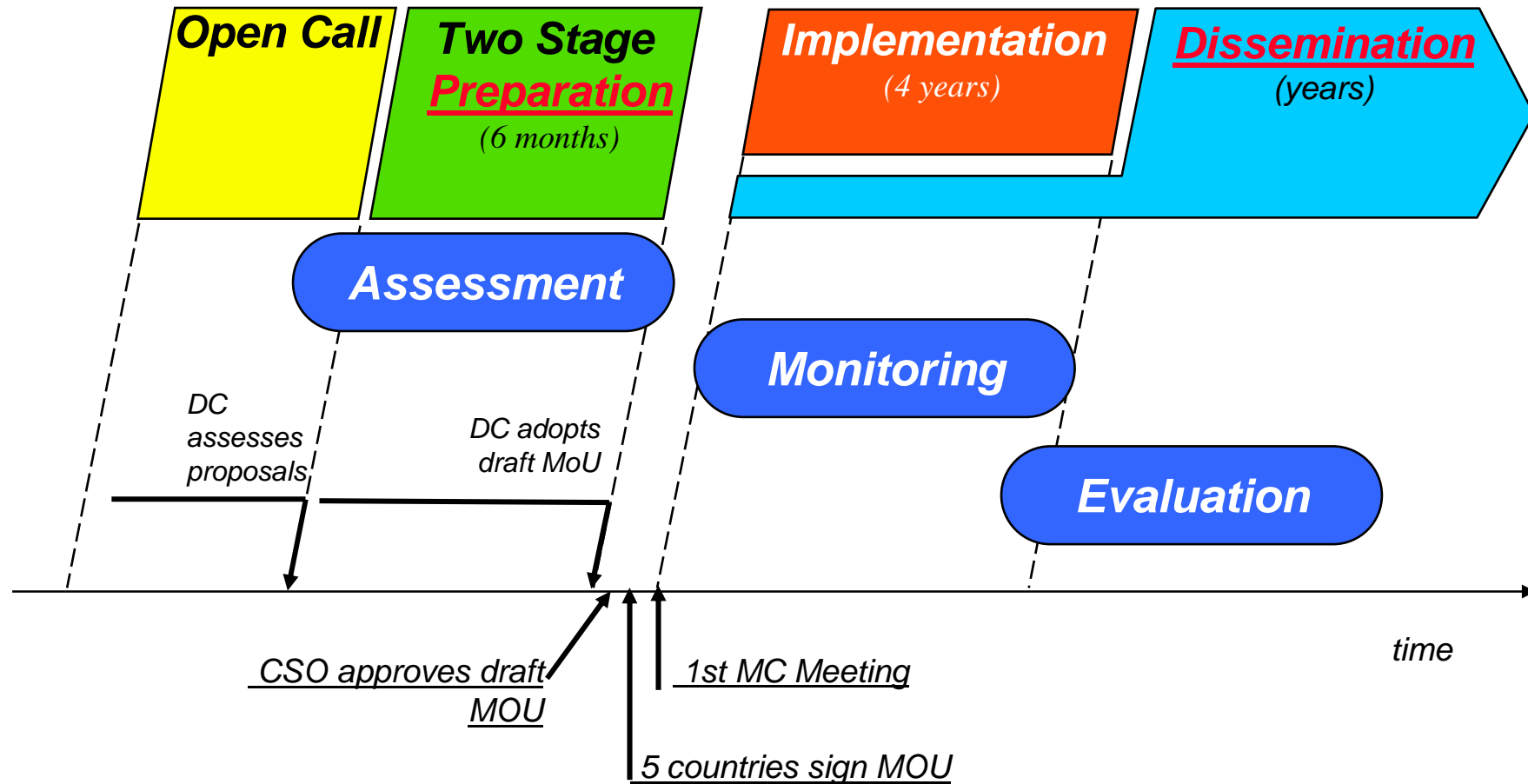


# Quality Control

**By the COST DC's assisted by the COST Office according to the "COST Guidelines "**

- The assessment of proposals for new Actions. Peer review by an External Expert Panel and by the DC
- The monitoring of the Actions in progress. Annual "Monitoring Progress Report" presented by the MC Chair in the yearly meeting the relevant DC
- The evaluation of completed Actions. Peer review by an Evaluation Panel. "Final Evaluation Report" presented to and approved by the DC

# Action Life Cycle



# Results

- **Scientific importance.** Thousands of papers. Ph Doctors. Recognition of COST scientific Community outside Europe.
- **Contribution to European competitiveness.** Contributions to normative and standardization bodies. SME's originating from COST Actions.
- **Societal importance.** Delicate issues arising from new technologies. High - standard, industry - independent , environment.
- **Contribution to the ERA.** COST precursor of research projects in the FP's. Networks of Excellence from COST Actions in FP6.

# Outcomes of COST Actions

## A COST Action may produce new knowledge

### **European network for pig genomics (COST 861)**

**coordinated by Dr. François Hatey (INRA, Toulouse, France)**

- The main objective of the Action is to increase our knowledge of the organisation, expression and regulation of the genes involved in pig development, health, reproduction, and product quality.
- 16 participating countries
- Complementary to FP6 IP EADGENE
- Organised the first European conference on pig genomics in February 2006

## A COST Action may define standards

### **Food consumption and composition data (COST 99)** coordinated by C.E. West, Wageningen Agricultural University (The Netherlands)

- Objective: to construct and establish a network of compatible food composition databases with the quality required for interpretation, description and exchange of high quality food consumption and food consumption data.
- Building on an idea from the FDA, published the first 'Langual' database in 2000. It is an automated method for describing, capturing and retrieving data about food.
- 25 participating countries

# A COST Action can lay the foundations for a larger network

## **Measuring and Monitoring of Farm Animal Welfare (COST 848)** coordinated by H; Blokhuis, Wageningen Agricultural University (The Netherlands)

- Objective: The main objective of the Action is to develop, standardise and intercalibrate methods of measuring and monitoring farm animal welfare and to stimulate welfare research.
- The chair of this Action now runs a fully-funded FP6 integrated project which uses the methodology developed by this Action.
- 20 participating countries

## A COST Action can solve a problem

**Fundamental , agronomical and environmental aspects of sulphur nutrition and assimilation in plants (COST 829) coordinated by Luit J. De Kok, University of Groningen, (The Netherlands)**

- Objective: to initiate and coordinate European research on plant sulphur metabolism.
- This Action assembled evidence from the participating countries that failing cereal crops in countries relying on rainfall was due to a deficiency of sulphur.
- They also devised a simple remedy – partial replacement of ammonium nitrate by ammonium sulphate
- 19 participating countries



# A COST Action can lead to an industrial application

**Consumer-oriented quality improvement of fruit and vegetable products (COST 915)** coordinated by Bart Nicolai, University of Leuven, (Belgium)

- Objective: tailoring the quality of fruit and vegetables and their products to meet consumer demands.
- 21 participating countries
- This Action united agronomists, engineers and chemists on a simple question : can you measure the 'freshness' of a fruit or a vegetable?
- The major outcome was a simple and rapid method (based on chromatography) for measuring fruit and vegetable quality
- This method was patented and is now widely used in this industry, and in other industries too.

# COST Web-site

## A tool to support researchers

*[www.cost.esf.org](http://www.cost.esf.org)*

# COST Office Web-based IT Tool

A 'common database', with **remote on-line access for Grant Holders**, allowing applications, reporting, standard document generation, management of bank details, etc.

## Objectives:

- Central storage and shared access to information (including scientific: eg: key-word search)
- Statistics: ex: number of participants per country
- Audits
- Reporting to EC
- Archives / Document Retrieval

# COST Home Page

The screenshot shows the COST Home Page in Microsoft Internet Explorer. The browser window title is "New COST: COST - Microsoft Internet Explorer". The address bar shows "http://www.cost.esf.org/". The page features a blue header with the COST logo and the text "European Cooperation in the field of Scientific and Technical Research". A navigation menu includes "Links", "FAQ", and "Login". A left sidebar contains a list of links: "Homepage", "Events & Calendar", "Domains & Committees", "Signatories / Actions", "Contacts", "COST Guidelines", "Publications", "Vacancies", "COST in Brussels", "COST-ESF", and "COST-EC". The main content area is divided into three sections: "What is COST?", "How can I join COST?", and "COST Open Call". The "What is COST?" section explains that COST is one of the longest-running instruments supporting co-operation among scientists and researchers across Europe, with 35 member countries. It mentions a new Domain structure starting on 1 June 2006. The "How can I join COST?" section provides information on joining based on position and action details. The "COST Open Call" section states that the next collection date for Preliminary Proposals is 30 March 2007. A "Notice board" on the right highlights the "167th Meeting of the Committee of Senior Officials for Scientific and Technical Research (COST)". The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 2:31.

# Contacts and Addresses

The screenshot shows a Microsoft Internet Explorer browser window displaying the COST website. The address bar shows the URL: <http://www.cost.esf.org/index.php?id=37>. The website header features the COST logo and the tagline "European Cooperation in the field of Scientific and Technical Research". A navigation menu includes "Links", "FAQ", and "Login".

The main content area is titled "Contacts" and displays a hierarchical organizational chart:

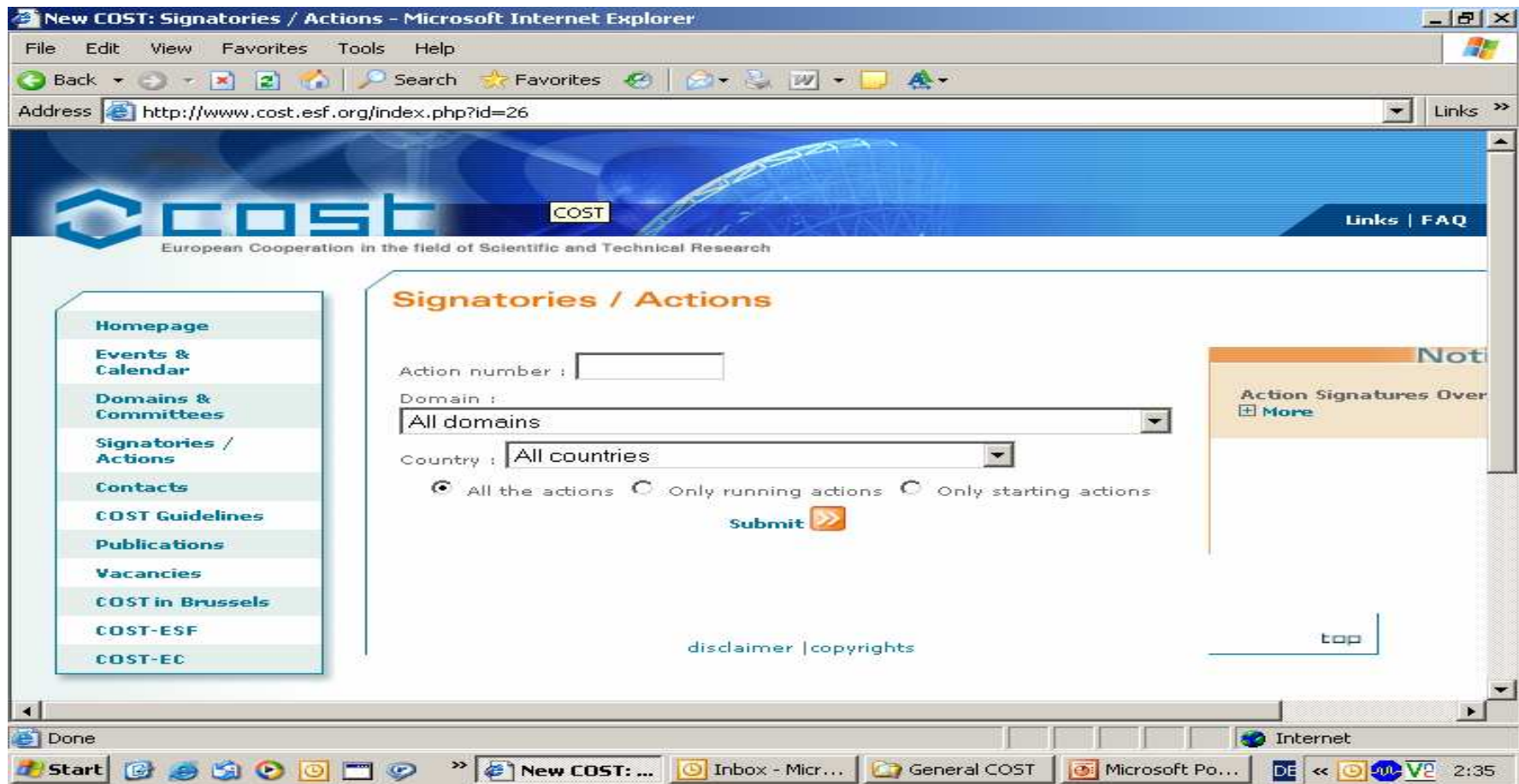
- Committee of Senior Officials (CSO)
  - Council COST Secretariat
  - COST National Coordinators
    - JAF\*
  - COST Office
  - COST Domains, Domain Committees and Ad Hoc Groups

On the left side, there is a vertical menu with the following items: Homepage, Events & Calendar, Domains & Committees, Signatories / Actions, Contacts, COST Guidelines, Publications, Vacancies, COST in Brussels, COST-ESF, and COST-EC.

On the right side, there is a "Notice board" section with a "Downloads" area containing a document icon and the text "COST Office Organisation Chart Version of 30 March 2007". Below this is a search box labeled "search a contact" with a right-pointing arrow button.

The browser's taskbar at the bottom shows several open applications: "New COST: ...", "Inbox - Micr...", "General COST", and "Microsoft Po...". The system clock indicates the time is 2:34.

# Search for a COST Action



# Action specific Information

The screenshot shows a web browser window titled "New COST: Signatures - Microsoft Internet Explorer". The address bar shows the URL: [http://www.cost.esf.org/index.php?id=143&action\\_number=e43](http://www.cost.esf.org/index.php?id=143&action_number=e43).

The page content includes a left-hand navigation menu with categories like "Domains & Committees", "Actions", "Contacts", "Signatories / Actions", "Contacts", "COST Guidelines", "Publications", "Vacancies", "COST in Brussels", "COST-ESF", and "COST-EC".

The main content area is titled "Action Overview" and features three download options: "Printable version", "pdf version", and "Jpg Version (Zip File)". Below this, a paragraph describes the action's objective: "The main objective of the Action is to improve and harmonize the existing national forest resource inventories in Europe. The secondary objectives are to support new inventories in such a way that inventories will meet national, European and global level requirements in supplying up-to-date, harmonized and transparent forest resource information, and to promote the use of scientifically sound and validated methods in forest inventory designs, data collection and data analysis. ...more".

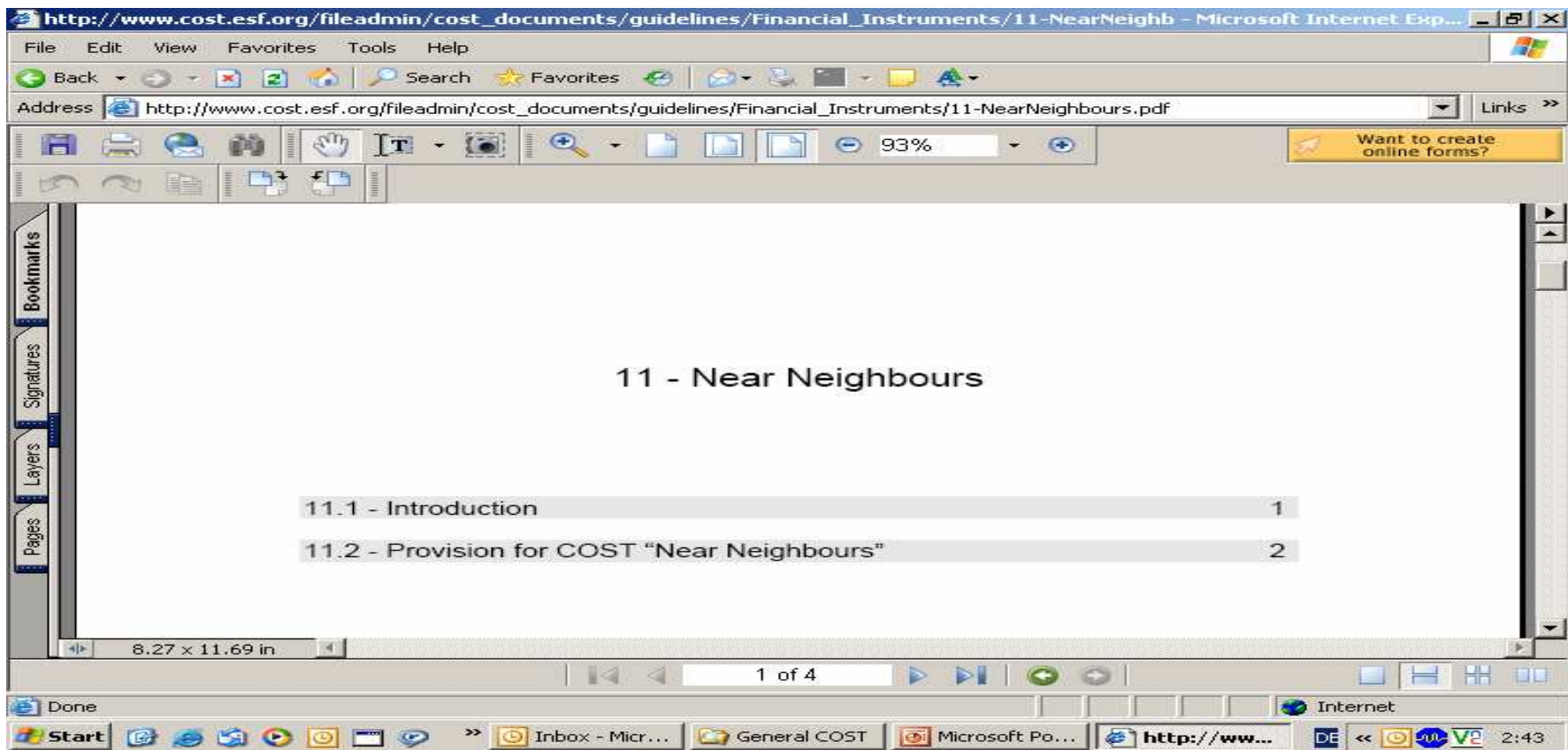
Below the text, the domain and action title are listed: "Domain : Forests, their Products and Services" and "Action Title : Harmonisation of National Inventories in Europe : Techniques for Common Reporting".

A table titled "Action details" and "Signatures" is displayed, showing the following data:

Action details	Signatures		
	Country	Date	Status
Draft MoU : 253/04	Austria	15/06/2004	Confirmed
	Belgium	24/09/2004	Confirmed

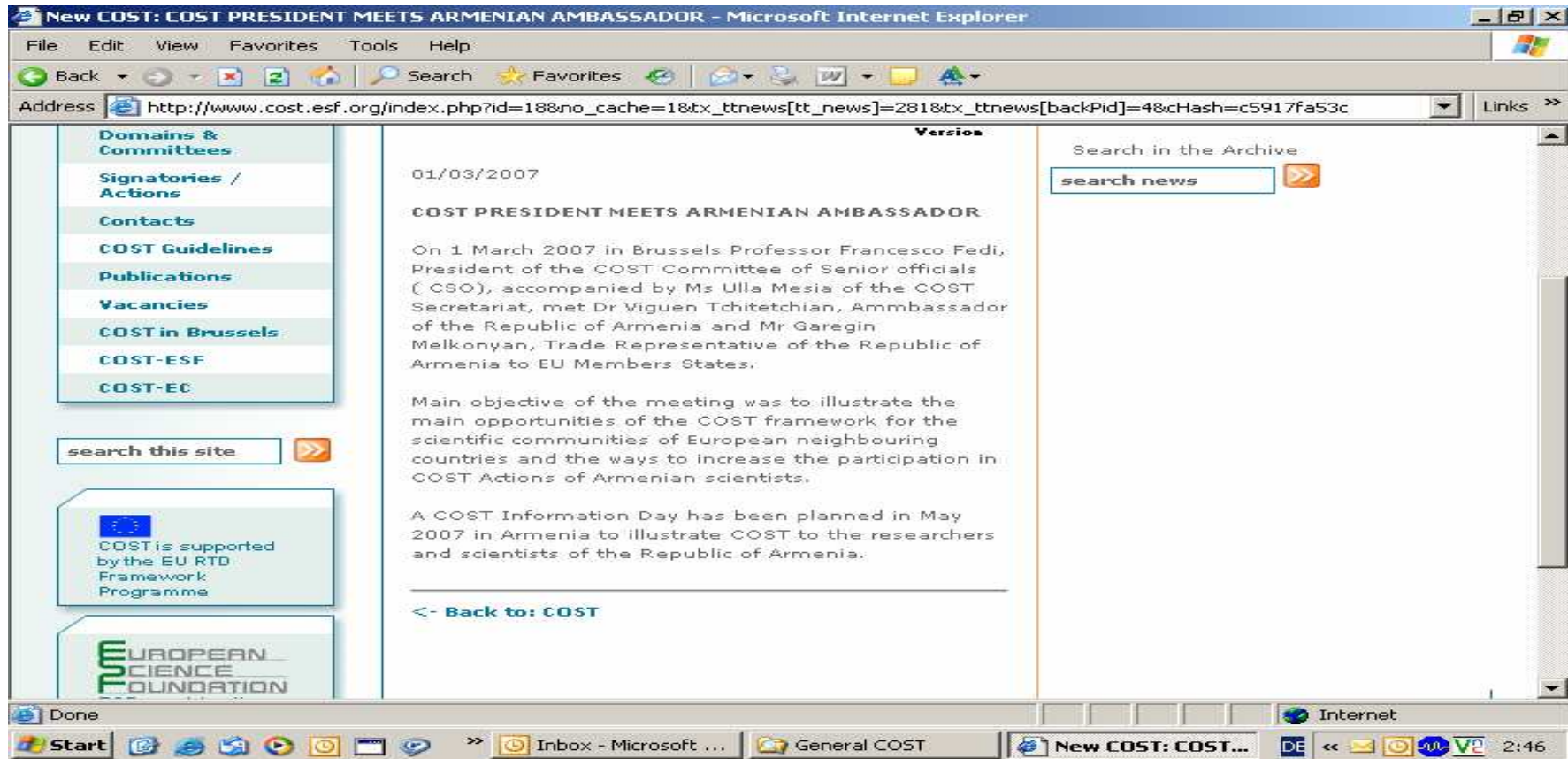
On the right side, a "Notice board" provides contact information: "More information can be obtained through the website: <http://www.metla.fi/eu/cost/e43/> or by contacting the Chair of the Action: Professor Erkki Tomppo. Rapporteurs: Dr. David Hladnik. Science Officer: G. SIEGEL. Administrative Officer: N. STANDAERT." Below the notice board is a list of expandable sections: "Action's News and Description", "Management Committee", "Contact list", "Non COST Institutions", and "Download MoU".

# Guidelines for Near Neighbours



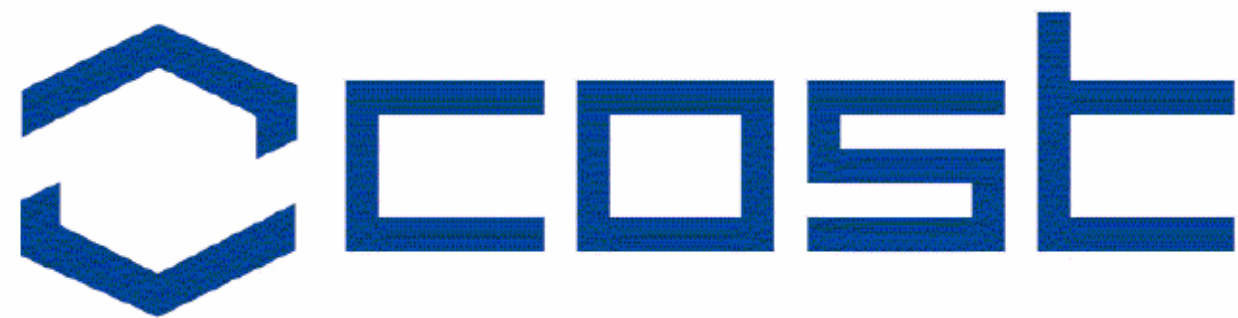


# COST President meets Armenia Ambassador





**Thank You for your attention !**

A large, stylized blue logo consisting of a hexagonal 'c' followed by the letters 'o', 's', and 't' in a bold, blocky font.