COST – European COoperation in the field of Scientific and Technical Research

by Antonella Baldi COST DC Food and Agriculture
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What is COST

- COST – European COoperation in the field of Scientific and Technical Research – is one of the longest-running instruments supporting co-operation among scientists and researchers across Europe.
- Launched in 1971
- It is based on an inter-governmental framework for cooperation (35 MS)
How it works

- Bottom up approach
- "à la carte" participation (only countries who wish to participate in an Action do so)
- Equality of access (participation is open to all COST countries)
- Flexible structure: Actions
What is supported by COST

Actions usually have a lifetime of 4-5 years and have an average budget of about EUR 500 000

Networking
- Management Committee and Working Groups; specialist workshops and conferences,
- publications and dissemination

Young researchers (on separate budget)
- Training schools.
- Short term scientific missions (STSMs) (about 1500 - 2500 euro).
- Early Stage Researchers: Conference grants

Strategic events
HOW COST IS ORGANIZED

Inter-governmental nature: **CSO** (Committee of senior offices) each cost member state appoints two representatives

**Domain Committees**: evaluation, monitoring and quality control duties

**Actions**: Management committees and Working groups
9 Domain Committees

- Biomedicine and Molecular Biosciences;
- **Food and Agriculture**;
- Forests, their Products and Services;
- Materials, Physical and Nanosciences;
- Chemistry and Molecular Sciences and Technologies;
- Earth System Science and Environmental Management;
- Individuals, Societies, Cultures and Health;
- Information and Communication Technologies;
- Transport and Urban Development.
Domain Food and Agriculture

- The Domain covers all aspects of research of food and non-food chains, plant and animal sciences and food sciences, and the technologies relevant to these.
HOW TO START A COST ACTION

- **OPEN CALL TWO TIMES A YEAR** with a two stage process.

- **Preliminary Proposals** (stage 1) should provide a brief overview of the proposal and its impact. Scientists from at least 5 countries interested in developing a new Action are invited to prepare a 3 page summary proposal. A pre-selection will rank the Preliminary Proposals according to a threshold.

- **Full Proposals** (stage 2). Full proposals (15-20 pages) are assessed by an independent panel of experts against specific criteria and, if successful, a recommendation is made for the new Action to be launched.

- **Final ranking** – Selection list by DC
CRITERIA

Is Cost the right funding scheme?
Science: quality innovation
Impact at European level
Structure and Organisation
Cost goals (young researchers involvement, geographic dimension, gender balance)
<table>
<thead>
<tr>
<th>Domain</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedicine and Molecular Biosciences (BMBS)</td>
<td>66</td>
<td>14%</td>
</tr>
<tr>
<td>Chemistry and Molecular Sciences and Technologies (CMST)</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td>Earth System Science and Environmental Management (ESSEM)</td>
<td>51</td>
<td>11%</td>
</tr>
<tr>
<td>Food and Agriculture (FA)</td>
<td>65</td>
<td>14%</td>
</tr>
<tr>
<td>Forests, their Products and Services (FPS)</td>
<td>21</td>
<td>4%</td>
</tr>
<tr>
<td>Information and Communication Technologies (ICT)</td>
<td>49</td>
<td>10%</td>
</tr>
<tr>
<td>Individuals, Societies, Cultures and Health (ISCH)</td>
<td>109</td>
<td>23%</td>
</tr>
<tr>
<td>Materials, Physical and Nanosciences (MPNS)</td>
<td>55</td>
<td>12%</td>
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<tr>
<td>Trans Domain Proposal (TDP)</td>
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<tr>
<td>Transport and Urban Development (TUD)</td>
<td>29</td>
<td>6%</td>
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<td><strong>Grand Total</strong></td>
<td><strong>475</strong></td>
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<tr>
<td>Domain</td>
<td>Full Proposals</td>
<td>Percentage</td>
</tr>
<tr>
<td>------------------------------------------------</td>
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<td>------------</td>
</tr>
<tr>
<td>Biomedicine and Molecular Biosciences</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td>Chemistry and Molecular Sciences and Technologies</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Earth System Science and Environmental Management</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Food and Agriculture</strong></td>
<td><strong>13</strong></td>
<td><strong>17%</strong></td>
</tr>
<tr>
<td>Forests, their Products and Services</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Individuals, Societies, Cultures and Health</td>
<td>18</td>
<td>24%</td>
</tr>
<tr>
<td>Information and Communication Technologies</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>Materials, Physical and Nanosciences</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>Transport and Urban Development</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Trans Domain Proposals</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>76</strong></td>
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</table>
First three open calls had 66, 64, and 67 pre-proposals. The next collection date for Preliminary Proposals will be 26 September 2008.

Approved Actions for year: about 6-7 (2 open calls)

Numbers of finishing Actions:
- 2008 – 4; 2009 - 5; 2010 – 8; 2011 - 4

Average number of countries per Action - 21

STSMs between 4 – 6 per Action per year
Breakdown of ongoing Actions by generic description

- 37 running Actions

  - Plant science and production
  - Animal science and production
  - Food sciences
  - Biotechnology (non food)
  - Agri-Environment

An imbalance in portfolio is clear; need to respond to new challenges; need to work more cross domain.
Actions in Animal Science (last 5 years)

- 846: Measuring and Monitoring of Farm Animal Welfare
- 845: Brucellosis in Animals and Man
- 854: Protozoal Reproduction Losses in Farm Ruminants
- 855: Animal Chlamydiosis and its zoonotic implications
- 861: European network for pig genomics
- 867: Welfare of fish in European aquaculture
- 920: Foodborne Zoonoses: a Coordinated Food Chain Approach
- 923: Multidisciplinary Hen Egg Research
- 925: Importance of prenatal events for postnatal muscle growth in relation to quality of muscle based foods
- 601: Fish reproduction and fisheries
- 702: Maternal Interaction with Gametes and Embryos
Foodborne Zoonosis: a Co-ordinated Food Chain Approach

- 22 Countries - [http://www.cost920.com](http://www.cost920.com)
- brought together internationally recognised scientists, young scientists, risk assessors and managers and policy makers.
- training in the newer molecular diagnostic and epidemiological techniques; contributed to the improvement of surveillance systems in many European countries.

- WG 1: Harmonisation of diagnostic and typing methods.
- WG 2: New and emerging foodborne pathogens
- WG 3: Quantitative foodchain risk assessment
- WG 4: Survival of zoonotic pathogens through the foodchain
Foodborne Zoonosis

Achievements:

- 10 WGs meetings and one Conference
- 20 STSMs
- Directory of laboratories – network of risk assessors
- MedVetNet Network of Excellence
- Eureka project
Biology of the Mammary Gland

Differences between species, but same functional unit, the mammary epithelial cell
24 Participating Countries

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Israel
- Italy
- Malta
- Netherlands
- Norway
- Poland
- Romania
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom
ORGANIZATION

- Working groups on two main thematic areas:
  - Mammary gland development and function (WG1)
  - Milk components, nutrition and health (WG2).
- Three technical working groups:
  - Cell biology (WG 3);
  - Genomics, proteomics and bioinformatics (WG 4);
  - Epidemiology (WG 5)
Cost action publication by year
## Networking activity between member laboratories

<table>
<thead>
<tr>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6 Joint Projects</strong></td>
<td>Austria, France, Hungary, Ireland, Israel, Italy, Sweden, the Netherlands, UK</td>
</tr>
<tr>
<td>Research, PhD training, STREP</td>
<td></td>
</tr>
<tr>
<td><strong>9 Collaborations</strong></td>
<td>Austria, Czech Republic, Denmark France, Hungary, Italy, Ireland, Israel, Swedish, the Netherlands, UK</td>
</tr>
<tr>
<td>On Specific topics</td>
<td></td>
</tr>
<tr>
<td><strong>4 Training and mobility</strong></td>
<td>Belgium, Denmark, France, Italy, Ireland, Slovenia, Spain, UK</td>
</tr>
<tr>
<td>EU Leonardo &amp; Socrates Programme</td>
<td></td>
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<tr>
<td><strong>19 Networking activities</strong></td>
<td>15 countries</td>
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<tr>
<td><strong>19 STSMs</strong></td>
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Strengths and weaknesses

- Bottom-up cooperation schemes, needs-driven, not policy-driven
- Too large network difficult to manage, some complexity especially in the evaluation approach
- Need to catch ‘high risk’ and ‘non traditional’ proposals
- Links with: ESF, FP7, EuroAgri, ERA-Net, European Platforms
http://www.cost.esf.org/

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