

European Commission



6<sup>th</sup> Framework Programme  
Anticipating scientific and technological needs

**NEST**

New and Emerging Science and Technology

REFERENCE DOCUMENT ON

# **NEST SUPPORT Actions**

17 December 2003

This is a reference document of DG Research. Before preparing proposals for NEST, the Guide for Proposers, and all other relevant documents which constitute the Information Package for the call, should be consulted.

## CONTENTS

<u>1</u>	<u>INTRODUCTION</u>	<u>3</u>
<u>2</u>	<u>OVERALL OBJECTIVES OF THE NEST SUPPORT</u>	<u>4</u>
<u>3</u>	<u>IMPLEMENTATION METHODS FOR NEST SUPPORT</u>	<u>4</u>
<u>4</u>	<u>SPECIFIC AREAS IN WHICH NEST SUPPORT WILL BE CARRIED OUT</u>	<u>5</u>
<u>5</u>	<u>PROPOSAL SUBMISSION AND EVALUATION MECHANISM</u>	<u>9</u>
<u>6</u>	<u>KEY DATES AND CONTACTS</u>	<u>9</u>

Please note that there is a **National Contact Point (NCP) for NEST in your country** who can offer personalized services. The mission of NEST NCPs is to inform, advice and support potential applicants in the preparation, submission and follow-up of NEST proposals.

For contact details: <http://www.cordis.lu/nest/ncp.htm>

# Reference document on NEST SUPPORT

## 1 INTRODUCTION

The New and Emerging Science and Technology (NEST) activity falls within the FP6 specific programme “Integrating and Strengthening the European Research Area”.

NEST provides a means to anticipate scientific and technological opportunities and needs in new and emerging areas. It supports unconventional, exploratory research which cuts across or lies outside the thematic priority areas of FP6, in particular because it is highly interdisciplinary and/or multidisciplinary.

There are three basic lines of action:

- *ADVENTURE projects* support research in new and emerging areas of knowledge and on future technologies, in particular in multidisciplinary fields, which is highly innovative and involves high (technical) risks.
- *INSIGHT projects* support research aimed at assessing new discoveries and newly observed phenomena, which may indicate important potential problems or risks to society.
- *PATHFINDER projects* support research on specific topics that are identified during the course of implementation of the 6<sup>th</sup> framework programme on the basis of their urgency and potential for future societal, industrial or economic relevance.

In addition, the work programme makes provision for *NEST SUPPORT actions*:

*... mandate for  
NEST SUPPORT*

*NEST SUPPORT actions focused on the conceptual and practical questions associated specifically with the research domain of NEST, will be carried out to assist in the development and exploitation of NEST activities.*

*...call for proposals*

This reference document sets out the approach that NEST proposes to take in implementing NEST SUPPORT actions, and in particular the actions that will be implemented via the NEST call for proposals published on Dec 17, 2003.

## 2 OVERALL OBJECTIVES OF THE NEST SUPPORT

### *...rationale for NEST...*

NEST is a new activity, with particular character but wide range. It opens exciting new prospects for European research, but will be very challenging to implement. In this context, the overall purpose of NEST SUPPORT actions is to provide assistance in setting up and organising the implementation of NEST. Such assistance will cover both conceptual and practical issues, and may range from the development of ideas and provision of advice, to the supply of necessary services.

### *...role of NEST in relation to other institutional partners...*

Since its main function is to encourage research in new areas, NEST operates on the principle of very close liaison with the research community in Europe, relying on it as the main source of creativity and new ideas. This open approach extends also to the development and implementation of NEST SUPPORT.

The network of National Contact Points established by the Member States and the Associated States will assist in the implementation of NEST. Support will also be drawn from other parts of the framework programme, including those of the Joint Research Centre, and the designated NCPs and the JRC are both eligible for funding under NEST SUPPORT.

It must be clearly understood that NEST SUPPORT will constitute only a small proportion of the activities under NEST, and will account for a correspondingly small part of the available budget.

### *...complement other NEST activities...*

In order to understand fully the needs for NEST SUPPORT, readers of this document are strongly advised to familiarise themselves with the main action lines of NEST – ADVENTURE projects, INSIGHT projects and PATHFINDER initiatives. Reference documents on these action lines are available on the NEST web-site [www.cordis.lu/next](http://www.cordis.lu/next)

However, NEST is an integrated activity and NEST SUPPORT actions are expected to contribute in many cases to more than one of these individual action lines.

## 3 IMPLEMENTATION METHODS FOR NEST SUPPORT

### *....implementation*

NEST SUPPORT will be carried out by means of the FP instruments “Specific Support Action” (SSA) and “Co-ordination Action” (CA).

SSA [http://www.cordis.lu/fp6/instr\\_ssa.htm](http://www.cordis.lu/fp6/instr_ssa.htm) is a general instrument that can cover a variety of different activities – studies and analyses, seminars, expert groups, operational support, information and dissemination, high level scientific awards and competitions, etc...

CA [http://www.cordis.lu/fp6/instr\\_ca.htm](http://www.cordis.lu/fp6/instr_ca.htm) is intended to promote and support the co-ordinated initiatives of a range of research operators in order to achieve improved integration of the European research. It may contain co-ordination, training and consortium management activities but cannot support research and development activities per se.

CAs differ from SSAs in that they always involve at least 3 independent legal entities from three different countries, entail co-ordination activities and usually have a longer life span.

Further information on these instruments and the associated contractual conditions can be obtained from the FP6 web-service (see below).

The main method of putting into effect NEST SUPPORT will be **Calls for proposals**. The call for proposals method provides a means for the research community to come forward with proposals on the basis of a general brief defined in the work programme. In particular, the NEST call will cover 3 specific areas defined in the workprogramme (see below).

#### 4 SPECIFIC AREAS IN WHICH NEST SUPPORT WILL BE CARRIED OUT

As noted above, the NEST work programme identifies three areas of action in relation to NEST SUPPORT. The sections below are intended to highlight some important aspects of the rationale the actions under each heading. However these are not intended to be exclusive or to provide formal guidance to proposers. NEST SUPPORT actions will only be supported if they provide substantial operational benefit to the implementation of the NEST activity.

##### 1. Promotion of interaction with the research community

NEST aims both to stimulate and to draw benefit from the creative potential of Europe's scientific community and its capacity for innovative and unconventional thinking. It must work with and through the scientific community, and other related actors, not only in the sense of evaluating proposals and funding research projects, but also in shaping and refining its modalities and establishing future actions.

Two different dimensions of this basic agenda can be identified, although they should not be considered necessarily as operationally separate areas of action.

##### (i) Building awareness of NEST, its aims and modalities

*...helping build a constituency and awareness of NEST proposers to understand NEST and to form partnerships with relevant actors....*

If NEST is to be successful in attracting high quality proposals, it requires a strong awareness of its aims and operational modalities amongst the research community and other concerned actors. Achieving this will be especially challenging, in view of the fact that NEST is a new part of the framework programme, and its specificity is not sectoral or disciplinary, but defined instead by requirements such as novelty and highly ambitious and challenging research.

The fact that NEST aims to attract proposals in areas outside the thematic priorities and in multi-disciplinary areas means also that attention must be given to the problems faced by potential proposers in developing partnerships across disciplines. Not only will the NEST "constituency" involve parts of the research community (and indeed other actors) that may not traditionally be involved in activities under the framework programme; but

also, when making proposals, they may need to form partnerships with parties in other Member States or Associated States.

There are also likely to be particular needs, for example to stimulate, encourage and facilitate the participation of small research teams, newly developed and remote research centres, as well as organisations from the candidate countries. Stimulation of the co-operation between Candidate Countries and Member States may be important, not just by the development of direct NCP contacts but also by the improvement of the existing databases for partner search and by the organisation of brokerage events in a particular field. It will also be important to attract young researchers and women into new areas with strong future potential.

(ii) **Interaction between NEST and other related initiatives**

*...helping NEST to understand other relevant research programmes and important stakeholders...*

There is a discernable trend in research funding towards activities designed to stimulate novelty, multi-disciplinarily and highly creative research. NEST's objectives are therefore partly shared by other organisations and funding agencies in Europe, and elsewhere. NEST should learn from these other activities and add value, especially in the context of the work towards a more coherent European Research Area.

This will require the identification of other organisations and activities, the establishment of contacts and sharing of information on strategies, actions and best practice in various domains.

**2. Engagement of the research community in the process of identifying future research opportunities**

In Europe considerable effort is being put into the identification of promising future research avenues. For example, various activities and networks dealing with technology foresight and futures studies have been established at national and European level. There is also a well-institutionalised structure of agencies engaged in technology assessment, scientific ethics and various domains of risk management associated with scientific and technological issues (environment, food agencies etc.)

*...helping NEST to understand the scientific trends and associated developments...*

There is no intention to duplicate these activities, or reproduce them in the NEST framework. Moreover, NEST is not designed to address the "consensus" view, but to explore new and unconventional prospects. On the other hand, there may be a need to connect with them and interpret certain outcomes and findings of such work in relation to the needs and opportunities in the NEST domain.

### **3. Analysis of methodological and technical issues associated with the NEST research domain, including analyses of:**

#### **3.1 The conduct of highly advanced science and technology in the European context, and on a comparative basis, and the specific socio-cultural and economical factors affecting its performance**

To achieve the objective of stimulating highly creative and novel research in the European Community, it will be helpful to understand the propensity for research with these characteristics in the European context. For example, the socio-cultural and economic incentives and dis-incentives to engage in multi-disciplinary research or in research involving high technical risks may be of relevance to the implementation of NEST.

It could be expected that contextual features at various different levels might be of interest - in the micro-context of laboratory organisation, culture and procedures, in the context of scientific institutions and career structures, in the broader conditions of life, aspirations and incentives identifiable at societal level. Gender issues, age, disciplinary specificities, industrial structures, and so on, might also be relevant.

It would also be reasonable to assume that within Europe, the situation and implications of the various dimensions indicated above could vary. It is also likely that the propensity for high-risk research in Europe differs substantially from the situation in the United States.

#### **3.2 The dynamics of scientific and technological change, the management issues specific to high risk and interdisciplinary research including issues of social impact and acceptance, ethical and regulatory aspects**

Conceptual and empirical analysis of scientific and technological change may help to clarify the way in which new productive areas of research emerge, for example at the interface between different disciplines, and provide guidance or choices to be made in supporting emerging research areas.

Also valuable in this context is an understanding of the ways in which public support mechanisms may assist in promoting the emergence of new research areas. As far as NEST is concerned, this is not a static process and a continuous need to adapt is evident. Systematic efforts to gather qualitative and quantitative information of different call results and of successful collaborations could promise extremely valuable information for this.

Closely connected with these questions is the issue of research management. Public support of innovative, multidisciplinary research may require special awareness of relevant management issues. High risk research and multidisciplinary research make particular demands on researchers and research management which may in some ways be at odds with established structures and arrangements, especially as regards public research. If NEST

is to successfully engage with research in these areas, it must be informed by a good understanding of where the problems and difficulties lie, and of best practice in addressing them.

### **3.3. The methodological basis for addressing systemic and societal vulnerabilities to science-based hazards.**

In the area of INSIGHT projects, the NEST mandate is to assess new discoveries and newly observed phenomena that could indicate problems and risks to society. The idea in principle is to provide an early warning of possible problems signalled by developments in the science base before they become fully evident as “risk issues” for society.

The pursuit of this agenda raises conceptual and methodological questions which could potentially be addressed from “generic” perspectives. Given the speed with which new issues can emerge nowadays, one important question is what should be the basis for identification of such issues? No procedure can guarantee that every emerging issue will be correctly recognised at an early stage. Increased scientific attention may in some cases lead to a proliferation of uncertainty and undermine confidence without reasonable cause. Timeliness is no doubt a key point and so is independence and credibility of advice. Delays in introducing corrective measures can also be aggravated by requiring over-detailed scientific analysis.

The ways in which potential hazards and vulnerabilities (of society and associated systems, eg technical systems), are conceptualised, in relation to one another, is also an issue of possible interest.. There are, for example, potentially important methodological implications for the conduct of projects and for the determination of response strategies.

As a Community activity, NEST operates within a mosaic of activities, at European and national level, associated with identifying, managing and regulating scientific activities and risks. In particular, INSIGHT projects should not duplicate, but rather complement activities taking place in these other contexts. Their “positioning” should reflect the NEST mandate as well as the administrative and procedural arrangements they are required to follow. Understanding the environment of other relevant activities in Europe from this perspective could also be very valuable in helping to orientate and manage NEST activities in the most efficient and effective way.

## 5 PROPOSAL SUBMISSION AND EVALUATION MECHANISM

The call for proposals will specify the requirements associated with the initiative but allowing the broadest possible scope for solutions.

*...non-anonymous proposals*

A one-stage evaluation procedure is envisaged. Full, non-anonymous proposals should be presented before the appropriate deadline (see below). Proposals will be evaluated by means of independent peer review, according to the procedures and criteria laid down in the Guidelines on Proposal Evaluation and Selection Procedures, and the “standard” criteria for the relevant instrument (SSA) or (CAs) set out in the work programme. These are reproduced in Annex 1. The final short list of proposals drawn up on the basis of the evaluation scores will take account of the need, as appropriate, for a properly balanced coverage of activities.

*...standard evaluation criteria...*

In all circumstances proposals must demonstrate the operational importance of the project to NEST. The budget of each NEST SUPPORT action will be defined in relation to the scale of the initiative; it could range up to 200000€ for a SSA or up to 300000€ for a CA. The financing arrangements for these instruments can be consulted on the FP6 web-site. They should avoid any duplication of pre-existing work. In view of the relatively small budget available, a small number of proposals will be selected.

*...variable budget...*

### **Calls for Proposals and contacts**

NEST Calls for Proposals can be consulted on the Cordis information website [www.cordis.lu](http://www.cordis.lu).

#### **Contact information:**

NEST web-site: <http://www.cordis.lu/nest>

6<sup>th</sup> framework programme: <http://www.cordis.lu/fp6>

*...contact points...*

Contact point for further information: [rtd-nest@cec.eu.int](mailto:rtd-nest@cec.eu.int)

## Annex 1

### Evaluation criteria: Coordination Actions (CAs)

#### 1. RELEVANCE

- The extent to which the proposed project **addresses the objectives** of the work programme.

#### 2. QUALITY OF THE COORDINATION

The extend to which:

- the research actions/programmes to be coordinated are of **demonstrably high quality**.
- the **coordination mechanisms** proposed are sufficiently **robust** for ensuring the goals of the action.

#### 3. POTENTIAL IMPACT

The extend to which:

- the proposal demonstrates a clear **added value** in carrying out the work at European level and takes account research activities at national level and under European initiatives (e.g. Eureka).
- the Community support would have a real impact on the action and its scale, ambition and outcome.
- the project mobilises a critical mass of resources in Europe
- exploitation and/or dissemination plans are adequate to ensure **optimal use of the project results**, where possible beyond the participants in the project.

#### 4. QUALITY OF THE CONSORTIUM

The extend to which:

- the participants collectively constitute a **consortium of high quality**.
- The participants are **well-suited to the tasks** assigned to them.
- The project combines the **complementary expertise** of the participants to generate added value with respect to the individual participants' programmes.

#### 5. QUALITY OF THE MANAGEMENT

The extend to which:

- **the project management** is demonstrably of high quality.
- there is a satisfactory plan for the **management of knowledge**, of intellectual property and of other innovation-related activities.

#### 6. MOBILISATION OF RESOURCES

The extent to which:

- the project provides for the **resources** (personnel, equipment, financial...) necessary for success.
- the **resources** are **convincingly integrated** to form a coherent project.
- the overall **financial plan** for the project **is adequate**.

#### Thresholds

Criterion	Threshold
1	3
2	4
3	3
4	3
5	3
6	3
Min. points	21/30

## Annex 1 (cont.) Evaluation criteria: Specific Support Actions (SSAs) projects

### 1. RELEVANCE

- The extent to which the proposal addresses key issues to achieve or support the objectives defined in the workprogramme/calls, specific programmes or ERA, as appropriate.

### 2. QUALITY OF THE SUPPORT ACTION

The extend to which:

- the proposed objectives are sound and the proposed approach, methodology and workplan are of a sufficiently high quality for achieving these objectives.
- the applicant(s) represent(s) a high level of competence in terms of professional qualifications and/or experience.
- the proposed activities are innovative and original (if applicable).

### 3. POTENTIAL IMPACT

The extend to which:

- the impact of the proposed work can only be achieved if carried out at European level.
- the Community support would have a substantial impact on the action and its scale, ambition and outcome.
- exploitation and/or dissemination plans are adequate to ensure **optimal use of the project results**, where possible beyond the participants in the project.

### 4. QUALITY OF THE MANAGEMENT

- The extend to which the management structure is credible in terms of professional qualifications, experience, track record and capacity to deliver.

### 5. MOBILISATION OF RESOURCES

The extent to which:

- the project provides for the **resources** (personnel, equipment, financial...) necessary for success.
- the overall **financial plan** for the project **is adequate**.

#### Thresholds

Criterion	Threshold
1	4
2	3
3	3
4	3
5	3
Min. points	17.5/25