

UK Environmental Observation Framework

Assessing our investments in observing our environment

Guidelines for organisations submitting cost information



Contents

- 1. INTRODUCTION 3
 - 1.1 Background 3
 - 1.2 A common reporting method 3
 - 1.3 Addressing funding issues for environmental observations 3
 - 1.4 The Environmental Observations Catalogue 3
 - 1.5 Summary 4
- 2. WHAT TO INCLUDE WITHIN THE COST INFORMATION 5
 - 2.1 The life cycle of the observing process 5
- 3. INSTRUCTIONS FOR SUBMITTING ACTIVITY AND COST INFORMATION 8
 - 3.1 Summary of information requested 8
 - 3.2 Spreadsheet for submitting activity/cost information 8
 - 3.3 Action list for submitting information 9
- 4. DETAILS OF SPREADSHEET FIELDS AND FURTHER GUIDANCE 11
 - 4.1 Additional guidance notes 14
- A FULL ECONOMIC COST GUIDELINES 16
- B CONTRIBUTIONS IN KIND (E.G. VOLUNTARY SECTOR) 19

IF YOU HAVE ANY QUERIES REGARDING THIS WORK PLEASE CONTACT GEMMA TRUELOVE AT THE UK-EOF SECRETARIAT (GEUE@ERFF.ORG.UK, TEL: 01793 411794)

1. Introduction

1.1 Background

The UK Environmental Observations Framework (UK-EOF) is committed to understanding and addressing the barriers to effective funding and use of environmental observations for the UK.

At present our best estimate is that the UK spends over £100 million and up to £500 million per year on observation activities and infrastructure. Much of the uncertainty is a result of different costing methods in different organisations. There is a need to understand this wide range of estimates and to narrow uncertainties through the development of a consistent, commonly agreed method for costing which is applicable to the very wide range of activities undertaken. We are asking your organisation to help us to revise this estimate by providing information regarding the environmental monitoring which your organisation is involved with and details of your investments in these activities. This will enable us to move forward with actions and to make funding mechanisms in the UK more sustainable.

1.2 A common reporting method

The UK-EOF and UKMMAS have developed a common reporting method with agreed principles on what resources we believe should be included as costs for environmental observation activities. We have tested these guidelines with the Environment Agency and JNCC and are now asking organisations to help us apply the guidelines and provide revised estimates of their investments in environmental observations.

1.3 Addressing funding issues for environmental observations

The cost information will be used by the United Kingdom Environmental Observation Framework (UK-EOF), managed by ERFF, to address strategic issues surrounding environmental observations made for and by the UK. We will use this information in order to:

- Develop a generalised understanding of the UK's investment in environmental observations and its financial value.
- Allow us to plan for sustainable observational infrastructure which meets current and future needs
- Develop an understanding of the status and security of funding for the UK's environmental observation activities.

1.4 The Environmental Observations Catalogue

It is important that this revised estimate of the investment in environmental observations is based upon an accurate and up-to date list of what activities are being undertaken by and on behalf of the UK. To this end and in parallel to our work on funding mechanisms, the UK-EOF is creating an Environmental Observations Catalogue which will contain metadata on

all the environmental observation activities carried out by or for the UK that can be included under the UK-EOF classifications of 'environmental' and 'observation', which are:

Observations: *the taking, on a reasonably regular basis, of any form of observations relative to the status of the environment, regardless of frequency of, or purpose for which, the observations are made, or however they are made (from satellites, ships, etc). Such observations are designed to meet a wide range of societal needs by providing a variety of products and services. Surveys are in scope for some work streams.*

Environmental: *the broadest sense of observations from the natural environment concerning physical (including geological), chemical and biological properties of the environment. This includes observations collected on land, in air, in ice, in freshwater and in the coastal and marine environment, compliance or statutory information, Earth observations from space and the effects of humans on the environment. Note the exceptions are social science and human health data*

This catalogue will build on the existing ERFF Monitoring database created in 2005 as part of the 'ERFF Strategic Analysis of UK Environmental Monitoring Activity' (ERFF Report 02) but will be broader in scope. The activity information your organisation submits will be transferred to this new catalogue. This catalogue will be updated on an annual basis and will be made available to the whole community on the ERFF website in summer 2009.

1.5 Summary

In summary you will be asked to give information regarding:

- Details of the environmental observation activities that your organisation is involved in (either in carrying out the activity or funding the activity);
- The cost of the environmental observation activities that your organisation is involved in (either in carrying out the activity or funding the activity).

To help you submit this information we have provided you with:

- This document, which gives guidance as to what should be included in any estimate of costs and how those costs should be reported.
- A spreadsheet to fill-in which details the environmental activities which your organisation is associated with (through funding or carrying out the work) and which the UK-EOF is currently aware of. This spreadsheet also details the cost information that the UK-EOF is requesting you to report for these activities.

Further details and explanations of the information we are asking for and how to submit it can be found in Sections 2, 3 and 4 with additional guidance within annexes A and B.

If any sections of this guidance document are not clear and you require further clarification regarding the information the UK-EOF are requesting, please contact Gemma Truelove at the UK-EOF secretariat (geue@erff.org.uk, Tel: 01793 411794).

2. What to include within the cost information

The common method for calculating costs is based upon an understanding of the life cycle of the observing process. Using this method, cost information is required for the complete life cycle of the observing process, as detailed below, on the basis of full economic costs.

2.1 The life cycle of the observing process

Observing activities develop over several stages.

The life cycle of the observing process is illustrated, in simplified form, below (Figure 1). All elements within the pink “observing process” box are included for costing purposes. The observing process starts with a requirement and ends with quality controlled data, fit for purpose and available to meet the meet its primary objective. It is recognised that the process may, in practice, be iterative or cyclic.

The “Definition and planning” and “Implementation” parts of the process include all the one off start up costs of a new activity, including the purchase of new infrastructure such as ships, aircraft, instrumentation and laboratories. The “Operations” parts of the process represent the repeated operational data gathering, analysis and data handling. Increasingly there is also an overarching “Policy, coordination, command and control” effort across a wide range of observing activities. Critically we also want to capture the costs of good data management and archiving.

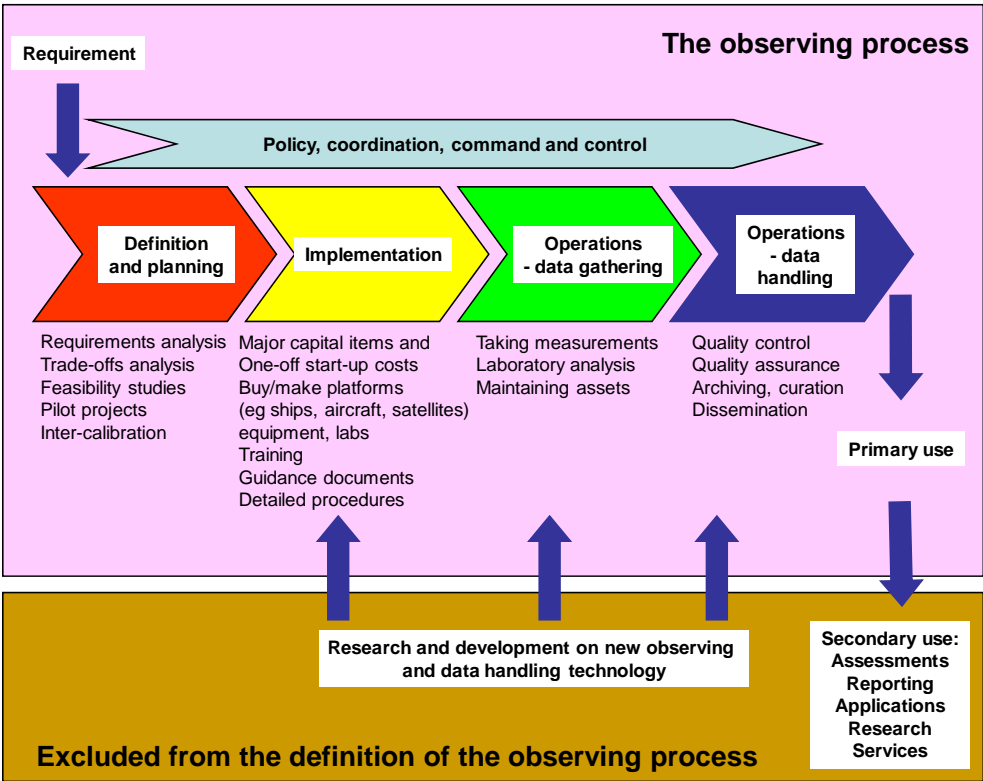


Figure 1: The life cycle of the observing process

In more detail a specific activity has four main parts:

- **Definition and planning:** The “Definition and planning” part of an activity takes place in the early stages. It includes requirements analysis and examination of observation trade-offs. In the context of new European Directives and Environmental Strategies and International Environmental Treaties this can be a lengthy process, requiring significant staff resources to consider the implications of what is being proposed, and to investigate and negotiate the type and level of observations required. The “Definition and planning” activity may also include feasibility studies and pilot projects to test observing options and inter calibration between proposed techniques, before final choices are made and rolled out on a national scale or agreed in an international context.
- **Implementation:** Once the observing requirements have been finalised implementation can take place. This part of the process includes all the one-off start up costs for a new activity. Observing platforms (e.g. satellites, ships, and aircraft), instruments and equipment need to be bought and assembled, facilities developed, procedures finalised and staff trained. If the decision has been made to procure services through third parties contracts, these will need to be finalised and service level agreements negotiated.
- **Operations – data gathering:** At the end of the implementation process, operations will start. This part of the process includes observing and taking measurements, analysis of samples and ongoing costs associated with maintaining equipment and facilities.
- **Operations - data handling:** Finally the data collected will be quality controlled, archived and made available for use by primary and secondary users. This part of the process includes costs associated with, for example data centres used to store the results of the measurements.

In addition to these parts of the process attributable to specific activities, increasing there are more general coordination activities. These are shown in Figure 1 as **Policy, coordination, command and control** to capture overarching activities, either within organisations, for particular sectors (e.g. UKMMAS secretariat) or across the UK (e.g. UK-EOF).

The current ERFF and UKDMOS databases have been centred on capturing a description of the operations – data gathering phase. **In this activity the UK-EOF is intending to broaden the scope (compared to previous activities), and to cover all environmental observations made for or by the UK (see definition below¹) and to capture all the resource input across the life cycle of the observing process.**

Figure 1 also shows what has been excluded from the definition of the observing process (brown box). At present the following activities are excluded:

¹ *Observations:* the taking, on a reasonably regular basis, of any form of observations relative to the status of the environment, regardless of frequency of, or purpose for which, the observations are made, or however they are made (from satellites, ships, etc). Such observations are designed to meet a wide range of societal needs by providing a variety of products and services. Surveys are in scope for some work streams.

Environmental: the broadest sense of observations from the natural environment concerning physical (including geological), chemical and biological properties of the environment. This includes observations collected on land, in air, in ice, in freshwater and in the coastal and marine environment, compliance or statutory information, Earth observations from space and the effects of humans on the environment. Note the exceptions are social science and human health data

- Research and development into new observing and data handling technology
- Secondary use of the data, e.g. assessments (such as using data to make the Charting Progress II assessment), research using the data (e.g. research activities associated with the National Centre for Earth Observation), environmental services derived from the data (e.g. early warning, forecasts, analysis of trends etc). It is recognised that there may be some ambiguity here regarding what should be included (primary use) and what should be excluded (secondary use) – **if in doubt include it and it can always be deleted later if considered beyond the scope of the costing exercise.**

3. Instructions for submitting activity and cost information

The UK-EOF is requesting that organisations both update our current knowledge of environmental observation activities and give estimates of the costs involved in carrying out these activities

3.1 Summary of information requested

We want to know:

1. What environmental observation activities your organisation invests in;
2. What you are spending on environmental observations this year;
3. What the activities cost on average;
4. If there are any issues regarding the security of funding and/or anticipated changes such as large capital items;
5. That the above information is submitted according to FEC guidelines and the reporting method detailed within this document.

3.2 Spreadsheet for submitting activity/cost information

You have been provided with a spreadsheet that details the environmental observation activities that the UK-EOF are currently aware of as being associated with your organisation and the cost information that we are requesting that you complete. The spreadsheet contains 5 main blocks of information as follows:

- Information about the lead organisation, the contact completing the database and level of confidentiality
- General information about the activities associated with the lead organisation
- Information related to the current FY spend.
- Information related to the annualised cost estimate.
- Additional cost information e.g. funding status.

The fields in each main block are detailed in Section 4 with further definitions and explanations.

We have sent you all of the records related to your organisation i.e. including those where you are not lead. These are given in two separate sheets. Please submit costs for items where you are the lead. For activities where you are not the lead organisation, assume that they will

be submitting the cost information but please check the details of your organisation's involvement. If for any reason you would like to submit costs for activities where your organisation is not leading, we would be happy to accept them and will collate them with other submissions.

3.3 Action list for submitting information

We are requesting that you:

1. Check the accuracy of the list of environmental observation activities that are contained within the spreadsheet and update this with new activities or changes in details as appropriate. Further information on what to include can be found in Section 2 and further details and explanations of the spreadsheet fields can be found in Section 4.
2. For each activity detailed fill-in the cost fields within the attached spreadsheet as fully as you are able. You will be asked to report:
 - The current FY spend for each activity;
 - An annualised or average annual spend per activity

The list of actions below should act as a guide to completing the spreadsheet.

1. Actions for updating activity information

You are asked to review or create the list of environmental observation activities that your organisation is involved in to at least the level of major activities.

ACTION 1: Look at the activity lines, supplied by UK-EOF, currently held in the ERFF, UKDMOS and JNCC databases and identify which part of the life cycle is currently described by the activity line.

ACTION 2: Amend the description of the activity line, if appropriate, to include other parts of the life cycle. For example, does the line adequately reflect the start up costs associated with the definition and planning and implementation phases? Is a major refurbishment planned in the next few years? Does the activity line adequately describe data handling aspects of operations?

ACTION 3: Add new activity lines which fall into the UK-EOF definitions "observations" and "environmental" as shown below.

- *Observations:* the taking, on a reasonably regular basis, of any form of observations relative to the status of the environment, regardless of frequency of, or purpose for which, the observations are made, or however they are made (from satellites, ships, etc). Such observations are designed to meet a wide range of societal needs by providing a variety of products and services. Surveys are in scope for some work streams.
- *Environmental:* the broadest sense of observations from the natural environment concerning physical (including geological), chemical and biological properties of the environment. This includes observations collected on land, in air, in ice, in freshwater and in the coastal and marine environment, compliance or statutory information, Earth observations from space and the effects of humans on the environment. Note

the exceptions are social science and human health data.

2. Actions for reporting cost information

You are then asked to submit a current annual and annualised cost for each activity within the spreadsheet.

ACTION 4: For each activity line and each part of the observing process identify timescales, costs and indicate the “scale” of the activity, e.g. number of sites, number of personnel, days of ship time, and hours of aircraft time. Confirm that all relevant costs have been included so that full economic costs are captured. Use your organisation’s standard accounting methods for full economic costing, or in the absence of such methods use the definitions in Appendix A.

Sufficient information on costs should be collected to allow expenditure related to start up costs and major refurbishments to be captured, as well as annual operations costs together with related dates over which costs are incurred. The information provided should include e.g. start-up costs for observing activities as well as annual ongoing operational costs and volunteer effort. **The most important factor is to capture all relevant costs rather than worry unduly regarding categorization or splitting costs into cost categories.**

ACTION 5: Record the contributions of the voluntary sector separately, if applicable. Use your organisation’s standard method or use the guidelines in Appendix A.

The current activity costs and annualised cost should, ideally, be provided for each line recorded (or updated) in the ERFF and UKDMOS databases. However it is recognised that this may not be feasible for organisations carrying out a wide range of observing tasks, as part of an integrated activity.

The level of aggregation should still ensure that the main environmental themes or clusters can be costed separately. **If you have any queries, the UK-EOF secretariat will be happy to discuss these with you and work towards a sensible level of aggregation of activities.** It is suggested that for activities recorded in the ERFF database the costs may be provided at “topic area” level if further disaggregation is not feasible (i.e. air, climate change, freshwater chemistry, freshwater ecology, geology and soil, hydrology, meteorology, terrestrial ecology, etc). In the case of marine monitoring if you are unsure of how to categorise your activities we will be happy to discuss this with you and agree the level of aggregation.

4. Details of spreadsheet fields and further guidance

The fields in each main block are discussed below, with definitions and explanations given.

1. Information about the organisation completing the information	
Lead organisation	The organisation which has filled in the cost information for the activity. Generally the request for cost information will be sent to the "Contact organisation" in the ERFF database or "Responsible organisation" in UKDMOS.
Contact first name	The person completing the cost information for the activity.
Contact last name	The person completing the cost information for the activity.
Telephone	The telephone number of the person completing the cost information for the activity
Email	The email address of the person completing the cost information for the activity
2. Activity overview	
Activity title	This field should correspond to the "Project title" field in the ERFF database, the "Observing programme" field in UKDMOS or the "Survey title" in the JNCC Biodiversity database. If the activity is not included in any of the databases then a new title should be chosen.
Cross reference to ERFF or UKDMOS	Either ERFF ID number, UKDMOS EDIOS programme id or JNCC scheme id. This field will help with traceability to existing databases to ensure what is being costed is the same as what is described within the databases If the activity is not included in either database then the contact should insert "new"
Area	Either "Topic Area" from ERFF database or "Project" from UKDMOS.
Description of activity aims	A brief synopsis of the scientific aims of the activity.
Size and complexity	Additional information should be provided regarding the size and complexity of this part of the activity, e.g. number of sites, aircraft flight hours, ship cruise days, number of staff (full time equivalents).
Start year (yyyy)	The year this particular part of activity started
End year (yyyy)	This field should be completed if this particular part of the activity is known to be a finite duration (e.g. definition and planning will generally have an end date).
Frequency of interval of activity	The aim in this field is to capture the interval between repeat activities, if this is greater than one year. For example a survey may be carried out every 5, 10 years. The definition and planning phase may be repeated periodically before a major refurbishment etc
Organisations involved - who does what	
Lead funder	Names of organisation (including the private sector)
Other funders	Names of organisation (including the private sector)

Lead Organisation carrying out the activity	Names of organisation (including the private sector)
Other Organisations carrying out the activity	Names of organisation (including the private sector)
3. Information related to the current financial year costs	
Current costs (excluding contributions in kind)	<p>The current financial year cost should be given. The cost information should be presented as an actual cost or if actual costs are difficult to provide, then estimate to the nearest £10k.</p> <p>The cost information should be provided at Full Economic Costs and include:</p> <ul style="list-style-type: none"> • Pay costs of personnel • Capital items (platforms, equipment, instruments, laboratories) • Outsourced services (including sub-contracts for consultancy) • Maintenance costs, consumables • Travel and subsistence • Overheads • VAT if applicable and not refundable <p>Further definitions are given in Appendix A of this report.</p> <p>Contributions in kind (e.g. voluntary sector) should be recorded separately and NOT included in this annualised cost figure.</p>
Current contributions in kind (If applicable)	<p>This field should record, for example, the contribution of the voluntary sector.</p> <p>Further definitions are given in Appendix A.</p> <p>The costs included here should be IN ADDITION to those above.</p>
Percentage of estimate assigned to each part of the process	
Definition and planning (£)	Estimated percentage of the annualised cost estimate assigned to the definition and planning phase of the observing process.
Implementation (£)	Estimated cost of the implementation phase of the observing process
Operations – data gathering (£)	Estimated cost of the (operations) data gathering phase of the observing process
Operations – data handling (£)	Estimated cost of the (operations) data handling phase of the observing process
Coordination (£)	Estimated cost of the coordination phase of the observing process
Qualitative check	
Cost categories	Yes/no tick box to indicate if the cost categories used are as suggested in Appendix A.
Alternative cost categories	If the cost categories vary significantly from that in Appendix A, this text box allows the respondent to describe the cost categories used
Basis for calculation of contribution in kind	<p>For volunteers the cost should be based on number of volunteers X time per volunteer X cost per unit time X (1+overhead)</p> <p>Costs rates and overheads should be based on a reasonable estimate given the level of skill and typical overheads rates, if services were to be procured professionally (see Appendix A).</p>

4. Information related to the annualised cost estimate	
Annualised cost (excluding contributions in kind)	<p>If the activity is a one off, of finite duration the annualised cost should be calculated as: total cost/number of years. For example the cost of the definition and planning of the XXX Network is £1,000,000 and will last 4 years. The annualised cost will be £250,000.</p> <p>If the activity is repeated annually (i.e. regular operations) the current annualised cost should be used.</p> <p>If the activity is repeated annually but the costs fluctuate please also provide an annualised cost based on the last 5 years spend on the activity.</p> <p>If the frequency of the activity is less than yearly, the annualised cost should be calculated as: cost of one complete activity/interval of the activity. For example, the XXX Survey takes place every 5 years. The cost of one complete survey is £25, 000. The annualised cost is £5,000.</p> <p>The cost information should be presented as an actual cost or if actual costs are difficult to provide, then estimate to the nearest £10k.</p> <p>The cost information should be provided at Full Economic Costs and include:</p> <ul style="list-style-type: none"> • Pay costs of personnel • Capital items (platforms, equipment, instruments, laboratories) • Outsourced services (including sub-contracts for consultancy) • Maintenance costs, consumables • Travel and subsistence • Overheads • VAT if applicable and not refundable <p>Further definitions are given in Appendix B of this report.</p> <p>Contributions in kind (e.g. voluntary sector) should be recorded separately and NOT included in this annualised cost figure.</p>
Annualised estimate for contributions in kind (If applicable)	<p>This field should record, for example, the contribution of the voluntary sector.</p> <p>Further definitions are given in Appendix B.</p> <p>The costs included here should be IN ADDITION to those above.</p>
Percentage of estimate assigned to each part of the process	
Definition and planning (%)	Estimated percentage of the annualised cost estimate assigned to the definition and planning phase of the observing process.
Implementation (%)	Estimated percentage of the annualised cost estimate assigned to the implementation phase of the observing process
Operations – data gathering (%)	Estimated percentage of the annualised cost estimate assigned to the (operations) data gathering phase of the observing process
Operations – data handling (%)	Estimated percentage of the annualised cost estimate assigned to the (operations) data handling phase of the observing process
Coordination (%)	Estimated percentage of the annualised cost estimate assigned to the coordination phase of the observing process
Qualitative check	
Cost categories	Yes/no tick box to indicate if the cost categories used are as suggested in Appendix A.
Alternative cost categories	If the cost categories vary significantly from that in Appendix A this text box allows the respondent to describe the cost categories used

Basis for calculation of contribution in kind	For volunteers the cost should be based on number of volunteers X time per volunteer X cost per unit time X (1+overhead) Costs rates and overheads should be based on a reasonable estimate given the level of skill and typical overheads rates, if services were to be procured professionally (see Appendix A).
5. Additional cost information	
Anticipated changes in costs	Brief description of how costs may evolve over time
Comment	Any notes to help clarify entries or assumptions.
Status	Choose the description which fits best. <ul style="list-style-type: none"> • Closed • Ongoing long term (5years +) • Ongoing medium term (2-5 years) • Ongoing short term (< 2 years) • Continuing pending funding decision • Proposed but unsure
Confidentiality of cost information	Yes/No tick box Yes indicates cost information is confidential No indicates cost information can be publicly released
Confidentiality caveats	If the cost information is confidential, this text box allows the respondent to specify the restrictions on the cost information

4.1 Additional guidance notes

- **Confidentiality:** Respondents should stipulate the level of confidentiality of their cost figures.
- **Timescales:** Current financial year costs should be included. Where activities are finite, one-off or of a fixed duration or where the current costs are likely to fluctuate, please also include an annualised cost for the activity (cost of total activity/duration or last 5 years spend if ongoing). Please include notes of any likely changes, e.g. due to new legislation. Recently completed activities may also be included if relevant to building up accurate cost profiles for the future, for example, recently completed procurements of major capital items.
- **Attribution of items and activities to “observing the environment”:** Some major cost items may serve a number of purposes. For example ship cruises may include elements of observing, research and logistical support. Likewise data centres may be used for quality control, archiving and dissemination of observation data (included in the definition of the observing process) and archiving and dissemination of research results and related documents (outside the definition of the observing process). Respondents are asked to judge regarding the attribution of costs to observing. If in doubt the total costs should be noted in the comment column and a proportion of the figures assigned.
- **Comparison of costs and scale of activity:** To assist with projections of future funding needs in the light of changing requirements information is required on the size/complexity of an activity e.g. number of sites, number of personnel, days of ship time, and hours of aircraft time.
- **VAT:** VAT should be included where paid and not reclaimed.

- **Inflation:** Cost profiles should be on a “cash” basis and issues such as inflation, discount rates etc may be ignored.
- **Estimated versus actual costs:** If available, the actual costs should be provided. Otherwise estimates should be given which are correct to the nearest £10,000. It is suggested that organisations with large and varied activities should concentrate on the large activities, first.
- **Annual costs:** Where relevant, annual costs should be based on a financial year (i.e. April to March).
- **Avoiding double counting:** All organisations providing cost information should avoid double counting.
- **Definition of “annualised cost”:** The main cost figure entered by respondents is an “annualised cost”. If the activity is a one off, of finite duration the annualised cost should be calculated as: total cost/number of years. For example the cost of the definition and planning of the XXX Network is £1,000,000 and will last 4 years. The annualised cost will be £250,000. If the activity is repeated annually (i.e. regular operations) the current annual cost should be used. If the frequency of the activity is less than yearly, the annualised cost should be calculated as: cost of one complete activity/interval of the activity. For example, the XXX Survey takes place every 5 years. The cost of one complete survey is £25, 000. The annualised cost is £5,000.

A Full economic cost guidelines

A.1 Introduction

Organisations that do not have their own methods for estimating the size of their investments in observing our environment can use the following definitions which are in line with NERC and Defra standards.

A.2 Pay costs of personnel

This category should include the **annual costs of personnel working directly on the activity**, including salary, National Insurance and superannuation. Pay calculations on the basis of average pay costs for the grades of staff working on the activity are acceptable. If members of staff work part-time on the activity, then annual costs should be allocated pro rata, on the basis of 215 working days per year.

A.3 Capital items (platforms, equipment, instruments, laboratories)

This category covers the procurement of all capital items. Once procured the ongoing running and maintenance costs will fall under one of the other funding categories (either outsourced services, maintenance or overheads). Some illustrative examples of typical capital investments include:

- Replacement / major upgrade of building stock such as laboratories, bases and monitoring sites
- Replacement / major upgrade of ships and aircraft
- Major IT procurement exercises (e.g. high performance computing, cluster computers)
- Additions / replacements to the equipment pools
- Laboratory equipment
- Vehicles purchased for field based research.

A.4 Outsourced services (including sub-contracts for consultancy)

In some cases activities may be outsourced to outside agencies or the private sector.

A.5 Maintenance costs, consumables

Maintenance costs could include items such as running cost of scientific infrastructure (e.g. maintenance costs for ships, mariner's salary costs on the ships, servicing of equipment). In general these are costs **directly attributable to the observing activity**. For some organisations these cost may be included either as outsourced services or overheads. **The**

important issue is to include costs somewhere, if applicable and not to double count; rather than worry unduly about the cost category.

Consumables are for example office and scientific laboratory supplies, (e.g. glassware, chemicals) which are purchased from third parties and replaced regularly. Consumables may also include fuel for vehicles including ships and aircraft.

A.6 Travel and subsistence

These are annual travel and subsistence costs incurred by personnel working directly on the observing activity (i.e. the travel and subsistence costs associated with staff in the “pay of personnel” cost category).

A.7 Overheads

Overheads **may** cover the direct costs of the use of services and facilities that underpin the observing activities, if these are not including in the outsourced services and maintenance categories above.

Overheads **shall** include indirect costs which cannot readily be uniquely assigned to a particular observing activity, but nonetheless contribute to the overall costs of the organisation carrying out the observing activity. These may include:

- Financial services such as accounting, tendering, marketing
- Personnel services
- Estate costs
- General staff facilities such as health and safety, training, welfare
- Departmental services such as administration, library, secretarial, printing
- Staff management and cover for maternity and long term sickness benefit.

The indirect costs should be calculated for discrete areas of activity if appropriate (i.e. different costs for different sites) and allocated to activities on the basis of one or more cost drivers such as square metres (for attributing the costs of laboratory or other large facilities) or time of direct staff (for contributing all other indirect costs). Salary/pay costs should not be used as a driver for indirect costs.

For universities and public sector establishments, overheads represent part of the full economic costs of the observing activity proposal. Our investment in observing the environment should include full economic costs.

A.8 Ineligible costs

The following are excluded from eligible costs:

- interest charges;

- hire purchase interest and any associated service charges;
- profit earned by a subsidiary or by an associated undertaking on work subcontracted under the activity;
- Contingency allowances expressed as an arbitrary percentage overall addition to eligible costs.

B Contributions in kind (e.g. voluntary sector).

Contributions in kind arise from two sources:

- An observing activity receives contributions from other organisations, at no cost to the main observing activity. For example, the POL Coastal Observatory is funded mainly by NERC. NERC costs can be accurately recorded by staff running the Observatory. The Observatory also receives “contributions in kind” from other organisations such as CEFAS, University of Bangor, and University of Liverpool. NERC personnel can make an estimate for the value of contributions in kind but the entry will need to be checked for double counting and/or accuracy by ERFF staff once all the returns have been made.
- Some activities, particularly in the biodiversity area, are carried out by members of the public or voluntary organisations. It is suggested that an attempt is made to calculate the total value of volunteer effort for each activity annually, either for the most recent year or averaged over all years since the activity commenced. JNCC currently uses calculations based on £35.00 per hour for skilled surveyors and £11.04 per hour (twice minimum wage) for less difficult surveys. A typical overhead of ~100% can be added. The calculation used to derive annual figures should be described, e.g. number of volunteers per year (N), time per volunteer per year in hours (T), hourly rate used (HR) and overheads (O%) added. The total contribution per year is therefore $N \times T \times HR \times (1+O\%/100)$.