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(UNEP/CBD/COP/11/INF/20)

CLUSTER REPORT ON RESOURCE REQUIREMENTS FOR THE AICHI BIODIVERSITY TARGETS

TARGET 1: AWARENESS RAISING

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Resource requirements for Aichi Target 1 – Awareness Raising

Report to the CBD High Level Panel

1 October 2012

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Contents

INTRODUCTION

The following Aichi target has been set with regard to awareness-raising of biodiversity:

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

An understanding, awareness and appreciation of biodiversity underpins the ability and willingness of individuals to make changes to their behaviour and creates the "political will" for governments to act and the political momentum for major structural changes, policy developments and improved environmental governance to develop. It is hoped that this change in behaviour will then affect the key drivers of biodiversity loss.

Links between awareness, attitudes, behaviour and biodiversity loss

Although it is clear that awareness is a crucial, and often necessary, component in reducing the drivers of biodiversity loss, this diagram does illustrate the number of links, and therefore the number of assumptions, associated with expecting engagement and information provision to result in reduced pressures on biodiversity loss. The relationship between raising awareness and resulting behaviour change is therefore a complex one.

A caveat should therefore be made clear from the outset. Despite obvious benefits, increased awareness from information provision and engagement does not *necessarily* lead to changes in attitudes or behaviour. Much will also depend on enabling factors such as social influences and having the necessary infrastructure available to support the desired behaviour change. Once awareness has been raised, therefore, efforts will also need to be made to ensure that behaviour change is supported once awareness has been raised (this is discussed further in Section 6.3).

1.1.2 Links to the CBD and COP Decisions

Target 1 underpins all of the other Targets and should facilitate their implementation. The target is also closely linked to Article 13 of the Convention and relevant decisions on communication, education and public awareness (CEPA).

Article 13: Public Education and Awareness

The Contracting Parties shall:

a. Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes; and

b. Cooperate, as appropriate, with other States and international organizations in developing educational and public awareness programmes, with respect to conservation and sustainable use of biological diversity.

COP 4 urged Parties when requesting assistance through the financial mechanisms (the GEF) to propose projects which promote measures for implementing Article 13 (Decision IV/10 B, paragraph 9). The Programme of Work on Communication, Education, and Public Awareness, or CEPA, aims to raise people's awareness on various issues including the role and importance of biodiversity, how it can be used in a sustainable manner, and the role of the Convention of Biological Diversity.

Numerous decisions have also been taken regarding Article 13, including Decisions V/17, VI/19, VII/24, VIII/6, IX/32, and IX/33 on the International Year of Biodiversity, and also Decision X/18 among other direct or indirect references to this issue. COP 10 Decision X/18: Communication, education and public awareness and the International Year of Biodiversity

invites Parties and requests the Executive Secretary to start executing various tasks to improve CEPA activities (http://www.cbd.int/decision/cop/?id=12284)

The CEPA programme (http://www.cbd.int/cepa) of work seeks to:

- Communicate the scientific and technical work of the Convention in a language that is accessible to many different groups;
- Integrate biodiversity into Education systems in all Parties to the Convention;
- Raise Public Awareness of the importance of biodiversity in livelihoods, as well as its intrinsic value (http://www.cbd.int/cepa).

The CEPA programme is a key instrument for raising awareness and policy enhancement which means it is an important existing mechanisms that can be leveraged for action to deliver Target 1.

The CBD have proposed the following milestones for this Target:[1]

- By 2011, basic public awareness campaigns about biodiversity and the steps people can take to protect it are initiated;
- By 2014, national baseline surveys are carried out and comprehensive national strategies to promote awareness of the values of biodiversity are prepared and adopted;
- By 2016, relevant educational curricula have been developed and implemented.

1.1.3 Links to other targets and how this has been addressed

Target 1 is arguably linked to all the other Aichi targets; increased awareness of different audiences will help to deliver the goals associated with the different Strategic Goals. The other targets tend to be related to key target audiences, whose awareness levels, if raised, should help to deliver biodiversity benefits. For instance, awareness amongst farmers of sustainable agricultural techniques should help to improve the sectors sustainability if more farmers therefore use these methods.

However, there are also other elements to raising awareness which are important and which would not necessarily be considered under the other targets, such as campaigns for reaching the wider public or integration of biodiversity into education programmes in order to reach children and young people. It was decided therefore that the analysis for this target would focus on different activities (which can be used to target different audiences), rather than focusing the analysis on the different types of audiences, as insights into the latter can hopefully be identified from the analysis being undertaken on the other targets.

It is likely that delivering this Target will make delivering other Targets easier, and as a consequence, potentially less resource intensive. For instance, if influential policy makers are aware of the importance and value of biodiversity, implementing relevant policies to deliver other Targets may be easier and more effective, requiring less resources.

It is expected that delivering this Target is therefore likely to indirectly benefit the delivery of, in particular, the following Targets (although other Targets are also likely to benefit):

- Target 4 on sustainable production and consumption;
- Targets under Strategic Goal B which aim to address direct pressures on biodiversity and promote its sustainable use (i.e. Targets 5, 6, 7, 8, 9 and 10);
- Targets under Strategic Goal C aimed at safeguarding ecosystems, species and genetic diversity (Targets 11, 12 and 13).
- Targets under Strategic Goal D which aim to enhance the benefits from biodiversity and ecosystem services (Targets 14, 15 and 16).

Likewise, there are other Targets which, if delivered, are likely to raise awareness of biodiversity and therefore indirectly help to deliver this Target. This is particularly the case, for instance, with:

[1] http://www.cbd.int/sp/targets/rationale/target-1/

- Target 2 on the integration of biodiversity values into relevant national and local strategies, planning processes and national accounting systems;
- Targets under Strategic Goal E aimed at enhancing implementation through participatory planning, knowledge management and capacity building (Targets 17, 18, 19 and 20).

However in most of the cases above, there are likely to be indirect benefits both to and from the delivery of other Targets (e.g. appreciating the importance of biodiversity may make policy makers more amenable to integrating biodiversity values into national accounting systems, which may serve to raise awareness of biodiversity values amongst other stakeholders). There are therefore, numerous and potentially complex interactions between this Target and the other Aichi Targets.

1.1.4 Links and benefits to other policy areas

The links between this Target and other policy areas is less obvious than is the case with some of the other Aichi Targets as it is a more 'discrete' objective related specifically to biodiversity. However, one can imagine that raising awareness on biodiversity will serve to help to raise the profile of environmental policy issues more broadly which are linked to biodiversity (e.g. water resources, climate change). Moreover, it would also serve to highlight the links between biodiversity and other policy areas through, for instance, noting the importance of ecosystem services (e.g. for health, poverty alleviation).

1.1.5 Challenges in estimating the resource needs for meeting Target 1

Target 1 is very broad and open ended, and does not specify either:

- The target audiences (i.e. whose awareness should be raised);
- The types of activities (i.e. how awareness should be raised); or,
- The scale of the activity (i.e. by how much awareness should be raised).

This has been the main challenge, and was consistently highlighted as a problem by stakeholders who were consulted for this study. The toolbox for communication, awareness raising and education activities is vast, and each tool can be implemented in a range of ways and to varying degrees (a workshop can involve just a half-day meeting with 20 experts, or it can involve 150 stakeholders across a whole range of sectors lasting 2 days, etc.).

The other challenge encountered is similar for many of the other targets, in that it is much easier to identify data and costs on these activities in the Western Hemisphere. Identifying and accessing data for the less developed countries and other regions of the world proved more difficult. However, wherever possible efforts have been made to identify other types of examples.

It also became clear that whilst there is considerable information available on the range and types of different awareness campaigns and activities, actual information on their costs are rarely published. This means that it was often necessary to identify and contact relevant stakeholders involved in these projects to ask for information on the costs associated with these activities. Contacting relevant individuals proved more effective than desk research, which made the process slightly more time consuming and meant that the data collection relied heavily on responses to requests for further information. For instance, all the relevant CEPA country experts (roughly 40 people) were contacted. However, few responded (partly because the available contact details were no longer active).

ACTIONS

Given that the ways of implementing this target are varied and very much context-dependent, a flexible approach was adopted based on costing a smaller number of prioritised activities, which could then be used as indications of the kinds of resource needs that are likely to arise from delivering this target. Two scenarios have also been developed (Scenario 1 and Scenario 2) for the individual activities to reflect the different ways and the different scale at which a country could implement the activities in question. Differences between higher and lower income countries have also been taken into account wherever possible in calculating the unit costs of each activity.

Three main types of activity have been identified, totalling 7 activities which relate closely to the 10 priority activities identified by the CEPA programme (although the latter tend to be more process focused):

- A baseline survey of awareness (and future monitoring)
- A communication / awareness strategy
- Five specific awareness raising activities, including:
  - Running a mass media campaign
  - Training programmes
  - Integration of biodiversity into education
  - Workshops
  - Events

These are not the only activities that are available or necessary to raise awareness. Equally, not all of these need to be implemented. They should therefore be treated more as a "menu" of potential options which can be combined in various ways. A selection of these activities could, for example, be used in different ways to deliver the target to suit different contexts.

The key audiences for these activities will, for instance, vary between countries and/or regions; some audiences may be more important in some country contexts than others. This should be identified by policy makers when creating a national awareness strategy. Some activities are more suited to some audiences than others (see Table 2.1). In selecting the activities to be prioritised for this analysis, activities of a sufficient number and type have been identified which can be used to target a number of different audiences.

This issue is discussed in more detail in Section 6.1.2.

Table 2.1 Examples of how the different activities are suited to target different audiences

	Specific sectors (e.g. farming, forestry, fisheries)	Children / Students	Government / Policy makers	NGOs	Media	Wider public
Workshops	X		X	X	X	
Training programmes	X		X			
TV / Radio campaigns		X				X
Posters / Leaflets campaign	X		X			X
Integration into education		X				
Events	X	X	X	X	X	X

METHOD OF ASSESSMENT

3.1 Overview of the method of assessment

As noted above, three main types of activities associated with raising awareness have been identified. It has been assumed that the first two (conducting a baseline survey of awareness levels, and developing a national strategy on raising awareness) comprise up-front investment needs to build enabling conditions and capacity, whilst the six specific activities relate more to potential on-going or recurrent expenditure (although some could also be one-off activities). The six specific activities act as a "menu of options" for countries to consider; not all activities will have to be implemented or implemented to the extent described in this assessment. Some may, for instance, not be necessary or suitable in certain contexts.

The analysis has, where possible, tried to take into account how the income levels and population size of a country might affect the resource needs of each activity. This is, however, only a crude assessment and more research is needed to develop a more nuanced assessment.

3.1.1 Investment needs – developing enabling conditions and building capacity

Although there are a range of options for developing the necessary conditions and capacity for raising awareness, the focus for estimating the resource needs has been on two activities:

- Developing and implementing a survey of people's awareness on biodiversity; and,
- Developing a national strategy for raising awareness on biodiversity.

Both of these activities are considered necessary preconditions to effectively raising awareness, as they form the basis upon which the other activities can be implemented, and measured against.

The first element is important in order to establish a baseline against which one can measure progress once awareness-raising activities are underway. In many countries it will be unclear to what extent people are aware of biodiversity, and therefore how much effort to raise awareness may be required, or how it should be targeted (including which audiences / sectors). It has also been assumed that the survey will then be repeated in the future to assess progress and results. Resource needs associated with these, iterative, surveys are included under on-going expenditure (although the assessment is done in the same section as the investment needs).

The second element is crucial for determining the priorities for each country (and could be informed by the results of the survey), in that the strategy will determine what biodiversity means to the national audience, and how to best tap into the ways in which biodiversity resonates most with different stakeholders within the country. It will also help to identify the key stakeholders, actors and communicators, which will help to identify what are the key activities that should be prioritised for raising awareness.

As has become clear in the development of the NBSAPs, the process of developing national strategies on biodiversity also, in itself, raises awareness amongst policy makers and stakeholders.

The approach has been to review activities from different country contexts aimed at measuring the level of awareness and developing national strategies, to determine the resource needs associated with such actions. On this basis, an indicative unit cost has been established, which has been aggregated and scaled up to arrive at a global estimate.

3.1.2 Recurrent expenditure – implementing awareness-raising activities

As mentioned above, there are a whole range of mechanisms available to raise awareness. For this assessment, the focus has been on estimating the resource needs of the following activities:

- Running a mass media campaign

- Introducing training programmes
- Integration of biodiversity into education
- Running workshops / conferences / events
- [Repeated national surveys to assess progress and results – however analysis for these has been included under the investment needs assessment]

Although being considered here under on-going expenditure, some of these activities could be one-off campaigns rather than necessarily recurrent spend. There is considerable flexibility in how long these activities will last, and therefore how much the total cost will be will depend on the country-specific needs. Given the Target's timetable, the total resource needs required to 2020 have been estimated, based on certain assumptions (e.g. number of events, number of workshops etc.).

Examples of these kinds of activities from different country contexts have been reviewed to determine the resource needs associated with such actions. In some cases, these include awareness raising activities not just on biodiversity but also any other awareness raising activity that can be costed on other issues (e.g. on HIV, climate change, waste, water use etc.) Examples of the identified activities and associated costs have drawn on as many sources and looking at as many different countries as possible within the limited scope of this study. Further desk research will attempt to identify further examples.

On the basis of this information, unit costs of each activity have been estimated. The available data has informed what units seem most appropriate and reasonable for estimating indicative costs. This process has then resulted in an estimate of the average cost (or range of costs) of each activity.

3.1.3 Differentiation and aggregation of resource needs

Unit costs have been estimated on a 'per country' basis. It has therefore been necessary to scale these figures up by the number of total countries in the world. The number of countries in the world has been assumed to be 197 in total. Although this includes the EU, it seemed appropriate to include the EU as a distinct "country" in addition to the individual Member States[2] given that the activities assessed here could also be separately developed, coordinated and/or implemented at the EU-level.

Unit costs have also been adapted, where appropriate, to reflect the different contexts of different types of countries. Countries have been classified into two different types by income (i.e. GNI per capita), drawing on the World Bank classification of countries.[3]

Countries have been categorised on this basis to reflect that lower income economies are likely to require a different approach, and may also require activities that are likely to be more resource-intensive given that necessary institutional structures and infrastructure are relatively undeveloped (e.g. in the case of educational programmes), or given that the audience may be harder to reach (e.g. in the case of population surveys or mass media campaigns).

- Lower income economies: these combine the World Bank's classification of low income economies (GNI per capita of $1,025 or less) and lower-middle-income economies (GNI per capita of $1,026 - $4,035). Using the CBD list of countries suggests that there are 88 such countries.
- Higher income economies: these combine the World Bank's classification of upper-middle-income economies (GNI per capita of $4,036 - $12,475) and high income economies (GNI per capita of $12,476 and over). Using the CBD list of countries suggests that there are 109 such countries.

Population size has also been taken into account where it was deemed most appropriate (i.e. for mass media campaigns, integration of biodiversity into education, events, workshops

[2] http://www.cbd.int/convention/parties/list/

[3] http://data.worldbank.org/about/country-classifications/country-and-lending-groups

and training programmes). Countries have been broken up into three different categories using World Bank data,[4] depending on their population size:

- Countries with a population size of roughly 100 million or less (amounting to 185 countries);
- Countries with a population size above 100 million[5] (amounting to 12 countries; 7 of which are higher income and 5 of which are lower income countries).

In general, resource needs have been estimated on a unit cost basis to suit the majority of countries (i.e. those with a population size of roughly 100 million or less). Discussions with stakeholders have highlighted however that resource needs will be considerably greater for some activities in countries whose population size is much larger, and that this should be incorporated into the analysis. In order to conduct a basic assessment which at least somewhat tries to take this into account, it has therefore been assumed that this unit cost will roughly double for countries with a population size greater than 100 million. Given the rudimentary nature of these assumptions, a more nuanced assessment should be conducted for future research to improve estimates of resource needs (e.g. which further breaks down countries in to more categories, or which adopts a more sophisticated approach to adapting the resource needs to population size).

Overall, the assessment of unit costs has allowed a sort of "menu" of costed options to be developed that are suited to different types of countries, and can then be considered by individual countries when they start to design their awareness raising campaign. On this basis, countries can develop a general understanding of the resource needs associated with an awareness campaign depending on which activities they choose to implement, and at what scale.

3.2 Difference between the approach adopted here and the GEF needs assessment

As part of the GEF needs assessment, the total (and incremental) resource needs associated with delivering the Aichi Targets have been estimated. However, the GEF estimates of total needs are considerably lower than the total figures presented here.

For instance, the GEF needs assessment only identifies a need of $200,000 per country that is eligible for GEF funding, compared to this work which indicates that the resource needs are likely several million US dollars per country for raising awareness.

These differences are due to a variety of reasons, including, the fact that:

- The GEF needs assessment only applies to those countries which are eligible for GEF funding (155), as opposed to a global estimate which takes into account the needs for all countries;
- The GEF needs assessment does not consider activities which have predominantly local or national benefits, which would suggest that many of the activities included in the analysis below would not be eligible for GEF funding. For instance, the GEF needs assessment only focuses on enabling conditions and capacity (i.e. conducting a national survey and developing a national strategy) and doesn't consider the additional specific awareness raising activities considered here (e.g. workshops, events, media campaigns, integration into education);
- The fact that this analysis seems to draw on a wider evidence base compared to the GEF needs assessment of Target 1. The GEF needs assessment draws largely on a few select examples of expenditure provided by the CBD Secretariat, including the Science Express project in India and the annual spend by the CBD Secretariat on the International Day of Biodiversity. This assessment tries to draw on a much wider evidence base.

[4] http://data.worldbank.org/indicator/SP.POP.TOTL

[5] Namely China, India, European Union (included' given it is likely that activities will also need to be established at its level), United States, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh, Russia, Japan and Mexico

ASSESSMENT OF RESOURCE NEEDS

The sections below present the available evidence of resource needs associated with the different activities identified in Section 2 above.

Based on this assessment, an overview of the key results is given in Section 5. Section 6 then discusses these results, including the confidence levels associated with the estimates and any gaps or further research needs.

4.1 National surveys of awareness on biodiversity

National surveys of public opinion are often used to establish people's views on various subjects. Unlike a population census, surveys tend to be based on surveying only a sample of the population. The results are then extrapolated to the wider population. There are various methods for surveying people, including by telephone, online surveys, postal surveys as well as face-to-face interviews.

Benchmark surveys are the first survey to be taken in a campaign. Subsequent surveys are then used to measure progress against these initial results. Benchmark surveys can also be used to, for example, determine what audiences or subject areas to target in a campaign. In the case of awareness raising, for instance, an initial opinion poll can highlight whether certain groups are less or more aware than others, and can also provide some insights into what aspects about biodiversity resonate most with the wider public or different audiences. This should help to inform where and how resources might be most effectively spent, including which types of activities, which audiences, and what messages might be most effective. As part of the baseline survey, it would be useful to also conduct qualitative interviews with key government and policy officials to complement the quantitative survey of the wider population.

Given the important role that the survey and its results could therefore play in informing the implementation other activities and their effectiveness, its design and the questions it includes is critical to ensuring that the right kind of information is delivered. For instance, the questions should consider the wider role of biodiversity and links to other policy areas (e.g. health, poverty alleviation, etc.) rather than the more traditional (and more limited) interpretation of biodiversity (e.g. flora, fauna and charismatic species).

A baseline survey of public awareness and opinion on biodiversity is therefore a crucial first step in developing and implementing a campaign for raising awareness, and can inform the development of a national strategy (see Section 4.2 below). Moreover, given that 'awareness' is a very intangible objective, and therefore very difficult to measure, surveys are a crucial mechanism which will enable progress to be tracked and better understood. The results can also be used to change the approach, if necessary, to make the campaign more effective if it becomes clear that activities to achieve the Target are not delivering the results they should be. However, other indicators should also be considered alongside the results of the surveys to better understand progress against the Target, such as whether biodiversity is increasingly integrated into other policies. Alternatively, other options include the number of visits to natural history museums, zoos, botanical gardens, protected areas, and parks, the number of school biodiversity education programmes or officially accredited teaching materials, trends in the voluntary participation in relevant activities, and so forth.

Given that surveys are based on a sample of a population, the results are subject to sampling or margins of error. These can be reduced by increasing the sample size, although there are associated costs with doing so, and diminishing rates of return. Typically, a sample size of 1,000 is used (which normally requires several thousands of participants to be surveyed in order to obtain that number of responses). For instance, this is the sample size used for both the Eurobarometer and the Biodiversity Barometer led by the UEBT (Union for Ethical Bio Trade). This sample size is generally thought to have a margin of error of about 3% of the whole population (i.e. 95% of responses will yield an outcome within 3% of the true percentage among the population).

For instance, given China's population (the country with the highest population), and adopting a target confidence level of 95% and a target confidence interval (i.e. margin of

error) of 3, this would require 1,067 people to be interviewed. The figure is similar for most countries. For instance, even when the population drops to 21,000 (e.g. Palau), the sample size needed for the required confidence levels and intervals is 1,016.[6]

It has therefore been assumed that a national survey would be based on a sample size of 1,000 people.

The evidence identified indicates a wide range of potential costs, from roughly $10,000 to almost $100,000 per survey. Discussion with various stakeholders have highlighted that surveys can be relatively resource intensive, especially when the required preparation, research, analysis and reporting is taken into account. In a middle income country, for instance, one interviewee suggested that, based on their experience, the cost is likely to range from $70,000 - $100,000. Another stakeholder estimated that, based on their experience in a middle-income country, the costs per survey are likely to be in the region of $100,000 - $150,000. Further discussions highlighted that if more in depth research were to be conducted (e.g. to develop and quantify segments of the population to be used as benchmarks against which to measures progress) which included more detailed qualitative as well as quantitative research, the cost would increase to $150,000 - $200,000.

Available information suggests that in countries where the wider public is easy-to-reach, the resource needs for a national survey should be **around US $50,000**. Higher income countries are likely to have systems in place that mean that populations are easier to reach. Surveys can therefore be conducted using less resource intensive methods (e.g. phone interviews, internet panels).

Where the public is more difficult to reach (i.e. in developing countries), the resource needs are likely to increase. An indicative cost is likely to be **around US $100,000**. Populations of lower income countries are likely to be less easy to reach and may, therefore, require more resource intensive methods (e.g. face-to-face interviews).

Given that a sample size of 1,000 has been assumed for countries of all sizes, population size has not been taken into account in the analysis for this activity.

Given 109 higher income and 88 lower income countries, the global resource needs for conducting a baseline national survey of public awareness on biodiversity in every country is therefore likely to amount to around **$14 million**.

Scenario 1: Repeating this survey once more at the end of the target period (i.e. 2020) would mean a **total global cost of almost $30 million**.

Scenario 2: Repeating this survey twice, once to gauge progress and to inform and adapt, where necessary, the ongoing awareness campaign (e.g. in 2017) and again at the end of the target period (i.e. 2020), would mean **a total global cost of roughly $40 million**.

Table 4.1 Examples of the costs associated with national surveys of awareness

Country	Description	Cost (US $)
Europe	Eurobarometer population survey in all Member States (January 2004), based on a sample of 1,000 adults in each Member State and conducted by telephone	11,000 per country (295,000 total)
Europe	Eurobarometer population survey in all Member States (July 2004), based on a sample of 1,000 adults in each Member State and conducted by telephone	10,000 per country (266,000 total)
Europe	Eurobarometer population survey in all Member States (November 2004), based on a sample of 1,000 adults in each Member State and conducted by telephone on a specific issue (the future Constitutional Treaty)	5,600 per country (152,000 total)
Europe	Eurobarometer population survey in France (May 2005), based on a sample of 2,000 adults and conducted by telephone on a specific issue (the future Constitutional Treaty)	77,000

[6] http://www.surveysystem.com/sscalc.htm

Country	Description	Cost (US $)
Europe	Eurobarometer population survey in the Netherlands (June 2005), based on a sample of 2,000 and conducted by telephone on a specific issue (the future Constitutional Treaty)	63,000
Europe	Survey of 1,000 adults in each of the 27 Member States, using existing surveys (i.e. consumer omnibus surveys) and adding specific questions on topic of interest (i.e. not a bespoke survey)	7,000 (per country)
India & Peru	Biodiversity barometer led by the Union for Ethical Bio Trade. Involved face to face or phone interviews with 1,000 adults. Costs do not include time spent on analysis.	18,000 – 25,000 per country
Poland	Household budget survey in 2000 – sample size of 36,163.	5.6 million (150 per household)
Hungary	Household budget survey in 2000 – sample size of 80,000	400,000 (35 per household)
Southern Caucasus	Public awareness indicator. Face-to-face interviews among a representative sample of the adult population (18-years and older).	14,000
UK	Survey of 1,000 micro businesses by telephone	40,000
UK	Survey of 250 businesses of specific types	50,000
Various	Biodiversity barometer led by the Union for Ethical Bio Trade. Cost of surveying 8 countries (Brazil, France, Germany, UK, Switzerland, USA, Japan and South Korea), on the basis of surveying 1,000 adults in each, where all were conducted using internet panels. Costs do not include time spent on analysis.	6,000 – 9,000 per country

Source: various, including personal communication with the Union for Ethical Bio Trade, previous work undertaken by GHK Consulting, information from the European Commission (http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2005-3914+0+DOC+XML+V0//EN&language=RO), as well as UN Studies on Household Sample Surveys in Developing and Transition Countries (http://unstats.un.org/unsd/hhsurveys/part2_new.htm)

4.2 Developing a national strategy for raising awareness on biodiversity

Developing a national strategy can be time and resource intensive. Resources are typically needed for, *inter alia*:

- Undertaking analysis
- Hiring consultants
- Hosting consultations
- Hosting workshops
- Reporting
- Dissemination of results

Given these various elements, it can be a time consuming process. Although it is possible to develop a national strategy in less than a year, the typical timeline developing a strategy can take between 2 to 3 years from start to finish. This can increase if there are delays in the approval process. Typically, time is required upfront to make the decision to launch the process. Once that decision is made, analysis can take between 3 to 12 months. The consultations can also take several months to a year, depending on how coherent the views are and on how extensive the consultation needs to be. Report writing can then take anywhere between 2 to 12 months, which might include additional consultations and validation. The adoption process can take a long time—even years—depending on the level at which the strategy is approved and the political will to move it forward.[7]

[7] ten Kate, K., *et al*. (undated) Preparing a national strategy on access to genetic resources and benefit-sharing.

Examples of the costs associated with developing a national strategy have been identified, and are shown in Table 4.2 below.

The analysis is largely based on the total cost (i.e. including co-financing) of GEF projects involving the development of national strategies, in particular National Biodiversity Strategies and Action Plans (NBSAPs). A few other examples are also included, such as the cost in South Africa of developing a strategy on access and benefit sharing of genetic resources, as well as a communication strategy on climate change in Eastern Europe.

Based on the costs of developing an NBSAP, the evidence suggests that, on average, the resource needs associated with developing a national strategy is $250,000 per country. However, it is possible that this is an overestimate, given that this is the cost of developing a Strategy which aims to deliver across 20 targets, rather than just on the issue of awareness raising. Nonetheless, much of same activities will be required to develop a Strategy on awareness raising, and much depends on the level of effort involved. It is likely therefore that an effective and comprehensive strategy on one issue might still require resource needs similar to that of an NBSAP. Moreover, developing a strategy for awareness should include other elements such as developing a brand and visual identity, which could require additional resources compared to other, more standard, strategies. For instance, feedback from one stakeholder suggested that establishing a brand identity and conducting the necessary research to do so, would cost roughly $150,000 over the course of the year. Awareness campaigns are competing for mental space of an audience; people are usually overwhelmed by a wide variety of ideas and messages. This means awareness campaigns need to be creative, and draw on lessons learned from commercial marketing strategies.

Overall, the evidence suggests that developing a national awareness-raising strategy which includes all the necessary elements (e.g. a brand identity, key messages, key target audiences) could be in the region of $200,000 (resource needs may be higher for larger and more decentralised countries). This slight reduction compared to the average cost of an NBSAP tries to take into account the fact that any associated stakeholder consultation typically used to inform the development of a Strategy may not need to be as comprehensive given that the Strategy should be able to draw on the results of the national survey on awareness (see Section 4.1 above).

It has been estimated that the resource needs for developing a national strategy on awareness are likely to be in the region of $200,000 per country. It has been assumed that the resource needs will be the same for countries of all sizes (in practice resource needs might be greater for larger countries if, for instance, consultation with stakeholders needs to be more extensive).

Assuming that there are 88 lower income and 109 higher income countries in the world (based on the CBD list of country and the World Bank classification), this produces **total global resource needs of about $40 million** for developing national strategies on raising awareness of biodiversity.

No scenarios have been developed, as developing a national strategy is a fixed, one-off cost for each country – each country should implement this activity.

Table 4.2 Examples of the costs associated with developing a national strategy

Country	Description	Estimated Cost (US $)
African country	MDG-based rural development strategy	92,000
Afghanistan	Development of National Biodiversity Strategy and Action Plan (NBSAP), Assessment of Capacity Building Needs for In-situ and Ex-situ Biodiversity Conservation	464,000
Albania	Biodiversity Strategy, Action Plan and National Report	96,000
Algeria	National Biodiversity Strategy, Action Plan and Report to the CBD	230,500
Algeria	Elaboration of a National Climate Change Strategy and Action Plan	194,670

Country	Description	Estimated Cost (US $)
Angola	National Biodiversity Strategy and Action Plan and Preparation of the First National Report to the Conference of the Parties	398,000
Antigua And Barbuda	National Biodiversity Strategy, Action Plan and First National Report to COP	139,000
Argentina	National Biodiversity Strategy, Action Plan and First National Report to CBD	348,890
Armenia	National Biodiversity Strategy, Action Plan and First National Report to CBD	174,800
Bahamas	National Biodiversity Strategy, Action Plan and First National Report to the Convention on Biological Diversity in the Bahamas	150,000
Barbados	National Biodiversity Strategy, Action Plan and First National Report to the Convention on Biological Diversity	143,640
Belize	Formulation of the National Biodiversity Strategy and Action Plan for its Implementation	184,500
Benin	National Biodiversity Strategy, Action Plan and Country Report to the COP	233,820
Bhutan	National Biodiversity Conservation Strategy and National Action Plan	116,546
Bolivia	Formulation of the National Biodiversity Strategy and Action Plan for its Implementation	275,752
Bosnia-Herzegovina	Biodiversity EA Preparation of National Biodiversity Strategy and Action Plan, National Reports and Establishment of a National Clearing House Mechanism	325,150
Botswana	National Biodiversity Strategy and Action Plan	350,000
Brazil	National Biodiversity Strategy and National Report	2,342,500
Burkina Faso	National Biodiversity Strategy, Action Plan and Country Report to the COP	230,977
Burundi	National Biodiversity Strategy, Action Plan and Country Report to the COP	229,950
Cameroon	Preparation National Biodiversity Strategy, Action Plan and First National Report to the CBD	300,000
Cape Verde	National Biodiversity Strategy, Action Plan and Country Report to the COP	208,151
Central African Republic	National Biodiversity Strategy, Action Plan and Country Report to the COP	164,700
Chad	National Biodiversity Strategy, Action Plan and Country Report to the COP	218,160
China	National Biodiversity Strategy, Action Plan and the First National Report to the CBD	59,400
Colombia	National Biodiversity Strategy, Action Plan and the First National Report to the CBD	253,000
Comoros	National Biodiversity Strategy, Action Plan and Country Report to the COP	131,700
Congo	National Biodiversity Strategy, Action Plan and Country Report to the COP	247,860

Country	Description	Estimated Cost (US $)
Cook Islands	National Biodiversity Strategy, Action Plan and Country Report to the COP	204,218
Cote d'Ivoire	National Biodiversity Strategy, Action Plan and the First National Report to the CBD	237,600
Croatia	Biodiversity Strategy, Action Plan and National Report	102,000
Cuba	National Biodiversity Strategy, Action Plan and First National Report to the CBD	206,280
Czech Republic	Biodiversity Strategy, Action Plan and National Report	101,000
Djibouti	Capacity Building, Development of a National Biodiversity Strategy and Action Plan and National Report to the CBD	558,260
Dominica	National Biodiversity Strategy, Action Plan and Report to the CBD	96,500
Dominican Republic	National Biodiversity Strategy, Action Plan and First National Report to the CBD	230,000
Ecuador	National Biodiversity Strategy, Action Plan and First National Report to the CBD	289,300
Egypt	National Biodiversity Strategy, Action Plan and First National Report to the CBD	288,000
El Salvador	Formulation of the National Biodiversity Strategy, action plan and Report to the CBD	217,900
Equatorial Guinea	National Biodiversity Strategy, Action Plan and First Country Report to the COP	296,000
Eritrea	National Biodiversity Strategy, Action Plan and First National Report	275,000
Estonia	National Biodiversity Strategy, Action Plan and First National Report to the CBD	166,000
Ethiopia	National Biodiversity Strategy, Action Plan, Participation in Clearing House Mechanism for CBD, and Country Report to the COP	406,930
Fiji	National Biodiversity Strategy, Action Plan and Country Report to the COP	197,925
Gabon	National Biodiversity Strategy, Action Plan and Country Report to the COP	232,200
Gambia	National Biodiversity Strategy, Action Plan and First National Report to the CBD	243,000
Georgia	Biodiversity Strategy, Action Plan and National Report	120,000
Grenada	Development of a National Biodiversity Conservation Strategy, and Action Plan and Country Report to the CBD	133,520
Guatemala	National Biodiversity Strategy and Action Plan	214,700
Guinea	National Biodiversity Strategy, and Action Plan and Country Report to the COP	223,020
Guinea-Bissau	National Biodiversity Strategy, and Action Plan and Country Report to the COP	195,480
Haiti	National Biodiversity Strategy and Action Plan and First National Report to the CBD and Clearing House Mechanism	262,000

Country	Description	Estimated Cost (US $)
Honduras	Development of a National Biodiversity Conservation Strategy and Action Plan and Report to the CBD	258,000
Hungary	National Biodiversity Strategy and Action Plan and First National Report to the CBD	166,320
India	National Biodiversity Strategy and Action Plan	968,200
Indonesia	Indonesian Biodiversity Strategy and Action Plan (IBSAP)	438,600
Iran	National Biodiversity Strategy and Action Plan and Country Report to the CBD	350,000
Jamaica	Development of a National Biodiversity Conservation Strategy & Action Plan and Report to the CBD	192,832
Kazakhstan	Development of A National Strategy and an Action Plan to Implement the CBD and to prepare the First Report to the COP	132,664
Kenya	Biodiversity Strategy & Action Plan and First National Report to the CBD	157,000
Kiribati	National Biodiversity Strategy and Action Plan and Country Report to the COP	198,790
Korea DPR	National Biodiversity Strategy & Action Plan and Report to the COP	299,250
Kyrgyzstan	Biodiversity Strategy & Action Plan and National Report to the COP	108,000
Latvia	National Biodiversity Strategy, Action Plan and Country Report to the CBD	205,315
Lebanon	Biodiversity Strategy and Action Plan and Report to the CBD	145,000
Lesotho	National Biodiversity Strategy and Action Plan, and Country Report to the COP	114,480
Liberia	Liberia's National Biodiversity Strategy and Action Plan, and Country Report to the COP	256,000
Macedonia	National Strategy and Action Plan of Biological and Landscape Diversity, National Report, Clearing House Mechanism, and Assessment of Capacity Building Needs	371,500
Malawi	National Biodiversity Strategy, Action Plan and First National Report to the CBD	289,000
Malaysia	National Biodiversity Strategy and Action Plan, and Report to the COP	36,750
Maldives	National Biodiversity Conservation Strategy, and Action Plan and Country Report to the CBD	170,680
Mali	National Biodiversity Conservation Strategy, and Action Plan and Country Report to COP	252,180
Marshall Islands	National Biodiversity Conservation Strategy, Action Plan and Report to the CBD	265,000
Mauritania	National Biodiversity Conservation Strategy, Action Plan and First National Report to the CBD	233,000
Mauritius	National Biodiversity Conservation Strategy, and Action Plan and First National Report to CBD	235,440
Mexico	National Biodiversity Conservation Strategy, and Action Plan and Report to the COP	254,000

Country	Description	Estimated Cost (US $)
Micronesia	National Biodiversity Conservation Strategy, and Action Plan and Report to COP	281,000
Moldova	Biodiversity Strategy, Action Plan, and National Report	125,000
Morocco	Elaboration of a National Climate Change Strategy and Action Plan	140,000
Morocco	National Biodiversity Strategy, and Action Plan and First National Report to the CBD	191,200
Mozambique	National Biodiversity Strategy, and Action Plan and First National Report to the CBD	216,000
Myanmar	Development of the National Biodiversity Strategy and Action Plan (NBSAP)	250,000
Namibia	National Biodiversity Strategy, and Action Plan	242,200
Nauru	National Biodiversity Conservation Strategy and Action Plan and Report to the COP including Clearing House Mechanism	148,000
Nicaragua	National Biodiversity Strategy, and Action Plan and Report to the COP	252,247
Niger	National Biodiversity Strategy, and Action Plan and Country Report to the COP	229,500
Nigeria	National Biodiversity Strategy, and Action Plan and Country Report to the COP	313,740
Niue	National Biodiversity Strategy, and Action Plan and Report to the COP	134,930
Oman	Biodiversity Strategy and Action Plan and Report to CBD	266,000
Palau	National Biodiversity Strategy Action Plan and First Report to the COP	330,000
Panama	National Biodiversity Strategy, and Action Plan and Country Report to the CBD	215,000
Papua New Guinea	Biodiversity Strategy and Action Plan (resubmission)	182,000
Paraguay	Development of a National Biodiversity Conservation Strategy, and Action Plan and Country Report to the CBD	136,935
Peru	Strategy and Action Plan for the Conservation and Sustainable use of Biological Diversity in Peru	217,900
Poland	National Biodiversity Strategy, and Action Plan and Country Report to the CBD	205,000
Rwanda	National Biodiversity Strategy, and Action Plan and Country Report to the COP	170,640
Samoa	Preparation of National Biodiversity Strategy and Action Plan, and First National Report to the COP of the CBD	183,010
Sao Tome and Principe	Biodiversity Strategy, Action Plan and First National Report and Clearing House Mechanism	163,000
Serbia	Biodiversity Strategy, Action Plan and National Report (BSAP)	315,170
Sierra Leone	National Biodiversity Strategy and Action Plan, and Country Report to the COP	275,000

Country	Description	Estimated Cost (US $)
South Africa	Strategy on Access and Benefit Sharing of Genetic Resources (included in the Biodiversity White Paper)	90,000
Suriname	Formulation of a National Biodiversity Action Plan for the Implementation of the Nation Biodiversity Strategy	92,000
Syria	Biodiversity Strategy and Action Plan and Report to the CBD	234,000
Timor Leste	National Biodiversity Strategy Action Plan, the First & Third National Report to CBD, Establishment of Clearing House Mechanism	295,200
Togo	Biodiversity Strategy (CDB Togo)	263,800
Tonga	National Biodiversity Conservation Strategy Action Plan and First Report to the COP	358,000
Trinidad and Tobago	National Biodiversity Strategy, Action Plan and First Report to the CBD	127,000
Tunisia	Biodiversity Strategy, Action Plan and National Report	89,000
Turkmenistan	Biodiversity Strategy, Action Plan and National Report with Clearing House Mechanism	332,540
Tuvalu	National Biodiversity Strategy Action Plan, First and Third National Reports to the COP and CHM	242,000
Uganda	Biodiversity Strategy, Action Plan and National Report	125,000
Ukraine	Biodiversity Strategy, Action Plan, and National Report	112,000
Uruguay	Formulation of the National Biodiversity Strategy, action plan and Report to the CBD	121,300
Yemen	Biodiversity Strategy, Action Plan, and the Report to the CBD	290,000

Source: Various, including
GEF Project Funding (http://www.thegef.org/gef/gef_projects_funding);
ten Kate et al. (undated) Preparing a national strategy on access to genetic resources and benefit-sharing (http://teebforbusiness.earthmind.net/files/Preparing_a_National_Strategy_on_Access_to_Genetic_Resources_and_Benefit-Sharing.pdf);
Millenium Project, Preparing National Strategies to Achieve Millennium Development Goals: A Handbook (http://www.gm.undp.org/Reports/Preparing%20national%20strategies%20to%20achieve%20the%20MDGs.pdf)

4.3 Specific awareness raising activities

The sections below detail the estimated resource needs associated with the kinds of, potentially on-going, or recurrent, activities that countries could choose to implement. Unlike the two activities described above, these are more of a “menu of options” for countries to consider in order to raise awareness (as opposed to the conducting a baseline survey and developing a national strategy which are, arguably, necessary preconditions for effectively raising awareness).

The options considered below include:

- Running workshops and / or conferences with key target audiences
- Running training programmes with key sectors
- Running high profile events
- Integrating biodiversity into education programmes
- Running a mass media campaign

4.3.1 Running workshops and / or conferences with key target audiences

Workshops and conferences are a key way to engage a specific audience. They would be particularly useful for engaging with, for instance:

- Key government officials;
- Academics;
- The private sector;
- The media;
- NGOs;
- Important stakeholders in different sectors (e.g. agriculture, forestry, manufacturing, etc); and,
- Communication multipliers (individuals / organisations who are able to disseminate messages to a wider audience).

It can be useful to conduct workshops both with a specific group of stakeholders, however it is also possible to run a workshop where a wide range of stakeholders are invited. For instance, workshops could prove particularly useful for bringing together academics, policy makers, the private sector and the NGOs to share experiences and to 'build bridges' between science and policy and business. It might also serve to improve coordination and coherence between these different groups, many of whom are already active in this area. Bringing all these efforts together to focus on the key messages (e.g. as determined in the national strategy) could increase the effectiveness of ongoing activities (and could provide the means to tap into a wider range of funding sources for delivering the Target).

Workshops might also act as an important mechanism for making academic research in this area more accessible and meaningful to other stakeholders, and might mean it can be more effectively 'translated' and disseminated to the wider public. Workshops could also serve to promote cooperation and knowledge sharing between countries and regions (e.g. north-south; south-south).

To increase their effectiveness and prominence, workshops and conferences can be organised and linked to high profile events or platforms such as the International Day on Biodiversity.

The resource needs for running a workshop / conference can vary significant, depending on the number of participants that are invited, the type of venue that is used, the running time of the workshop (e.g. a half day or 2 days), etc.

For instance, assuming that it takes 5 days to prepare and organise a workshop, at a day rate of $1,000, the resource needs associated with preparing for a workshop amounts to $5,000. Other indicative costs are shown below, assuming 3 organisers, and then either 50 or 100 attendants for a 1 day workshop.

Table 4.3 Assumptions for estimating resource needs

	US $ per head	For 3 organisers	50 attendants	100 attendants
Travel	450	1,350	22,500	45,000
Accommodation	150	450	7,500	15,000
Subsistence	100	300		
Catering & venue hire	60		3,000	6,000
Total (including travel / accommodation for attendants)		2,100	33,000	66,000

This suggests that the resource needs for conducting a 1 day workshop in a higher income country could amount to between about $35,000 and $70,000. Another $5,000 would then be necessary to account for the time associated with preparing and organising the workshop.

The costs of travel and accommodation for all attendants have been included in this calculation, given that the global resource needs of all stakeholders are being estimated, rather than what might arise only from public spending.

Similarly, in a lower income country context, personal communication with the organisers of TEEB (The Economics of Ecosystems and Biodiversity*)* workshops and other experienced stakeholders, indicate that each workshop costs a minimum of $50,000. This would cover travel, accommodation, venue and catering costs. Any less than that amount is likely to compromise the number of people who attend.

Assuming then that, for **higher income countries**, **the average resource needs for a workshop could be in the region of $35,000** (allowing for preparation time, three organisers, and 50 attendants).

For lower income countries, the evidence suggests that the **resource needs per workshop would be a minimum of $50,000**.

Resource needs will then vary depending on the number of workshops that are organised.

Scenario 1 could involve, for example, 5 workshops spread over the period between 2015 and 2020, or clustered together in one year (e.g. 2015). This is equivalent to $250,000 per country for lower income countries, and about $175,000 per country for higher income countries over the whole period (i.e. to 2020).

It is likely however that in countries with bigger populations, more workshops might be required to have the same kind of impact. It is therefore assumed that countries with a population size of 100 million or more would require 10 workshops spread over the same period. This is equivalent to $350,000 per country for lower income countries, and about $500,000 per country for higher income countries over the period 2015 – 2020.

Scenario 2 could involve three workshops a year until 2020, starting in 2015 (to allow for a population survey and a national strategy to be put in place), equivalent to $750,000 per country for lower income countries, and $525,000 per country for higher income countries.

This would amount to 15 workshops. It is likely that in countries with bigger populations, more workshops might be required. It is therefore assumed that countries with a population size of 100 million or more would require 6 workshops a year. This is equivalent to roughly $1.5 million per country for lower income countries, and about $1 million per country for higher income countries over the period 2015 – 2020.

Total global resource needs (2015 – 2020) are then calculated on the following basis:

- For countries will populations greater than 100 million, given 7 of these are higher income, and 5 of these are lower income countries, this totals $5 million under Scenario 1 and $15 million under Scenario 2.
- For countries will populations of less than 100 million, given 102 remaining higher income countries, and 83 remaining lower income countries, this totals $40 million under Scenario 1 and $115 million under Scenario 2.

Combining the two types of countries together suggests global resource needs could amount to about $45 million under Scenario 1 and about $130 million in Scenario 2.

4.3.2 Running training programmes with key sectors

Given the significant impact that some stakeholders or sectors have on biodiversity, and also the potential role that some groups can play in reducing negative effects on biodiversity, specifically targeted training programmes can potentially have a significant impact on helping people understand the important of biodiversity, its value, and also how to use it sustainably.

Training programmes can, for instance, be targeted at certain sectors such as agriculture, where farmers can be trained in using sustainable agricultural methods and the importance and value of biodiversity to their livelihoods. Similarly, government officials can be trained in the use of national accounting systems which take into account the value of biodiversity.

Communication multipliers can also be trained, such as teachers and journalists, in the role and importance of biodiversity. These stakeholders can then use their training to educate or train others.

Training can be designed in a range of ways and based on a range of methods, from on-site face-to-face instruction, through to e-learning. Training can also include involved the development of videos or video games which can appeal to other audiences such as children or young adults (e.g. Interactive Media Instruction). Training programmes typically also involve the preparation of associated materials such as training guides or best practice documents.

Examples that have been identified of various training programmes and their associated costs are given in Table 4.4 below.

Table 4.4 Examples of training programmes and their associated costs

Country	Description	Cost (US $)
Thailand	Biodiversity Research and Training Programme, including 58 training programmes	2 million (35,000 per programme)
Poland	Training of various stakeholder groups, including police, farmers, as well as developing good practice guides for tourism, farmers, planners, fishermen and area managers	300,000
Malta	Information and communication campaigns for the proper use and management of nitrates in agriculture and livestock breeding, part of LIFE+, including training sessions for 2,550 farmers and 900 livestock breeders	1.5 million
Georgia	GEF funded Agricultural Research, Extension, Training (ARET) Project to reform on-farm agricultural and environmental practices	8 million
Various	Action Plan Training/Skills Building for 25 Least Developed Countries to assist with National Implementation Plan Development under the Stockholm Convention	2 million
Costa Rica, India, Fiji and Senegal	Support for Regional Oceans Training Programmes: establishing four regional centers that develop curricula and train scientists and officials from their respective regions. Participants in the training program jointly create intervention methodologies for later implementation in their countries of origin.	3.5 million (roughly 1 million per country)
Various	Climate Change Training Phase II - Training Programme to Support the Implementation of the UNFCCC, involving the preparation of 8 major training packages.	3.2 million (400,000 per training package)
Uganda	AIDS Support Organization training courses related to AIDS care and counselling that are offered to local and regional organisations. 11 courses are run	12,000 per course (600 per student)
USA	5 hour educational game on waste recycling	25,000
USA	Training videos for the military (1 hour)	65,000 – 75,000

Source: Thailand NBSAP, Poland NBSAP, ICF International, GEF project database.

Other examples of the resource needs required to develop different kinds of training are:[8]

- $1,000 to $3,000 per-finished-minute (PFM) of a professional video
- $200,000 for production of a standard (i.e. not using professional equipment) video
- $15 - $50 per slide for a professional training slides (i.e. powerpoint presentation)
- $25 - $150 per minute of professional audio tape
- $1,000 per hour of instructor-led training
- $10,000 per hour of standard e-learning
- $6,000 - $15,000 per hour of interactive multimedia instruction

It is clear from the evidence that the resource needs associated with developing and running training programmes can vary considerably depending on what methods are used, what scale they are implemented at, and the number of different audience types that they will attempt to reach.

Drawing on the available evidence, it seems that **$1 million per year per country** could be a reasonable allocation of resources for developing various training programmes, with enough flexibility for determining what form these should take and who they should be targeted at. Of course, countries could choose to allocate less than this, or significantly more.

Scenario 1 might therefore involve an allocation of $500,000 per year per country, while **Scenario 2** could be more in the region of $2 million per year per country, if several training programmes were developed to target several different audiences using a range of different methods, and which were run over several years.

Given that more resources are likely to be required for implementing a sufficient number of training programmes of sufficient scale to have a similar impact in countries with a greater population size, it has been assumed that, for countries with a population size greater than 100 million, under Scenario 1 resource needs would therefore be $1 million per country per year and under Scenario 2 this would rise to $4 million per country per year.

Total global resource needs (2015 – 2020) are then calculated on the following basis:

- For countries with populations greater than 100 million, given there are 12 of these, this totals $60 million under Scenario 1 and $240 million under Scenario 2.
- For countries will populations of less than 100 million, given 185 remaining countries, this totals $460 million under Scenario 1 and $1.85 billion under Scenario 2.

Combining the resource needs for both types of countries together suggests global resource needs could amount to about $520 million under Scenario 1 and about $2 billion in Scenario 2.

4.3.3 Running events which highlight the role and value of biodiversity

High profile events can help to raise awareness on huge range of different issues. Earth Day is one such example. One key benefit of events is that they can be designed to reach various types of audiences, including children, students, women, farmers, etc.

One of the most well-known examples related to biodiversity is the International Day for Biological Diversity (IDB), which is held every year on the 22nd of May. It was first introduced in 1993 (although the date was originally 29th of December, which was then moved to the 22nd of May in 2000). An event such as the IDB provides a very visible platform for other national events to be organised. Linking events to the IDB can increase their profile, and promote the sense that there is “global action” taking place which creates a greater sense of solidarity. Workshops and conferences (see Section 4.3.1 above) can also be linked to events which can increase their reach and effectiveness.

Some examples of events, and their associated costs, are given in the table below. The evidence indicates that the resource needs associated with running events can vary significantly.

[8] http://www.nwlink.com/~donclark/hrd/costs.html

Table 4.5 Examples of different events and their associated costs

Country	Name	Description	Cost (US $)
Various	International Day of Biodiversity	Funding from the Secretariat at the global level for producing and distributing materials to countries	15,000 – 20,000 per country (750,000 per year)
India	Science Express Train	Science Express - Biodiversity Special is an innovative and unique mobile exhibition mounted on a specially designed train, which travelled across India in 2012. Campaign has been organised since 2007. Since establishment, the train has covered 68,000 km, attracted 6.3 million visitors and had 220 stops on the designated stations during 801 exhibition days.	400,000
Europe	Shell Eco-Marathon	Challenges high school and college student teams from around the world to design, build and test energy efficient vehicles. Included event organization, EU stakeholder and speaker identification and management of EU-wide media relations	250,000 – 500,000
South Africa	Hives of Hope	Developing two versions of Zulu beehive shaped huts, constructed of indigenous plants, to be created for COP 17. The Hive would be 10 metres high and designed as a place of rest and reflection, and to illustrate the intrinsic values of biodiversity.	240,000
China	WWF Earth Hour	Launched official EH website in China. Included celebrity engagement, media relations, press & public event management	100,000

Source: Various, including CBD Secretariat, ICF International, DEA/SANBI

On the basis of the available evidence, it seems that an indicative cost of **$200,000 per event** seems relatively reasonable, both in lower and higher income countries, to account not only for the resources needed for organising and running the event, and producing any associated materials, but also to account for the fact that each event would need to be accompanied with some level of promotional or PR activity. Some events (depending on their design), may require fewer resources. However, a minimum budget of $200,000 should be allocated per year to event(s).

Under Scenario 1, then, it is assumed that $200,000 per year is allocated to events. This should fund, at the minimum, 1 event to coincide with the IDB from 2015 to 2020 (to allow time for a national survey and national strategy to be put in place), totalling a minimum of 5 events over the investment period. This is equivalent to $1 million per country over the whole investment period (2015 – 2020).

It is likely however that the resource needs are going to be much higher for larger countries (i.e. with populations of more than 100 million), given that it more resources will be required for events to have the same level of exposure and/or impact (e.g. see above the resources required for the Science Express train in India).. It is therefore assumed that the minimum allocation for events for countries with a population size of 100 million or more should be $400,000 per year (equivalent to $2 million per country between 2015 and 2020). As before, this should fund at a minimum 1 event per year.

Under Scenario 2, resources allocated to events could be increased to $600,000 a year. This might, for instance, fund 3 different events each year, potentially to coincide with the IDB and which target different kinds of audiences (totalling 15 events over the whole investment period; equivalent to $3 million over the five years).

For countries with a population size of more than 100 million, it is assumed that to deliver the same level of impact, resource needs would double to $1.2 million a year. This should also allow at least 3 different events to be funded each year between 2015 and 2020. Total resource needs over the whole period for these countries would therefore increase to $6 million.

Total global resource needs (2015 – 2020) are then calculated on the following basis:

- For countries with populations greater than 100 million, given there are 12 of these, this totals about $25 million under Scenario 1 and $70 million under Scenario 2.
- For countries will populations of less than 100 million, given 185 remaining countries, this totals $185 million under Scenario 1 and $550 million under Scenario 2.

Combining the resource needs for both types of countries together suggests global resource needs could amount to about $210 million under Scenario 1 and about $630 million in Scenario 2.

4.3.4 Integration of biodiversity into education programmes

The importance of integrating biodiversity into education has long been recognised as playing an important role in achieving sustainable development.[9] The integration of biodiversity into education is also one of the key aims of CEPA's work programme. As a result, the CBD Secretariat and UNESCO are committed to working together to mainstream biodiversity within the Decade of Education for Sustainable Development.

There have been many examples in the past of topics being integrated into education, including health issues (e.g. HIV) as well as environmental issues (e.g. climate change). Drawing on experience from these should give a good indication of the resource needs associated with integrating biodiversity into education.

Personal communication with UNESCO on the pilot projects currently ongoing as part of the Decade of Education for Sustainable Development to integrate climate change issues into secondary education suggest that the resource needs for a medium sized, developing country (e.g. South Africa, Mauritius, Guyana) are around $100,000 to $500,000 per year. This is based on running a small number of capacity building workshops with Ministers of Education and adapting some education materials.

It was also noted that resource needs would increase for bigger countries and more decentralised countries. The required activities would also differ between developed and developing countries; in the case of the latter, more networking and capacity building would be necessary, as well as the development of new (rather than adaptation of old) materials.

Further evidence was also identified from UNESCO on the implementation of school-based sexuality education programmes across six countries. The different programmes, and their associated costs are shown in Table 4.6 below.

Table 4.6 Resource needs associated with programmes to implement school-based sexual education programmes

Country & Name of programme	Total costs (US$)	Annual Cost (US$ 2009)	Cost per learner (US$)
Nigeria: Family Life and HIV Education	3.4 million	560,000	7
Kenya: World Starts With Me	1.4 million	360,000	50
Indonesia: DAKU!	1.2 million	290,000	160
India: Adolescent Reproduction and Sexual Health Curriculum	10.8 million	3,500,000	14
Estonia: Human Studies	5.6 million	310,000	33
The Netherlands: Love Live Love	12.2 million	830,000	33

Source: UNESCO (2011). School-based sexuality education programmes: A Cost and Cost-Effectiveness Analysis in Six Countries. Available from: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/CostingStudy.pdf

[9] The United Nations Conference on Environment and Development (UNCED) (1992) Chapter 36 of the Agenda 21 is devoted to promoting education, public awareness and training

Another estimate of costs associated with integrating biodiversity education into education was identified through the Polish NBSAP, which estimated that roughly $170,000 would be required for initiatives to raise awareness through the education / schooling system, as well as verification of the curricula for university school levels with regard to biodiversity.

Discussions with other stakeholders suggested that developing a more comprehensive programme of action to effectively integrate biodiversity into education could require greater investment, which is likely to amount to between $750,000 and $1 million per country.

The evidence suggests that it would seem a reasonable estimate for integrating biodiversity into education in an average **higher income country would be about $750,000 per year**, whilst a higher estimate of about **$1 million per year for lower income countries** would be needed.

Scenario 1 could involve running such a programme for only **3 years**, which would result in resource needs of $2.25 million per higher income country and $3 million per lower income country.

However, in countries with much larger populations (i.e. more than 100 million) it would be reasonable to assume that more resources would be required to successfully integrate biodiversity into education and produce enough materials to be disseminated across the whole country, especially where the country is heavily decentralised (e.g. the United States). It is assumed therefore, that resource needs for such, larger, countries would increase to $4.5 million per higher income country and $6 million per lower income country for the three year progamme of integration.

Scenario 2 would involve running such a programme to integrate biodiversity into education **for 5 years**, which would result in total resource needs per country of $3.75 million per higher income country and $5 million per lower income country.

It is assumed that for countries with a population size of more than 100 million, resource needs would therefore increase to $7.5 per higher income country and $10 million per lower income country, over the whole period from 2015 – 2020 (amounting to $1.5 million per year per higher income country and $2 million per year per lower income country).

Total global resource needs (2015 – 2020) are then calculated on the following basis:

- For countries will populations greater than 100 million, given 7 of these are higher income, and 5 of these are lower income countries, this totals about $60 million under Scenario 1 and $100 million under Scenario 2.
- For countries will populations of less than 100 million, given 102 remaining higher income countries, and 83 remaining lower income countries, this totals $480 million under Scenario 1 and $800 million under Scenario 2.

Combining the two types of countries together suggests global resource needs could amount to about $540 million under Scenario 1 and about $900 million in Scenario 2.

4.3.5 Running a mass media campaign

A mass media campaign can be an effective way of reaching the wider public. However, resource needs will vary significantly depending on, for instance, what media is used (e.g. TV, radio, paper, digital), and what kind of coverage is sought (e.g. national, regional, local).

There are a wide range of examples of different media campaigns. Some of these, and their associated costs, are shown in Table 4.8 below. The available evidence indicates that costs associated with a mass media campaign can vary significantly depending on what tools are used, the length of time the campaign is run for and what kinds of audiences are targeted (e.g. a specific stakeholder group or the wider public).

Personal communication with a contact involved in the marketing of the TEEB initiative suggested that US $400,000 could fund a national campaign on a single issue for about 3 months, which would include engagement of a marketing agency, advertising costs and the costs of producing associated materials. A campaign is likely to be ineffective unless it is repeated or run over a sufficient period of time (a single campaign is unless to have any long-lasting impact). A campaign would therefore need to be run three or four times a year,

which could increase costs to roughly US $1.5 million per year. Discussions with other stakeholders suggest that a mass media campaign which includes use of a wide range of media, including TV is likely to require investment of roughly $10 million a year.

Based on the examples identified, the average cost of a campaign seems to be roughly US $3 million (although some of the campaigns were run over varying time periods and were based on different approaches).

Information was also obtained on the costs of running very local, or issue-specific, mass media campaigns in developing countries (e.g. which target a single species). This suggests that for a very limited mass media campaign, resource needs are likely to be in the region of $100,000 to $500,000 a year. However, this estimate relates only to developing countries, where less resource intensive methods can be relied upon (e.g. radio, print media). For instance, many of these campaigns involved developing a radio drama series. The resource needs for one radio episode is about $1,000. This increases by an order of magnitude when considering the resource needs for one TV episode (i.e. $10,000). Some examples of such projects and their associated costs[10] are given in Table 4.7 below. All the campaigns were delivered over three years.

Table 4.7 Examples of local, issue-specific mass media campaigns

Name	Description	Annual cost
Cross River Gorilla Conservation in Nigeria and Cameroon: *"My Gorilla - My Community"*	The campaign targeted behaviour change to promote habitat conservation for the last remaining 250 Cross River gorillas that reside in Nigeria and Cameroon. The project involved engagement with local communities in dialogue and activities that promote the conservation of habitat and cessation of harmful activities. An Entertainment-Education drama (Linda's Joint) was also prepared for broadcast.	$100,000
Water & Sanitation in Peru: *"My Community, My Water: The Story of Our Water"*	Campaign was based on a multi-faceted program using a national 90-episode Entertainment-Education radio drama and regionally-produced radio talk shows to motivate social change with regard to sanitation, hygiene and water resource management.	$400,000
Tiger Conservation in Laos: *"My Tiger - My Community"*	Campaign aimed to promote the conservation of Indochinese tigers in the Nam Et-Phou Louey National Protected Area (NEPL NPA) in Laos. It involved an Entertainment-Education workshop with broadcast of the drama in 2012	$100,000
Climate Change, Biodiversity Conservation & HIV in the Caribbean: "*My Island - My Community*"	Targetting 15 island nations of the Caribbean, based on a 208-episode radio drama entitled Callaloo. The programme involved working with over 60 partners throughout the region, including US Fish and Wildlife Service, The Nature Conservancy, KfW, Options, Population Services International, and Birdlife International	$500,000
Coastal Management in Ghana	Campaign involved developing a 52 episode radio soap opera (Biribireba), that reaches up to 2.5 million people each week in six coastal districts of the Western Region of Ghana	$150,000
Sustainable Forestry in West Africa:	Programme spread over 4 countries and 3 transboundary hotspots. Campaign included a 52-episode radio drama in 5 languages.	$500,000
Sustainable Forestry & Ape Conservation in Gabon: *"The Sustainable and Thriving Environments for West Africa Regional*	Campaign sought to turn Gaguie the Gorilla, the official mascot of the African Cup of Nations football tournament, into an ambassador for conservation through editorials in newspapers; distribution of over t-shirts, hats and stickers with conservation messages to fans; ten conservation-themed discussions on Gabon's primetime morning TV show; and arranging for Gaguie and his dance troupe to parade a	$100,000

[10] PCI Media Impact: Using the Power of Entertainment-Education to Promote Species Conservation & Sustainable Development. Figures obtained through personal communication with PCI Media Impact.

Name	Description	Annual cost
Development (STEWARD)"	banner stating "We all win when we protect nature" around the stadium before the final game of the tournament	
Chimpanzee Conservation in Rwanda & Burundi: *"My Chimpanzee - My Community"*	Promoting the conservation of chimpanzees and their habitat in the Nyungwe-Kibira landscape in Rwanda and Burundi through the launch of a training workshop for program partners in March 2012 with broadcast set for January 2013.	$100,000
Chimpanzee Conservation in Liberia & Sierra Leone: *"My Western Chimpanzee - My Community"*	Promoting the conservation of Western chimpanzees and their habitat in the Upper Guinea Forest Ecosystem in post-war Sierra Leone and Liberia	$100,000

Source: PCI Media Impact: Using the Power of Entertainment-Education to Promote Species Conservation & Sustainable Development. Figures obtained through personal communication with PCI Media Impact.

The evidence collected and the information gathered through discussions with stakeholders indicates that a relatively conservative estimate for running a comprehensive mass media communication campaign may be **in the region of US$3 million a year for lower income countries, and US$5 million for higher income countries**. Resource needs are likely to be less in lower income countries, where a greater reliance would have to be placed on, for example, radio and print media, and less on (typically more expensive) digital or TV media. It is likely that administration and management costs will also be less.

A mass media campaign could be **run twice in the period between 2015 – 2020**. For instance, one could be developed for release in 2015, which could be informed by the results of the public survey on awareness and following the development of a national survey. Another campaign could then be implemented in 2018, which could be developed to suit different needs or to build on the campaign that had run previously.

Running an annual campaign twice during this period would therefore mean total resource needs for a higher income country of US$10 million and US$6 million for a lower income country.

However, there is considerable scope to adjust these costs depending on the specific needs and priorities of a country's context. Resource needs could therefore be adjusted around this figure.

In Scenario 1, resource needs could, for instance, be reduced to US$3 million a year in a higher income country or US$1 million in a lower income country. This could be done, for instance, by reducing the number of times a year the campaign is run. However, a more effective approach would be to target fewer groups in the media campaign and still running it often rather than reducing exposure (retention is one of the most important factors in ensuring a media campaign is effective, and repetition is one of the key means of ensuring that messages are retained). Running an annual media campaign twice in this scenario would result mean the resources required would be $6 million for a higher income country and $2 million for a lower income country between 2015 and 2020.

However, for countries with much larger populations (i.e. in excess of 100 million), resource needs will significantly increase in order to deliver the same level of impact (given that there is more people to reach). It is assumed, therefore, that for such countries, resource needs could increase to $5 million a year for higher income countries, and $2.5 million a year for lower income countries. For these countries, running an annual media campaign twice in this scenario would result in resource needs of $10 million for higher income countries and $5 million for lower income countries.

In Scenario 2, resources could be increased significantly. These could, for instance, increase to US$10 million a year in a higher income country and about US$5 million in a lower income country. This would enable a greater number of tools to be used and for the campaign to have a much wider reach.

For countries with a population of more than 100 million, the resource needs would be even higher. It has been assumed that, for these countries, resource needs might increase to $20 million a year for a higher income country and $10 million for a lower income country. Running an annual media campaign twice in this scenario would result in resource needs of $40 million for higher income countries and $20 million for lower income countries.

Total global resource needs (2015 – 2020) are then calculated on the following basis:

- For countries will populations greater than 100 million, given 7 of these are higher income, and 5 of these are lower income countries, this totals $105 million under Scenario 1 and $380 million under Scenario 2.
- For countries will populations of less than 100 million, given 102 remaining higher income countries, and 83 remaining lower income countries, this totals $760 million under Scenario 1 and $3 billion under Scenario 2.

Combining the two types of countries together suggests global resource needs could amount to about $865 million under Scenario 1 and about $3.4 billion in Scenario 2.

Table 4.8 Examples of media campaigns and their associated costs

Country	Name	Description	Type of activity	Cost (US $)	Source
Belgium	UNICA – Brazilian Sugarcane Industry Association	Communications campaign in support of uptake of biofuels in Europe's energy policy solutions. Stakeholder audit to assess perceptions of issues linked to biofuels	N/A	100,000 - 250,000	Weber Shandwick
Brazil	Sky Rainforest Rescue campaign – aims to protect rainforest in Brazil	To support the campaign, documentary maker Ross Kemp visited the Amazon Rainforest to investigate deforestation, for two programmes to be broadcast on Sky1 next spring	TV documentaries	6 million	http://www.mediaweek.co.uk/news/947345/
Bulgaria, Czech Republic, Hungary, Poland and Romania	"Be a Changer – You Control Climate Change" campaign	Continuation of the EC's campaign on climate change. Included launch events held to coincide with Work Environment Day. It was estimated that a total of 20.5 million should be reached through the 54.7million advertising spots using TV, online and outdoor advertising	Print, online, radio and TV	1.7 million	GHK Consulting
Estonia	Baltic Info Campaign on Hazardous Substances	The overall aim of the campaign is to strengthen the consumer demand in three Baltic States for products free of hazardous substances which involves for instance to inform users about specific hazardous substances and products which may contain them	TV, radio, leaflets, interactive video games, web-competitions	2.5 million	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf
Europe	European Year of Volunteering	Communication campaign as part of The Year to promote to volunteering by generating a critical mass of activities targeting volunteering and by promoting exchange of ideas and good practices.	N/A	1.8 million	http://ec.europa.eu/dgs/education_culture/evalreports/civilsociety/2009/year2011_en.pdf (see page 16)
Europe	European Year of Intercultural Dialogue	Communication campaign as part of the Year to promote the fundamental principles of the European Union	N/A	5.5 million	http://ec.europa.eu/dgs/education_culture/evalreports/culture/2005/year2008/Year2008anx_en.pdf (see page 13 and 26)
Europe	Community's Action Programme to promote bodies	Awareness raising activities as part of an initiative to extend and deepen knowledge of the building of Europe or contribute to common policy objectives	N/A	2.7 million	http://ec.europa.eu/dgs/education_culture/evalreports/education/2007/activereport_en.pd

Country	Name	Description	Type of activity	Cost (US $)	Source
	active at European level and support specific activities in the field of Education and Training	in the field of education and training, both inside and outside the Community			f (see page 17)
Europe	European Year of Education through Sport	Promotion of sport as a part of formal and informal education and the mean to increase the social integration. Communication campaign included a competition for new logo of the initiative, a media strategy, and promotional materials	N/A	2.8 million	http://ec.europa.eu/dgs/education_culture/evalreports/sport/2005/aees/aeesrep_fr.pdf (see page 12)
Finland	Promoting sustainable Salmon fishing practices on Lake Saimaa, part of LIFE+	The project's general objective is to maintain the genetic diversity of the valuable salmon populations in Lake Saimaa and to improve their vitality with an information exchange and negotiation process that aims to promote sustainable fishing practices.	Press releases, local media, information website	450,000	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf
Germany	VdZ (Forum for Energy Efficiency)	Public relations and education campaign	N/A	250,000 - 500,000	Weber Shandwick
Kenya	Strategy on Plastic Waste Management for the City of Nairobi	Types of activities: Awareness campaign, stakeholders trained in each division, NGOs, civil society and youth groups, preparation of posters, radio programs prepared and presented, etc.	Print, radio	400,000	http://www.unep.org/roa/Portals/137/Docs/pdf/PlasticWasteStrategy_Nairobi.pdf (p. 35)
Netherlands	Newsletter Emissions Trade – electronic newsletter	Monthly electronic newsletter on emissions trading (CO2 and NOx) in the Netherlands, for a target audience of some 2000 stakeholders: ETS participants, (local) authorities, consultants. It informs about all relevant policy issues and important developments on the Dutch market and beyond (EU, global). The newsletter is a journalistic and authoritative product, issued by the Ecofys editor's staff since 2003 until present.	Print	50,000 / yr	ICF International
Poland	National awareness raising campaign 'Discover your nature' , part of LIFE+	The main goal of the project is to improve awareness and appreciation about Natura 2000 among Polish citizens. Press campaign aimed to reach 1 million citizens.	TV films, press campaign	2.5 million	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf

Country	Name	Description	Type of activity	Cost (US $)	Source
Slovenia	Live Water – from Biodiversity to the Tap	The project's main objective is to improve public awareness in Slovenia about the importance of protecting and conserving freshwater ecosystems	Digital, social media, press, surveys, workshops, events	650,000	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf
Slovenia	Raising awareness of the importance of environmentally sound management of the WEEE among identified target groups in Slovenia	The Slovenia WEEE campaign project aims to raise awareness of the handling, treatment and recovery - including reuse and recycling - of WEEE across all the municipalities in Slovenia. Special emphasis is placed on households and school children	Information campaign, didactic materials, website, competitions	700,000	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf
Spain	Boosting Land Stewardship as a conservation tool in the Western Mediterranean Arch; a Communication and Training Scheme	The project aims to convey the value of land stewardship among biodiversity conservation stakeholders at European level (specially the Western Mediterranean Arch), and to encourage its use and application	Audio & video media, press, workshops	2 million	http://ec.europa.eu/environment/life/publications/lifepublications/compilations/documents/infcompilation10.pdf
Thailand	'Travel with a New Heart for Sustainable Thailand' – Tourism Authority of Thailand (TAT)	Campaign aiming to encourage tourists to look after tourists destinations and their environment	N/A	600,000	http://thailandtravelupdate.com/ new-tat-campaign-urges-environmental-protection
Thailand	'Travel with a New Heart for Sustainable Thailand'	Campaign by the Tourism Authority of Thailand (TAT) aiming to encourage tourists to look after tourists destinations and their environment	N/A	600,000	http://thailandtravelupdate.com/new-tat-campaign-urges-environmental-protection
UK	The Nag	An online campaign website which promotes positive actions. The Nag site supports online discussion, mapping, voting, wikis and automated monthly e-mail reminders. Received an international award as the best ethical website.	Digital / Social media	90,000	http://www.socialbysocial.com/book/nag
USA	Heart Stopper – Smoking and Health Video Campaign	Development of Heart Stopper, a public service announcement that shows what smoking can do to the human body. Heart Stopper has aired 7,838 times in 96	Public service announcement TV commercial	4.3 million	ICF International

Country	Name	Description	Type of activity	Cost (US $)	Source
		markets, receiving $8.42 million worth of air time and reaching an estimated 39 million viewers.			
USA	Stop Smoking Marketing and Education Campaign	The development, implementation, and evaluation of a marketing and education campaign to promote tobacco cessation. Involved two-market, four-installation print and radio advertising pilot campaign which were refined for the national rollout. The rollout involved Web marketing; presented at relevant conferences; established strategic partnerships with professionals in health promotions, dentistry, and other disciplines; and developed creative for media and outdoor advertising. Also involved a public service announcement video.	Print, radio, public service announcement video, digital	5.7 million	ICF International

RESULTS

5.1 Overview of the results

This section presents an overview of the results, broken down by investment needs and on-going, recurrent expenditure.

5.1.1 Investment needs

In order to build capacity and establish the right framework and enabling conditions for an awareness campaign to be designed and implemented, the following two activities need to be completed:

- Conducting a baseline survey of public awareness
- Preparing a national strategy for raising awareness on biodiversity

A summary of the estimated resource needs associated with these are given in Table 5.1 below.

It is assumed that resource needs will be similar even for countries with significantly larger populations (i.e. more than 100 million).

Table 5.1 Estimated investment needs for raising awareness

Activity	Unit cost per country (US $)		Total global cost (US $)
	Per higher income country	Per lower income country	
Baseline survey	50,000	100,000	14 million
Strategy	200,000	200,000	40 million
Total	250,000	300,000	**54 million**

Source: GHK analysis. NB: assuming 88 lower income countries and 109 higher income countries in the world, based on the World Banks classification system (see Section 3.1.3).

5.1.2 Recurrent expenditures

Recurrent expenditure has been calculated on the basis of assessing the resource needs associated with 5 further awareness-raising activities, as well as recurrent surveys of awareness. Not all countries will choose to implement all of these activities, or to implement them on a recurrent basis so some of these may not be applicable, or count, as on-going expenditures in some country contexts.

The national strategy that is developed should help to inform what activities are most suitable and how often they should be implemented.

Unit costs and assumptions used

Unit costs are presented below in Table 5.2, for countries whose population size is less than 100 million. Table 5.3 shows how these unit costs might increase for countries whose population is greater than 100 million. In general, it has been assumed that resource needs for such countries are double that of countries with a population size of less than 100 million. The total global unit costs is given in Table 5.4.

Assumptions have then had been made to develop two different Scenarios for estimating the total global resource needs. These are shown in Table 5.5. For some of the activities (workshops, events, integration of biodiversity into education), the assumption has been made that they will not begin until 2015 to allow time for the initial baseline survey of awareness to be conducted and for a national strategy to be developed which will inform the design and implementation of the campaign.

More detail on how resource needs have been estimated is provided in the blue box under the corresponding section for each activity.

Table 5.2 Estimated recurrent expenditures - unit costs

Activity	Unit	Unit cost per country (US$)	
		Per higher income country	Per lower income country
Survey	Per survey	50,000	100,000
Workshops	Per workshop	35,000	50,000
Events	Per event	200,000	200,000
Training programmes	Per year	1,000,000	1,000,000
Integration into education	Per year	750,000	1,000,000
Mass media campaign	Per year	5,000,000	3,000,000
Total		7.0 million	5.4 million

Source: GHK analysis.

Table 5.3 Estimated recurrent expenditures – increase in the unit costs for countries with a population size of more than 100 million

Activity	Unit	Unit cost per country (US$)	
		Per higher income country	Per lower income country
Survey	Per survey	50,000	100,000
Workshops*	Per workshop	35,000	50,000
Events	Per event	400,000	400,000
Training programmes	Per year	2,000,000	2,000,000
Integration into education	Per year	1,500,000	2,000,000
Mass media campaign	Per year	10,000,000	6,000,000
Total		14.0	10.6

Source: GHK analysis.

**While the unit cost per workshops remains the same, the number of workshops that need to be conducted to deliver the same level of impact will need to increase.*

Table 5.4 Estimated recurrent expenditures – total global costs per unit for all countries

Activity	Unit	Global unit cost for all countries (US$ million)		Total global cost per unit (US$ million)
		Population size <100 million	Population size >100 million	
Survey	Per survey	13.4	0.9	14.3
Workshops	Per workshop	7.7	0.5	8.2
Events	Per event	37.0	4.8	41.8
Training programmes	Per year	185.0	24.0	209.0
Integration into education	Per year	159.5	20.5	180.0
Mass media campaign	Per year	721.0	92.0	813.0
Total		1,123.6	142.6	1,266.3

Source: GHK analysis. NB: assuming 88 lower income countries, of which 5 have populations greater than 100 million and 109 higher income countries, of which 7 have populations greater than 100 million in the world, based on the World Banks classification system (see Section 3.1.3).

Table 5.5 Assumptions on recurrent resource needs for developing Scenarios 1 and 2

Activity	Scenario 1 assumptions	Scenario 2 assumptions
Survey	1 additional survey conducted at the end of the target period (2020) to assess outcomes. (Total surveys, including baseline survey = 2)	2 additional surveys conducted, once to gauge progress and to inform and adapt, where necessary, the on-going awareness campaign (e.g. 2016) and once again at the end of the target period to measures results (2020). (Total surveys, including baseline survey = 3)
Workshops	5 workshops spread over 5 years, or clustered together in one year (2015 – 2020). Total workshops = 5. For countries with a population size of more than 100 million, it has been assumed that a total of 10 workshops will be needed to deliver the same level of impact. It has therefore been assumed. Total workshops = 10.	3 workshops per year for 5 years (2015 – 2020). Total workshops = 15. For countries with a population size of more than 100 million, it has been assumed that a total of 6 workshops per year will be needed to deliver the same level of impact. It has therefore been assumed. Total workshops = 30
Events	1 event per year for 5 years (2015 – 2020), to coincide with the International Day for Biodiversity. Total events: 5	3 events each year for 5 years (2015 – 2020), potentially to coincide with the International Day for Biodiversity and to target different audiences. Total events: 15
Training programmes	Limited number of programmes / target audiences. Estimated annual resource needs are roughly halved ($500,000 per country with a population size of less than 100 million; $1 million per country with a population size of more than 100 million).	Flexibility for a greater number of programmes to be implemented, a greater number of audiences to be targeted and a greater number of tools to be used. Estimated annual resource needs are doubled ($2 million per country with a population size of less than 100 million; $4 million per country with a population size of more than 100 million).
Integration into education	Programme of integration to run for 3 years.	Programme of integration to run for 5 years.
Mass media campaign	Assuming 2 media campaigns are run (one in 2015, and one later, e.g. in 2018, which can then be adapted in light of any changing needs) Estimated resource needs for an annual mass media campaign are roughly halved. For countries with a population size of less than 100 million: $3 million per higher income country; $1 million per lower income country. For countries country with a population size of more than 100 million: $5 million per higher income country; $2.5 million per lower income country	Assuming 2 media campaigns are run (one in 2015, and one later, e.g. in 2018, which can then be adapted in light of any changing needs) Estimated resource needs for an annual mass media campaign are roughly doubled. For countries with a population size of less than 100 million: $10 million per higher income country; $5 million per lower income country. For countries country with a population size of more than 100 million: $20 million per higher income country; $10 million per lower income country

Estimated recurrent expenditure

The estimated total recurrent expenditure for the Scenario 1 is given in Table 5.6, and the Scenario 2 in Table 5.7. The figure given in brackets is the resource needs for countries with a population size that is greater than 100 million. The total global cost has been estimated given 88 lower income countries, of which 5 have populations greater than 100 million and 109 higher income countries, of which 7 have populations greater than 100 million in the world, based on the World Banks classification system (see Section 3.1.3).

Table 5.6 Estimated total recurrent expenditure (2015 – 2020) – Scenario 1

Activity	Per higher income country (US $ million)	Per lower income country (US $ million)	Total global cost (US $ million)	Notes
Survey	0.05 (0.05)	0.10 (0.10)	14.25	1 additional survey between 2015 - 2020
Workshops	0.18 (0.35)	0.25 (0.50)	43.55	5 workshops in total (10 for large countries)
Events	1.00 (2.00)	1.00 (2.00)	209.00	5 events in total
Training programmes	2.50 (5.00)	2.50 (5.00)	522.50	Estimated resource needs halved
Integration into education	2.25 (4.50)	3.00 (6.00)	540.00	Programme run for three years
Mass media campaign	6.00 (10.00)	2.00 (5.00)	873.00	Estimated resource needs halved; 2 media campaigns in total between 2015 - 2020
Total	11.98 (21.85)	8.85 (18.50)	2,202.30	

Source: GHK analysis. Figures in brackets relate to countries with populations >100 million.

Table 5.7 Estimated total recurrent expenditure (2015 – 2020) – Scenario 2

Activity	Per higher income country (US $ million)	Per lower income country (US $ million)	Total global cost (US $ million)	Notes
Survey	0.10 (0.10)	0.20 (0.20)	28.50	2 additional surveys between 2015 - 2020
Workshops	0.53 (1.05)	0.75 (1.50)	130.65	15 workshops in total (30 for large countries)
Events	3.00 (6.00)	3.00 (6.00)	627.00	15 events in total
Training programmes	10.00 (20.00)	10.00 (20.00)	2,090.00	Estimated resource needs doubled
Integration into education	3.75 (7.50)	5.00 (10.00)	900.00	Programme run for the full five years
Mass media campaign	20.00 (40.00)	12.00 (20.00)	3,416.00	Estimated resource needs doubled; 2 media campaigns in total between 2015 - 2020
Total	37.38 (74.55)	28.95 (57.50)	7,192.15	

Source: GHK analysis. Figures in brackets relate to countries with populations >100 million.

Table 5.8 below summarises the required recurrent expenditure associated with the unit cost and Scenarios 1 and 2 for a higher income country and a lower income country, as well as the total global resource needs to 2020. The figures given in brackets are those estimated for countries with a population size greater than 100 million. The global resource needs have been calculated on the basis that there are 88 lower income countries, of which 5 have populations greater than 100 million and 109 higher income countries, of which 7 have populations greater than 100 million in the world, based on the World Banks classification system (see Section 3.1.3).

Table 5.8 Total recurrent activity expenditure over the whole investment period (2015 – 2020)

Total investment needs (2015 – 2020)	Per higher income country (US $ million)	Per lower income country (US $ million)	Global resource needs (US $ billion)
Total expenditure per unit cost	7.0 (14.0)	5.4 (10.6)	1.3
Total expenditure – Scenario 1	12.0 (21.9)	8.9 (18.5)	2.2
Total expenditure – Scenario 2	37.4 (74.6)	28.0 (57.5)	7.2

Source: GHK analysis. Figures in brackets relate to countries with populations >100 million.

5.1.3 Differences in total recurrent resource needs between different types of countries

Per country, total resource needs over the period to 2020 could vary between about US$10 and US$40 million for a higher income country, and from about US$10 to US$30 million for a lower income country. This cost roughly doubles for countries whose population is greater than 100 million, to between $20 and $75 million for a higher income country and $20 to $60 million for a lower income country (as shown by the figures in brackets).

Total resource needs for a lower income country are therefore slightly less than for a higher income country. Due to the resource needs of a mass media campaign, and the fact that more resource intensive methods for conducting one are needed in a higher income country, the investment needs under Scenario 2 are much higher in a higher income countries.

However, other activities will require more resources to implement in a lower income country (e.g. surveys of awareness, running workshops, integrating biodiversity into education) – see Table 5.2.

Table 5.9 Summary of total resource needs (over the whole investment period, 2013 – 2020)

	Per higher income country (US $ million)	Per lower income country US $ million)
Upfront investment needs	0.25 (0.25)	0.30 (0.30)
Recurrent expenditure – Scenario 1	11.98 (21.85)	8.85 (18.50)
Recurrent expenditure - Scenario 2	37.38 (74.55)	28.95 (57.50)
Total (Scenario 1)	12.23 (22.10)	9.15 (18.80)
Total (Scenario 2)	37.63 (74.80)	29.25 (57.80)

Source: GHK analysis. Figures in brackets relate to countries with populations >100 million.

5.1.4 Summary of global resource needs

Considering both investment needs and recurrent expenditure, the results of this analysis suggests that the global resource needs between 2013 and 2020 amount to between US$2 billion and US$7 billion, as shown in Table 5.11 below.

Most of this cost is due to recurrent expenditure on awareness raising activities; investment needs are relatively small ($54 million between 2013 and 2015). Total recurrent expenditure needs (between 2015 and 2020), on the other hand, is estimated at between US$2 and US$7 billion, with annual resource needs of between US$0.4 and US$1.4 billion (see Table 5.10).

In calculating annual recurrent expenditure however, it should be noted that, under the assumptions used in this assessment, several of the activities are not implemented every year, including:

- **Surveys of awareness**: either one or two additional surveys conducted over the period 2015 - 2020
- **Integration of biodiversity into education**: either a three year programme (2015 – 2018) or a five year programme of integration (2015 – 2020)
- **Mass media campaigns**: annual campaign that is run only twice over the period 2015 – 2020.

The annual recurrent expenditure therefore does not reflect the full costs of each of these activities in a single year, but the average annual expenditure over the full period 2015 to 2020. Depending on how often these activities are implemented therefore, the annual resource needs will differ (e.g. annual resource needs will increase if surveys / mass media campaigns are conducted every year).

Table 5.10 Estimated global resource needs - breakdown (US$ million)

Activity	Investment needs (total period, 2013 – 2015)		Recurrent annual expenditure		Recurrent total (2015 – 2020)	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
National strategy	39.4	39.4	/	/	/	/
Surveys of awareness	14.3	14.3	2.9	5.7	14.3	28.5
Workshops	/	/	8.7	26.1	43.6	130.7
Events	/	/	41.8	125.4	209.0	627.0
Training programmes	/	/	104.5	418.0	522.5	2,090.0
Integration into education	/	/	108.0	180.0	540.0	900.0
Mass media campaign	/	/	174.6	650.0	873.0	3,250.0
Total	53.7	53.7	440.5	1,405.2	2,202.3	7,026.2

Table 5.11 Total global resource needs (US$ billion)

Activity	Total for the whole period (2013 – 2020)		Average annual (for period 2013 – 2020)	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2
National strategy	0.04	0.04	0.01	0.01
Surveys of awareness	0.03	0.04	0.00	0.01
Workshops	0.04	0.13	0.01	0.02
Events	0.21	0.63	0.03	0.09
Training programmes	0.52	2.09	0.07	0.30
Integration into education	0.54	0.90	0.08	0.13
Mass media campaign	0.87	3.25	0.12	0.46
Total	2.26	7.08	0.32	1.01

5.1.5 Cost profile

It is likely that some of the resource needs above might decrease over time, for instance as experience increases or as the necessary frameworks are put in place to support continued efforts. For instance, resource needs for repeated surveys may decrease once the best method has been determined and the necessary tools have been established, which will then only need to be amended slightly to suit any changes over time.

However, in order to be effective, awareness raising should not be a finite activity delivered only over a limited time period. It is more likely that some level of awareness raising will need to continue in order for awareness levels to be retained, and for behaviour change (if and where it might happen as a result) to be sustained. Repetition is one of the key factors which increases the success of an awareness raising campaign, and should not be underestimated.

Over time, however, it is likely that the message, and possibly the nature, of the activities will shift as needs change. For instance, different audiences might be targeted if pressures shift, or different messages might be used that resonate with audiences during different times (e.g. linked to current events or changes in the economic, social or political context). It may be that new types of activities also come to the fore (e.g. social media such as Facebook, Twitter) which might influence the level of resources needed to continue to deliver the Target.

Therefore, given that over time, the types of activities which may be appropriate (e.g. depending on the types of audiences that need to be targeted or the types of messages that need to be disseminated), the cost profile may change given that different activities require different levels of resources.

However, by providing a "menu" of costed options, this analysis should provide a good basis for the resource needs to be assessed in a flexible way over time, given different assumptions about how these needs may change (and therefore what mix and what level of activity is required). In this assessment, we have assumed that all countries implement all the activities listed, which may not be necessary either at the moment or in the future.

5.1.6 Caveats and considerations

It should be noted here that training programmes as an activity is closely linked to several other Aichi Targets, as delivering on some of these targets may require specific training programmes to be implemented which educate sector-specific audiences (e.g. farmers, fishermen). However, other Targets have not included this activity in their assessment. The resource needs associated with specific training programmes have therefore been included in this assessment, although it might be best considered under the specific Targets where such an activity may be relevant.

It should be noted that the unit cost assumptions made here are largely related to the whether the country has a lower or higher income. There are a whole range of other factors, however, which may also affect the resource needs of a country with regard to raising awareness, or may determine which activities may be most suitable.

For instance, the resource needs of a country may also differ depending on, *inter alia*:

- its population size (this has been briefly considered in this study, but a more in depth assessment would be needed to determine the extent to which this factor would influence resource needs; it is likely that the impact would be significant);
- its economic structure (e.g. a country which relies on tourism and therefore is closely linked to biodiversity may already have a good level of awareness on the importance and value of biodiversity);
- whether a country is decentralised or centralised (e.g. a decentralised country may require greater resources as activities may need to be adapted or discussed at different levels); and,

- existing institutions and infrastructure (e.g. with regard to educational materials and means for integrating new issues into the national curriculum).

Moreover, different activities may be better suited to different kinds of countries. For instance, in a country where very few sectors have a very significant impact on biodiversity, a targeted campaign with workshops and training programmes targeted at those sectors may be more useful than a mass media campaign, which may actually be unnecessary.

Consequently, although the needs assessment presented here estimates the total investment needed to implement all of the activities specified, this may not be useful or necessary in some countries. Moreover, the activities presented here are only a small list of measures that are available to raise awareness. Other, increasingly popular, methods exist, such as using social media. The use of social media can be inexpensive and still impact on a significant number of people. Given its cost-effectiveness, it should also be considered when designing an awareness campaign in countries where it is appropriate (some examples of effective but inexpensive campaigns using social media are given below).

The use of social media – a cost effective way of raising awareness

Unfriend Coal

In February 2010 Greenpeace launched a campaign on Facebook encouraging Facebook to 'Unfriend' Coal and switch to renewable energy sources. By campaigning on the very network it was campaigning about, the approach got maximum attention with over 700,000 people now having signed the petition via the Facebook group. Greenpeace gained further attention through a fun video animation featuring Mark Zuckerberg, Facebook's creator, which was posted on YouTube which has received more than half a million views.[11]

To Mama with Love

This very low budget campaign had a significant impact with the help of social media. A week-long campaign, run by only two people, raised nearly $17,000 and helped to provide a safe home for 17 children in Tanzania. The campaign, launched on Mother's Day 2010 by US non-profit organisation Epic Change, had the clear aim of raising money to support women in their efforts to help under-privileged people across the globe by giving hope, strength and instilling self-belief through education.

The website makes use of a virtual scrapbook that the donor can customise using photos, videos and messages which can then be sent as an e-card for mother's day. Through allowing donors to share their virtual scrapbook with friends and family via Facebook and Twitter widespread exposure ensued. The campaign's blog gives updates on the progress and development of the projects whilst YouTube and Flikr were used to upload videos and photos of the children involved, each telling their story. The campaign has also created a Twitter list called TwitterKids through which the children involved can tweet to the rest of the world.

Source: Yoke, Social Media – The campaigners' new best friend (Available from: http://thisisyoke.com/successful-social-media-campaigns)

The actual investment needs may therefore be much less (e.g. if fewer activities are necessary), or much more (e.g. if more activities are implemented or fewer activities are necessary but need to be implemented on a much larger scale) than those presented here.

It is best therefore to treat the needs assessment as a "menu" of costed options that provide indicatives costs of different activities. These can then be combined or adapted to suit the needs of each country's context. It should be noted however that there is considerable benefit to adopting a multi-pronged approach, as using various awareness strategies tends to increase the overall impact; multiple messages delivered through different activities (i.e., events, workshops, billboards, digital media, etc.) reach further and have more impact as messages are able to build on and reinforce each other.

[11] http://www.youtube.com/watch?v=QPty-ZLbJt0&lr=1

5.2 Country needs assessment for Target 1

Only six countries have submitted a country needs assessment which estimates the resource needs for delivering the Aichi Targets. Estimates resource needs for delivering Target 1 are shown in Table 5.12 below.

From the small sample, the total resource needs are estimated to be between US$2 million and US$7 million over the ten year period between 2011 and 2020.

This is considerably lower than the resource needs estimated here, and suggests that countries have significantly underestimated the resources need to deliver this Target.

Table 5.12 Country needs assessments for Target 1

Country	Total Amount Needed for 2011-2020 (US$ million)
Brazil	Not specified
Bangladesh	4
Ecuador	7
Grenada	2
Micronesia	2.5
Myanmar	Not specified

Source: CBD Secretariat

5.3 Additional resource needs

Nearly all Parties indicate in their fourth national reports that they are undertaking actions related to education and public awareness. To arrive at some view of the additional expenditure required to raise awareness, National Reports submitted to the CBD by Parties have been assessed, using the National Reports Analyzer[12] and focusing especially on responses to Questions 7, 80, 91 – 97, and 182. It is likely that the additional effort will differ across countries / regions. Reports have therefore been analysed according to the different Global Economic status of countries (least developed, developing, developed countries, as well as economies in transition and small island developing states (SDIC)). Given the general lack of any expenditure data associated with responses to these questions, it has only been possible to conduct a qualitative assessment.

With regards to developing national strategies, it is clear that many counties, of all the economic types, have made already implemented a communication, education and public awareness strategy (38%), although only a few have also promoted public participation to any significant extent (13%). In other countries, strategies are still under development (21%), whilst a significant number have no plans in place to do (28%). It would seem, therefore, that there is considerable investment already being made into this activity, and that the additional expenditure required may be relatively little in some countries. However, it is possible that additional resources may still be needed to further develop and refine the strategies to take into account all the necessary issues (e.g. establishing a brand identity, identifying key target audiences, identifying key messages). It might, for instance, be necessary for existing strategies to be revised or updated to take into account the results from the national surveys on awareness.

The National Reports also make it clear that some countries have already made inroads into developing and implementing training programmes with key stakeholder groups. For instance, with regard to the provision of training on biodiversity to tourism operators, there is a roughly even split between those countries which already have programmes in place (38%), those who have programmes under development (32%), and those who have no plans for implementing such programmes (30%). Although this indicates that there is

[12] https://www.cbd.int/reports/analyzer.shtml

ongoing activity to establish training programmes on the importance and role of biodiversity with important stakeholder groups, it is unclear to what extent other stakeholder groups (besides tourism operators) are also being targeted (e.g. agriculture, forestry, fisheries, industry, policy makers). Whilst it is promising therefore, that elements of this activity is already taking place in some countries, it is likely that additional expenditure will be required to refine existing training programmes in line with the overall national strategy, and to address any gaps in the kinds of stakeholder groups which are being targeted.

The vast majority of countries also seem to be implementing activities to promote the communication, education and public awareness of biodiversity at a local level (95%). Moreover, just over half of responding countries are making some effort to develop the adequate capacity to deliver CEPA activities, whilst roughly a third have programmes to do so under development. Nonetheless, a significant minority (17%) have made no such efforts, whilst only a very small proportion (3%) have put comprehensive programmes in place.

Overall then, responses illustrate that there are a number of efforts already ongoing to raise awareness. However, there is insufficient information available to determine the scale, extent, or effectiveness of the current level of activities. This makes it difficult to determine what would be the additional expenditure required above and beyond existing efforts. Current activities are likely to be uncoordinated and ad hoc. Moreover, these activities are likely to be funded through national sources which tend to be scarce, limited and vulnerable to changes in the political and economic context. Significant additional investment is therefore likely to be necessary to ensure that there are concerted and targeted efforts to deliver Target 1 by 2020.

DISCUSSION

6.1 Confidence in the results

The confidence levels associated with the different estimates and activities vary. There are also varying gaps in the evidence. These are summarised in Table 6.1 below.

Overall however, the estimates have been discussed and refined through discussions with various organisations. On the basis of these inputs, there seems to be general agreement that the estimates are reasonable, if read alongside the appropriate caveats that they are subject to change and might not always be appropriate in all contexts.

Resource needs estimated here have been compared against a comprehensive, on-going awareness raising campaign which suggests that the results from this study are in line with experience in this area (see Section 6.1.2).

Table 6.1 Confidence levels and gaps associated with estimated expenditure of the different activities

Activity	Confidence levels associated with estimated expenditure	Gaps in the evidence and further research needs
Strategy	**HIGH** A considerable amount of relevant evidence was available to estimate the average cost of developing a national strategy a high level of confidence. Moreover, there are relatively few variables that could influence the resource needs (largely staff costs, staff time, and the extent of the stakeholder consultation that is conducted to inform the strategy).	None
Survey	**MEDIUM** A sufficient amount of relevant evidence was available to estimate the average cost of conducting a survey in different country contexts, with a reasonable level of confidence.	More accurate estimates could be developed if market research companies were contacted, who could then assess country-specific needs, methods and costs (e.g. IPSOS).
Workshops	**MEDIUM** There is a reasonable level of confidence associated with the assumptions made to estimate the cost of a workshop in a higher income country. For lower income countries, there is a reasonable level of confidence that past experience is a good indication of potential future costs. However, there are a considerable number of variables that could influence the costs of a workshop depending on its design which could significantly alter the resource needs.	More work could be done to better understand the variables which can influence the cost of a workshop, and how these vary in different country contexts. However, there is a limit to how much can be done as workshops will have to be designed to suit specific needs, which cannot be determined a priori and will depend on what is decided are the priorities in the national strategy.
Training programmes	**LOW** Although some evidence was identified on which to base estimates of resource needs, there are a significant number of variables that could influence the costs of a training programme. Therefore the cost of running training programmes in different countries could only be estimated with a limited degree of confidence.	More examples of training programmes and their associated costs could be identified. A better understanding of the different variables which influence the costs of training programmes, and the way in which they influence costs would be useful. However, there is a limit to how much can be done as training programmes will have to be designed to suit specific needs or specific audience types, which cannot be determined a

Activity	Confidence levels associated with estimated expenditure	Gaps in the evidence and further research needs
		priori and will depend on what is decided are the priorities in the national strategy.
Events	**LOW** It proved difficult to identify the costs associated just with running specific events (in most cases these costs were subsumed within others as part of a wider awareness raising campaign). There is therefore a limited amount of evidence on which to base the estimated resource needs. Moreover, there are a number of variables which can influence the cost of an event.	More examples of events and their specific costs could be identified. A better understanding of the different variables which influence the costs of events, and the way in which they influence costs would be useful. However, there is a limit to how much can be done as events will have to be designed to suit specific needs or specific audience types, which cannot be determined a priori and will depend on what is decided are the priorities in the national strategy
Integration into education	**MEDIUM** The estimate is based on on-going experience by UNESCO in integrating environmental issues into education and therefore can be translated to the integration of biodiversity into education with reasonable levels of confidence.	More information can be obtained from UNESCO with regard to other programmes of integrating issues into education (e.g. health).
Mass media campaign	**LOW** Although many examples of media campaigns were identified, associated costs vary significant. The resource needs for conducting a media campaign can be affected by a whole range of variables, making it very difficult to arrive at a "general estimate" of the associated costs.	More work could be done to arrive at average estimates for the costs associated with specific types of activities, e.g. TV, radio, audio, press, digital. However, without a better understanding of the specific needs, target audiences and purposes of a mass media campaign, it will be very difficult to improve on the estimated costs. There is, therefore, a limit to improving the estimates of resources needs, until a national strategy is put in place which will inform its design and implementation.

6.1.2 Comparing the findings with experience from other awareness raising campaigns

Drawing on experience from Rare Inc and the implementation of the Pride Campaigns suggests that the resources needed to implement comprehensive awareness raising programmes such as the Pride Campaigns are in line with those found here.

For instance, each Pride Campaign requires an investment of $350,000 over two years. These include resources for barrier removal ($50,000), training (Master of Arts in Communication), as well as monitoring and evaluation alongside the measures needed to deliver the campaign. A single country (e.g. as in the Philippines) might require four cohorts of 15 campaigns each to target a specific population, in this case coastal fishers. In total, this would amount to $21 million for a single country to implement an awareness campaign which aims to reach 12% of a target population (which is the level that is deemed necessary for increased awareness and behaviour change to become viable in the "early adopters" and thus begin to become embedded in social norms).

This estimate of $21 million per country is well within the range of per county resource needs estimated in this study (generally between about US$10 and US$40 million for most countries).

6.2 The importance of different audiences and the impact on resource needs

As mentioned in Section 2, different activities considered in this assessment are suited to different audiences. Decisions therefore about which audiences should be targeted will influence the relative weight given to the different activities in a campaign.

Discussions with different stakeholders have consistently highlighted the need for activities which target policy makers and government officials in key ministries, in order to build the necessary political will for action and to improve political decision making. There should, therefore, be a strong emphasis on workshops and training programmes which target these kinds of stakeholders.

Workshops can also be very cost effective if they are used to target communication multipliers (i.e. credible and influential communicators). By engaging with them and bringing them on board, they can then be relied on to disseminate the message to other audiences. Workshops can therefore provide very good value for money if used appropriately, as the resource needs could be reduced by adopting a more targeted approach.

For instance, drawing on the experience of Rare Inc. and the new approach they are testing, suggests that a programme which targets communication multipliers such as this which is designed to raise awareness (but which does not address economic, social, political or legal barriers which are key to turning awareness to behaviour change), could require global resource needs of roughly $50 - $60 million. This estimate does not, however, take into account the resource needs of the trainees and the campaigns they would then run as a result. This programme would, essentially, involve 'training the trainers', whereby 200 ten one-day workshops are held a year, which aim to train 5,000 communicators in CEPA. It is estimated that these communicators could then reach 125 million people in subsequent campaigns. Over the five year period (2015 – 2020), this programme would then provide the capacity necessary to reach and raise the awareness of 10% of the earth's population (625 million people). This kind of targeted approach does therefore provide considerable value-for-money in that relatively moderate resources are needed to reach a large number of people aimed at raising awareness. Barriers to change would need to be addressed for that awareness to be turned into behaviour change, and as noted above, this programme does not take into account the additional resources needed by the trainees who then conduct subsequent campaigns.

Although it is clear that such targeted campaigns are likely to be more cost effective than some of the other activities, it is equally clear that many of the other actions are also important and should not be neglected. For instance, it was noted that the importance of engaging with the wider public (e.g. through wider events and mass media campaigns) should not be underestimated given the significant influence that public opinion can have on policy development and political will. Nonetheless, with regard to the wider public, it was noted that mass media campaigns are less likely to be as effective as activities which engage more closely with specific stakeholders; as mentioned, broad and shallow activities are less likely to have a long term impact than activities which are deep and narrow. Where resources are limited therefore, the added value of, need for, and benefits resulting from, a mass media campaign should be closely examined to determine whether those resources are better invested in other, more targeted, activities. In order to ensure more specific activities are effective, the necessary groundwork needs to be done to establish which audiences should targeted and which messages will resonate with them most.

Reaching other types of (potentially harder to reach) stakeholders are also crucial, especially children and young adults given that their actions will have long-term impacts. Shaping their attitudes and behaviour is therefore an important element in implementing an effective awareness raising campaign. Consequently, regardless of other elements of a campaign, all countries should invest in integrating biodiversity into education programmes.

Overall, as discussed in Section 4.2, establishing what audiences to target during the development of the national strategy will therefore be a crucial first step in designing and shaping the awareness campaign for each country.

6.3 Benefits of delivering the Target and ensuring its effectiveness

Raising people's awareness can potentially have significant benefits, if this translated into a change in attitudes or changes in behaviour (see Figure 6.1). Raising awareness, especially of the public for instance, is often considered the first step to changing policy. Poignant or hard hitting messages and campaigns can therefore have significant impacts.

Links between awareness, attitudes, behaviour and biodiversity loss

However, although it is clear that awareness is a crucial component in reducing the drivers of biodiversity loss, the diagram above does illustrate the number of links, and therefore the number of assumptions, associated with expecting engagement and information provision to result in reduced pressures on biodiversity loss. Whilst awareness-raising is therefore clearly necessary for reducing drivers of loss, awareness-raising alone is unlikely to be sufficient on its own to lead to action.

Despite obvious benefits, increased awareness from information provision and engagement does not *necessarily* lead to changes in attitudes or behaviour. Early behaviour change models which were, for instance, based on the assumption that information alone would lead to behaviour change (i.e. 'information-deficit' models of behaviour), have been widely criticised on the grounds that individuals rarely act as 'rational actors' (Jackson, 2005). The fact that internal motivations and intentions do not always translate into actual behaviour has been coined by environmental psychologists as the 'value-action gap' (or intention-action gap, and more recently, the Behaviour-Impact Gap) (see, for example, Kolmuss and Agyeman 2002; Csutora, 2012). Social psychology research shows that behaviour is, in fact, a result of complex interactions between multiple factors – some internal motivations, and other factors external to the individual. It is likely therefore that this 'gap' is a result of other factors getting in the way of changes in behaviour; internal factors like habits and skills, social factors like norms, and external resources including money, are all potential reasons which can explain why increased awareness and better intentions rarely result in changes to behaviour.

Much will also depend on the presence of enabling factors such as having the necessary infrastructure available to support the desired behaviour change. An important prerequisite for behaviour change, therefore, is that people are actually capable of implementing the desired actions. Awareness of biodiversity, its important and how to use it sustainable will not alone translate into behaviour unless people also have the resources and conditions necessary to undertake the appropriate actions.

The assumption that greater information will lead to greater environmental action therefore fails to recognise the importance of contextual factors, psychological antecedents and the social ecology within which behaviour takes place (Halpern et al., 2003). From this perspective, the role of individuals and their motivations becomes incidental, and instead the focus is on reconfiguring other elements – for instance, by changing the physical infrastructure, or the policy frameworks, or the social meanings of a particular practice. Looked at in this way, information campaigns designed to change attitudes are unlikely to deliver a lasting change in behaviour without also at least considering these other factors.

Awareness raising and pro-environmental behaviour change then becomes about more than just the provision of information. Other considerations are at least as critical, including an appreciation of the barriers created by context and habitual routines, the need to frame information in ways which nudge the audience towards shared goals, and also the importance of understanding and actively engaging with the target audience.

It is therefore crucial that clear objectives are established when designing awareness campaigns as part of developing the national strategy to deliver Target 1, in order to identify the key target groups and the key changes in behaviour that are required. A comprehensive and effective plan can then be designed (taking into account the factors noted above such as barriers to change, social norms, enabling conditions, etc.) to deliver changes in behaviour, as well as increased awareness levels.

Evidence suggests that awareness-raising activities which therefore engage more closely and directly with an audience are likely to be more effective, as they will provide a better understanding of the audiences' needs and circumstances. An example of such a successful campaign, and the limitations of adopting an "information-only" approach are shown in the case study box below. Campaigns which therefore aim to better understand the needs and behavioural barriers of a target audience are much more effective (for examples see *COI, 2009: Communications and behaviour change*[13]).

Encouraging water efficiency

As a consequence of lawn watering, summer water use can rise 50% relative to other times of the year. In an effort to offset the cost of building a new water-processing plant, Durham Region, Ontario, developed a community-based social marketing strategy (i.e. environmental programs based on psychological expertise) to reduce water use by 10% (Durham Region, 1997). Through survey techniques and direct observation, barriers to water-efficient lawn care were identified. Pilot households were divided into two groups. Householders in the first group were visited by a student employee on bicycle who spoke to residents about efficient water use. Although psychological knowledge was not used to shape the presentation of this information, residents were provided with a water gauge (one identified barrier was that residents were unaware of when they had watered their lawn adequately) and a prompt that was to be placed over the outside water faucet that reminded residents to water their lawn on either odd or even calendar days based upon their house numbers and to water their lawns only when it had not rained in the previous week. Further, these residents were asked to sign commitments that they would water their lawns only on odd or even days and that they would limit their watering to one inch per week (72% of those approached made these commitments). Meanwhile, those householders who were in the "information only" condition were provided with an information packet on efficient water use. Compared to baseline measurements, observation of residents indicated that those householders who were visited by cyclists decreased watering by 54%, whereas those in the "information only" control group increased lawn watering by 15%. Further, watering lawns for longer than 1 hour decreased by 66% when householders were visited by a cyclist, whereas it increased by 96% in the other condition. In total, this program cost $88 (Canadian) to deliver per household, for a total program cost of $80,000. Durham Region calculates that the achieved reduction in peak water consumption allowed 250 new homes to be serviced with a savings in water plant development costs of $945,000.

Source: Taken from McKenzie-Mohr, D (2000). Promoting Sustainable Behaviour: An Introduction to Community-Based Social Marketing. Journal of Social Issues, Vol. 56, No. 3, pp. 543–554

A potential way forward might be to focus efforts on raising the general awareness of the wider public in the early years of a campaign (e.g. though a mass media campaign), but thereafter to more directly engage with, and target, specific audience types using more interactive (and therefore more effective) methods, though the use of, for instance, workshops, education and training programmes based on the priorities that are identified in the national strategy. Moreover, approaches (e.g. social marketing techniques and new social media) which can tap into social norms and a sense of 'community spirit', and which create a sense of solidarity and provide people with tangible actions that they can undertake, are likely to be more effective than methods which target isolated individuals and which focus solely on information provision.

It should also be noted that all of the above measures will be less effective without the necessary political will to drive the implementation of these activities.

[13] Available from: http://coi.gov.uk/documents/commongood/commongood-behaviourchange.pdf

Overall it is clear that awareness-raising is only the first step in a campaign to change behaviour; other activities are necessary to take advantage of the attention generated in order for the campaign to have a longer-term impact and to increase the likelihood that increased awareness leads to changes in behaviour.

6.4 Funding opportunities

There is, potentially, considerable scope for innovative funding sources to be used in some of the awareness-raising activities discussed above. Hence while some activities might seem expensive (e.g. involving a widespread and comprehensive mass media campaign), not all of the investment would have to come from public agencies. The scope for partnerships in this area is considerable, both through working with private companies (e.g. through sponsorship) and through coordinating efforts with NGOs. The wide range of existing initiatives which are already on-going in this sector, especially by national and international NGOs (e.g. Greenpeace, WWF, Friends of the Earth), provide a number of opportunities to tap into, and build on, these efforts.

There are, for instance, a number of existing examples (see the case study box below) which illustrate the potential for, and benefits of, partnerships between different stakeholders (public/private; private/NGO), and the potential role that the private sector can play in raising awareness of biodiversity.

Where public funding is required, it does not necessarily have to come from the 'traditional' environmental sources; funding for education initiatives for instance could come from the budgets of other specific agencies or relevant Ministries (e.g. the Ministry of Education rather than the Ministry of Environment). Some countries may also have access to national Environment Funds to provide partial funding for environmental awareness and education

Moreover, in the case of "social advertising" (i.e. the promotion of issues that are relevant for society as a whole), it is often possible to negotiate considerable media discounts or additional cost-free advertising slots with the media. In some media, social advertising is entirely free of charge. It is therefore possible in many instances possible to persuade media sources to donate time, space and even creative talent as part of their individual contribution to the importance causes such as promoting biodiversity. Moreover, finding a champion among media sources that is willing to be the first to publicize the campaign can lead to cooperation from other media particularly competitors.

There are, therefore, a range of options to consider which may reduce the costs of awareness raising activities.

Examples of private funding for awareness raising

DANONE/Evian Fund for Water (Ramsar & DANONE)

In 1998, the DANONE Group, under its flagship water brand, Evian, and the French Global Fund for the Environment agreed on the creation of a fund, financed by Group DANONE and in favour of the Ramsar Convention, with the main objective to "take action from the mountains to the sea for water resources and their quality". The DANONE/Evian Fund for water was created as an action plan to promote education, training and communication for the implementation of Ramsar's Strategic Plan. The Fund would include 4 areas of action:

- information (for the different stakeholders);
- communication and public awareness;
- training and technology transfers; and,
- courses and seminars.

Since its inception, the DANONE/Evian Fund was the main source of funding for producing communication material for World Wetlands Day (WWD, 2nd February each year). With the help of the Fund, the Ramsar Secretariat has been able to produce thematic material to be distributed around the world for WWD. But the Fund was also used for more specific issues like direct public awareness through information and interpretation centres. Through the Ramsar/DANONE

partnership, the "Maison Ramsar de la Baie de Somme", in partnership with Conservatoire du Littoral, and the "Pré-Curieux" site, in Evian, were created in France. These two interpretation centres have a common aim: informing about and promoting the Ramsar Convention and its actions with local/regional specific examples and raising awareness on the importance and usefulness of wetlands locally and globally.

The Fund has also allowed the Secretariat to produce specific material (publications and exhibitions) to raise awareness on Ramsar's mission and philosophy. Finally, the DANONE/Evian Fund also supported the wish of the Secretariat to recognize and honour "wetland conservation excellence" around the world. The Ramsar Award, consisting of a $US10.000 prize in three categories (education, science and management) is given, every 3 years, to any individual, group or organisation particularly involved, though their work or actions in conserving wetlands with a long-term view.

Sky Rainforest Rescue (Sky & WWF)

Sky and WWF are working together to help save one billion trees in the state of Acre in the Brazilian Amazon in order to improve livelihoods for poor families, protect habitats for threatened species and help to combat climate change. Sky will be able to use its presence in one in three homes to drive awareness of tropical deforestation and raise money through its programming and marketing reach. WWF is able to use its conservation expertise to develop and manage the project on the ground, allocate funds and work with government and local communities to ensure the campaign's success.

Source: The Ramsar/DANONE Partnership: How can private sector help to implement an international convention to conserve wetlands? (Available from: http://earthmind.net/biotrade/docs/wrk/ramsar-june2005-danone-partnership.pdf) ; Sky Rainforest Rescue: http://rainforestrescue.sky.com/our-campaign

6.5 Further research needs

Given the limited scope of this assessment, there is considerable scope for further research into some key areas to improve on the evidence and the analysis.

There is scope both for additional research to supplement and complement the analysis which has already been conducted for this study (i.e. to improve the evidence base), as well as for additional research to be completed into areas which have not been covered in sufficient detail in this study (i.e. to fill any remaining gaps in the analysis).

For instance, to improve the evidence base, additional research should be conducted into:

- The resource needs associated with some of the activities identified here, especially where confidence levels in the current estimates are low (e.g. mass media campaigns; training programmes; workshops; events; integration into education).
- How the resource needs associated with the activities might be affected if other characteristics of a country are taken into account (e.g. economic structure, existing institutions / infrastructure). Moreover, although income and population size have been briefly assessed in this study, more research is also needed to develop a more nuanced understanding of how these factors affect resource needs.

In terms of the remaining gaps in the analysis, additional research is needed to assess:

- The current levels of expenditure on the different activities identified here in order to accurately gauge what "additional" investment is needed beyond that which is already on-going;
- The benefits associated with raising awareness on biodiversity, especially for other Targets and policy areas. An understanding of how delivering this Target might facilitate the delivery of others (including whether achieving Target 1 might affect the resource needs of the other Targets) would be particularly important;
- The different types of funding sources and mechanisms which might be available to support the delivery of this Target, and the extent to which the resources needed to deliver this Target will need to come from public funding (which might be a relatively small proportion);

- Which of the activities identified in this study deliver the best value-for-money in terms of their impacts and the ability to ensure that awareness actually leads to action. As part of this, an assessment of the different elements that lead to a successful and effective campaign would also be useful;
- What other measures or activities may be needed to translate increased awareness levels into behaviour change, how these could be implemented and what their resource needs might be. These could, for instance, include other opportunities beyond those considered here for building capacity in order to support awareness raising processes, as well as actions to support broader sharing and learning;

Table 6.2 Gap analysis

	Target 1 – Raising global awareness on biodiversity
Strength of evidence on resource needs	Medium – Low. Some evidence has been identified on the resource needs for the different activities, although available evidence on some activities are weaker than others. Some need for further research.
Strength of evidence on current levels of expenditure	Low. Very little evidence could be identified on the existing levels of expenditure on the activities identified in this study. There is therefore considerable need for further research.
Other Targets	
Links to other Targets	Strong links to all other Targets – delivery of Target 1 should support and facilitate the delivery of others. .
Evidence on potential co-benefits	There is likely to be considerable benefits to the delivery of other Targets from the delivering of Target 1. Moreover, delivery of Target 1 should reduce the resource requirements of achieving others. More research could be undertaken to better understand the linkages and the extent of the co-benefits.
Other policy areas	
Related policy areas outside of biodiversity	Raising awareness of biodiversity should serve to raise the profile of other environmental issues more broadly (e.g. water resource, climate change). Moreover, it would also serve to highlight the links between biodiversity and other policy areas through, for instance, noting the importance of ecosystem services (e.g. for health, poverty alleviation).
Evidence on potential benefits to other policy areas	No concrete evidence has been collected on the potential benefits to other policy areas. Further research could therefore be conducted.