

Outreach -

***bringing Earth sciences
to everyone***

Earth sciences for society



www.esfs.org

Prospectus for a key theme of the International Year of Planet Earth



What is this brochure for?

This is a prospectus for the Outreach activities of the International Year of Planet Earth 2005-2007. It describes the way in which the Year intends to operate its Outreach scheme, and how you can go about applying to become involved – and to claim financial support for your Earth science outreach initiatives.

Who should read it

This prospectus is aimed at anyone looking for support for Earth science outreach activities (as defined below) and at potential sponsors of the Year wanting to learn more about how the Year intends to satisfy this half of its remit.

To find out more...

Every one of the International Year's nine science themes has a prospectus like this one. To find out about the research themes, please consult www.esfs.org (where all our publications can be found).

What to do next...

If, having read this brochure, you feel you have an Earth science outreach project that might be eligible for funding under the Year, please go to www.esfs.org and download the appropriate Expression of Interest (Outreach) form, and follow the instructions on submitting this to the International Year. (If you cannot find such a form, it means that it is not ready – please keep visiting the site.)

The greatest show on Earth

The International Year's Outreach Programme will work alongside its Science Programme and have equal resources to support activity within its remit. However, the International Year is as much about public awareness as it is about science. Indeed if successful, it will constitute one of the biggest international promotional initiatives ever launched for any science subject.

The Science Programme will fund research projects suggested by researchers within nine broad themes, each described in a booklet like this one and all available on www.esfs.org. Outreach programmes fundable from the International Year shall all satisfy the same essential characteristics as apply to its research programmes. These are set out below. It is imperative that you make every effort to explain how your outreach project conforms to these essential characteristics.

To be eligible for funding your outreach initiative should:

- emphasize the clear relevance and **impact of Earth science on human affairs**
- have a **geoscientific dimension**
- emphasize principles of **sustainability**
- stress holistic aspects of **Earth System Science**
- be **global in relevance**, no matter how local in application
- have demonstrable **potential for developing countries** and others with a need to participate in, and benefit from the applications of Earth science knowledge
- be based upon the key questions of the International Year's **nine principal science themes**
- be organised in such a way as **to build on existing money**, so that International Year funding is (wherever possible) supplementing existing funding or building upon projects already funded.
- designed to make use of most **modern technology**, where appropriate (i.e. be deliverable electronically)
- be substantially **achievable within three years**
- capable of producing **clear "deliverables"**
- **not include salary costs***.

**Detailed instructions on what constitute "salary costs" will be included in the detailed instructions to applicants. However broadly speaking, the Year will not pay proportions of the salary costs of employed persons working on Year-sponsored projects, nor to employ new staff to undertake them. Honoraria to specialist contractors, such as science writers, designers or artists, for example would be allowed.*



Science programme

A panel of 20 eminent geoscientists from all parts of the world decided on a list of nine broad science themes - Groundwater, Hazards, Earth & Health, Climate, Resources, Megacities, Deep Earth, Ocean, and Soils.

The next step is to identify substantive science topics with clear deliverables within each broad theme. A 'key-text' team has now been set up for each, tasked with working out an Action Plan. Each team will produce a text that will be published as a theme prospectus like this one.

A series of Implementation Groups will then be created to set the work under the nine programmes in motion. Every effort will be made to involve specialists from countries with particular interest in (and need for) these programmes.

For more information - www.esfs.org

The essential characteristics can, however, be interpreted with some freedom, as befits the diversity of initiative that we hope to fund. For example, the concept of a "clear deliverable" will vary widely depending on the activity being sponsored. This might be a clear, single "job done" such as a piece of educational material contributing to the Year's education legacy. A conference on (or near to) one of the Year's themes, for example, could apply for support so as to allow attendance by delegates from developing countries - their attendance constituting a "clear deliverable".

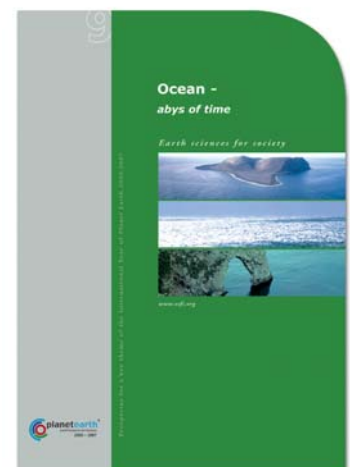
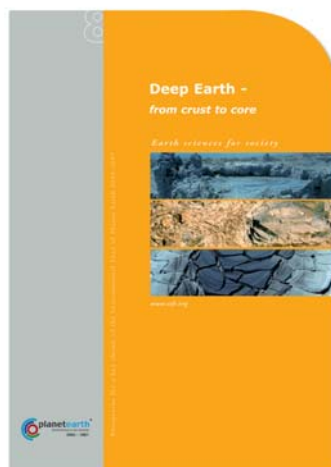
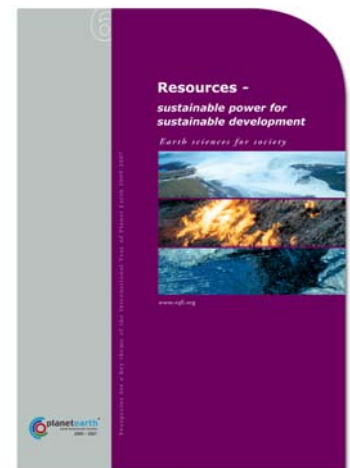
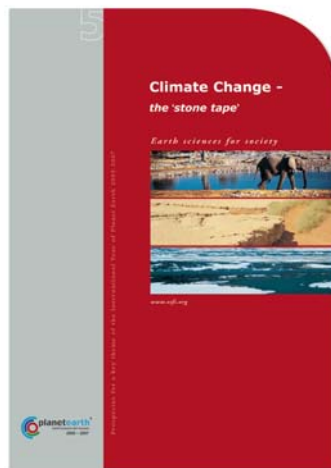
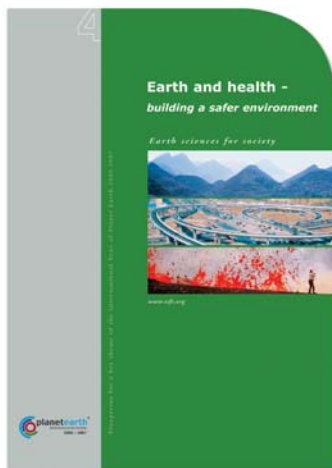
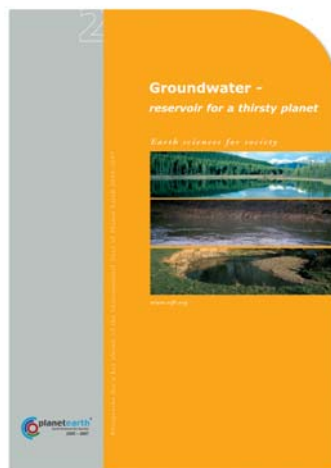
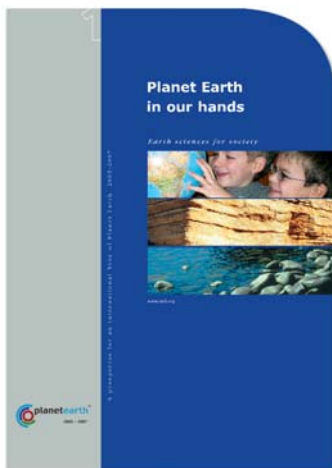
The major themes - maintaining congruence

The International Year has nine major scientific themes under which its research budget is allocated.

- **Groundwater** - towards sustainable use
- **Hazards** - minimising risk, maximising awareness
- **Earth and Health** - building a safer environment
- **Climate** - the "stone tape"
- **Resources** - sustainable power for sustainable development
- **Megacities** - going deeper, building safer
- **Deep Earth** - from crust to core
- **Ocean** - abyss of time
- **Soil** - the thin brown line

In considering bids for support under the Outreach Programme of the International Year, we will generally look for clear congruence between any outreach proposal and one or more of these scientific themes. At the time of writing, another theme, 'Earth and Life' is being actively considered.

- The International Year is as
- much about public awareness
- as it is about science ●



Who is behind the International Year?

Initiated by the International Union of Geological Sciences (IUGS) in 2001, the proposed International Year of Planet Earth was immediately endorsed by UNESCO's Earth Science Division, and later by the joint UNESCO-IUGS International Geoscience Programme (IGCP).

The main aim of the International Year - to demonstrate the great potential of the Earth sciences to lay the foundations of a safer, healthier and wealthier society - explains the Year's subtitle: Earth sciences for society.

The reactive mode is expected to be the dominant mode of expenditure from the Outreach Programme's budget

Top down, or bottom up?

The only successful way for a scientific initiative as broad the International Year to work is to be responsive to demand from the grassroots. The science themes are there to act as a "filter mechanism", directing proposals to broad areas thought to be potentially fruitful scientifically and of particular societal importance. However, what the scientists propose remains up to them.

Outreach - a bidding process

Just as the Science Programme would not prescribe to scientists how they should conduct their research, so the Outreach Programme will operate (mainly) responsively by *inviting bids for support* at various levels from educationalists, production companies, collectives, scientific organisations, etc. The Year intends to mobilise others in support of its objectives. However, it will also take the initiative where it feels this to be necessary. Wherever possible it will seek to work (in both modes) in partnership.

The Year's Outreach programme will therefore operate in two modes:

- Reactively, responding to outreach bids received, evaluating their merits according to International Year criteria, and deciding whether to fund.
- Proactively, identifying particular projects and finding the means to prosecute them (e.g., commissioning educational materials, organising competitions, commissioning works of art).

The reactive mode, for which this prospectus is mainly designed, will involve receiving Outreach project bids and supporting materials, consulting knowledgeable referees where necessary, delivering a verdict, and authorising the bidder to proceed on the assurance that money shall be forthcoming once the work is completed*. The reactive mode is expected to be by far the dominant mode of expenditure from the Outreach Programme's expected \$10million budget

**Money "up front" may also be paid (for example, to support the attendance at related conferences by scientists from countries with weak currencies) but only when absolutely necessary, and always with assurances of full documentation post-event.*

Outreach prospectus

This prospectus is therefore aimed at a very diverse range of groups, including geological societies (of all kinds; national, local; professional, amateur), scientific unions, universities, education authorities, science teachers' organisations of all kinds at all levels, TV and radio programme makers, science journalists, arts bodies etc., who may wish to bid for support.

As well as setting out the essential characteristics and the science themes (above) and helping applicants towards the Expression of Interest (Outreach) form on www.esfs.org, it also gives examples of activities that might be put forward for support, as guidance to applicants.

Language

The medium of the *application process* shall be English, though there shall be no restriction on the language of any envisaged "product", nor of any supporting materials offered at the bid stage.

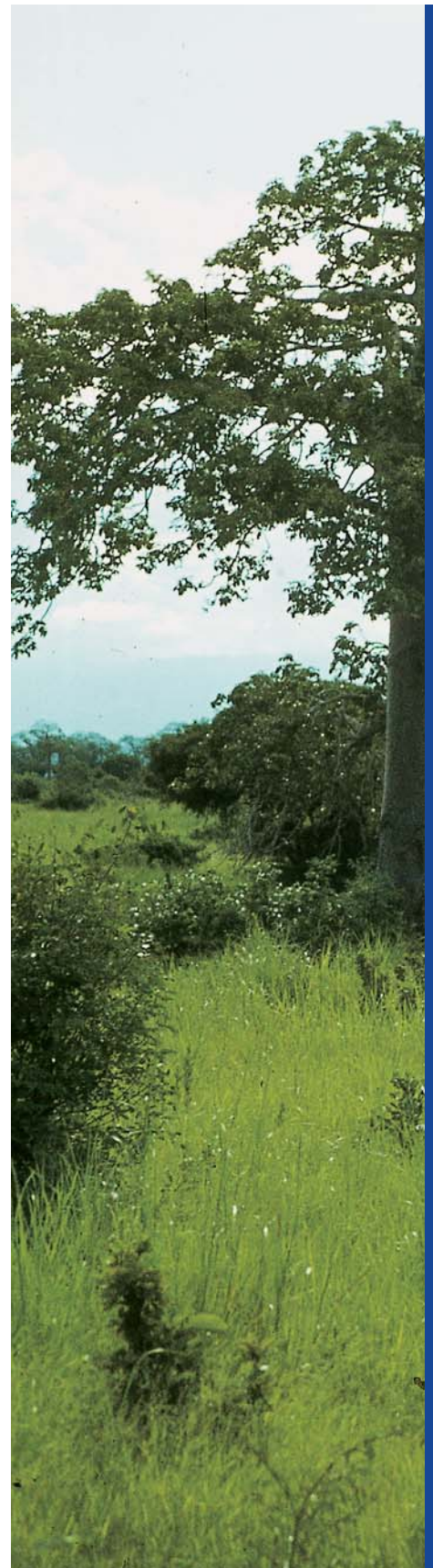
How will bids be examined?

Earth Science Outreach proposals received will be evaluated and where necessary sent to specialist in that mode of scientific Outreach for expert comment. Reports will be sent back to the Year's Organisation, which will then decide on which to fund. All bids will be screened for compliance with the essential characteristics, and congruence with the Year's science themes.

The application and submission process will be continuous, and will not have "rounds"; though there will be a cut-off date beyond which no further applications will be entertained.

Successful and unsuccessful bids will then be returned to the proposers under cover of a letter containing any of the Outreach Programme's comments, conditions etc. Unsuccessful bids may be asked to reapply pending modification.

Proposals that require funding urgently - e.g., from a TV production company that itself has a bid deadline to meet - will be fast-tracked at the discretion of the Chairman of the Outreach Programme.





Appropriate scientific conferences should be

offered the opportunity to bear the Year logo



What is Outreach?

The International Year uses the collective term “Outreach” to denote three distinct (potential) areas of activity:

- **EDUCATION**
- **MEDIA RELATIONS**
- **POLITICAL LIAISON.**

The Year expects to fund initiatives that communicate the main messages of the year, or the science of its nine research themes, through education, the media, the arts, and through liaison with governments and departments of State (civil service).

Plugging effectively into these three broad communication professions will allow the Outreach Programme to perform the main task

set it by the International Year - namely, “to improve awareness generally of the huge potential within the Earth sciences to create a healthier, safer and wealthier society”.

This broad and ambitious goal requires that the International Year achieve three things:

- **A better instinctive sympathy among the wider public for Earth scientists’ work**
- **Better integration of Earth System Science within curricula, and greater academic visibility of Earth sciences within national education systems**
- **Better understanding about the potential of Earth science for better planning decision-making among politicians and civil servants.**

These three requirements correspond to the three subdivisions of our definition of outreach.

- **Free listings on the Web site,**
- plus more tangible benefits for**
- those who wish to claim support** ●

What sorts of Outreach activity?

Here is a short list to illustrate the kinds of activities that the Year hopes to support.

- **Events, event listing, and badging**

Appropriate scientific conferences (in addition to those specifically organised by the Year or its science programmes to discuss research commissioned by the Year) should be offered the opportunity to bear the Year logo and be listed on www.esfs.org as a free aid to their promotion.

Most conferences are run on very tight budgets without major sponsorship and do not offer attendance support, which is often a major problem for some nationalities. The Year can offer funds towards certain purposes that conform to its boundary conditions.

For example, we would not pay for a drinks reception, but we would consider supporting attendance by scientists from countries with weak currencies. Grant money will be paid in Euros, administered by the Conference organisers and properly accounted for in their returns.

All conferences accepting grant money for any purpose will be required to place the Year logo and Web site URL on all their materials, and to make Year literature available at their venue.

- **Cooperation for increased visibility**

There are many different (often concurrent) days weeks, months and years of this and that, promoted by governments, intergovernmental bodies, scientific unions, or commercial consortia. Many of these may have objectives that are congruent with those of the Year. The International Year of Planet Earth would like to list all these in its on-line events calendar, and offer their organisers the chance to affiliate with the Year.

The same opportunities as for conferences (above) can be made available - free listings on the Web site, plus more tangible benefits for those who wish to claim support for all or part of their activities.



What does the International Year's logo mean?

The International Year is intended to bring together all scientists who study the Earth System. Thus, the solid Earth (lithosphere) is shown in red, the hydro-sphere in dark blue, the biosphere in green and the atmosphere in light blue.

The logo is based on an original designed for a similar initiative called Jahr der Geowissenschaften 2002 (Earth Sciences Year 2002) organised in Germany.

The German Ministry of Education and Research presented the logo to the IUGS.



The International Year

Initiated by the International Union of Geological Sciences (IUGS) in 2001, the proposed International Year of Planet Earth was immediately endorsed by UNESCO's Earth Science Division, and later by the joint UNESCO-IUGS International Geoscience Programme (IGCP). The main aim of the International Year - to demonstrate the great potential of the Earth sciences to lay the foundations of a safer, healthier and wealthier society - explains the Year's subtitle: Earth sciences for society.

How will it work?

To achieve maximum political impact, the IUGS-UNESCO team aims to have the International Year proclaimed through the UN system, targeting 2006 as the Year itself. Its ambitious programmes cannot, however, be implemented in twelve months. We now expect the Year's activities to begin in 2005 and culminate in 2008.

● Educational material

Teacher and pupil materials, linked to the themes of the Year and written by appropriately qualified professionals in education, should be made available via the Web site as html pages and as downloadable PDFs. Recycling existing materials could play an important part here. Educational literature, especially that produced before the creation of the Web, tends to go out of print long before outliving its usefulness. If you would like support to bring good educational material back into permanent use, then you should talk to us.

All such material reproduced with help from the Year would have to carry the Year logo prominently throughout, be linked to the Year's Web Site www.esfs.org, and carry reciprocal links.

● Citizen science - involving the public in research

Engaging the public in scientific activities is a fashionable method of demystifying the work of science and scientists and making the public feel involved - that it "owns" a bit of science. In many sciences, zoology and botany in particular, the activities of amateur scientists in reporting sightings, for example, remain important and can be easily harnessed by some scientific activities - such as population dynamics, ecology, and other environment-related studies. We encourage researchers and educationalists to do so - and to apply for us for support.

Mass experiments

The Outreach Programme would be interested in hearing from any project involving mass experiments that encourage the participation of the public in Earth science research congruent with the aims of the Year.

Scientific exhibitions

The Year will be interested to receive applications for support from curators and exhibition designers about fixed and travelling science exhibitions congruent with the Year's scientific themes and the essential characteristics.

● Competitions

Journalism and writing

The Outreach programme is interested to hear from those who organise science writing prizes, as we would be interested in sponsoring awards for categories of science communication illustrating appropriate subjects congruent with the aims of the Year, in any medium.



**Engaging the public in scientific activities
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- **The Year is keen to ensure**
- that the public is properly**
- engaged with its aims** ●



Photography

Photo competitions offer a means of involving the public (through amateur sections). The Outreach Programme would be interested to sponsor Earth Science related photo competitions of all sorts and at all levels, in return for (in the case of amateur photographers) the perpetual free use of any winning or commended entry.

The Year is keen to ensure that the public is properly engaged with its aims, however, so the entries in any competition that we sponsor will have to be specifically intended to illustrate some aspect of one of the Year's nine scientific themes. This means that all those entering will have to pay attention to the issues underlying the year, and think creatively about how their pictures could be said to illustrate them. All entries must be accompanied by a short artist's statement, expressing why they think their picture is relevant.

Best scientific paper

The Year is interested in offering support for a prize for the best paper by a young author (under 35) that can be said to illustrate the science of any of the nine themes. These papers should have been published in peer-reviewed publications, but the work need not necessarily have had any prior connection with the Year. The purpose of the exercise is to draw the attention of young researchers to IUGS activities generally, and to the Year in particular.

- **Special magazine supplements**

The Year would be interested in sponsoring of special issues of popular scientific and general magazines on Earth science related subjects ("The state of the planet")

- **Books**

The Year will be interested to receive proposals from authors and publishers for supporting the publication of books aimed at the increasing the general reading public's access to Earth science. Children's publishers are particularly encouraged to give this idea some attention.



- **“Story ideas”**

The Outreach Programme is interested in collaborating with news organisations in promoting news stories congruent with the science themes and wider essential characteristics of the Year's activities. We are interested in developing collaborative arrangements with news agencies and providers of all kinds, to help promote current events news that illustrates the key themes of the Year. We are particularly interested in cooperating with news providers and agencies dedicated to bringing the benefits of science to the notice and service of the developing nations, who need it most, but who can afford it least.

- **Programme making**

Much scientific programme-making these days is undertaken by independent production companies who pitch programme ideas to broadcasters. Broadcasters may also commission specific, one-off series on particular themes - ancient civilizations, natural hazards, for example - or even individual programmes.

Much scientific programme-making benefits additionally from sponsorship - from foundations like the National Geographic, or successful specialist broadcasters like Discovery. Many of these bodies are now both foundations and programme makers and broadcasters. Most documentaries at the top end of the market involve firm-in arrangements between such organisations and public service broadcasters.

The Year is interested in making some funds available for programme-makers, approving projects for potential funding, conditional upon the programme going ahead in a successful bid.

- **Art commissioning**

The International Year is committed to portraying a fully rounded impression of science within the context of general culture, and is interested in sponsoring artists whose work focuses on the oneness of the Natural world, the position of human beings in relation to the Earth and Nature. We are also interested in sponsoring travelling exhibitions.

Only one Earth

The human race needs its planet. We depend on it completely, because we evolved from it, remain forever part of it, and can exist only by courtesy of the self-sustaining Earth System.

The more we learn, the more we understand that we must nurture the Earth as we would our children, for their sake.

Conclusion

These are just some of the ideas we would like to pursue, and see developed, using resources that the International Year expects to have at its disposal following proclamation. However, they are illustrations only, aimed at encouraging you to have your own ideas. We hope that they have shown you that the International Year is thinking about communication in the round, and is not restricting itself to small educational projects aimed at children.

There are many more - almost infinite possibilities. We are interested in sponsoring major educational initiatives including degree programmes. We might also wish to support the purchase of books for institutions in developing countries, or to facilitate the exchange of information between countries of widely divergent economic status in other ways.

How we use our resources is up to you.



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