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The International Year of Planet Earth in Portugal: past activities and further developments

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The Portuguese National Committee for the IYPE was created in the framework of the Portuguese National Commission for UNESCO, in April 2007. The Committee incorporated the contributions of 220 private and public organizations, mainly municipalities and educational institutions of all levels, and sponsored more than 500 activities since then. The Scientific Programme emphasized relevant cooperation between Earth scientists from the Community of Portuguese Speaking Countries, under the guidance of their National Committees (Angola, Brazil, Cape Verde and Mozambique). In consideration of the community of 230 million Portuguese speaking people, the Portuguese National Committee translated and printed the twelve brochures produced by IUGS-UNESCO, posted them on the official website (www.anoplaneta-terra.org), and supported several editions also in Braille, in order to make Earth sciences readily accessible to all citizens. As a result of these accomplishments during the IYPE triennium (2007-2009), the Portuguese National Committee was invited by the UNESCO-IUGS Corporation to co-organize Planet Earth Lisbon '09, the Global Closure Event of the IYPE, which took place in Lisbon, 20th to 22nd November 2009.

The Portuguese National Committee for the IYPE

In the framework of the United Nations Decade of Education for Sustainable Development (2005-2014), the Portuguese National Commission for UNESCO implemented the aims and objectives of the International Year of Planet Earth at the national level in September 2006. A working group made of representatives of several national organizations for research and development in Earth sciences was thus created in order to formalize the National Committee of Portugal (NC-Portugal) for the IYPE Corporation (Henriques et al., 2008a; Silva

and Henriques, 2009). Under the patronage of the President of the Portuguese Republic, and based on a representative structure, a diversified agenda of events and sustainable financial support, the NC-Portugal joined the IYPE Corporation in April 2007 (AIPT, 2007a, 2009; Henriques, 2008a; Henriques et al., 2008a; IYPE, 2009a).

For the implementation of the IYPE goals at the national level, the NC-Portugal adopted a structure of three committees – Committee of Honour, Committee of Representatives, and Executive Committee. The Committee of Honour comprised all major governmental representatives, such as the Prime-Minister, several Ministers and Secretaries of State, the President of the National Commission for the UNESCO and related Group of Members of Parliament, and Presidents of several important foundations in Portugal, such as the Calouste Gulbenkian and Mário Soares Foundations (Silva and Henriques, 2009).

The Executive Committee was composed of five Earth scientists affiliated with Portuguese universities (Minho, Trás-os-Montes, Coimbra, Lisbon and Algarve), the President of the Geological Society of Portugal and three members of the Portuguese National Commission for the UNESCO (the President, the Executive Secretary and the Programme Specialist – Science), as well as of four observers from the Ministries of Environment, Education and Science and also an observer from RTP, the public television of Portugal (Silva and Henriques, 2009). NC-Portugal was sponsored by six important enterprises operating in Portugal and committed to socially-responsible issues – CARRIS, BAYER – Portugal, Águas de Portugal, Empresa de Desenvolvimento Mineiro, EDP – Electricidade de Portugal and PETROBRAS – Petróleo Brasileiro (Brazil) and has as media partners National Geographic – Portugal and the RTP (CPAIP, 2009). Such partnerships were crucial for the dissemination of IYPE goals, namely by bringing together scientists, politicians and industrial leaders who were committed to building a safer, healthier and wealthier societies around the globe (Mulder et al., 2006).

The Executive Committee has worked as a nuclear structure to attract other private and public organizations into a broader group, the Representative Committee that could implement locally relevant events. The Representative Committee was thus composed of members belonging to different sectors, namely public and private universities, research centres, schools, foundations, institutes, municipalities, national committees of UNESCO Programmes (IHP - International Hydrological Programme, MAB - Man and Biosphere, IOC - Intergovernmental Oceanographic Commission), the private sector, a

ballet company, NGOs, associations, museums, the Naturtejo and Arouca Geoparks, agencies, Academy of Science and other Academies, Ciência Viva – Science Alive, UNESCO clubs, individuals, among others. The 220 members belonged both to private and public sectors, with NGO and other Associations particularly well represented.

The IYPE in Portugal during the triennium 2007-2009

The official opening of the IYPE in Portugal took place at the Pavilion of Knowledge (Lisbon) on November 10th, 2007, the International Day of Science for Peace and Development. The IYPE was nationally recognized by a special Port wine with the IYPE label and by a special stamp edition (Fig. 1). More than 3,000 people attended the event, and participated in diverse activities for all ages (seminars, workshops, shows, exhibitions), which were widely reported by national radio, television and newspapers. A message by the Portuguese President was read and the Portuguese translation of the 12 IYPE brochures was launched (AIPT, 2007a; Mulder, 2008). Since then, the documents have been available in hard copy and online to all the citizens, through the NC-Portugal website (www.anoplanetaterra.org) and the Corporation website (<http://yearofplanetearth.org/>). During the triennium, almost 94,000 downloads of the brochures were recorded from the Portuguese website alone. The CO₂ emitted as a direct and/or indirect consequence of the NC Launch Event were estimated (60.28 tons) and compensated for by the equivalent trapping of CO₂ at the CarbonZero® forest area of Peneda-Gerês National Park (AIPT, 2007a, b).

In the second year of the triennium, NC-Portugal produced an itinerant exhibition –“Once upon a time the Earth” - launched at the Parliament, in Lisbon, in November, 2008. The exhibit illustrated the 10 themes of the IYPE and has been presented all over the country in order to reach a broad public audience. The exhibits were displayed at schools (UNESCO ASP Net), museums, city halls, Portuguese Geoparks (Arouca and Naturtejo), the Interpretation Centre of the



Figure 2. The exhibition of the NC-Portugal at the Interpretation Centre of the Capelinhos Volcano (Azores), in October, 2009, where the Regional Government organized a special seminar on the geological heritage of the Archipelago, and announced its political commitment to support the application of the Azores Geopark to the UNESCO’s Global Geoparks Network.

Capelinhos Volcano (Azores) (Fig.2), shopping malls, UNESCO World Heritage Sites (Sintra – Quinta da Regaleira), fairs (Viana do Castelo and Lisbon), UNESCO Network of Libraries (Beja), Tapada Nacional de Mafra, Fortress of Sesimbra and the Pavilion of Knowledge (during the Planet Earth Lisbon ‘09). The exhibition will continue its tour beyond 2010, and will be presented at 31 municipalities in northern Portugal that belong to the Centre of Excellency of Education for Sustainable Development - United Nations University.

With all members of the Committee of Representatives able to post events and activities on the IYPE Portuguese website, it was possible to know who was doing what, when and where in Portugal, and it is possible now to evaluate the activities implemented (Fig. 3). Since its creation in April 2007, the NC of Portugal sponsored approximately 500 events, 84% of them included in the Outreach Programme (Fig.4), which were mainly organized by NGOs, associations, schools and universities. Local, regional and national events have made the IYPE a successful initiative because they involved people from throughout the country and generated “interest and greater awareness among the general public, decision makers and politicians about the effective application, for the benefit of human society, of the widely available wealth of information in the hands of the Earth science community” (Mulder et al., 2006, p. 83).

The IYPE in Portuguese

The IYPE, by noting that geoscientific knowledge – which “remain largely unknown to the public and often untapped by policy and decision makers” (PD, 2008, p.1) – could and should be more effectively used to promote sustainable development (Mulder et al., 2006), emphasizes the need of increasing international cooperation to mitigate global environmental problems (IYPE, 2007a). This goal is consistent with the objectives of the Community of Portuguese-Speaking Countries (CPLP – Comunidade dos Países de Língua Oficial Portuguesa), which integrates 8 states (Angola, Brazil, Cape Verde, East-Timor, Guiné-Bissau, Portugal, Mozambique and São



Figure 1 The stamp edition celebrating the International Year of Planet Earth in Portugal, where the four symbolic colours of the IYPE logo representing all constituents of the Earth System were used: green for biosphere, pale blue for atmosphere, red for the solid Earth and dark blue for hydrosphere (Mulder et al., 2006).

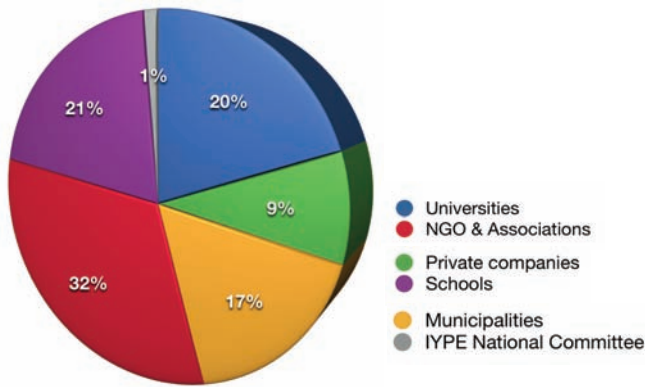


Figure 3. Percentage of activities organized by the 220 private and public organizations composing the Committee of Representatives (data from the NC-Portugal website, where each organization was referred after approval by the Executive Committee of a programme of planned activities focussed on the IYPE goals; CPAIPT, 2009).

Tomé and Príncipe) located on 4 continents (Africa, America, Asia and Europe), and representing 230 million people (CPLP, 1996, 1997, 2007). Among them, the National Committees for Angola, Brazil, Cape Verde, Portugal and Mozambique have been formally established and act on behalf of the Corporation at the national level (Mulder, 2008; Mulder et al., 2009; IYPE, 2009b). Cooperation with the NC of the Community of Portuguese-Speaking Countries has been promoted by the publication in Portuguese of 12 Brochures of the IYPE, also available online, and by the organization of the First International Conference on the Development of Geosciences in the Community of Portuguese-Speaking Countries, which was held in Coimbra, Portugal in October 2008, where the Coimbra Declaration was approved (Henriques et al., 2008b; CD, 2008). Further meetings were held and are planned for the near future - Rio de Janeiro, Brazil, October, 2009; Luanda, Angola, November, 2009; Santiago, Cape Verde, January, 2010; Bissau, Guiné-Bissau, March, 2010; Rio de Janeiro, Brazil, June, 2010 – with the goal of making existing knowledge on Earth sciences more available for the improvement of everyday life, especially in less developed countries (Mulder et al., 2006), a goal that is easier to achieve among people speaking the same language (Henriques et al., 2008a).

In consideration of all citizens of Portuguese Speaking Countries, the NC-Portugal supported and distributed, in Portugal and worldwide, several editions dedicated to children (Henriques et al., 2008c; Henriques and Moreno, 2009; Tapadinhas, 2009), editions printed in Braille (Fig. 5), and, in collaboration with

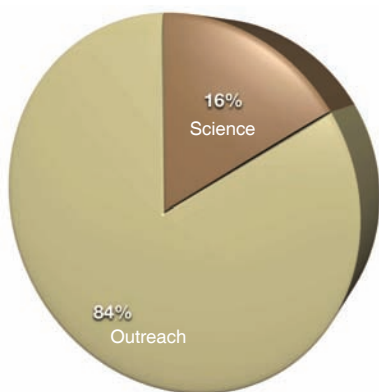


Figure 4. Scientific and Outreach events celebrating the International Year of Planet Earth in Portugal (data from the NC-Portugal website where organizers announced directly their events through a username and password delivered by the NC; CPAIPT, 2009).



Figure 5. The official IYPE logo in Portuguese, also in Braille version.

other NCs, editions on the geological heritage of remote African regions (Alfama et al., 2008). The NC – Portugal and the Portuguese Commission for the UNESCO have also supported the creation of the National IYPE Committees of Angola and Cape Verde (Silva and Henriques, 2009).

Because of the visibility, large, and diverse audience for its activities, the NC-Portugal was invited by the UNESCO-IUGS Corporation for the IYPE to host the Planet Earth Lisbon 2009, a worldwide event to celebrate the closing of the International Year of Planet Earth triennium (2007-2009), to highlight main results of the IYPE and to launch new initiatives building on the IYPE legacy (Silva and Henriques, 2009; PEL, 2009).

The legacy of the IYPE in Portugal

In terms of the number of members who have joined the Portuguese Committee for the IYPE and the events they have promoted during the triennium 2007-2009 (Figs. 3 and 4), the IYPE has been a great success in Portugal (Silva and Henriques, 2009). Other accomplishments provide further support, namely those included in the main goals of the Declaration presented at the Global Launch Event of the International Year of Planet Earth – Paris Declaration (PD, 2008). In fact, the increasingly number of articles in local newspapers, TV and radio programmes dedicated to IYPE issues, the effort by teachers and municipalities to work together in this field, the number of books and papers published by many Portuguese scientists, the production of DVDs and other media tools – all available online at the national website (AIPT, 2009) – and the initiatives of enterprises promoting their social responsibility by making Earth scientific knowledge more accessible to the public demonstrate that gradually the IYPE goals have been achieved and included in the environmental, social and economic agenda (Silva and Henriques, 2009).

Awareness of the structure, evolution, beauty and diversity of the Earth system and its human cultures inscribed in landscapes, as highlighted in the Paris Declaration (PD, 2008), has also been promoted through a positive partnership with the two Portuguese

Table 1. The increasing number of vacancies on Earth Sciences degrees available at Portuguese universities and institutes as a result of the increasing number of candidates. Earth Sciences degrees refer to Geology and related areas (e.g., Geological Engineering, Mining Engineering, Geography, Geographic Engineering, Environmental Engineering, Ocean Sciences, Teachers Training on Geology and Biology) (DGES, 2009)

Academic Year	Number of available places	Number of appliances
2006/2007	1291	736
2007/2008	1422	1162
2008/2009	1715	1485

Geoparks belonging to the UNESCO Global Geoparks Network (Naturtejo Geopark and Arouca Geopark, EGN, 2009a, b) and with the Biospheres Reserves from Azores (Corvo, Graciosa and Flores Islands, UNESCO, 2009).

Finally, the greater academic visibility of Earth Sciences within national educational systems, an important requirement assigned to the Outreach Programme of the IYPE (IYPE, 2007b), has been enhanced greatly in Portugal, as demonstrated by the increase in students selecting geosciences in Portuguese Higher Education institutions (see Table 1).

The major achievement in the implementation of the IYPE in Portugal was the shared experiences and good practices between all members of the NC, which will provide a greater visibility for the United Nations Decade for the Sustainable Development and the IYPE issues in the forthcoming years (Henriques, 2008b; Silva and Henriques, 2009).

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