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Annual Report

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1. Summary

DAMOCLES over Europe – DOE

The Arctic Ocean has come to the centre of the climate change stage. New stories abound on the loss of Arctic Sea ice, on Greenland's calving glaciers, on the Gulf Stream and the consequences for humanity, not only in terms of the impact of climate change, but also with regard to the effect on the commercial activities in the North. There is growing public interest about the Arctic, this mysterious frozen ocean of the North. The DAMOCLES over Europe Exhibition seeks to inform the general public throughout Europe about the EU funded research being carried out in the Arctic and to clarify some prevalent misconceptions about climate and the Arctic.

The DAMOCLES Mobile Exhibition, is put together by the International Polar Foundation (IPF) and the Atelier Brückner, museum designers of Stuttgart, and showcases the DAMOCLES Project, the largest EU funded research project in the Arctic Basin, with over 48 partner institutes seeking to throw light on the interactions between Arctic Ocean, ice and atmospheric mechanisms and how they influence climate.

The Exhibition was inaugurated at the Royal Belgian Institute of Natural Sciences in Brussels (Belgium) where it was on display from the 5th to the 15th of March 2007.

Since then the Exhibition has been hosted by :

The French Institute in Varna (Bulgaria);

The IPF at Tour and Taxis in Brussels (Belgium);

The European Space Agency in Frascati (Italy);

The Ice Sculpture Festival in Bruges (Belgium);

The European Research & Innovation Exhibition in Paris (France);

and currently by the University of Luxembourg (Luxembourg).

The Exhibition was extended from the original concept to make it more attractive to an international audience and to young people, through the use of innovative animations, film and design.

The Exhibition consists of a 7m x 7m square structure. The inside is a panorama of the Arctic landscape. Behind this panorama various Arctic themes can be observed through slits in the panorama. The “red-line” theme is Arctic past and present – the Arctic through history in terms of climate, science and the nature of life in contrasting warm and cold periods.

This leads in turn to a discussion of the role of scientific research in the Arctic in providing clues to the functioning of the World climate system, and ultimately why we need to observe and understand it. Answers to these questions are provided on the outside of the box.

In the middle of the installation is circular “desk”, where animations based on mathematical models, depicting different facets of the dynamics of the Arctic system are linked together to explain how data is collected and used to predict future change on the basis of present data and past experience.

For further information:

International Polar Foundation:

<http://www.polarfoundation.org>

Atelier Brückner

<http://www.atelier-brueckner.de/>

Introduction film on DAMOCLES exhibition:

http://www.polarfoundation.org/index.php?damocles_exhibitions_introductory_film/&s=no&puid=596&uid=551&lg=en

2. Activities towards meeting Project objectives

The wider objectives of the DAMOCLES over Europe (DOE) project were largely met:

1. The objective to create a stimulating and visually attractive exhibition for the general public was largely met;
2. In addition, the aim to reach out across Europe to communicate on collaborative European research efforts being conducted in the Arctic regions by DAMOCLES (*Developing Arctic Modelling and Observing Capabilities for Long-term Environmental Studies*) was met by inclusion of one southern European destination, and one eastern one in the countries visited. The exhibition was also held in large cities (Brussels and Paris);
3. Explaining global warming and its connection with the Arctic ice was also successful as visitors were compelled to move from the visually interesting inner sections to the intellectually challenging outside with doors of questions and answers on Arctic climate and change;
4. The seminar on EU research during the International Polar Year was the occasion for the inauguration of the DAMOCLES Over Europe Exhibition;
5. The exhibition introduces the research involved in DAMOCLES and explains why it is different from what came before, highlighting collaboration with the EU and ESA.

3 Activities and Deviation from Work Plan

The DOE project was created with a format that allowed the language versions of the whole exhibition to be completely changed, cheaply, rapidly and with minimal intervention, allowing this modular exhibit to travel to different countries of Europe without having to create a new exhibition each time.

The DOE project also provided the support to introduce an advanced design to enhance the DAMOCLES exhibition as well as logistical support.

The costs were higher than expected for some elements of the Work Packages because of unforeseen costs (IPR for images; insurance of the artefacts used was based on a valuation which was made by the auction house Bonhams', in the United Kingdom, exorbitant transport costs).

In addition, the costs were higher than initially expected because only a specialised team was finally able to install the exhibition, and since this team is based in Hamburg, it means that the costs include travel and hotels for the whole team. In order to keep costs predictable, participation in the transport costs were requested from the venues.

Organising the logistical support turned out to be a task which was not as straightforward as imagined. The costs of the whole package consisting of:

- Loading and unloading at venue
- Transport to venue
- Installation, including transport and accommodation of team,
- Dismantling, including team costs as above,
- Transport to storage
- Unloading
- Repairs
- Brochures

was beyond what had been foreseen in the budget and beyond what most museums were willing to pay, and so it was decided to split the costs between museums/ venues and the project budget.

Despite this, it was still impossible to keep costs within the budget.

Besides the venues that have hosted the exhibition, the following cities have expressed an interest in hosting DAMOCLES Over Europe:

- Copenhagen, Denmark
- Gdynia, Poland,
- Crete, Greece
- Berlin, Germany.

However, these venues as well as other events which were to be integrated to the schedule depending on the requests from institutes and partners did not materialise. A number of venues were too small to host the exhibition. There was much interest for the film and animation developed for use in public service TV and other media, and this material was provided in stand-alone format..

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The project is being managed and executed by IPF and Polaris Centre effectively, working with selected professionals in museum design, logistics, communication, printing and translation services.

Communications

Publicity tools and documents announcing the Exhibition were placed on the Damocles and IPF web sites and partly put into place by the Communications team of the IPF: e.g.:

- Coordination of all print and web based activity, (science writing, design, graphics, and layout of supporting documentation, contacts with the press, contacts with service providers, writers, translators etc). Graphical design support for laying out documents and preparing brochures and posters: provided in-house as foreseen.

The Plan for Disseminating Information includes:

- A cycle of exhibitions in 7 different venues
- Participation in IPY activities
- Multilingual exhibition support packages developed during the project
- Multilingual support documentation (brochures) and exhibition posters
- Coordinated press and media strategy in-house, with host venues and with the DAMOCLES consortium
- Coordinated information and Exhibition actions via DGRTD
- Internet based support for communication on the research activity and on the exhibition
- Integration of the exhibition in *Class Zero Emissions* initiated by IPF (described below)
- Final destination in the Polaris Climate Change Observatory

Class Zero Emissions is a new educational project, initiated by the International Polar Foundation and supported by the governments of Belgium's Flemish and Walloon Communities. The interactive exhibition is set to open on March 2nd, 2009 for a three year period at the headquarters of the International Polar Foundation. Targeted at schools, it aims to introduce students to the fascinating world of the Polar Regions. Over the three year period, it is expected that 108 animations will be organised (54 animations in French and 54 animations in Dutch).

At the CZE exhibition centre, students will learn about the landscape and indigenous animal life in these regions and discover the research and exploration scientists undertake in the Arctic and Antarctic. Through interactive learning activities such as experiments, students will be able to learn about the importance of these fragile regions to the study of climate change. The exhibition centre will allow students to get involved in the global discussion about climate change and will encourage them to be more sustainable in their everyday lives. Class Zero Emission has the following objectives:

- To inform people about climate change, the Polar Regions and sustainable development;
- To raise public awareness on the importance of polar science;
- To demonstrate innovative solutions that provide an answer to the complex challenges and problems facing our world today;
- To encourage young people to develop a sustainable lifestyle and to take action in order to limit their impact on the environment.

Translation

- Has been outsourced to companies and individuals - A master copy was established in English. Translated versions exist in French, Dutch and Italian. Where translation services were contracted out, the text was validated by a native speaker from the scientific community.

Exhibition Design, Repair and Customisation

Exhibition design professionals and the IPF Polaris team collaborated on the extension of the exhibition, the integration of the language versions developed by the Communications unit into the exhibition, and the assembling of the animation of mathematical model outcomes.

A short list of potential designers was established. The successful candidates, the Atelier Brueckner of Stuttgart, had the most experience in working with the scientific community, and was able to guarantee delivery by the beginning of March 2007, in time for the IPY (International Polar Year 2007-2008).

- The Atelier Brueckner prepared a preliminary design concept, followed by an advanced Design Study on the basis of which they tendered out the construction and following this selected one company for the construction and electronic media (Gielissen) and another one for graphics (Heinze & Malzacher), and a third for the building of the museum sets (Ulrike Schlemm).
- The adaptation and repair of the exhibition is managed by the constructors (who also do the installation), after several difficulties with other companies who overcharged and broke material.

Logistics

Logistics is carried out by Gielissen, who could deliver the whole package and could carry out repairs when necessary.

A single logistics contract was not prepared as the company that was selected for the transport was sometimes subject to the criteria evoked by the venue that hosts the exhibition. Each event is subject to a price offer from a minimum of three organisations.

Costs were reduced in certain areas, such as transport because the host venues contributed to these.

Exhibition Cycle

The Exhibition has been hosted by a varied group including some large public venues.

Artefacts and exhibits of various types were sought to occupy up to 100 square metres. At this size, the Exhibition sometimes has difficulty being accommodated in institutions, and museums.

Venues to date:

Brussels, Belgium

Musée d'Histoire Naturelle

5 – 15 March 2007

Varna, Bulgaria

Palais des congrès et festivals (L'Institut de France)

12 – 26 July 2007

Brussels, Belgium

Tour & Taxis (Inauguration Princess Elisabeth Antarctic Station)

2 – 9 September 2007

Frascati, Italy

The European Space Agency

28 September – 5 October 2007

Bruges, Belgium

Snow & Ice Sculpture Festival

23 November 2007 – 13 January 2008

Paris

European Research & Innovation Exhibition

5 -7 June 2008

Luxemburg

University of Luxembourg

15 December 2008 – March 2009

Participation in IPY activities

The International Polar Year was launched on the 1st of March 2007.

The exhibition has been available to a large geographical constituency by creating a customised (for language and other elements) module which can tour major science museums.

It is possible to feature the Exhibition in key locations, such as polar institutes, and potentially to use it for key events like the European Commission's Communicating European Research week and Green Week.

However, no event has been organised by any Polar Institute to showcase this Exhibition, except when the Foundation (IPF) organised an event at Tour & Taxis featuring Polar research activities.

Multilingual exhibition support

The compactness of the exhibition also makes for easier translation into more languages. This is a key element of the activity, as it is intended to create one master version of the texts, in English, and then to create the other language versions so that the exhibition can be easily and rapidly modified for other countries.

Multilingual support documentation (brochures) and exhibition posters

All supporting documentation has been designed, written and produced in-house, or with Atelier Bruckner or Heinze & Malzacher.

Effectiveness of exhibition as a communication tool

The DAMOCLES Mobile Exhibition was hosted by 7 venues in the framework of events with large audiences. The table presented hereafter indicates the number of visitors who have participated in each event.

The exact number of people who have viewed the exhibition cannot be determined as the exhibition was in most cases integrated in a larger event and only entries to the event could be estimated. Pictures of these events and related press articles are included in annex to this report.

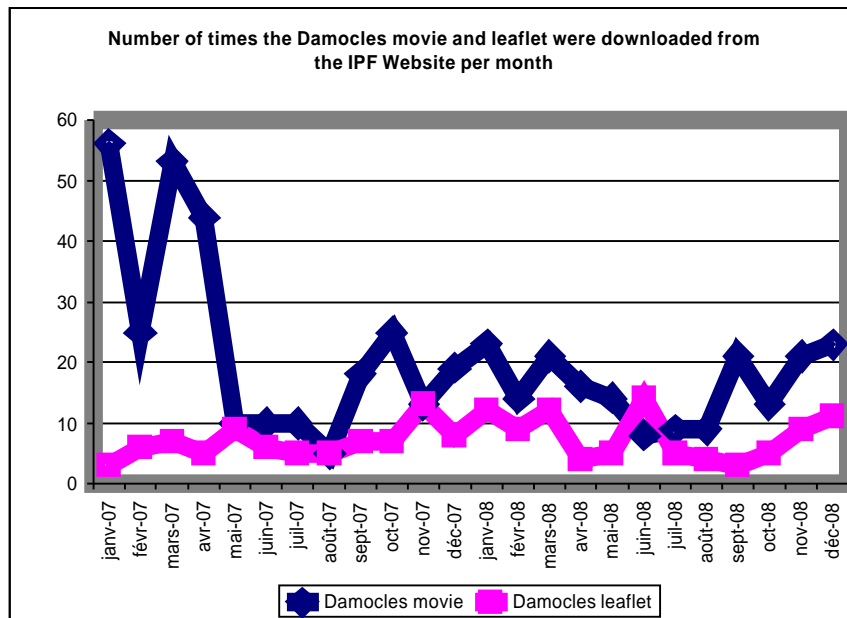
City, Country	Venue	Date	Number of visitors of the event hosting the exhibition
Brussels, Belgium	Musée d'Histoire Naturelle	5-15 March 2007	7.000
Varna, Bulgaria	Palais des congrés et festivals (L'Institut de France)	12-26 July 2007	1.300
Brussels, Belgium	Tour & Taxis (Inauguration Princess Elisabeth Antarctic Station)	2-9 Sept. 2007	40.000
Frascati, Italy	The European Space Agency	28 Sept. - 5 Oct. 2007	550
Bruges, Belgium	Snow & Ice Sculpture Festival	23 Nov. 2007 - 13 Jan. 2008	200.000
Paris, France	European Research & Innovation Exhibition (SERI)	5-7 June 2008	25.248
Luxemburg, Luxembourg	University of Luxembourg	15 Dec. 2008 - 28 Feb. 2009	Ongoing

The events with the largest participation were the Inauguration of the Princess Elisabeth Antarctic Station in Brussels, the Snow & Ice Sculpture Festival in Bruges and the European Research & Innovation Exhibition in Paris. On 2-9 September 2007, the exhibition was presented in Tour&Taxis next to the Princess Elisabeth Antarctic Station. The audience included both adults and children as many families attended the event. School classes also participated in the event on weekdays. In Bruges, the exhibition was integrated into the Snow & Ice Sculpture Festival, a yearly event attended by the general public and many families.

In Paris, the exhibition was presented in the European Commission's Research Directorate General stand. The exhibition is currently hosted by the University of Luxembourg.

A total of more than 270 000 people participated in the events hosting the exhibition. The diversity of the venues and events has allowed communication to various target groups including students, the general public and professionals. The integration of the exhibition in larger events has allowed raising interest for polar sciences in the general public.

Venues hosting the exhibition have been announced on the IPF Internet site at <http://www.polarfoundation.org/> (see annex to the report). Both the Damocles film and leaflet are available for download on the Internet site. The graphic presented hereafter shows the monthly download statistics for the movie and the leaflet between January 2007 and December 2008.



Over this period, a total of 480 people have downloaded the movie and 174 people have downloaded the leaflet.

Lessons learned

- *Venues*

The hosting venues have to be carefully vetted for various pre-requisites such as size of exhibition space to deploy the installation, for which there is little flexibility, provision of electricity and Internet connection, provision of security, as the electronic equipment is quite expensive and attractive to potential thieves, and existence of access points for unloading and introducing the modules into the building. Lack of these elements can often disqualify a host venue.

- *Accessibility*

Physical accessibility to the contents of the installation was found to be difficult for smaller children, and it was decided to add step units to allow them to see through the apertures in the panorama wall.

- *Logistics*

Transport storage and installation costs exceeded what was previously foreseen. The installation of the exhibition required a lot of logistical work and attention to the exhibit material. The need to protect the exhibition items is important and can reduce their visibility.