

The Earth's rising temperature....

125 years after the first International Polar Year and 50 years after the International Geophysical year, the international science community will kick off the 4th edition of the International Polar Year on March 1st 2007.

Groups of scientists from all around the world will work together in the coming 2 years. Their goal is to gain a better understanding of our environment through completing a study on the Polar Regions. The North and South Pole can give us key indications on the evolution of our climate, atmosphere, the hole in the ozone layer, the dynamics of the oceans, and the behaviour of Polar bears. Assessing the detailed future of our climate is a huge challenge for our scientists today. It will require a big effort to limit the damages of global warming on the Earth's environment. Information concerning all the international Polar projects can be found on www.ipy.org.

Arctic Arc

During the International Polar Year 2007-2008 Belgium will conduct important scientific experiments in the Polar regions. Our two Belgian ambassadors, Dixie Dansercoer and Alain Hubert, will depart in February for a never-done-before North Pole expedition of 4.300 km. This expedition, dubbed the "arctic arc", will kick off in northern Siberia at 80°N30'E. Firstly it will go in the direction of the North Pole, then it will continue to the most northern point of Greenland and finally it will end in the most southern point of Greenland, Narsarsuaq, in 2007. It will be a scientific expedition where ice will be observed in order to give us a better understanding of the impact of climate change.

www.antarctica.org

Station Princess Elisabeth

The "Belare Logistics Survey Expedition" kicked off in 2005. Two hundred tons of material and equipment were transported to the South Pole in order to build a new Belgian station. The station received the name "Princess Elisabeth" and is the follow-up of the King Boudewijn Station, which closed down in 1967. The actual construction of the station will commence in November 2007. The unique elements of this station will be the integrated use of renewable energy sources ("zero emission") and the maximum recycling of waste in order to decrease the level of damage on the surrounding environment. The station will be occupied by twenty Belgian scientists from several backgrounds who will conduct different research studies and observations during the southern summer (from November- February). The total cost of the station is estimated at €6,4 million. There is a huge deal of interest in the project, from the private sector as well as from numerous institutions such as governments, universities, and the scientific world...

You can also contribute to the station (account number 000-0000090-90).

Terra Incognita

The ice, the snow, the penguins, the white landscape... it has fascinated us for over centuries and Belgium has been a pioneer in the region. History teaches us that people are always eager to discover new things, on a journey to the mysterious "Terra Incognita". We are driven to find the unknown, to keep going, to the South and the North, in order to eventually claim this land. This also applies to the cold Polar Regions. The famous commander, James Cook, was the first to lay eyes on and describe the coast of the white polar continent in January 1774, while onboard the ship "The resolution". He managed to go just above the Polar Circle at 71°10' south and 106°54' west. The names of the seas, sea straits, and islands give away the journeys of the expeditionaries: Weddell, Dumont d'Urville, Ross, Amundsen, and many others. The acquisitions of the Northern regions and the many expeditions that have taken place there also reveal some very interesting stories. Many different legends have been created in the North Pole such as those of Barents, Baffin and Nansen.

Adrien de Gerlache

Belgians can be very proud of their Polar history, which still resonates today and is also recognized worldwide. This is mostly thanks to our fellow Belgian Adrien de Gerlache de Gomery, and his brave crew, who were the first to embark on a scientific expedition to the South Pole region. To the tunes of the Brabançonne, the Belgian ship "Belgica" departed towards the South Pole on August 16th 1897 from the Antwerp Harbour. The journey

was different to all other Polar journeys purely because of its scientific nature and purpose. In his book, "Fifteen months in the South Pole, the Belgica expedition (1897-1899)", you can uncover that commander de Gerlache steered his ship into an icecap on purpose, thereby forcing him to spend the winter on Antarctica. During this period he was able to collect some very valuable scientific information. He describes his intentions as the following: "...We will be the first to spend a winter on the icecaps of Antarctica, and that gives us the unique chance to collect a phenomenal amount of information. Is that not what we wished for; is that not what we wanted?" He was definitely a pioneer.

Even though he was the first to survive a severe winter on Antarctica, he worked very efficiently to collect useful meteorological and zoological data. It was Emile Racovitz, the environmental expert on the expedition, who first discovered that a small mammal lived on the white continent. His team also put some of the, at-the-time unknown, South Pole on the map. This is why the 6th continent of Antarctica has so many Belgian names on its map: the Gerlache sea strait, Antwerp Island, the bay of Flanders, Brabant Island, and Luik Island.

The journey

During a journey to the polar region, and onboard a sailing ship, I step out of my cabin and join the rest of the passengers. The weather is foggy, grey and cold. I look at a young couple who have a book in their hands. While trying to recognize the title, I notice the names Dixie Dansercoer and Alain Hubert, the modern-day Belgian adventurers and masters of the great white continent. The young man is reading their novel "Chaos on the icecaps, an attempt to cross the entire Arctic Ocean". The man suddenly says, "You Belgians definitely like a challenge". "That's right," I reply, "they have shown amazing courage by continuously confronting the unbearable, extreme cold for over 68 days. They survived numerous falls into the icy waters, and came face to face with unexpected and threatening polar bears." We continue talking about several other titles, and together mention the names of a few more adventurers: Mike Horn, Nicolas Vanier, Emmanuel Hussenet, and of course our two Belgians, Alain and Dixie. They are, without a doubt, symbolic pilgrims who are passionate and fascinated by the vast white spaces located on the outskirts of our planet.

Icebergs in sight

The captain of the ship sounds the horn. We finish our conversation and make our way to the course bridge. Astonished, we stare at the white giants in front of us. It is truly spectacular! Icebergs, which are meters high, hover high above us. Sometimes, a faint explosion breaks the silence and indicates another new crack in the ice. A loud thunderclap suddenly catches our attention. The ocean slams against the big white wall. A piece of ice, the size of a house, breaks loose and falls into the water, creating a huge wave which breaks apart in great force. There is now a large cage-like hole, where there was once an impressive white wall. At starboard, a cruise liner is approaching us. More and more "eco tourists" are planning their holidays to this mysterious place. They want to experience this natural phenomenon in real life and witness the melting of the great icecaps. Perhaps they are looking for the peace the Polar Regions can offer us as a remedy against stress. Especially Greenland, Svalbard and Alaska are very popular holiday destinations in the summer season. Everyone wants to get a glimpse of the unicorn, the belugas, the walrus, the sea lions, and of course the most popular attraction of all, the polar bear. The holiday-makers visiting the South Pole prefer to go in the period between November and February in the hope of seeing some penguins, sea lions, or albatrosses. Everything in this region of the world is extraordinary and very special.

Planet Earth and global warming

NASA and the European Space Organization are continuously photographing our planet through satellites, allowing them to assess to what extent climate change is affecting our planet. During the summer, the ice of the North Pole melts away, but it is sadly not coming back as quickly in the winter months. One of the main tasks of this large white continent is to reflect the sun's rays, and thereby playing a crucial role in the natural cooling of the planet. It is important to note that the ice on the North Pole has lost 15% of its surface and 40% of its depth over the last century. In the summer, when the ice is melting, the darker surface will capture more of the sun's rays and this will then make the planet warmer. In November 2004, as part of the ACIA study (Arctic climate impact assessment), an international team of 300 scientists focused on the impact of climate change on the North Pole. The results showed that if we continue to release as much CO₂ and other gasses into the atmosphere, the average temperature will raise with 4 to 7 °C in the North Pole region by 2100. It is not wrong to assume that by then the icecaps of the North Pole will disappear during the summer months, the icecap of Greenland will melt, and the biological mix will change forever. This will have many affects on the rest of our

planet; forests will gradually move northwards at the expense of the tundra, which will have a further affect on the reproduction of millions of migrating birds. That will be the beginning of “ecological” migration during which animals will search for new appropriate living environments.

The disappearing icecaps also present a threat to the sea lions, as they will become the favoured prey of the Polar Bear. On the other hand, the extinction of certain animals, such as the Polar Bear, will be inevitable. The WWF has recently shown that the Polar Bear population has decreased by 20% since 2001. Similarly, the habits and lifestyles of Eskimos and other populations of the North will also change drastically.

What about the future?

Will our grandchildren be able to enjoy this planet and its environment as much as we did? Sadly, the alarming conclusion is that climate change will not only affect the Polar Regions but the entire planet. The glaciers of Nepal, Mount Kilimanjaro in Tanzania, the French and Swiss Alps... they will all become the victims of global warming. The icecaps of the Polar Regions have already lost 300km² of their surface over the last twenty years. On the news we are constantly confronted with images of typhoons, hurricanes, floods and heat waves, and it is often the developing world that suffers the most from such disasters. On a more positive note, the international community is starting to react and get involved in this problem. We are all aware of the causes of climate change, and we have recognized the need to change our behaviour. But are we prepared to radically change our consumption patterns? If we don't, we will be exposed to severe climate disasters and the outbreak of new illnesses. We have passed the stage of questioning and wondering. It is an inconvenient truth, as the title of Al Gore's film correctly states.

Alain Hubert

Since 2002, Alain Hubert is the chairman of the International Polar Foundation board, which is in the protective care of HRH Prince Filip of Belgium. By attending conferences and presenting lectures, the Belgian expeditionary hopes to make people aware of the dangers of global warming. He wants to propose solutions and uncover how we can all contribute to a sustainable development of our environment. Alain Hubert also visits numerous schools, and shares his knowledge, his concern, his hope and his experience with them. This kind of communication with young people, with adults of today and tomorrow, is essential to battling climate change. On the website www.educapoles.org you can find an interactive and educative platform available to all young people and educational organizations. In the “Fun Zone” you will find several multimedia applications- animations, images, quiz questions- which youngsters and adults can both use to learn more about the vastness and richness of our Polar Regions.

Antarctica at the Science adventure park “Pass”

Until December 2008, you can visit a special display about the South Pole at the science adventure park ‘Pass’. This display is very interactive: the audience gets the chance to see 3D animations of geographical elements to give them a better understanding of the white continent. Tickets cost €12,50 for adults and €7,50 for children (6-14yrs old). Touring members will receive a discount (adults €7,50 and children €6). Entrance is free for children younger than the age of 6

Pass- science adventure park

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