

#### RESEARCH/REVIEW ARTICLE

# Princess Elisabeth Antarctica: an International Polar Year outreach and media success story

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#### **Abstract**

One of the priorities of the fourth International Polar Year (IPY) was to increase awareness of the polar regions and polar science among the general public through education, communication and other forms of outreach. This paper reports on the media coverage of Princess Elisabeth Antarctica (PEA), Belgium's "zero-emission" Antarctic research station designed by the nonprofit International Polar Foundation (IPF) to run on wind and solar energy and to employ state-of-the-art forms of energy management and other "green" technology. This paper provides background information on PEA, a review of IPF's media strategy for the project, a description of media coverage of the station and a discussion of the way in which the IPF's main messages were reported in the media. IPF staff surveyed approximately 300 media reports released between February 2004, when the PEA project was announced to the general public, and June 2010, when the IPF presented their findings at the IPY conference in Oslo. PEA was featured 580 times in print and web media in Belgium, and 303 times outside Belgium. Major international agencies such as the Associated Press, Agence France Presse, the BBC, Al-Jazeera and Reuters covered the project. On television and radio, PEA was featured in news broadcasts from all four major television networks in Belgium, most major radio stations and 34 different television and radio news outlets outside Belgium. The paper concludes that the media coverage for PEA was significant and suggests reasons why the project was so widely reported.

To increase awareness of the polar regions and polar science among the general public, one of the priorities of the fourth International Polar Year (IPY) was education, communication and other forms of outreach. This paper reports on the media coverage of the conception and construction of Princess Elisabeth Antarctica (PEA), Belgium's groundbreaking "zero-emission" Antarctic research station designed by the International Polar Foundation (IPF) to be powered by renewable wind and solar energy and to make use of an advanced energy management system as well as other forms of "green" technology.

The IPF is a non-profit Public Utility Foundation founded in 2002 by Alain Hubert (polar explorer, engineer and professional mountain guide), Professor Emeritus André Berger (palaeoclimatologist at the Université Catholique de Louvain and former President of the European Geophysical Society), and Professor Hugo Decleir (glaciologist at the Vrije Universiteit Brussel and former Chairman of the Belgian National Committee on Antarctic Research). To bridge the divide between the scientific community and the general public, the IPF has a three-part mission to inform, educate and demonstrate. The belief is that a well-informed public can make more educated decisions related to sustainable living, as summed up in the foundation's motto: "Educate to understand, understand to act."

The IPF informs and educates the general public about the polar regions and polar science via a range of websites and a wide variety of educational and outreach initiatives. The IPF demonstrates by undertaking physical projects that show initiative and entrepreneurship in tackling climate change. PEA represents the IPF's first flagship "demonstration" project.

Constructed primarily during the two austral summers of the IPY (2007/08 and 2008/09) atop Utsteinen ridge in the vicinity of the Sør-Rondane mountains in Dronning Maud Land, East Antarctica, PEA is the first ever polar research station specifically designed and built to run entirely on renewable wind and solar energy. The "zeroemission" principle means that the daily operation of the station itself produces no carbon emissions and only makes use of a back-up diesel-powered generator in case of emergencies. As well as using wind turbines and solar photovoltaic panels to produce its electricity, PEA incorporates several other tried and tested green technologies, including solar thermal panels to heat water, passive building techniques to keep the interior of the station at a comfortable temperature, and a water treatment system that treats all used water (both black and grey) and recycles 60% of it for re-use within the station—which puts it in the top tier of stations in the Antarctic in this regard (see Gröndahl et al. 2009).

Beyond the application of green technology and passive design, however, getting the occupants of the station to rethink how they use energy is what makes the PEA project unique. A smart microgrid developed by the IPF, Laborelec (a subsidiary of GDF Suez) and Schneider Electric, based on the principle of power demand management, makes it possible to efficiently manage energy consumption in the station. The smart microgrid used at the PEA station is currently the most energy efficient microgrid in use. A programmable logic circuit, similar to the kind used in industrial machinery, prioritizes energy distribution throughout the microgrid based on a pre-determined set of criteria. Safety systems receive the highest priority, whilst outlets to plug in non-essential appliances receive the lowest.

In respect to design, the futuristic outer appearance of the station (Fig. 1) was never an aim in and of itself, but rather a product of its functionality. The priority was to create an aerodynamic design, which would allow katabatic winds from the Antarctic Plateau to flow freely around the station and avoid snow accumulation, and achieving energy efficiency by reducing heat loss to the environment and using every calorie of heat energy in the station efficiently, even the body heat produced by the station's occupants. The idea was to adapt to the local environment, rather than continually battle against nature with an inefficient design. The shape and design of PEA is the result of these demands, and of their integration into the same physical structure.

The idea of building a "zero-emission" Antarctic research station belongs to Alain Hubert and the IPF as a means to reduce the impact of scientific research—not only on the Antarctic environment, but also on the global atmosphere. With Belgium lacking a research station in Antarctica since the decommissioning of its King Baudoin Station in 1967, the Belgian Federal Government commissioned the IPF to build PEA in 2004 on the condition that it could raise the necessary funding and support from the private sector to complete the project. Through the IPF's fundraising campaign, a number of sponsors and technical partners agreed to come onboard the project, providing either financial or in-kind support. Belgian citizens also made financial contributions via tax-deductible donations. Ultimately two-thirds of the money necessary to build the station came from the private sector. The Belgian government provided the balance of the funding necessary to carry out the PEA project, and the Belgian Military offered logistical support during the expeditions to Antarctica in exchange for the possibility for its members to gain experience in a region of the world with harsh environmental conditions.

From the scientific research perspective, Utsteinen ridge in Dronning Maud Land was chosen as the ideal site to build PEA because of its location in the heart of a region of Antarctica in which very little scientific research had been done previously, and also to fill a logistical gap in the network of research stations in this part of the Dronning Maud Land, providing new opportunities to the international research community. Since the first scientific team arrived at PEA in 2008, a number of other research projects have been undertaken in microbiology, geology, seismology, glaciology and meteorology, with the station hosting scientists from Japan, Germany, the UK, the Czech Republic, the US and the Russian Federation.

As the first polar research station to have received the majority of its funding from the private sector, the PEA project represents something completely novel in the world of polar research, where research stations are usually funded exclusively with public money through national polar programmes. The private sector continues to play an important role in running the station, which is currently managed by a dedicated public—private organization, the Belgian Polar Secretariat.

Following three Belgian Antarctic Research Expeditions (BELARE) in the austral summers of 2004/05, 2005/06 and 2006/07, charged with identifying the ideal site for the new station, and planning the logistics for its construction, PEA was built during the 2007/08 and 08/09 seasons, coinciding with the two austral summers of the fourth IPY. PEA was Belgium's principal contribution



Fig. 1 Princess Elisabeth Antarctica, with some of the solar photovoltaic panels and wind turbines that power the station.

to the IPY. The station's inauguration took place in Antarctica on 15 February 2009, during the closing weeks of the IPY (Fig. 2).

# Overview of the media strategy

The communications strategy for PEA evolved significantly from the time the Belgian government commissioned the IPF to build a station in Antarctica in 2004

until June 2010. There have been three broad stages in the communications strategy.

The first stage focused primarily on securing sponsors and having the project noticed within Belgium. This involved publishing a dedicated project page on the IPF's corporate website (www.polarfoundation.org) and drafting brochures and other literature aimed at recruiting potential sponsors.



Fig. 2 Former Belgian Federal Minister for Science Policy Sabine Laruelle and International Polar Foundation President Alain Hubert inaugurate the Princess Elisabeth Antarctica research station on 15 February 2009 at Utsteinen Nunatak, Dronning Maud Land, Antarctica.

The second stage, starting in May 2006, focused on increasing media coverage within Belgium, to allow Belgian citizens to feel a sense of ownership of the station project and its "zero-emission" ambitions. The project was also highlighted as Belgium's legacy to the IPY, as was the public–private partnership element. The aim was to widen sponsorship, and to encourage Belgian citizens to make a tax-deductible donation to the project.

On a practical level, this involved several tasks: significantly expanding the IPF's media contact list, issuing press releases more frequently and to a wider spectrum of journalists, setting up a new dedicated website (www.antarcticstation.org) on which to publish the latest developments in the PEA project, and most importantly, organizing a very publicized send-off inauguration and public exhibition for the PEA station in Brussels in September 2007. This phase also involved using the sustainable design of the station as a background for creating Class Zero Emission, an educational workshop for students between 10 and 18 years old which focuses on the polar regions, polar science and sustainable living, as well as CD-ROM animations and pedagogical dossiers focusing on the same themes.

The third and most recent stage in the communication strategy came after the inauguration of the station in Antarctica in February 2009 and has focused primarily on communicating the scientific research being carried out at the station, promoting PEA as an international research platform, and emphasizing the station as an example of sustainability, demonstrating how people can change the way they utilize energy.

During this third stage, the IPF was able to draw attention to the PEA project in a number of different ways. It provided regular updates on the station and scientific research carried out at and around the station on www.antarcticstation.org, as well as its polar science news website www.sciencepoles.org. The IPF has continued to create educational activities focusing on the station and on polar science more generally via its www.educapoles.org website and its Class Zero Emission initiative. More recently in the summer of 2010, the PEA station was featured at the Belgian Pavilion at the World Expo 2010 in Shanghai, and again at a follow-up event in Brussels to show off highlights from the Belgian Pavilion.

Furthermore, the IPF documented the entire construction and post-construction phases of the station through the services of a professional photographer and film crew. Selections of these aesthetically breathtaking images were then made available to the national and international media to illustrate articles and television coverage. They were also used in a short film entitled *Beyond the* 

poles, produced in 2009 by the IPF in conjunction with MDW Productions, which examines some of the activities of the fourth IPY, including PEA. The film premiered at the IPY closing ceremony at the World Meteorological Organization (WMO) in Geneva on 25 February 2009. As the only feature film produced for the IPY, the WMO regards *Beyond the poles* as its primary reference film for the IPY.

Overall, during the six years between the conception and completion of PEA, the IPF organized 12 press conferences and issued 20 press releases, in parallel with PEA sponsors who also issued their own press releases to their own press contacts.

More details of the IPF's media strategy, and the resulting coverage, are delineated in the sections that follow.

## Media coverage

The PEA story was covered by the media in at least 48 countries. PEA was featured across a wide range of platforms, including general-interest newspapers, science and technology publications, building and architecture publications, business magazines, children's magazines, women's magazines, nightly news broadcasts, television specials, web videos and radio broadcasts. PEA was featured 580 times in print and web media in Belgium and 303 times outside Belgium. Major international agencies such as the Associated Press (AP), Reuters, Agence France Presse (AFP) and Al-Jazeera covered the PEA project. On television and radio, PEA was featured in news broadcasts from all four major television networks in Belgium, most major radio stations and in a total of 34 different television and radio news outlets outside Belgium. The PEA project was also featured on global media outlets such as the BBC and Euronews.

## Media coverage during the planning stage

In February 2004, the announcement that the IPF had been commissioned by the Belgian Government to build the new Antarctic research station during the fourth IPY was only given modest coverage in the Belgian press, appearing a total of just 33 times. Nevertheless, the announcement was reported in all of the major French-and Dutch-language newspapers with articles published in *Le Soir* (e.g., Anonymous 2004a) and *Het Laaste Nieuws* (e.g., Anonymous 2004b). The announcement was also covered in English-language media for expatriates in Brussels such as *The Bulletin* magazine (e.g., Anonymous 2004c).

Coverage was mostly neutral, with just one positive article in *Le Soir* (Anonymous 2004a), which praised the idea of returning, and one negative article in *La Libre Belgique* (Anonymous 2004d), which featured an interview with a biochemist from the University of Liège who expressed the opinion that scarce funds should be used for more scientific research rather than a new research station.

The IPF next issued a press release following the completion of the first BELARE missions during the austral summer of 2004/05, which had the objective of finding a site for the station. In this instance, coverage focused mainly on the details of the expedition and on the fact that Belgium would be returning to Antarctica.

On 31 May 2006, the IPF formally announced at a press conference in Brussels that the new Belgian research station in Antarctica would be the first ever "zero-emission" polar research station. Giving the Belgian press more to talk about, it was announced that HRH Prince Philippe of Belgium had agreed that the new Belgian station would be named Princess Elisabeth Antarctica, after his daughter, Princess Elisabeth, and that the Belgian Royal Mint would produce a 10 EUR coin to commemorate the PEA's construction. Several Belgian television and radio stations, such as RTBF La Première, RTBF and VRT, dedicated air time to covering the story during their afternoon and/or evening news programmes. The story also garnered some print coverage.

Meanwhile, studies related to the energy efficiency and architecture of the station had been going on since 2004, and the station's final design was taking shape. At the press conference on 31 May 2006 the IPF released the first visual representation of what the finished PEA Station would look like on-site, conceived by the graphic arts company Détrois. All Belgian television stations that reported on the PEA project on 31 May used the new visual in their news broadcasts.

Overall, between 2004 and 2006, it can be said that press coverage for the first stage of the project was on par with what the IPF was hoping for. There was slightly more coverage in the French-language press than in the Dutch-language press. Nonetheless, the IPF has always stressed that the PEA project is a Belgian and international project, and Alain Hubert has always addressed both the French- and Dutch-speaking communities in their native languages, as well as international audiences in English.

# Media coverage of the send-off inauguration

Media coverage remained steady and exclusively Belgian throughout 2006 and the first half of 2007. There was

some minor coverage of PEA associated with the BELARE 2006/07 expedition to Antarctica.

As the IPY got underway in 2007, the IPF ramped up communication efforts to achieve more international press coverage for the station. To facilitate on-site construction in Antarctica, the main structure of PEA was pre-assembled during the summer of 2007 at the Tour & Taxis exhibition centre in Brussels. This provided a perfect opportunity for the IPF to organize a send-off inauguration ceremony at the centre in September 2007.

In the lead-up to the send-off inauguration, the IPF hired more communications staff: a media officer, an inhouse journalist and an in-house graphic artist. The communication team focused their efforts on contacting all international media correspondents in Brussels, as well as the technology, environment and science editors of major newspapers across Europe and the Americas. One month prior to the PEA's September Brussels inauguration, the IPF web team also launched a tri-lingual (French, Dutch and English) website (www.antarcticstation.org) dedicated exclusively to PEA.

On 5 September 2007, the send-off inauguration of PEA took place in front of the pre-assembled station at Tour & Taxis. In attendance were HRH Prince Philippe of Belgium, Belgian government ministers and representatives from key sponsors of the PEA project. Also in attendance were foreign ambassadors, representatives from the European Union institutions and a delegation from the Chinese Arctic and Antarctic Administration. For four days following the inauguration, the IPF opened the station to the general public, and set up side exhibitions about the station, polar science and sustainable technologies. The exhibition also featured stands for the station's key sponsors, public lectures given by polar scientists and polar-themed games and puzzles for children.

The 6–9 September 2007 public exhibition of the station proved a considerable public outreach success in the eyes of both the IPF and its sponsors, with extensive coverage across Belgian television, radio and newspaper platforms. This resulted in 35 000 visitors over the three-day period, which greatly exceeded the IPF's expectations.

Many major Belgian radio stations in the Brussels area broadcast announcements about the Tour & Taxis public exhibition during their hourly news updates, as did some of the Belgian television stations in their coverage of the 5 September send-off inauguration. However, one of the most significant contributors to the major success of the public exhibition was a two-hour prime-time *Planète nature* programme about the PEA project that aired on the Belgian television station RTBF the evening of 5 September 2007. The broadcast featured Alain Hubert, IPF co-founder and climatologist André Berger, the

Vice-President of the Intergovernmental Panel on Climate Change (IPCC) Jean-Pascal Van Ypersele and other environmental experts in front of the recently preassembled PEA at Tour & Taxis.

Articles appeared in 152 Belgian print and web publications from August to December 2007 alone, ranging from general to specialized interest, and both local and national reach (Table 1). Television and radio reports were produced across the four major Belgian television stations: RTBF, RTL, VRT, VTM and most of the major Belgian radio stations (Radio 2, FM-Brussel, Radio Contact, Nostalgie, and RTBF La Première).

Outside Belgium, a total of 108 print and web publications covered the send-off inauguration (Table 2). Several major international press agencies sent representatives, including the AP, AFP, Reuters, Agencia EFE, Jiji Press and All Headline News.

**Table 1** Belgian media coverage during the build-up to the send-off inauguration and in connection with the inauguration itself. Articles appeared in 152 Belgian print and web publications. A sample of these is shown in the table. (Article titles given in the table have been translated into English by the authors. The authors will provide a more extensive list of media references upon request.)

Author and year	Article title	Newspaper or magazine
Anonymous 2007c	Belgian scientists back on the ice	Vers l'Avenir
Anonymous (G.C.) 2007	History will remember those who are there	La Libre Belgique
Anonymous (N.F.) 2007	A unique model: 0% CO <sub>2</sub> emissions	La Dernière Heure
Antoine 2007	First CO <sub>2</sub> neutral station	L'Echo
Cendrowicz 2007	Antarctic study pod	The Bulletin
De Smet 2007	Our station will shine like a diamond	De Standaard
Du Brulle 2007	Polar station ready for departure	Le Soir
D. Hendrickx 2007	Belgium flaunts itself in Antarctica	Gazet van Antwerpen
K. Hendrickx 2007	Belgian Antarctic station world first	De Morgen
Lemaire 2007	See the polar stationin Brussels	Le Journal des Enfants
Léonard 2007	Polar station attracts curious visitors	La Capitale
Randisi 2007	Our polar base is becoming a reality	Metro
Romaen 2007	Exciting building of tomorrow	Het Ingenieursblad
Snik 2007	I will serve something besides pasta for a change	Het Laatste Nieuws
Vereenooghe 2007	Belgians return to Antarctica	De Tijd
Vets 2007	I was really frightened	Het Belang van Limburg

The station's send-off inauguration also received coverage via foreign television stations, on their television broadcasts or on their websites. There was coverage in at least nine countries outside Belgium. Television broadcasts appeared on Česká Televize, TSR Switzerland, EuroNews and Saudi TV Channel 2. Coverage of the story appeared on the websites of the CBC, 2NN News Japan, France 2, France 3, ABC (Australia) and the BBC (which included video coverage of the station on its website).

Sponsors provided support for selected journalists to attend the send-off event. The Swedish company Electrolux, which provided energy-efficient appliances for the station, invited their own pool of journalists to attend the inauguration and issued their own press release. This resulted in coverage in an Italian home appliances magazine (Anonymous 2007a) and on a Hungarian environmental website (Anonymous 2007b). Dow Corning also issued a press release about its participation in the PEA project that was widely circulated and picked up by several news outlets, including local newspapers in the US like the *Midland Daily News* (Dow Corning 2007).

Overall, the coverage the IPF was able to survey was primarily neutral, and most of the messages the IPF wanted to get across made it into the media. These included the main themes relating to Belgium returning to Antarctica; the Belgian government commissioning the IPF to build the station as Belgium's contribution to the IPY; and the fact that the station would be "zero emission". Additional themes related to PEA as a new international research platform and the type of research that would be carried out there.

Almost all the news stories surveyed reported that PEA would be the world's first "zero-emission" polar research station, and roughly half went into some detail about the functioning of the station (wind and solar energy, passive design, recycling of used water, etc). This was an important accomplishment for the IPF, as the main purpose of the public send-off was to show that an environmentally-friendly construction could be accomplished using existing technologies, even in the harshest of environments. Although scientific research plans for the station were relatively well reported, journalists writing for the general press oversimplified at times, stating that climate change would be studied at PEA. Whilst this was correct, it was not the whole story: research not related to climate studies was also in the planning stages.

A few discrepancies noticed in the press survey related to the estimated lifespan of the station. Whilst the official figure is 25 years, some reports mentioned 30 or 40 years. Furthermore, very few media outlets reported that, as

**Table 2** International media coverage during the build-up to the send-off inauguration and in connection with the inauguration itself. A sample of the numerous articles that were published in 2007 is shown. (Article titles given in the table have been translated into English by the authors unless they were originally in English. The authors will provide a more extensive list of media references upon request.)

Author and year	Article title	Newspaper or magazine	Country
Anonymous 2007d	Belgian research station in Antarctica	Neue Zürischer Zeitung	Switzerland
Anonymous 2007e	Belgium building zero-emission Antarctic station	Daily Times	Pakistan
Anonymous 2007f	Belgium unveils polar station	China Daily	China
Anonymous (ANI press agency) 2007	World's first zero-emission Antarctic research station unveiled	Daily India	India
Anonymous (EFE press agency) 2007	Presenting the first polar station that emits no carbon dioxide	El Mundo	Spain
Anonymous (S.R.) 2007	The first "zero-emission" base	Science et Avenir	France
Brahic 2007	Antarctic pod makes way for green research	New Scientist	UK
Brand 2007a	Polar research station to be pollution free	St. Petersburg Times	US
Brand 2007b	Group unveils polar science station	The New York Times	US
Brand 2007c	Group unveils polar science station	USA Today	US
Davis 2007	Belgium building zero-emission Antarctic station	The Washington Post	US
Dessibourg 2007	First "green" base in Antarctica	Le Temps	Switzerland
Dow Corning 2007	Dow Corning sponsors International Polar Foundation's Princess Elisabeth Antarctica station	Midland Daily News	US
Pettersen 2007	Building the future in Antarctica	Dagbladet	Norway

had been communicated, once the lifespan of the station had been reached, it could be dismantled efficiently and with minimal impact on the Antarctic environment.

Some messages were sometimes missed altogether. For example, the Reuters report on the station gave no mention of the IPF, nor did it mention the public–private partnership that made the station possible.

From the technological angle, the most reported aspect of PEA was the wind and solar energy, passive design and water treatment. Less prominent in the press was talk of the smartgrid energy management system and the message that managing energy use is even more central to the PEA project than the use of renewable energy at the source. At that time the energy management system was still in the process of development and the media tended to focus more attention to the adventure of constructing the station.

A survey that examined 2900 IPY-related news items from March 2007 up to mid-February 2008, reinforces the IPF's review of PEA media coverage over a period of time preceding, during, and immediately following its send-off inauguration. The PEA story was third in the list of top stories in international media during the entire period by the survey (Rüth 2008). It was second on the list of the top 10 stories in all media during the period between September and November 2007 in the international media (after the IPCC's and Al Gore's Nobel Peace Prize) and was the IPY-related story that received the most press release citations in international mass media from September to November 2007 (Rüth 2008).

## Media coverage during the construction phase

Media coverage of PEA continued from September 2007 until its on-site inauguration in Antarctica in February 2009, with most media attention coming from the Belgian press. During the BELARE missions to Antarctica, a two-person camera and sound crew from the Belgian television stations RTBF (French-language) and VRT (Dutch-language) collected footage of the construction, which they then used in their broadcasts and sold to other media outlets. Print articles appeared regularly in all major newspapers in Belgium, and a handful of national periodicals issued special dossiers on the PEA project.

One of the most exemplary television shows dedicated to the PEA project which touched on all the themes the IPF was hoping to get across to the media during this period was a two-hour long edition of the RTBF television show *Opinion Publique* broadcast on 22 May 2008, which featured IPF President Alain Hubert, PEA Station Project Manager Johan Berte, the Head of the Belgian Federal Science Policy Philippe Mettens, and a panel of scientists, many of whom eventually travelled to PEA to conduct research.

Events and milestones which drew media attention and coverage included the first scientific team arriving at PEA in November 2008; the establishment of the InBev Baillet-Latour Fellowship Award (a grant set up by the IPF and the InBev Baillet-Latour Fund to help young polar scientists wishing to carry out research at the PEA); and a contest for Belgian children to draw their own

representation of the station. Belgian media also took interest in the return of the BELARE expedition following the successful construction of the station's main structure in March 2008, and when the IPF and PEA sponsors and technical partners showcased many of the environmentally-friendly components of the station's technical core (water treatment system, solar thermal panels and smart microgrid) as they were being tested prior to the departure of the 2008/09 BELARE mission.

In an education and outreach project for children, in October and November 2008 the IPF organized a contest in conjunction with one Dutch-language (Gazet van Antwerpen) and one French-language (La Dernière Heure) newspaper as well as the Wetenschapsfeest (Science Festival) in Flanders and les Journées d'éducation à Namur (Namur Education Days). Belgian Internet service provider Skynet participated in the contest as well via their Kid City programme. The contest asked children from both of the two major language communities in Belgium to suggest names for a polar tern to be featured in a sticker album the IPF would release, in conjunction with Panini, which produces sticker albums for children (10 winners from each language community received an educational CD-ROM about the polar regions and climate change produced by the IPF). Released in February 2009, the sticker album featured a polar tern who guided children through the polar regions with games and puzzles to teach children about the unique environments around the poles. The book highlighted PEA and its "zero-emission" design. The sticker albums went on sale in book shops all across Belgium in February 2009 and were offered for free in editions of one newspaper in each of the two major language regions in Belgium: Gazet van Antwerpen in Flanders and La Dernière Heure in Wallonia. The television station RTL ran advertisements to promote the sticker album. Stickers for the album were given away to classes that participated in Class Zero Emission workshops at IPF headquarters.

## Media coverage of the on-site inauguration

On 15 February 2009, after two seasons of construction and as the IPY was drawing to a close, the completed PEA station was officially inaugurated in Antarctica by ministers from the Belgian government and chief executive officers from the principal sponsors of the PEA project. As had been the case for the send-off inauguration, the primary media targets were Belgian and Brussels correspondents from all major media outlets. This resulted in both Belgian and international media outlets, such as RTBF, VRT, Reuters and Al-Jazeera, attending the inauguration in Antarctica.

The messages which the IPF prioritized had not changed in the year and a half since the September 2007 send-off inauguration, except that as the IPY was now drawing to a close, the IPF wanted to make sure PEA would be recognized as Belgium's main contribution to the IPY.

In this respect, Belgian coverage was considerable, with articles appearing in 112 print and web media platforms across Belgium. As during the send-off inauguration in September 2007, several media outlets, both local and national, produced a number of articles between January and April 2009 (Table 3).

All Belgian national television channels (RTBF, RTL-TVI, VRT and VTM) broadcast regular news reports leading up to the on-site inauguration. Two channels (VTM and RTL-TVI) broadcast a weekly series of reports as part of their Sunday evening news from November 2008 up until the on-site inauguration. A satellite link-up between the station and VIPs at the Museum of Natural History in Brussels was broadcast on RTBF, allowing for direct coverage of the inauguration within Belgium. Nearly all radio stations in Belgium broadcast news briefs covering PEA's on-site inauguration.

Coverage was mostly neutral, with a handful of positive and negative articles. The negative coverage in *Vers l'Avenir* (Anonymous 2009a), *La Dernière Heure* (Kaibeck 2009), *Le Soir* (Du Brulle 2009), *La Libre Belgique* (Ducarme 2009) and *Het Nieuwsblad* (Anonymous 2009b) criticized the carbon footprint produced by the large number of VIPs and journalists who attended the inauguration in Antarctica. Although this criticism is understandable, the IPF took the view that it was the price to pay to promote the environmental messages at the heart of the PEA project and was a one-time event.

International coverage was more widespread compared to the send-off inauguration in September 2007, with reports appearing in 37 countries and in 23 languages. In total, 195 foreign print and web publications picked up on the story (Table 4).

Coverage appeared on environmental and technological websites such as Forced Green (Anonymous 2009c), The Tech Herald (Bowden 2009), the Polish website Gadzetomania (Anonymous 2009d), the Norwegian website Miljøstrategi (Anonymous 2009e) and the Italian website Gstriatum (Anonymous, no date).

The on-site inauguration also received coverage from television and radio media outlets in 10 countries outside Belgium. Televised coverage appeared on the BBC, Euronews, ARD, ARTE, Spiegel Television, Al-Jazeera and TSR (Switzerland). The Austrian radio station ORF broadcast a programme about PEA and a video report produced by Reuters appeared on websites such as that belonging to the German tabloid *Bild* 

**Table 3** Belgian media coverage during the construction phase. A sample of the articles appearing in 112 print and web media platforms across Belgium is presented in the table. (Article titles given in the table have been translated into English by the authors unless they were originally in English. The authors will provide a more extensive list of media references upon request.)

Author and year	Article title	Newspaper or magazine
Anonymous 2009g	A researcher from Liège at the South Pole	La Meuse
Anonymous 2009h	Princess Elisabeth Station	Paris Match Belgique
Anonymous 2009i	A woman in Antarctica	Femmes d' Aujourd'hui
Anonymous 2009j	The cold is a companion	De Standaard
Anonymous 2009k	Belgium raises its flag at the South Pole	De Morgen
Anonymous 2009l	Polar station without footprint,	De Tijd
Anonymous 2009m	Scientific research in style	Knack
Anonymous 2009n	The Princess Elisabeth Base	Het Belang van Limburg
Anonymous 2009o	Belgium has a new home at the South Pole	Metro
Anonymous 2009p	Alain Hubert opens "his" station in Antarctica	Grenz-Echo
Anonymous 2009q	Mission to Antarctica	The Bulletin
Anonymous 2009r	Princess Elisabeth station officially inaugurated	Het Ingenieursblad
De Meyer 2009	The Belgian flag flies again in Antarctica	Het Laatste Niews
Du Brulle 2009	Belgium returns to Antarctica	Le Soir
Ducarme 2009	From Adrien de Gerlache to Alain Hubert, 110 years of Belgian presence in Antarctica	La Libre Belgique
Kaibeck 2009	Polar inauguration	La Dernière Heure
Rommers 2009 Valentin	Popping the champagne at Belgian South Pole station Belgium returns to Antarctica	Het Nieuwsblad La Capitale
2009 Verheyen 2009	As a small country, we are now big again	Gazet van Antwerpen

(Anonymous 2009f). The websites of Euronews, Radio France Internationale, CNBC-Italy, MSNBC, CBS, CBN, ABC and Ten Network Australia provided coverage on their websites.

Cumulatively, one can conclude that the PEA's on-site inauguration in Antarctica in 2009 was an even greater success in terms of media coverage compared to the send-off inauguration in Brussels in September 2007.

Analysis of the press coverage shows that most of the major themes were covered in a similar fashion to the September 2007 send-off inauguration, but this time with a greater emphasis on PEA as the Belgian contribution to the IPY. The coverage was neutral to positive. French and French-language Swiss media were generally positive about the project, using terms like "revolutionary". On more than one occasion, IPF President, Alain Hubert, was compared to Al Gore or the high-profile French environmentalist, Nicolas Hulot, in his efforts to raise awareness on climate change issues. The French press was also good at communicating that Alain Hubert wanted to encourage school children to become interested in the sciences.

Press agency reports appeared in full or in part in about half of the international media stories identified. The bulk of international coverage was in English, thanks primarily to AP and Reuters. Coverage in the US and Canada in particular was much more extensive for the on-site inauguration than for the send-off inauguration. The AP story by Brand was the most widely distributed story about the PEA station internationally appearing in at least 60 print and/or web publications (e.g., Brand 2009a–h). Brand's AP story also gave links to IPF websites, something which was very much appreciated by the IPF communication team. (However, these links were sometimes eliminated during editing.)

As with the send-off inauguration, the efforts of a number of sponsors and technical suppliers also helped to get additional coverage for the PEA project. Proven Energy, the technical supplier that provided the wind turbines for the station, issued a press release in multiple languages (including Arabic, Finnish and Hindi) about the station's inauguration, highlighting the company's involvement in the project and the sturdiness of its wind turbines. Its press release appeared on websites such as Engineering News (van der Merwe 2009) and Forced Green (Anonymous 2009c). An Electrolux press release found its way onto the website of the Norwegian environmental magazine Miljøstrategi (Anonymous 2009e).

## Post-inauguration media coverage

PEA has continued to enjoy media attention following its on-site inauguration, for example when the station's energy smartgrid was completed and came on line during the 2009/10 Antarctic season and when the IPF formally donated the completed PEA station to the Belgian State on 31 March 2010.

As a boost to its international exposure, PEA was also chosen to be one of the main exhibits in the European

**Table 4** International media coverage during the construction phase. Reports appeared in 37 countries and in 23 languages. In total, 195 foreign print and web publications picked up on the story. A sample of these articles is presented in table. (Article titles given in the table have been translated into English by the authors unless they were originally in English. The authors will provide a more extensive list of media references upon request.)

Author and year	Article title	Newspaper or magazine	Country
Anonymous 2009s	Ultra-modern Belgian station in Antarctica	Der Standard	Austria
Anonymous 2009t	Zero emission station	Corriere della Sera	Italy
Anonymous 2009u	Antarctica goes green	L'Express	France
Anonymous 2009v	Tintin at the South Pole	Courier International	France
Anonymous 2009w	An ecological base in Antarctica	El Commercio	Spain
Anonymous 2009x	First "zero emission" station opens in Antarctica	China View	China
3rand 2009a	Belgium opens new Antarctic climate change research station	Toronto Star	Canada
Brand 2009b	Belgium opens new Antarctic polar research station	The International Herald Tribune	UK
Brand 2009c	Belgium opens new Antarctic polar research station	The Guardian	UK
Brand 2009d	Belgium opens new Antarctic polar research station	The Washington Post	US
Brand 2009e	Belgium opens new Antarctic polar research station	The Los Angeles Times	US
Brand 2009f	Belgium opens new Antarctic polar research station	The Seattle Times	US
Brand 2009g	Belgium opens new Antarctic polar research station	The New York Post	US
Brand 2009h	Belgium opens new Antarctic polar research station	USA Today	US
Brendei 2009	Climate-neutral station in Antarctica	Explore Magazine	Canada
Roelf 2009	First carbon-free station opens in Antarctica	Scientific American	US
Siuberski 2009a	A Belgian station in Antarctica	Le Monde	France
Siuberski 2009b	A century after Amundsen, Antarctica has all modern conveniences	Daily Times	Pakistan

Union-Belgian Pavilion at the World Expo 2010 in Shanghai.

#### **Discussion**

The range of publications which covered the PEA story is exceptionally broad. The IPF's sustained effort to communicate its message and to develop a good working relationship with members of the press paid off. While it is difficult to know exactly what motivated certain media outlets to cover the PEA story, one can speculate on their motivations based on our review of the stories that appeared in the media.

# **National pride**

Belgium has had a long history in the Antarctic. The tiny country was the first to lead an overwintering expedition in Antarctica in 1898 during the voyage of the *Belgica*, and is one of the original 12 signatories of the Antarctic Treaty. PEA was Belgium's main contribution to the fourth IPY and an opportunity for Belgium to once again have its own research station in Antarctica following the decommissioning of King Baudouin Station in 1967. Given that the PEA project was spearheaded by a Belgian non-profit organization, allowing Belgium to be the first country to build and operate a "zero-emission" research station in Antarctica, it stands to reason that the story would be attractive to the national media.

# **Environmental friendliness**

Climate change, the environment and sustainable development now represent mainstream subjects for media across the world. The PEA project demonstrated that it is possible to live and work sustainably even in one of the harshest environments on Earth. The station design also went above and beyond the environmental standards stipulated in the environmental regulations for Antarctica (Antarctic Treaty Secretariat 1998a; see also 1998b), commonly referred to as the Madrid protocol, setting a higher standard for research stations on the continent. It seems reasonable that such a project would not go unnoticed by the press, especially media outlets specialized in the environment and sustainable development.

# Unique mix of technologies

PEA would not be environmentally friendly without the technological research and development behind the project. PEA is a first-of-its-kind prototype polar research station, made possible thanks to the hard work of many engineers and specialists from both the IPF and the station's sponsors and technical partners. However, many of the techniques used in the station are not limited to use in Antarctica. Many of the "green" techniques employed in the station, such as passive construction and a smart electrical grid, are already in use in commercial and residential buildings throughout the world. These are aspects of the PEA story that green

technology, architecture and design publications would be likely to pick up on.

## **Entrepreneurial spirit**

As with many entrepreneurial endeavours, the PEA project started as a visionary idea with which a broad range of people could easily identify. In hindsight, the fact that Alain Hubert and the IPF were able to build on this simple idea and physically realize it within the space of about six years was certain to draw the interest of journalists, and that of the general public. Judging from media reports, the project's vision and innovation was an attractive aspect to many media outlets.

## Private sector participation

The role that the private sector played in the project cannot be understated, both in terms of its realization and its public profile. Before the construction of PEA, no station in Antarctica had been funded primarily with money from the private sector. Furthermore, PEA continues to be jointly managed by the public and private sectors under a Polar Secretariat. Along with its "zero-emission" characteristic, the fact that the private sector played a key role in making a scientific research station possible is the other unique aspect to the PEA project. Private sector funding shows the commitment that companies and ordinary citizens have towards the sustainability and scientific research missions incarnated by PEA.

# Ordinary people accomplishing the extraordinary

Another appealing aspect of the PEA project is that many ordinary people interested in taking part in a ground-breaking project participated in its construction, many on a voluntary basis. The technicians and other specialists who worked on building the station came from a variety of different backgrounds such as plumber, carpenter, electrician, and cook. Working on the station provided them with the opportunity to travel to a continent which they would otherwise never have had a chance to visit. Their story of adventure, discovery, and accomplishment make for an inspirational narrative.

## A new scientific research platform in Antarctica

It seems self-evident that media outlets focusing on science, and in particular polar science, would find the PEA project an attractive topic. Prior to its construction, little scientific research had been undertaken in the region of Dronning Maud Land where PEA now stands.

In addition, the station fills a logistical hole in the network of Antarctic stations in the region. The research and logistical opportunities the new station offers are of particular interest to the international scientific community and the niche publications that cater to them.

#### **Aesthetics**

Last, but certainly not least, PEA's spectacular location and strikingly futuristic external and internal aesthetics are not the result of a single architectural vision or design, but were instead guided by functionality and energy efficiency requirements. Nevertheless, there is no doubt as to PEA's powerful and universal visual impact, whether in situ, or as reflected in the film footage shot by MDW Productions and the images of IPF photographer René Robert. Selections of these images and film footage were made available by the IPF for print, television and web media internationally and certainly played a key role in the visual impact and wide circulation of the story beyond the Belgian context.

#### Conclusion

The story of PEA was a media success in terms of outreach and communication, not only for IPF but also for the IPY and polar science. With the general public able to follow in the media an inspirational story of the dream of a first-of-its kind environmentally-friendly research station becoming reality alongside the scientific research taking place there, PEA was able to bring more attention to the IPY and highlight the importance of the polar regions and polar science.

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#### References

- Anonymous 2004a. Les Belges au sud. (Belgians go south.) *Le Soir,* 7 February.
- Anonymous 2004b. 500.000 euro voor niewe Belgische basis op Zuidpool. (500 000 Euros for new Belgian base in Antarctica.) *Het Laaste Nieuws*, 9 February.
- Anonymous 2004c. Back to the pole? *The Bulletin,* 12 February.
- Anonymous 2004d. Belgium on ice. *La Libre Belgique*, 6 February.
- Anonymous 2007a. Breaking news. Apparecchi Ettrodomestici, June.
- Anonymous 2007b. A Princess Elisabeth kutatóbázist energiatakarékos Electrolux háztartási gépekkel szerelték fel az Antarktiszon. (Princess Elisabeth research base in Antarctica equipped with energy-efficient household appliances.) Posted on Greenfo website on 15 October. Accessed on the internet at http://old.greenfo.hu/hirek/hirek\_item.php? hir=17029 on 8 December 2011.
- Anonymous 2007c. Les scientifiques belges retrouvent la banquise. (Belgian scientists back on the ice.) *Vers l'Avenir,* 5 September.
- Anonymous 2007d. Belgische forschungsstation in der Antarktis. (Belgian research station in Antarctica.) *Neue Zürischer Zeitung,* 6 September.
- Anonymous 2007e. Belgium building zero-emissior Antarctic station. *Daily Times*, 10 September.
- Anonymous 2007f. Belgium unveils polar station. *China Daily,* 7 September.
- Anonymous (ANI press agency) 2007. World's first zeroemission Antarctic research station unveiled. *Daily India*, 6 September.
- Anonymous (EFE press agency) 2007. Se presenta la primera estación polar que no emite dióxido de carbono. (Presenting the first polar station that emits no carbon dioxide.) *El Mundo*, 6 September.
- Anonymous (G.C.) 2007. L'Histoire retiendra ceux qui en seront. (History will remember those who are there.) *La Libre Belgique*, 17 August.
- Anonymous (N.F.) 2007. Un modèle unique, 0% d'emission de CO<sub>2</sub>. (A unique model: 0% CO<sub>2</sub> emissions.) *La Dernière Heure*, 6 September.
- Anonymous (S.R.) 2007. La première base polaire "zéro emission". (The first "zero emission" base.) *Science et Avenir*, October.
- Anonymous 2009a L'Antarctique, un scandale, dit Isabelle Poncelet. (Antarctica is a scandal, says Isabelle Poncelet.) *Vers l'Avenir*, 19 February.
- Anonymous 2009b 219 ton  $CO_2$  voor zero-uitstootstation. (219 tonnes of  $CO_2$  for the "zero emission" station.) *Het Nieuwsblad*, 18 February.
- Anonymous 2009c. Wind at Princess Elisabeth Station. Posted on Forced Green website on 15 February. Accessed on the internet at http://www.forcedgreen.com/2009/02/wind-at-princess-elisabeth-station/ on 8 December 2011.

- Anonymous 2009d. Najbardziej ekologiczna stacja polarna na swiecie. (The most ecological polar station in the world.) Posted on Gadzetomania website on 17 February. Accessed on the internet at http://gadzetomania.pl/2009/02/17/najbardziej-ekologiczna-stacja-polarna-na-swiecie on 8 December 2011.
- Anonymous 2009e. Electrolux valgt som partner for "zero-emission" prosjekt i Antarktis. (Electrolux chosen as partner for "zero emission" project in Antarctica.) Posted on Miljøstrategi website on 18 February. Accessed on the internet at http://www.demo.alphadesign.no/miljostrategi/detail.html?nyheter.nid=392 on 25 April 2011.
- Anonymous 2009f. Erste umweltfreundliche polarstation eingeweiht. (First pollution-free polar station inaugurated.) Posted on Bild website on 16 February. Accessed on the internet at http://www.bild.de/video/clip/suedpol/antarktis-7410940.bild.html on 8 December 2011.
- Anonymous 2009g Une chercheuse liégeoise au Pôle Sud. (A researcher from Liège at the South Pole.) *La Meuse*, 13 February.
- Anonymous 2009h. Station Princess Elisabeth. (Princess Elisabeth Station.) *Paris Match Belgique*, 19 February.
- Anonymous 2009i. Une femme en Antarctique. (A woman in Antarctica.) Femmes d'aujourd'hui, July.
- Anonymous 2009j. Koude is een metgezel. (The cold is a companion.) *De Standaard*, 10 January.
- Anonymous 2009k. België hijst de vlag op de Zuidpool. (Belgium raises its flag at the South Pole.) *De Morgen,* 16 February.
- Anonymous 2009l. Poolstation zonder voetafdruk. (Polar station without footprint.) *De Tijd*, 13 February.
- Anonymous 2009m. Wetenschap in stijl (Scientific research in style.) *Knack*, 11 February.
- Anonymous 2009n. De Prinses Elisabethbasis. (The Princess Elisabeth Base.) *Het Belang van Limburg,* 10 February.
- Anonymous 2009o. België heeft nieuwe thuis op de Zuidpool. (Belgium has a new home at the South Pole.) *Metro*, 16 February.
- Anonymous 2009p. Alain Hubert eröffnete "seine" Station in der Antarktis. (Alain Hubert opens "his" station in Antarctica.) *Grenz Echo*, 17 February.
- Anonymous 2009q. Mission to Antarctica. *The Bulletin*, 5 February.
- Anonymous 2009r. Prinses Elisabeth-station officieel ingehuldigd. (Princess Elisabeth Station officially inaugurated.) *Het Ingenieursblad*, 23 April.
- Anonymous 2009s. Hochemoderne belgische station in der Antarcktis. (Ultra-modern Belgian station in Antarctica.) Der Standard, 16 January.
- Anonymous 2009t. Stazione a zero emissioni. (Zero emission station.) *Corriere della Sera*, 14 February.
- Anonymous 2009u. L'Antarcticque se met au vert. (Antarctica goes green.) *L'Express*, 16 February.
- Anonymous 2009v. Tintin au pole sud. (Tintin at the South Pole.) *Courier International*, 16 February.
- Anonymous 2009w. Una base ecológica en la Antártida. (An ecological base in Antarctica.) *El Commercio*, 19 February.

- Anonymous 2009x. First "zero-emission" station opens in Antarctica. *China View*, 16 February.
- Anonymous No date. Prima base a emissioni zero in Antartide. (First zero emission base in Antarctica.) Posted on the Gstriatum website. Accessed on the internet at http://www.gstriatum.com/it/prima-base-a-emissioni-zero-in-antartide/ on 8 December 2011.
- Antarctic Treaty Secretariat 1998a. *Protocol on environmental protection to the Antarctic Treaty.* Accessed on the internet at http://www.ats.aq/e/ep.htm on 6 December 2011.
- Antarctic Treaty Secretariat 1998b. *Annex III to the protocol on environmental protection to the Antarctic Treaty. Waste disposal and waste management.* Accessed on the internet at http://www.ats.aq/e/ep.htm on 6 December 2011.
- Antoine F. 2007. Première station CO<sub>2</sub>-neutre. (First CO<sub>2</sub>-neutral station.) *L'Echo*, 6 September.
- Bowden R. 2009. First ever zero emissions polar base opened in Antarctica. Posted on The Tech Herald website on 16 February. Accessed on the internet at http://www.thetechherald.com/article.php/200908/2952 on 8 December 2011.
- Brahic C. 2007. Antarctic pod makes way for green research. *New Scientist*, 5 September.
- Brand C. 2007a. Polar research station to be pollution free. *The St. Petersberg Times*, 6 September.
- Brand C. 2007b. Group unveils polar science station. *The New York Times*, 5 September.
- Brand C. 2007c. Group unveils polar science station. *USA Today*, 5 September.
- Brand C. 2009a. Belgium opens new Antarctic polar climate change research station. *The Toronto Star*, 15 February.
- Brand C. 2009b. Belgium opens new Antarctic polar research station. *International Herald Tribune*, 15 February.
- Brand C. 2009c. Belgium opens new Antarctic polar research station *The Guardian*, 15 February.
- Brand C. 2009d. Belgium opens new Antarctic polar research station. *The Washington Post*, 15 February.
- Brand C. 2009e. Belgium opens new Antarctic polar research station. *The Los Angeles Times*, 15 February.
- Brand C. 2009f. Belgium opens new Antarctic polar research station. *The Seattle Times*, 15 February.
- Brand C. 2009g. Belgium opens new Antarctic polar research station. *The New York Post*, 15 February.
- Brand C. 2009h. Belgium opens new Antarctic polar research station. *USA Today*, 15 February.
- Brendei M. 2009. Klimaatneutral station op Zuidpool. (Climate-neutral station in Antarctica.) *Explore Magazine,* 19 February.
- Cendrowicz L. 2007. Antarctic study pod. *The Bulletin*, 13 September, p. 10.
- Davis E. 2007. Belgium building zero-emission Antarctic station. *The Washington Post*, 5 September.
- De Meyer K. 2009. Belgische vlag wappert opnieuw op Antarctica. (The Belgian flag flies again in Antarctica.) *Het Laatste Nieuws*, 14 February.

- De Smet F. 2007. Ons station zal schitteren als een diamant (Our station will shine like a diamond.) *De Standaard,* 18 August.
- Dessibourg O. 2007. Première base "verte" en Antarctique. (First "green" base in Antarctica.) *Le Temps*, 7 September.
- de Wouters M. (director) 2009. *Beyond the poles*. (Film.) MDW Productions.
- Dow Corning. 2007. Dow Corning sponsors International Polar Foundation's Princess Elisabeth Antarctic Station. *Midland Daily News*, 5 September.
- Du Brulle C. 2007. La station polaire prête au départ. (Polar station ready for departure.) *Le Soir*, 5 September.
- Du Brulle C. 2009. La Belgique revient en Antarctique. (Belgium returns to Antarctica.) *Le Soir*, 14 February.
- Ducarme X. 2009. D'Adrien de Gerlache à Alain Hubert, 110 ans de présence belge. (From Adrien de Gerlache to Alain Hubert, 110 years of Belgian presence in Antarctica.) *La Libre Belgique*, 14 February.
- Gröndahl F., Sidenmark J. & Thomsen A. 2009. Survey of waste water disposal practices at Antarctic research stations. *Polar Research 28*, 298–306.
- Hendrickx D. 2007. België pronkt op de Zuidpool. (Belgium flaunts itself in Antarctica.) Gazet van Antwerpen, 6 September.
- Hendrickx K. 2007. Belgische zuidpoolbasis wordt wereldprimeur. (Belgian Antarctic station world first.) *De Morgen*, 6 September.
- Kaibeck M. 2009. Inauguration polaire. (Polar inauguration.) *La Dernière Heure*, 14 February.
- Lemaire N. 2007. Voir la station polaire...à Bruxelles. (See the polar station...in Brussels.) *Le Journal des Enfants,* 31 August.
- Léonard G. 2007. La station polaire attire les curieux. (Polar station attracts curious visitors.) *La Capitale*, 10 September.
- Pettersen T.E. 2007. Bygger framtidsbygg i Antarktis. (Building the future in Antarctica.) *Dagbladet*, 30 November.
- Randisi F. 2007. Notre bas polaire devient réalité. (Our polar base is becoming a reality.) *Metro*, 24 August.
- Roelf W. 2009. First carbon-free station opens in Antarctica. *Scientific American*, 15 February.
- Romaen H. 2007. Najaarscyclus "boeind bouwen voor morgen". (Second half of the year "exciting building of tomorrow".) *Het Ingenieursblad*, 1 October.
- Rommers W. 2009. Champagnekurken knallen op Belgische zuidpool station. (Popping the champagne at Belgian South Pole station.) *Het Nieuwsblad*, 16 February.
- Rüth C. 2008. Media coverage report. In: *International Polar Year 2007–8 Education, Outreach, & Communication Meeting. Meeting Summary Report.* Pp. 12–15. Strasbourg: International Polar Year Education, Outreach & Communication Subcommittee.
- Siuberski P. 2009a. Une station belge en Antarctique. (A Belgian station in Antarctica.) *Le Monde,* 17 February.
- Siuberski P. 2009b. A century after Amundsen, Antarctica has all modern conveniences *Daily Times*, 22 February.

- Snik C. 2007. Eens iets anders dan pasta serveren. (I will serve something besides pasta for a change.) *Het Laaste Niews*, 7 August.
- Valentin M.B. 2009. La Belgique de retour en Antarctique. (Belgium returns to Antarctica.) *La Capitale*, 13 February.
- van der Merwe C. 2009. Renewable-energy operated research base opened in Antarctica. Posted on the Engineering News website on 16 February. Accessed on the internet at http://www.engineeringnews.co.za/article/renewableenergy-operated-
- research-base-opened-in-antarctica-2009-02-16 on 11 May 2009.
- Vereenooghe S. 2007. Belgen keren terug naar Zuidpool. (Belgians return to Antarctica.) *De Tijd*, 6 September.
- Verheyen K. 2009. Als klein land zijn we nu weer groots. (As a small country, we are now big again.) *Gazet van Antwerpen*, 16 February.
- Vets T. 2007. Ik ben echt bang geweest. (I was very frightened.) *Het Belang van Limburg,* 18 August.