

Science vs. Entertainment – New Trends in Antarctic Tourism and needs for revised governance

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Abstract: Although, first tourists visited Antarctica nearly one hundred years ago, modern Antarctic tourism began only in the second half of the 20th century. The concept of the Antarctic expedition cruise ship became an immediate success with more or less continuously growing passenger numbers over the last decades. The main attraction of these cruises was Antarctica as an exotic and unexplored destination. Highly qualified expert tour guides accompanying the cruises became a mainstay of the industry as well as required by the regulatory framework for the industry. In recent years, a number of Antarctic tour operators have added experience or adventure-focused add-on activities to Antarctic cruises with kayaking or camping on the ice, today already kind of a standard offering. Additionally, several companies have ordered new ships for their Antarctic offerings.

The article argues that these additional ships will increase competition between the different operators and that experience and adventure-orientated add-on activities will be one of the main tools for achieving a competitive advantage. Furthermore, it is argued that the add-on activities result in some of the guides or lecturers no longer being subject specialists for Antarctica, but subject specific instructors for the add-on activities even if there might be few guides that are Antarctic specialists as well as specialists for the add-on activities. The main consequence of these recent changes in the Antarctic cruise industry is that the required number of guides and related passenger-guide ratios no longer guarantee that there is a sufficient number of Antarctic specialists on every ship as the required minimum numbers of guides can also be fulfilled by specialists for the add-on activities. In addition, the add-on activities as well as a trend for short duration cruises result in a concentration of Antarctic cruise ship activities in some comparable small areas like the Peninsula region and the South Shetland Islands which consequently might be negatively affected by the tourism activities simply due to the sheer number of activities in a limited area. The article concludes with some recommendations on how comparably small changes to the regulations for Antarctic cruises, most importantly changing the regulations for the guides in a way that instructors for add-on activities or translators do no longer count against the minimum required number for expert guides, can mitigate negative effects of the recent changes in Antarctic cruise tourism on the Antarctic ecosystem. It is argued that such a change is mandatory if Antarctic tourism shall continue having only a minimal effect on Antarctica and its ecosystems despite an increasing number of ships and adventure focused add-on activities to individual cruises. Finally, such changes seem to be unavoidable if Antarctica shall not become a cruise destination like any other on the globe, but should continue providing an experience that can be found nowhere else and serves as an example of tourism, nature experience, education and protection going together in a sustainable way.

Zusammenfassung: Wenngleich die ersten Touristen bereits vor nahezu einhundert Jahren an Bord von Versorgungsschiffen in die Antarktis reisten, liegt der Beginn des modernen Antarktistourismus in der zweiten Hälfte des 20. Jahrhunderts. Expeditionskreuzfahrten wurden ein äußerst erfolgreicher Sektor mit stetig wachsenden Passagierzahlen insbesondere in den letzten Jahrzehnten. Die Hauptattraktion dieser Reisen war und ist die Antarktis selbst als eine exotische und kaum erschlossene Region. An Bord der Schiffe arbei-

tende Lektoren – zumeist mit einem beruflichen Hintergrund im Bereich der wissenschaftlichen Erforschung der Antarktis – entwickelten sich nicht nur schnell zu einem festen Bestandteil dieses Konzepts, sondern wurden ebenso ein verpflichtendes Element der einschlägigen internationalen und nationalen Bestimmungen für die Durchführung von Antarktikkreuzfahrten. Zwei wesentliche Veränderungen prägen die Entwicklung der Kreuzfahrtindustrie in der Antarktis seit einigen Jahren: Zum einen setzen einzelne Reedereien verstärkt auf einen aktivitätsorientierten Erlebnistourismus und zum anderen hat eine Vielzahl von Reedereien neue Schiffe geordert, die in den kommenden Jahren in Fahrt gestellt werden. Diese Schiffe werden zu einer erheblichen Verstärkung der Konkurrenzsituation zwischen den einzelnen Anbietern führen und einer der wesentlichen Wege, in dieser neuen Konkurrenz zu bestehen, wird das verstärkte Angebot von erlebnis- und aktivitätsorientierten Zusatzangeboten sein. Eine Folge dieser Zusatzangebote ist, dass die Lektoren nicht mehr nur als traditionelle Lektoren tätig sind, sondern verstärkt als Betreuer oder Trainer für diese Zusatzangebote. Konsequenterweise werden die derzeit gültigen Regelungen bezüglich der erforderlichen Anzahl an Lektoren bzw. das Mindestverhältnis von Lektoren und Fahrgästen nicht mehr automatisch sicher stellen, dass eine hinreichende Zahl von Lektoren dem Bereich der Wissensvermittlung über die Antarktis zuzurechnen ist. Vielmehr erlauben die derzeitigen Regelungen, zumindest theoretisch, die Mindestanforderungen ausschließlich mit Betreuern und Trainer für die Zusatzangebote zu erfüllen. Da neben den Zusatzangeboten eine steigende Anzahl Reedereien Kreuzfahrten kurzer Dauer anbietet, ergibt sich zusätzlich eine Konzentration des Kreuzfahrttourismus in wenigen vergleichsweise kleinen Regionen der Antarktis und zwar hauptsächlich im Bereich der Antarktischen Halbinsel und der Süd-Shetland-Inseln. Eine solche Konzentration touristischer Aktivitäten muss zwar nicht automatisch über einer Schädigung des antarktischen Ökosystems führen, beinhaltet jedoch ein relevantes diesbezügliches Risiko. Basierend auf der Analyse dieser Veränderungen der antarktischen Kreuzfahrtindustrie werden Empfehlungen entwickelt, wie sich mit vergleichsweise geringem Aufwand die negativen Folgen dieser Veränderungen entweder vermeiden oder zumindest begrenzen lassen. Insbesondere wird vorgeschlagen, dass die Betreuer oder Trainer für die erlebnis- und aktivitätsorientierten Zusatzangebote sowie eventuell an Bord mitreisende Übersetzer nicht mehr für die Erfüllung der Mindestanzahl an Lektoren angerechnet werden können. Eine entsprechende Änderung des einschlägigen nationalen und internationalen Regelwerks für Kreuzfahrten in die Antarktis erscheint unvermeidlich, wenn langfristig sicher gestellt werden soll, dass trotz einer zunehmenden Anzahl an Schiffen und dem verstärkten Angebot von Zusatzangeboten, Antarktikkreuzfahrten nur minimale oder bestenfalls keine negativen Auswirkungen auf die Antarktis und ihre Ökosysteme haben sollen. Zusätzlich ist eine solche Fortschreibung des Regelwerks unabdingbar, wenn die Antarktis nicht zu einem Kreuzfahrtziel wie jedes andere werden soll, sondern Reisen in die Antarktis weiterhin eine einmalige Kombination aus Tourismus, Naturerlebnis, Umweltbildung und -schutz in Form eines nachhaltigen Tourismus bleiben sollen.

INTRODUCTION

„Besuchen Sie Europa solange es noch steht! (Visit Europe while it's still standing!)“ is not only the title of a highly successful 1980s New Wave song by the German group Geier Sturzflug, but was originally a cynical and humorous marketing slogan by an American travel agency for trips to Europe during the late Cold War period. In allusion to the total destruction of Europe due to a nuclear conflict or the Cold War turning hot, it was cynically suggested to visit Europe as long

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as it is still visitable. Fortunately, the risk of Europe's destruction by a nuclear war has minimized considerably.

Today, a comparable advertisement would be more appropriate for visits to Antarctica; although it will be probably neither a nuclear conflict that destroys Antarctica and ends Antarctic tourism nor any other major international military conflict. Also, it is not expected that climate change or giant ice sheets breaking loose will cause an immediate end to Antarctic tourism. The most prevalent risk for Antarctic tourism today is the tourism itself and most importantly some recent changes within the Antarctic tourism industry. These changes might not necessarily bring an end to Antarctic tourism, but could result in Antarctica becoming a cruise destination just like many others characterized by passengers looking for all kind of fun activities onboard and ashore but not the destination itself and Antarctic tourism imposing substantial negative effects on Antarctica and its ecosystems.

ANTARCTICA AND THE BEGINNINGS OF THE TOURISM INDUSTRY

Antarctica is without any doubt still the continent with the least number of tourists, but more than 40.000 tourists per annum visiting Antarctica in recent years are a clear indicator that Antarctic tourism is a factor that can no longer be ignored. While 40.000 tourists per year might look like a small number, the extreme remoteness and sensibility of the continent needs to be taken into account when it comes to topics like maritime safety or ecological concerns.

In addition, while the total number of tourists in Antarctica is still small compared to virtually all other tourist destinations on the globe, the number of tourists visiting Antarctica is more than ten times the number of people residing on the whole continent during the Austral summer. Using the ratio between tourists and 'summer-locals', i.e. scientists and other personnel of the various research stations, instead of the absolute number of tourists, places Antarctica immediately into the top-ten list of regions or countries visited by foreign tourists. The tourist-resident ratio for traditional international tourist hot-spots like the various Caribbean island nations ranges from 5.8 tourists per resident for the US Virgin Islands to 12.8 for the British Virgin Islands, 24.8 for Macao and even 33.5 for Andorra. But for most other tourist destinations like the Seychelles with a ratio of 2.3, the tourist to local ratio is below three and for larger countries regularly below one, meaning that the annual number of tourists visiting the country is lower than the residential population.

It might be argued that Antarctic tourism started already nearly a century ago, when passengers traveled occasionally to the continent or the Sub-Antarctic islands onboard supply ships for whaling or research stations. For example, in the 1920s, the FLEURUS, a converted trawler used by the Falkland Islands Government for bringing mail and supplies to the whaling stations on the Falkland Islands Dependencies, offered round-trip tickets for bunks that were not used for the exchange of personnel at the whaling station (STONEHOUSE & SNYDER 2010). The numbers of these first Antarctic tourists were extremely low, most certainly below 100 per year. Consequently, their impact on the Antarctic environment remained a non-issue, especially when comparing to the impact of the

thousands of seasonal workers employed by the whaling stations on the Sub-Antarctic islands every season during this period and of course, the whaling industry itself (BENNETT 1932). The whaling industry brought the whale stocks of the Southern Ocean to near extinction and reindeer brought to South Georgia as wild game for hunting are just one example of other negative impacts by the whaling stations.

More importantly, these early Antarctic cruises were no dedicated leisure cruises to Antarctica, but regular supply and mail runs with some round-trip tourist tickets sold for a number of bunks that were not required for the exchange of personnel. Consequently the schedule of vessels like the FLEURUS as well as activities onboard were not determined by the interests of the tourists and it seems logical that the only activity available to the tourists was simply enjoying the cruise, the spectacular views, and probably some short landings, when the ship was anchored off one of the stations. The small number of tourists that went ashore had hardly any impact, especially when compared to the substantial environmental repercussions of the whaling stations.

Altogether, it can be summarized, that up to the second half of the 20th century, Antarctica was not considered as a pristine environment that needed protection, but as a continent to be explored and exploited.

Consequently, the beginning of Antarctic tourism as known today started only in the late 1960s when the first expedition cruise ship, the LINDBLAD EXPLORER, was commissioned and started regular tours to Antarctica. The program offered to the passengers of the LINDBLAD EXPLORER, the first ever purpose-built expedition cruise ship, was more or less comparable to the experience of the very early Antarctic tourists (SHACKLETON & SNYDER 2001). The main attraction was the Antarctic landscape and nature and simply observing and enjoying Antarctica was the main and nearly only program offered to the passengers. But already this first purpose-built expedition cruise ship was equipped with heavy-duty inflatable boats used for shore visits or short cruises close to glacier fronts or other areas of interest like beaches or cliffs crowded with Antarctic wildlife. These small-boat operations, regularly named zodiac operations after the name of the French supplier of most of the heavy-duty inflatables, became quickly a main staple of expedition cruises all over the globe and in particular in Antarctica.

When the LINDBLAD EXPLORER, often nicknamed 'the little red ship', started modern Antarctic tourism, there were basically no regulations for this tourism. The Antarctic Treaty had already entered into force in 1961 (ANTARCTIC TREATY SYSTEM 1983), but included no specific provisions or regulations for tourism beyond the area to be used for peaceful purposes only (Article 1 of the Antarctic Treaty).

Because of the small number of tourist in those days, also their influence on Antarctic flora, fauna and historic places and sites remained negligible, but concepts and activities developed for the operations of the LINDBLAD EXPLORER became the mainstay of Antarctic tourism in the decades to come.

One of the most important ingredients to the successful recipe for a traditional Antarctic cruise as developed since the 1970s

was a program of lectures onboard the ship that replaced the standard onboard entertainment program of a conventional cruise ship more or less completely. All kinds of show-acts, musical performances, black-tie cocktail parties, white tie dinners etc. were small or non-existent compared to traditional, non-expedition cruise ships. Experts on subjects like Antarctic wildlife, geology, oceanography, glaciology and the history of the Polar Regions joined the cruises and provided detailed information on Antarctica during the lectures. In addition, these experts served as guides during the zodiac cruises and the landings. The program onboard the expedition cruise ships was de facto much more like the program of an adult education center than the entertainment program of a traditional cruise ship. There might have been some aspects of a traditional entertainment program onboard the expedition cruise ships like some live music performances or a Captain's Cocktail, but the main attraction was the destination itself and knowledge transfer about it through the lectures.

Although there was no formalized requirement for any kind of training or education for the experts accompanying the expedition cruise ships, the few operators active in the early years of the international market for expedition cruises to Antarctica selected them carefully. They usually recruited scholars retired from a career in Antarctic research or still active scientists that saw the expert job onboard the expeditions cruise ships as a side-gig to a main job at least closely related to Antarctic exploration and research.

In addition, some young polar scientists decided to stay on lecturing onboard the expedition cruise ships instead of pursuing a career with a polar research institution. Regardless if they were full-time lecturers or serving onboard the expedition cruise ships as a side-gig, common to all guides of the early generation was an academic education with some relevance for Antarctic research or substantial professional experience related to Antarctica. It was also common that working as a guide onboard an Antarctic expedition cruise ship was for some not only a job, but a welcome opportunity to step out of the proverbial academic 'ivory tower' and to communicate research results not only to academic colleagues, but to a wider audience interested in Antarctica (HEIDBRINK 2013).

With the number of cruise ships operating in Antarctic waters continuing to be extremely small throughout the 1970s and the 1980s and even in the early 1990s being around ten ships regularly sailing Antarctic waters, recruiting highly qualified lecturers and guides with substantial Antarctic expertise was no difficulty at all. In addition, with nearly all the passengers coming from English or German speaking countries, it was also not a problem to recruit experts who could communicate with the passengers in their respective language. The few passengers coming from non-English or German speaking countries usually had sufficient command of one of those languages so there was no need for translators.

The late 1980s marked a shift in Antarctic tourism with a substantial increase in the number of passengers going to Antarctica (MASON & LEGG 2000). Despite of the substantial increase in passenger numbers, the concept of the typical Antarctic cruise remained more or less unchanged since Antarctica itself remained the main attraction and enrichment or entertainment programs were limited to scholarly information on Antarctica.

Despite of an expanding number of operators and ships offering Antarctic expedition cruises, the competition between individual operators remained comparably low. Operators still not entered the Antarctic tourism business in large numbers and individual operators could easily carve out niches in the market, like targeting German-speaking passengers or enthusiast nature photographers interested in seabirds etc.

Nevertheless, the increasing number of ships going to Antarctica resulted in significant changes to the expedition cruise industry with the creation of the International Association of Antarctic Tour Operators (IAATO) in 1991 (STONEHOUSE 1992). Founded by seven operators of Antarctic cruises, IAATO aimed from its early beginnings "to promote safe and environmentally responsible travel in this remote, wild and delicate region of the globe" (IAATO 2018). The founding of IAATO was a reaction to more ships and operators joining the market and the realization that without certain standards, the Antarctic tourism industry would contribute to the destruction of the nature and landscape that were at the very bases for its economic success. IAATO thus developed a substantial set of guidelines for Antarctic expedition cruises, reaching from distance requirements for the observation of wildlife, anti-invasive species measures, guide-to-passenger ratios, and an assessment of guides and expedition leaders to name just a few of the areas for which there are guidelines or strict requirements. Since its creation, more than 100 companies have joined the IAATO (IAATO 2018).

However, due to IAATO being a private industry organization, these regulations originally only apply to IAATO members. Nevertheless Antarctic cruises require a permit from the respective national authorities if the ship is home-ported or the operating company is located in a signatory nation of the Antarctic Treaty. These nations had regularly made membership or at least compliance with IAATO standards, guidelines and regulations a mandatory condition for receiving the required permit. Consequently, IAATO standards today need to be understood as binding not only for the members of IAATO, but de-facto for all operators of Antarctic expedition cruise ships.

Although the efforts to develop standards for the industry and consequently to minimize effects of tourism on Antarctica must be commended and the system is probably more effective than many other industry-based self-regulatory frameworks, some new developments are posing substantial challenges to the system as it stands today. Thus, a general reform of the system or at least some substantial changes is necessary if the system should continue to ensure minimum effects of tourism on Antarctica and provide a regulatory framework for sustainable tourism.

Of course, it can also be argued that the whole system of regulating Antarctic tourism with the help of an industry association like IAATO is not really acceptable. For example, legal scholars like S.V. Scott question if the current system of governance including an industry organization and authorities is compatible with the level of environmental protection and the precautionary approach to which the Antarctic Treaty System is committed (SCOTT 2001). Regardless if ones agrees with these positions or not, it is obvious that there is a need for revision and change of the regulations for Antarctic tourism.

RECENT DEVELOPMENTS AND NEW SHIPS

The success of the Antarctic cruise industry in previous years has resulted in a steady increase of the number of ships employed in the business. The most recent list of ships by IAATO (2018-2019) shows more 40 ships in the category 13-200 passengers, plus nearly ten ships in the categories of 200 and above passengers (IAATO Member Vessel). Many operators have also ordered new ships, many of them purpose-built for expedition cruises in the high latitudes. With these new ships entering service over the next years, the overall passenger capacity of the Antarctic expedition cruise industry will increase substantially as many of the new ships have a higher passenger capacity than their predecessors and because the older ships will not immediately leave the market. Consequently, the overall passenger capacity of the Antarctic cruise industry will not only continue to rise, but see a substantial jump over the next years.

This substantial growth of overall passenger capacity will result in increased competition among cruise operators. With each of the new ships meaning a multi-million Euro investment, the companies need to think hard about how to position the new ships in the market in order to prepare for the increased competition. Due to the specifics of the Antarctic cruise industry and most notably the limitations of passenger numbers if the ship is to offer cruises with landings and other off-ship activities, the options available to the companies are limited in comparison to other sectors of the global cruise industry. The main strategies to gain a competitive advantage include: (1) Increased luxury; (2) budget cruises or short duration cruises; (3) additional activities. Each of the three options bears opportunities and risks for companies and entails different consequences for Antarctica.

The first option – increased luxury – appears obvious but is indeed difficult to implement. Given the high costs for Antarctic cruises with the cheapest ten day cruise today already asking for ca. 4000 to 6000 Euro per passenger and standard three week cruises regularly ranging between 10000 and 20000 Euro the majority of Antarctic expedition cruise ships are already luxury ships classified as four star or above. Consequently, the options to increase luxury onboard the ships are limited due to the already extreme high standard. Furthermore, as the main selling point for an Antarctic cruise is the destination itself, it needs to be questioned if increasing luxury beyond today's levels, whatever this might entail, will really result in a competitive advantage. Passengers interested in the ultimate luxury will probably not opt for an expedition cruise at all and passengers interested in the expedition cruise will normally not ask for a level luxury that might border decadence. In conclusion, increased luxury is predominantly an option to retain a certain group of passengers for particular companies rather than a tool to attract large numbers of new passengers.

The second approach, the Antarctic budget cruise, is also inflicted with a number of limitations. First of all, a budget cruise in line with Antarctic standards will always be an extremely expensive cruise in comparison to other markets. Offerings like the 'one week below 1000-Euro cruise', which today can easily be found in the Caribbean or Mediterranean markets with some offerings as low as below 500 Euro per

passenger per week, will not make it to Antarctica in the foreseeable future due to the high operational costs of any ship in the Southern Ocean and the huge distances that need to be covered. The passenger number limitations according to IAATO standards, most notably the regulation that ships with more than 500 passengers can not offer any on-shore activities, prohibit any thinking along the line of economics of scale. Finally, it needs to be asked if a passenger who is willing to pay several thousand Euros for a ten-day cruise would really accept the comparable low standard that is required to offer an Antarctic budget option. In summary, the potential for success of Antarctic budget cruises to open new markets is limited.

Somewhat related to the concept of an Antarctic budget cruise is the option of offering short-duration cruises. In contrast to other global markets of the cruise industry, the minimum duration of an Antarctic cruise is between seven and ten days due to the distance between the port of embarkation, typically Ushuaia in southern Argentina, and Antarctica. Only the northern tip of the Antarctic Peninsula and the nearby South Shetland Islands are in reach for such short duration Antarctic cruises. Any increase in the number of short-duration tours per season automatically results in an increased number of ships operating in a comparable small area, which is already the most crowded part of Antarctica. Thus, more short-duration cruises will automatically result in an increased pressure on a small number of landing sites like Petermann Island or Halfmoon Island and in particular Deception Island. In sum, budget and short-duration cruises might be a concept attractive for some operators of Antarctic cruises as such cruises might be attractive to passengers who do not want to spend their whole annual vacation time for an Antarctic cruise. But an increase in the number of short duration cruises offered would automatically increase the impact tourism on certain Antarctic regions, in particular the northern Antarctic Peninsula and the South Shetland Islands.

The third and probably most promising option for Antarctic expedition cruise operators to gain a competitive advantage by attracting new passengers, is adding additional activities to the cruises. A good number of operators are already offering such add-ons like kayaking, mountaineering, skiing, scuba-diving and on shore camping.

The average passenger of an Antarctic expedition cruise is a generally age matured, well off and highly educated citizens from a (western) developed country. The cruises including add-on activities are targeting a younger audience not only interested in Antarctica, but in the adventure-focused add-on activities to check the box 'Antarctica' on their personal bucket list for the respective activity, for example having scuba-dived on all continents. So far only few places in Antarctica provide decent opportunities for these activities and are cleared by the respective authorities for such activities. For example, on-shore camping is only permitted at certain sites. These add-ons will thus contribute to certain areas of Antarctica experiencing increased pressure from tourism as it can already be seen in the vicinity of Paradise Bay, where there are a number of overnight camping sites in comparable short distance from each other.

When looking at the web pages of the various operators of Antarctic expedition cruises, it seems that basically each and

every company active in the market has already integrated some add-on activities into their offerings. This trend will not only continue but will rapidly spike with the launch of the new ships that all provide infrastructure especially designed for add-on offerings. In short, Antarctic tourism is changing from a market in which the destination is the main attraction to a market where the activities are the main attraction.

An indicator of this development is the concept of cruises in which all of the additional activities are already included in the basic price for the cruise that is currently offered by at least one operator. If add-on activities are offered for an additional fee, the number of participants is regularly limited. If these activities are offered as part of an all-inclusive package, it can be safely assumed that the majority if not all passengers will participate in these activities resulting in a high pressure on crew, expedition leader, and expedition staff to provide the opportunity for all passengers. As the all-inclusive Antarctic cruises are often short-duration cruises, this increased pressure on Antarctica occurs often in a few small areas with some locations basically used nearly permanently during the relatively short Antarctic cruise season.

Altogether, the increased number of ships in combination with the various strategies utilized by the tour operators to gain a competitive advantage result in the overcrowding of certain areas on the Antarctic Peninsula and the South Shetland Islands. For example, when cruising the Neumayer Channel in the middle of the Antarctic cruise season, it is no longer uncommon to see three or four expedition cruise ships working in the same area on any given day. While this does not automatically mean that there will be any degradation of the environment at the landing sites in this particular region, there is at least a certain risk for negative effects like for example certain species avoiding the particular place. Such a spatial concentration of Antarctic tourism is by no means a new phenomenon, but was already observed as early as 2004 (BASTMEIJER & ROURA 2004). Nevertheless, the increasing number of short-duration cruises as well as the expanding number of Antarctic expedition cruises offering add-on activities is most certainly intensifying this concentration trend.

The issue of the guides¹

One of the pillars of the regulatory system for Antarctic expedition cruises is the requirement of each cruise to be accompanied by guides and led by a designated expedition leader. The main duties of the guides and expedition leaders are to provide information on Antarctica, to guarantee compliance with the respective regulations, most notably the IAATO standards, and to make sure that tourism is not causing any negative effects on Antarctic wilderness and wildlife. Consequently, the guides and expedition leaders are a key factor for compliance with the guidelines as developed by IAATO and implemented via the required national permit system for cruises to Antarctica and for minimizing the effects of expedition cruises on Antarctica. This strong reliance on guides and expedition leaders is a direct consequence of the history of the modern Antarctic cruise industry when even the first modern expedition cruise ships used guides who were subject specialists and not just regular staff of the ship. Regular staff like cruise directors, hostesses or hosts or onboard hotel personnel are more expe-

rienced in dealing with passengers, but usually lack specific knowledge about Antarctica. Thus, the operators of the first tours to Antarctica in the late 1960s and 1970s had understood that specialized guides are the most effective tool to provide the passengers with the unique experience they are looking for when travelling to Antarctica. Mandatory minimum numbers for guides per ship as well as guide-to-passenger-ratios for all kind of onshore operations were developed and became a key element of the IAATO standards. The basis for the guide concept was that the guides should only be responsible for providing passengers information about Antarctica and make sure that there is no adverse effect on Antarctic wildlife and landscape by passengers. Based on personal experience over nearly a decade, the author can easily confirm that this is already a fulltime job – a job that is definitely enjoyable and rewarding, but provides by no means the option to take over any additional responsibilities.

Activity-focused Antarctic cruises

As discussed earlier, one of the few options available for Antarctic tour operators to distinguish themselves from their competitors is offering a broad range of additional activities. In particular such activities, like kayaking, scuba-diving, mountaineering and skiing, require specialized instructors to generate a safe and meaningful experience. Therefore, the guides onboard activity-focused Antarctic cruise ships regularly include ski-instructors, scuba-diving instructors, mountain guides or other specialists for the respective activity. While there is no doubt that these instructors are highly trained and qualified specialists in their respective field, they are not necessarily specialists for Antarctica and their knowledge about Antarctica is sometimes limited to what is required for passing the pre-season IAATO assessment. The pre-season IAATO assessment was originally introduced to make sure that all guides had the up-to date knowledge on regulations for specific landings sites and the whole set of guidelines according to IAATO standards. Nevertheless, it needs to be explained that the assessment was at least indirectly based on the assumption that all guides would bring substantial knowledge about Antarctica to the ship. While the instructors for add-on activities bring substantial knowledge to the ship, this knowledge is not necessarily related to Antarctica, but the respective activity. Consequently their knowledge about Antarctica might be limited to the little what is required to pass the assessment.

If they pass the assessment, they count for the required number of guides and in particular the ratio between guides and passengers ashore at any Antarctic landing site. Importantly, if adventure-focused add-on activities are offered during a specific landing, these guides will be mainly occupied with the respective instruction for the activity and consequently contribute comparable little to the traditional activities and responsibilities of a guide. For example, when explaining one on one to a passenger how to safely handle a kayak, it is normally not possible to make sure that other passengers are keeping the mandatory distance from wildlife. It can easily happen that all official requirements are met. Anyhow, the number of guides de facto available for the preservation and care for wildlife and landscape and making sure that passengers get respective information and follow the regulations

might be well below the actual requirements as the guides being responsible for the additional activities and doubling as a traditional guide will be mainly occupied with the instruction for the additional activity.

New passenger groups

As said before, the majority of passengers in the early days of Antarctic expedition cruises were either English or German speakers or at least familiar with one of these two languages. For example, in the season 1996/97 roughly two thirds of all Antarctic tourists came from English speaking and close to a fifth from German speaking countries. The only Asian country with a number of Antarctic tourists large enough to show up in the statistics for 1996/97 was Japan with 7% of all tourists (MASON & LEGG 2000). In recent years, various other Asian countries, in particular China and to a lesser degree South Korea, have become important markets for the Antarctic cruise industries with tour operators either offering individual cruises exclusively for tourists from these countries (normally as charter operations) or providing specialized language services on tours designed for passengers with various language capabilities.

The reasons for the increase in the number of Antarctic tourists from China are a consequence of two developments: The economic growth in China has produced a substantially sized group of wealthy citizens that can effort the expensive trip to Antarctica. Further, China's ambitions to become a relevant Antarctic nation are not limited to efforts in building up Antarctic research infrastructure including various year-round research stations, but include an important domestic educational and public outreach element that places Antarctica high on the list of relevant issues for the future of the country (BRADY 2010), resulting in a desire to visit Antarctica.

While some operators hire translators for their Asian, especially Chinese passengers as additional staff, others integrate native speakers into their teams of expedition guides. Employing highly qualified Chinese Antarctic specialists with a background similar to the traditional English or German speaking guides is in practice only a theoretical option, however. The main prerequisite for this staff is usually exclusively being native speaker of an Asian language. Of course, these guides have to pass the IAATO assessment as all other guides, but it seems sometimes that preparing for and passing the assessment is the only specific Antarctic qualification they are bringing aboard.

The IAATO assessment

One of the central elements of safeguarding the quality of the guides onboard Antarctic expedition cruise ships is the IAATO assessment system for guides and expedition leaders (the complete set of respective regulations, general and Site-specific guidelines is available in the IAATO Field-Operations-Manual). According to these regulations, all guides and expedition leaders have to pass an annual assessment to make sure that they have the required knowledge of general regulations and wilderness etiquette as well as of specific regulations for individual landing sites. In theory, this system

of annual assessment is designed to make sure that all guides and expedition leaders possess the knowledge required for the job and for the protection of Antarctica, in particular the regulations for individual sites in Antarctica, encounters with and protection of wildlife. As the actual assessment is an open-book online test with no supervision or time limit, which can be taken at home, the process is prone to deception.

This shall not imply that large-scale cheating is taking place, but it needs to be stated that the assessment does not include any supervisory mechanism. For example, one can take the assessment on one computer and use another or the mobile app provided by IAATO to look up the answers if in doubt, which is easily possible as there is no time limit for the exam. In fact, in confidential conversations even well-experienced guides with many years of practice in Antarctica admitted that they are meeting prior to the season in small groups: While one guide is taking the test, the others are checking the IAATO Field Manual for the correct answer if necessary.² On the other hand, it may be argued that a group of guides meeting prior to the season to prepare for the test fosters an exchange and discussion about the regulations, which is beneficial to everyone in comparison to a single guide taking the test alone. Be that as it may, for guides engaging in one of these dubious practices, it is practically impossible not to reach a passing score. Consequently, the assessment is not intended to separate the wheat from the chaff in the sense of hindering unqualified guides to work on Antarctic cruise ships, but rather to make sure that guides and expedition leaders familiarize themselves with the handbook and guidelines at least once a year prior to the beginning of the season. Cynically, one may conclude that the IAATO assessment as it stands today does not guarantee that a guide or expedition leader knows the regulations and guidelines, but knows where to find them or whom to ask.

Challenges to Antarctic historic monuments and sites:

The recent changes in Antarctic tourism increase the pressure on Antarctic wildlife and nature, for example through more frequent disturbances of penguin colonies or increased erosion due to trampling. Less obvious but of similar importance is that the changes in tourism imply dangers for historic monuments and sites, which is discussed in the following using the example of the historic hut at Damoy Point.

The historic hut at Damoy Point was originally constructed by the British Antarctic Survey in 1973 and last used in 1993. In 2009, it became designated as a Historic Site (HSM) protected area under the Antarctic Treaty (HSM 84) and today is maintained and operated by the UK Antarctic Heritage Trust that is also operating the museum at Port Lockroy on neighboring Wiencke Island. The hut is open to the public as a museum (on prior call to Port Lockroy), but all other use of the hut, for example for overnight stays, is prohibited. There are no UK Antarctic Heritage Trust personnel at Damoy Point, thus the guides of the ships visiting the hut have to function as museum guards.

Close to the hut is a popular spot for overnight camping. Although overnight camping and visits to the hut are two completely independent activities, the first causes an indirect risk for the preservation of the latter. As long as everything

works as planned, the hut may see some additional visitors due to the camping activities nearby, which is not problematic, even positive. But if the weather conditions during the camping go foul and a sudden drop in temperature or an incoming storm make camping an unpleasant experience or even prohibit a return to the ship, there is a good chance that the campers will use the historic hut as an emergency shelter. Of course, the guides should make sure that this does not happen, but if you are thinking about 15 or 20 passengers exposed to severe weather conditions and desperate for an alternative to an exposed tent or bivy bag and only two guides, it is likely that the guards will not prevent the usage of the hut as a temporary emergency shelter until a safe return to the ship is possible again. It is questionable if such a non-permitted use of the hut will be reported to the staff of the UK Antarctic Heritage Trust, but it is beyond doubt that using the hut as an emergency shelter for 15 or 20 people may cause some damage or at least additional wear and tear to the hut, in particular if it happens not only once but several times over the years.

Of course, if there is a real emergency, it is no question that the hut should and could be used as a shelter. The critical point is that some passengers might consider already unpleasant conditions as such an emergency and arguing with these passengers might become an interesting experience for any guide. Consequently, permitting overnight camping activities close to historic monuments and sites and in particular historic huts needs to be understood as a realistic risk for the long-term preservation of these structures.

AN ATTEMPT OF A CONCLUSION AND SOME RECOMMENDATIONS

If expedition cruises to Antarctica shall remain a different experience than cruises in other parts of the world, the regulatory system for Antarctic cruises needs to be adjusted. It is obvious that tour operators are employing various methods to gain competitive advantages. Experience or adventure focused add-ons to the traditional Antarctic cruise as well as offerings in other languages than English and German seem to be the most promising ways to gain such a competitive advantage, which is of relevance because of the substantial number of new ships entering the Antarctic expedition cruise market over the next years.

If the add-on activities and the other changes in the market shall not destroy indirectly by themselves what they are hoping to offer to their prospective passengers, then regulatory adjustments are unavoidable. First and foremost, the regulations concerning the requirements for tour and expedition leaders need to be adjusted as they are key to minimizing the effects of tourism on Antarctica. First of all, the staff providing instructions for the adventure orientated add-on activities should no longer be netted against the minimum number of guides and the ratio between passengers and guides at any specific Antarctic site regardless if these instructors have passed the IAATO assessment or not. Such a measure would guarantee that the guides can actually fulfill their duties as guides, i.e. making sure that passengers follow the Antarctic tourism guidelines, such as wilderness etiquette, without being distracted by the need to provide instructions for add-on activ-

ities. The same applies to translators on journeys set up for specific language groups. Translators and trainers for add-on activities need to be additional personnel.

Second, while recognizing that the IAATO assessment for guides and expedition leaders is much better than requirements for cruise staff in nearly all other markets, the IAATO assessment is to a certain degree a meaningless exercise that does not guarantee that all guides and expedition leaders have relevant knowledge about Antarctica. Consequently, the current un-proctored open book online assessment should be replaced with a system that prohibits cheating, for example by personalizing the exams. In addition, as such an exam will always only test for book or theoretical knowledge and not for real-life knowledge or Antarctic experience. The online assessment should be complemented with a requirement that asks for a professional background in Antarctica or at least an education in an academic discipline relevant to Antarctica.

Still related to the issue of the guides, but no longer the IAATO assessment, it may be asked what it means if guides and expedition leaders are involved in the zodiac-shuttle operations at landing sites. While it is unproblematic that guides and expedition leaders drive zodiac-boats during cruises shuttle service, it is a different issue if a guide or expedition leader drives a zodiac shuttle to a destination on a site visit because this is a person that is not ashore during the specific landing.

Ultimately, these recommendations will result in an increased number of staff required for Antarctic expedition cruises, at least for those with experience orientated add-ons. Given the whole economic set-up of these cruises, this should be a rather small extra expenditure, in particular because it would affect all operators. In fact, some of the operators offering add-on activities are already employing more guides than the required minimum and making this practice an industry-wide standard would not only level the field of competition, but make sure that using good practice when it comes to traditional lecturers and additional specialized guides for add-on activities will not result in an indirect economic competitive disadvantage.

After all, the current number of required guides and the passenger-guide ratios were developed at a time when add-on activities simply did not exist. Next to regulatory changes to guides and expedition leaders, changes are also necessary for site visits regulations during a cruise.

In locations close to protected areas and in particular historic monuments and sites, overnight camping activities should be prohibited. This would prevent historic huts from being used as shelters, in particular in situations where conditions might be tough and unpleasant, but no real emergency.

Research already shows that different species react differently to tourism (HOLMES 2007) and future studies will most certainly result in an even more complex pattern of reactions of individual species to tourism. Thus, the introduction of a precautionary approach to the guidelines is mandatory, even if this means giving up long practiced standards for encounters between certain Antarctic species and tourists as the real impact of such encounters can only be evaluated ex-post, or in other words, when the damage has already been done.

While some measures have already been taken to reduce the use of certain place names in advertising materials for specific cruises, the use of place names for advertising purposes should be abolished altogether. This measure would help reducing competing for certain landing areas that are current at risk of becoming completely overcrowded even if the number of ships per day remains within regulations. An authentic experience of Antarctica can be gained at many places and not only at the few locations already known by name by potential passengers before boarding the ship.

Measures should further be taken to diversify the landing sites used by Antarctic expedition ships as much as possible. Otherwise there is the risk that one or two small areas develop into some kind of an Antarctic adventure park with add-on activities like kayaking, skiing, scuba-diving and overnight camping going on at all landing sites of the respective area more or less on a daily basis throughout the season. There is no direct evidence that such a situation will cause negative effects on the Antarctic environment, but there is the possibility of negative effects and thus a precautionary approach should be used. In addition, one of the main selling points for every Antarctic cruise is the 'pristine' wilderness and remoteness of the places to be visited and if these places are actually looking like a well-visited adventure park, the add-on activities might turn against themselves as they are no longer providing a competitive advantage for operators.

It could be argued that it is better to concentrate all the add-on activities in one or two small areas to contain the potential negative effects to these areas. But this would entail, in the long term, the destruction of these areas and there is no guarantee that the add-on activities would not crawl into other areas as well. Mitigation of the potential negative aspects of add-on activities is thus the much better approach than containment.

As demonstrated throughout this article, Antarctic expedition cruise tourism is at a turning point with the substantial number of new ships coming into service and add-on activities increasingly the norm of Antarctic cruises. If operators of Antarctic expedition cruises earnestly want to keep their industry different from the cruise industry elsewhere; if they want to integrate new activities into their cruises; and if they aim to enlarge their share on Asian markets, they will need to think about changing the rules and in particular the regulations related to the guides accompanying Antarctic expedition cruise ships. With IAATO being an industry organization the operators do have the required tools in their hand. But of course, if the operators fail to make the necessary adjustments to the self-regulating mechanisms for their industry it will be up to the national authorities and ultimately the Antarctic Treaty System to make the required changes.

If the guides should continue their function as guardians of Antarctica within the cruise industry, they need to be guides only. A double role as instructor for whatever kind of adventure orientated activity or as a translator is no option.

If the operators of Antarctic expedition cruises and the responsible authorities within the Antarctic Treaty nations are not willing to update the rules, two scenarios are likely to unfold: Either all parties involved simply accept negative effects on certain parts of Antarctica or, as a radical measure, tour operators decide to give up the concept of experienced focused

add-ons. Both options cannot be really in the interest of cruise operators, Antarctic tourists and, most importantly, Antarctica itself.

In theory there would also be the third option of simply prohibiting activity and or experienced focus add-ons as a precautionary approach comparable to the regulations on mining activities in Antarctica. In real life it seems to be naïve to think about such an option as the changes to the Antarctic expedition cruise industry are already a reality even if the new ships will enter into service only over the next decade.

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ENDNOTES

- 1) All information on the guides is based on personal experience of the author who has served as a guide for several Antarctic cruise operators for nearly a decade as a side-gig to his main profession as an economic historian focusing on the Polar Regions.
- 2) Information obtained in confidential interviews with numerous Antarctic guides. Details about the interviewees cannot be revealed as the respective colleagues all continue working as guides in the Antarctic cruise industry.

References

- The Antarctic Treaty System* (1983): Canberra, Australia: Australian Government Pub. Service.
- Bastmeijer, C.J. & Roura, R.M.* (2004): Regulating Antarctic Tourism and the Precautionary Principle.- *American Journal of International Law*. 98, no. 4: 763-781.
- Bennett, A.G.* (1932): *Whaling in the Antarctic*.- New York: H. Holt.
- Brady, A.M.* (2010): China's Rise in Antarctica?- *Asian Survey*. 50(4): 759-785.
- Heidbrink, I.* (2013): Preaching to the Converted: Reflections on Lecturing in Antarctica.- *Coriolis – Interdisciplinary Journal of Maritime Studies* 4(1), 25-31.
- Holmes, N.D.* (2007): Comparing King, Gentoo, and Royal Penguin Responses to Pedestrian Visitation.- *Journal of Wildlife Management* 71(8): 2575-2582.
- IAATO* (2018): What is IAATO? URL: <https://iaato.org/what-is-iaato>, accessed on May 10, 2018.
- IAATO* (2018): Member Vessel Directory: URL: <https://apps.iaato.org/iaato/vessel/list.xhtml>, accessed on July 24, 2018.
- Mason, P.A. & Legg, S.J.* (2000): The Growth of Tourism in Antarctica.- *Geography* 85(4): 358-362.
- Scott, S. V.* (2001): How Cautious Is Precautions?: Antarctic Tourism and the Precautionary Principle.- *The International and Comparative Law Quarterly* 50(4): 963-971.
- Shackleton, K.H. & Snyder, J.* (2001): *Ship in the Wilderness Voyages of the MS Explorer Through the Last Wild Places on Earth*. London: Gaia Books.
- Stonehouse, B.* (1992): IAATO: an association of Antarctic tour operators. *Polar Record* 167: 322.
- Stonehouse, B. & Snyder, J.M.* (2010): *Polar tourism: an environmental perspective*. Bristol [u.a.]: Channel View.

