Climate change will have increasing impacts on both our natural world and society as the century progresses. While there is increasing understanding of how climate change will directly impact destinations in which ecotourism takes place, the indirect impacts of climate change are less clear. In this chapter we will consider the impacts of climate change on the tourism system and explore the ways ecotourism may respond to a changing world. Ecotourism represents a broad range of activities, from guiding in the arctic to ecolodges in tropical rainforests, and responses will vary across locations and business types. Nevertheless, in this chapter we will examine insights into the anticipated impacts of climate change and how ecotourism organizations and destination communities are dealing with these changes.

Climate change and the tourism system

Climate change represents one of the most significant challenges facing humanity, and its implications for tourism are only part of a much larger story. The discussion of the impacts of climate change on tourism requires application of systems thinking. Tourism is a complex adaptive system (Farrell & Twining-Ward, 2005; A. Morrison, Lehto, & Day, 2018). It is embedded within two other complex, interrelated systems: human society and the natural ecosystem. Each of these systems are impacted by and have an impact on climate itself, which is also a complex system. Any discussion of the impacts of climate change on ecotourism must consider broader issues of climate change on society, and climate change on tourism in general. Each of these phenomena are complex systems, sometimes embedded, but always deeply interconnected with each other. The challenge of climate change and its impact on tourism, and specifically ecotourism, can best be described as a set of wicked problems (Rittel & Webber, 1973). While generalisations can be made about the likely impacts of climate change, each destination community or organisation will respond in its own way. According to E. Morrison, Hutcheson, Nilsen, Fadden, and Franklin (2019), “There is no simple solution to a wicked problem. Proposed solutions are neither wholly right nor completely wrong, and each problem is unique” (p. 6). Every ecotourism destination and every ecotourism product will face unique challenges as climate change impacts accelerate. As each destination tackles the challenge, it is important that we learn from our collective experience.
Climate change

Climate change will have a significant impact on natural and human systems. The Intergovernmental Panel on Climate Change (IPCC) notes that “changes in climate caused impacts on natural and human systems on all continents and across the oceans” (IPCC, 2014a, p. 6). It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The ocean will continue to warm and acidify, and the global mean sea level will rise” (IPCC, 2014a, p. 10). Nicholls (2014) notes that climate change will have broad implications for destinations, as well as the operations of tourism businesses. At a destination community level, the direct impacts of climate change will lead to rising sea levels, extreme weather including more severe storms, ocean acidification, and rising temperatures. Nicholls (2014) also notes that tourism businesses will face operational challenges because of climate change. These will include reduced water availability, extreme weather events, difficulties in security insurance, and new costs to reduce carbon.

Climate change is becoming an increasingly important topic in tourism literature. Studies of climate change to date have focused on some of the most vulnerable destinations, including mountain tourism—particularly ski-related tourism—and small island tourism. Nevertheless, climate change will impact all parts of the world, and significant impacts are expected in destinations with relatively little change.

Ecotourism and climate change

Ecotourism is an important form of sustainable tourism that has demonstrated an ability to protect and conserve natural ecosystems, provide economic benefits for local communities, and enrich travelers with greater appreciation of nature and culture. While the concept of ecotourism is broadly embraced, definitions vary. Our definition, based on Fennell (2001), recognises ecotourism as tourism that tends to take place in natural areas, is concerned with conservation, is respectful of local culture, and endeavors to ensure benefits of tourism accrue to local people. Ecotourism embraces principles of sustainable tourism with a focus on natural spaces and local culture. It has been a means of conserving natural spaces and biodiversity. It has also been an effective tool in sustainable tourism development around the world, particularly in developing countries. Ecotourism products are frequently important in developing countries, providing opportunities for economic and social development.

Climate change will have a disproportional impact on ecotourism. Ecotourism is broadly distributed across the globe, so while climate change impacts can be expected, the impacts will be varied. There is growing documentation of the impacts of climate change on ecotourism, with studies identifying issues from Jordan (Jamaliah & Powell, 2018), to Australia, to Nepal, to New Zealand (Kutzner, 2019).

Nevertheless, as our ecosystems change because of the changing climate, ecotourism’s reliance on nature-based activities will require adaptations. Ecotourism businesses are often small scale and less able to adapt to changing circumstances or disaster, such as floods or fires. Many ecotourism products are in developing countries where societal stresses caused by climate change are expected to be most acute. The significance of climate change is acknowledged by ecotourism organisations. For instance, the Asian Ecotourism Network has recognized the importance of tackling climate change and became a signatory of the “Tourism Declares a
Climate Emergency” (AEN, 2020). In addition, Ecotourism Australia has incorporated climate change as a core element of their certification process.

The nexus of human and natural systems that is fundamental to ecotourism means that ecotourism is closely tied to the changes climate change is predicted to create. The direct impacts of climate change are coming into focus in many parts of the world. While there is some variation in models adopted to project climate change, there is growing clarity on the likely direct impacts of it. In 2019, Galudo Beach Lodge, Mozambique—recognised as an important example of effective ecotourism—was decimated by a major storm. While storms are not uncommon, the intensity of this storm was exacerbated by warming sea temperatures caused by climate change. The indirect impacts of climate change are far less clear and could have significant impacts on many tourism destinations. Indirect changes are those that are the result of a changing climate. These can range from changing biodiversity, to changes in health and wellbeing in destination communities, to decreased consumer demand in some locations (Nicholls, 2014).

In complex systems, the impacts of change are often nonlinear, so it is difficult to predict how climate change will impact ecotourism destinations. The use of impact chains as a tool for systematically observing change is becoming more common (Arabadzhyan et al., 2020). In their assessment of the effects of climate change on coastal tourism, Arabadzhyan et al. (2020) identify a broad range of impacts, including the loss of attractiveness of touristic marine environments, loss of comfort due to reduced beach availability, loss of attractiveness due to deterioration in land environment, increased danger of forest fires, increased thermal stress, increased health issues due to emergent diseases, decrease in available water for the tourist industry, and loss of attractiveness due to cultural heritage loss.

**Climate change, natural systems, and ecotourism**

Ecotourism, by definition, intersects with the natural environment. As a result, ecotourism products will be affected by a range of indirect impacts of climate change. These changes will be many, and they will vary depending on the ecosystem and the level of change. For example, in many places forest composition will change, and with it, the types of animals inhabiting the forest will change. These changes may change the visitor appeal of these locations. Climate change’s impact on vegetation and water will significantly impact sub-Saharan Africa with up to 40% of species in national parks facing extinction due to inability to migrate (Nicholls, 2014); there is no doubt this will impact Africa’s nature-based ecotourism sector. Aquatic ecosystems will be impacted as well. Fishing tourism companies on the Great Lakes of North America are already changing the fish they seek as a result of the changing availability of species brought on by climate change (Chin, Day, Sydnor, Prokopy, & Cherkauer, 2019). Additionally, birdwatching tours in New Zealand, faced with reduced numbers of yellow-eyed penguins due to climate change, are adding marine animals to their programs (Kutzner, 2019). Rising water temperatures are causing increased acidification of ocean water, which is placing reef ecosystems in jeopardy (GRMPA, 2019). Ecotourism operators on the Great Barrier Reef are responding by adopting climate action strategies, including mitigation and adaptation.

Proximity to nature is both an advantage of ecotourism and a risk. As temperatures rise and droughts become more prevalent, risks for ecotourism products will increase. In 2019, Australia experienced one of the worst bushfire seasons on record. These fires were exacerbated by a
changing climate. The fires impact ecotourism products across the country, from Kangaroo Island, South Australia, to Queensland.

**Climate change, human systems, and ecotourism**

Climate change will also impact human systems in a variety of ways, including social disruption. The United States Department of Defense acknowledges that

climate change poses another significant challenge for the United States and the World at Large … The pressures caused by climate change will influence resource competition while placing additional burdens on economies, societies, and governance institutions around the world. These effects are threat multipliers that will aggravate stressors abroad such as poverty, environmental degradation, political instability and social tensions. (USDoD, 2014, p. 8)

These impacts are expected to be most acute in developing countries, many of which rely on ecotourism for economic development.

The changing climate will have impacts on many aspects of human life. There will be different demands for energy in some areas as the need for cooling increases, new pressures on water management systems as droughts reduce available water or increased rain leads to flooding, and new demands for infrastructure to meet changing needs (IPCC, 2014a). Another important indirect impact of climate change will be those affecting human health. The impact of increased heat and humidity on agricultural workers has been well documented, and tourism workers will likely suffer similar issues (Filippelli et al., 2020). Climate change is anticipated to increase the range of disease, with tropical diseases like zika and dengue expanding to new locations.

In warmer climates, climate change is expected to impact the activities that are enjoyable, comfortable, or even safe. Most tourism takes place in a so-called comfort zone, where temperatures range from 60 to 80° F. As temperatures rise in traditional destinations, changes in travel patterns must be expected. The impacts of ecotourism products in the tropics may be substantial.

Climate change will also have impacts on heritage and cultural locations. For instance, Brooks, Clarke, Ngaruiya, and Wangui (2020) note that archeological sites across Africa face destruction as a result of direct and indirect impacts of climate change.

**Changing consumer behaviors**

One important indirect impact of climate change may be fluctuations in consumer demand. While travel has been considered a right, and social capital from sharing stories and images from travels to remote locations has been a driver of travel, there is growing evidence of a counter trend. Flight shaming has been introduced into the lexicon (Gössling, Humpe, & Bausch, 2020; Thornhill, 2019). The impact of a major change in what is socially acceptable or even socially desirable can be seen in the current pandemic, where travel shame is a factor suppressing demand. On the other hand, “last-chance tourism,” where tourists seek to visit places before they are succumbed to biodiversity loss or other climate impacts, is creating opportunities for some destinations—at least in the short term (Denley et al., 2020; Eijgelaar, Thaper, & Peeters, 2010; Lemelin, Dawson, & Stewart, 2012).
Mitigation, adaptation, vulnerability, and resilience

Responses to climate change can be divided into two broad categories: mitigation and adaptation. The IPCC describes mitigation and adaptation as “complementary strategies for reducing and managing the risks of climate change” (IPCC, 2014a, p. 17).

**Mitigation**

Mitigation is described as “actions that reduce the amount of greenhouse gas emissions” (Reinhardt & Toffel, 2017, p. 104). Tourism is a significant contributor to climate change and has an important role in reducing GHG emissions. Assessments from 2005 suggest tourism contributes between 3.7 and 5.4% of global CO2 to GHG emissions (UNWTO & UNEP, 2008, p. 177). Transportation, particularly air travel, and buildings are the largest contributors of GHG. Ecotourism products have taken a leading role in mitigation. By definition, ecotourism organisations have a commitment to the environment and to work to lower environmental impacts of their operations and monitor the behavior of their guests (Hornoiu, 2015). Many ecotourism products take care to ensure that their operations minimise greenhouse gas production. They utilise architectural and design features to reduce energy, and they are among the first to adopt regenerative principles in architecture. These processes not only minimize GHG, but also take carbon from the atmosphere.

Ecotourism takes place within the broader tourism system, and effective climate change programs require support from a variety of organizations. Industry associations, like Ecotourism Australia, encourage the adoption of mitigation strategies. Ecotourism Australia’s “Climate Heroes” program promotes mitigation strategies and recognises organisations that are reducing their GHG emissions. Government programs designed to increase energy efficiency and reduce reliance on nonrenewable energy sources can make significant contributions to reducing GHG. There is also increasing evidence that ecotourists are prepared to support the mitigation strategies.

A systems approach to ecotourism reveals the irony that although many ecotourism operations are low impact and strive to minimise GHG, they tend to be distant from source markets and require travelers to fly long distances, thus generating GHG in their travel to the destinations.

**Adaptation, vulnerability, and resilience**

Adaptation is described as actions that “make an organization more resilient in the face of ongoing and forecasted changes in the earth’s systems” (Reinhardt & Toffel, 2017, p. 105). As the impacts of climate change become more acute, ecotourism organisations will need to adapt. Responding to the need for adaptation to climate change requires a recognition of the issues, an understanding of the impacts, a willingness to act, and the ability to respond. Even when operators recognise the impacts of climate change, action may be minimal. For some ecotourism operators, climate change can be seen as “slow moving and low risk” (Chin, 2015). Studies in Indiana (Chin et al., 2019) and Australia (Turton et al., 2010) show that even though operators may have concerns about climate change, they rarely have clear plans for adapting to it. Hernandez and Ryan (2011) find that most operators are in the early planning stages of climate adaptation. While some impacts of climate change take place gradually, many ecotourism products—and the destinations in which they are located—are vulnerable to sudden shocks caused by climate change. Floods, droughts and fires, and storms are all likely to increase
with climate change, and tourism businesses’ preparedness for these types of disasters are limited (Sydnor-Bousso, Stafford, Tews, & Adler, 2011). As extreme weather impacts, from floods to storms to droughts, weigh more heavily on ecotourism products, resilience will be a necessary capacity of ecotourism businesses.

Resilience and vulnerability, are becoming critical issues in understanding climate change impacts. The Intergovernmental Panel on Climate Change (IPCC) describes resilience as the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation. (IPCC, 2014b, p. 127)

Sydnor-Bousso et al. (2011) describe resilience as the ability to withstand shocks and rebuild. It is the ability of the hospitality industry to return after disasters to pre-disaster levels of functioning or better (Sydnor-Bousso, 2009). As threats from extreme weather increase, ecotourism businesses must build their resilience by planning for disaster recovery. This presents a significant challenge as many tourism organizations fail to plan for disaster adequately (Sydnor-Bousso et al., 2011), and many ecotourism businesses exist on extremely tight budgets and few rainy-day resources. If operator level responses are still somewhat limited, there is emerging evidence that destination communities reliant on ecotourism are beginning to recognise the importance of building adaptive capacity and resilience. In a study in the Dana Biosphere Reserve in Jordan, Jamaliah and Powell (2018) note that a resilience in tourist destinations was dependent on a range of interconnected and interdependent social, economic, governance, and environmental factors. Their study highlights that while destinations may be strong in some components of resilience, they may need to build capacity in others. The awareness of climate change issues in destinations varies. Santos-Lacueva, Ariza, Romagosa, and Saladié (2019) note that factors such as the development of the destination, the policy framework, the presence of extreme meteorological events, and the dependency on natural resources all play a potential role. While there is some value in considering the destination community’s resilience and the businesses’ resilience separately, it is important to recognise the important interactions between ecotourism products and their destination communities. Effective destination governance can improve the resilience of ecotourism products. Similarly, ecotourism may contribute to the resilience of destination communities (Hornoiu, 2016).

Appreciating the vulnerability of ecotourism organisations and destinations is critical for effective risk-management. Vulnerability is “the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope with or adapt” (IPCC, 2014b, p. 128). Understanding the vulnerability of destination communities is an emerging area of climate change research (Calgaro, Lloyd, & Dominey-Howes, 2013; Moreno & Becken, 2009). These studies have examined communities from the edge of protected areas in the south of New Zealand (Espiner & Becken, 2013), as well as agro-ecotourism in the Philippines (Hidalgo, 2015), Fiji (Moreno & Becken, 2009), Riviera Maya and the Spanish Mediterranean (Santos-Lacueva et al., 2019), and the Nepalese Himalayas (Nyaupane & Chhetri, 2009).

One of the great challenges of adaptation for ecotourism is that, in the short term, consumers have a greater ability to adapt quickly than ecotourism businesses, particularly those with physical structures (Day et al., 2018; Simpson, Gossling, Scott, Hall, & Gladin, 2008). Travelers can easily choose different destinations as climate changes. There is growing evidence of
consumer awareness of climate change. In two studies conducted in 2019, consumers identified the possibility that their travel plans may be impacted by climate change. The “Portrait of the American Traveler” shows that 48% of travelers agree that climate change will have a significant influence on what destinations they choose to visit in the next five years (MMGY Global, 2019). In a different study, Destination Analysts’ “State of the American Traveler” (2019) shows that 50% of American leisure travelers expect that climate change will impact their travels at some point in the next five years. Further, Destination Analysts reports that 28.5% of travelers expect climate change will affect the timing of trips, 20.9% will change the destinations they choose, and 15.2% will adjust how they travel.

The impact of some changes, particularly in the short term, may be minimal from the visitors’ perspective. Tourists may be unaware of some changes caused by climate change or may make minor behavioral changes. For example, travelers to the Great Barrier Reef were unaware of changes in hard coral, an impact of climate change, when they visited (Ramis & Prideaux, 2013).

**Lessons from Binna Burra Lodge: Queensland, Australia**

On Sunday, 8 September 2019, bushfires destroyed Binna Burra Lodge (BBL), one of Australia’s iconic ecotourism properties. An examination of the disaster, the recovery, and the broader context of the event provide important insights for ecotourism destinations and ecotourism operators preparing for the impacts of climate change. Australia’s ecotourism sector differs from ecotourism in many parts of the world. Australia is a wealthy, developed country and has a long history of ecotourism and nature-based tourism. Ecotourism and nature-based tourism are an important part of the Queensland tourism portfolio and are actively promoted by state and national Destination Marketing Organisations (DMOs). Industry associations, including Ecotourism Australia (EA) and Queensland Tourism Industry Association, provide a range of support materials and resources to ecotourism throughout the state.

BBL is an ecotourism lodge in the Lamington National Park in Southern Queensland. Established in 1933, the lodge has been a leader in ecotourism in Australia. The Binna Burra complex included a lodge with some pioneering local timber accommodations, a number of apartment-style “Sky Lodges,” and a Rainforest Campsite and Safari Tents. The Lamington National Park, one of the national parks in the Gondwana Rainforests World Heritage Site, is a temperate rain forest. It is described as “outstanding examples of major stages of the Earth’s evolutionary history, ongoing geological and biological processes, and exceptional biodiversity” (UNESCO, 2020). The Binna Burra Cultural Landscape is listed on the State Government’s Heritage Register a place that has “cultural heritage significance to the people of Queensland” (Queensland Government, 2016).

Binna Burra has a long tradition of commitment to ecotourism principles. It first achieved “Advanced Ecotourism” certification with EA in 1997 and has remained committed to ecotourism performance management and improvement. EA, established in 1991, inspires environmentally sustainable and culturally responsible tourism. EA is a membership-based organisation representing over 500 ecotourism operators, 1700 products, and a growing number of destinations. EA designs and delivers a range of certification programs promoting sustainable tourism. The “Advanced Ecotourism” certification is awarded to Australia’s leading ecotourism products that have demonstrated a commitment to operate with minimal impact on the environment and provide opportunities to learn about the environment with operators that are achieving best practices, using resources wisely, and helping local communities. Ecotourism Australia’s certification process incorporates a commitment to regular risk assessment and crisis...
preparations, as well as a range of mitigation activities, including a commitment to energy efficiency and reduction.

Disaster recovery is a complex activity. “The decisions of an entity impact the decisions and recovery of others. These decisions include rebuilding, replacing, repairing, resuming, and restoring everything from income sources to buildings to social networks to businesses to infrastructure” (Marshall & Schrank, 2014, p. 597) and this is the case for Binna Burra Lodge. Disaster recovery is best considered a process that takes place over time, and recovery times can be different for different organizations. Binna Burra’s efforts to rebuild following the fires have been recognized as exemplary, and it is worthwhile noting some of the key elements of the recovery.

Pre-disaster period

Lamington National Park is part of the Queensland National Parks system. The park is well managed, and rangers from the National Park Service work closely with BBL management. In the weeks prior to the fire, controlled burns were undertaken as part of the ongoing forest management of the park.

BBL was prepared for the disaster, with established emergency plans and fire safety training drills that were conducted on a regular basis. In the days before the fire struck the lodge, BBL made several important decisions. Evacuations began two days before the fire reached the lodge, and all guests and staff were successfully evacuated before the fire blocked the escape routes. Binna Burra is a wilderness location, and the only land access is by a single road to the lodge. This critical infrastructure was damaged in the fires and, if evacuation had been delayed in the hope that the fire would not reach BBL, lives would have been placed in great danger. Cotterell and Gardiner (2019) note that the decision to “not let business get in the way of the early evacuation” (p. 7) avoided the possibility of emergency helicopter evacuations and the possibility of not being able to successfully get everyone to safety. Binna Burra staff, together with Emergency Services staff, were deployed to ensure that no curious visitors could reenter the area.

Perhaps more importantly, Binna Burra has established strong ties to the community and government—local, state, and national. The organisation is active in tourism industry activities and has established itself as a good corporate citizen and a positive contributor to the social, environmental, and economic wellbeing of the region. This investment over the years in relationship building with a wide variety of stakeholders represents significant social capital.

The fire

Early in the morning of September 8, 2019, the wildfire destroyed Binna Burra’s heritage-listed buildings, including the original lodge accommodation and dining room. At the time of the devastation, there were concerns that the iconic ecolodge would not recover from the damage of the bushfires. The Guardian ran an obituary for the lodge (MacColl, 2019). The bushfires that impacted Binna Burra were at the early part of a six-month season of bushfires that covered the whole of Australia, with over 17 million hectares burned across New South Wales, Victoria, Queensland, ACT, Western Australia, and South Australia (Richards, Brew, & Smith, 2020). Bushfires are an indirect result of climate change. While climate doesn’t cause fires, it does create the conditions in which bushfires are more likely. In 2019, Australia experienced its driest year (CSIRO, 2020) on record, and the severity of the bushfire season is partially attributed to the impacts of climate change (Thompson, 2020).
Throughout the process, staff followed a predetermined emergency plan (Cotterell & Gardiner, 2019). Even as the fire approached, a remote headquarters was established and a crisis communication plan was implemented with the BBL chairman, Steve Noakes, the most senior member of the management team, providing a single source of consistent messaging to media and stakeholders. Other important crisis management lessons included the importance of being able to operate remotely during the crisis and the importance of having a “go-kit” of information necessary to keep the business operating (Cotterell & Gardiner, 2019).

Immediate post-disaster recovery: #Bringbackbinnaburra

Binna Burra quickly committed to returning to business. Communication activities with media and key stakeholders focused on recovery. “Bring Back Binna Burra” became a rally theme with communications and fundraising efforts. A GoFundMe page generated over A$140,000. By quickly changing their website to focus on recovery efforts, Binna Burra was able to capitalise on publicity generated from the media coverage that reached as far as London and New York. Stakeholder communication remained a priority in the months following the fires.

Government commitment to rebuilding infrastructure was almost immediate. In the days following the fire, state, and federal government expressed willingness to collaborate to #BringBackBinnaBurra. The state government immediately established a Binna Burra Recovery Taskforce to support the restoration of infrastructure including water and telecommunications (Cotterell & Gardiner, 2019). The day after the fire, the taskforce also committed to supporting displaced staff if necessary (Dick, 2019). By Wednesday, the first taskforce meeting was convened and was visited by the Queensland Minister for State Development, Manufacturing, Infrastructure and Planning, and by the Regional Council Mayor. By the end of the week (September 13), the Prime Minister of Australia and the Premier of Queensland had visited the site.

Ongoing post-disaster recovery—the first year after the fire

In the weeks and months following the fire, additional business challenges were addressed by the BBL team. One significant challenge was organizing refunds for over 4000 forward bookings for accommodation and on-site venues. This issue was not only administratively challenging, but it also placed strains on cashflow and financial resources. Another ongoing management issue was the continued support of the staff. With 90% of the 65 staff having been made redundant, BBL arranged a “staff transition event with job and training offers to staff. Counselling and financial advice was also provided” (Cotterell & Gardiner, 2019).

BBL established an internal reconstruction council to manage the recovery process. Working groups provided information and supported five key sets of activities. These activities included coordination and government liaison, corporate issues, business operations, (stakeholder) relationships and communications, and people (including human resources and volunteer coordination). While working through their recovery, BBL was able to apply the framework developed for the Queensland State Disaster Plan. They also received guidance from the National Institute for Disaster Resilience (Schultz & Barnett, 2020).

Binna Burra was committed to re-open as soon as possible, but the lack of road access resulted in an eight-month delay until the single road access could be made safe for heavy equipment to commence the demolition work. In early 2020 BBL open a small off-site local café which traded for just four weeks before being closed down due to the global COVID-19 pand...
pandemic. It reopened mid-year for a short time, but was closed down when the primary Binna Burra site reopened for business in September 2020, one year after the devastating bushfires. On 1 September 2020, BBL welcomed its first guests back into the repaired Sky Lodges accommodation and opened a new ‘Bushwalker’s Bar’ at the historic Grooms’ Cottage. The focus on re-opening is critical as research shows that the speed to re-open is an important success factor in successfully surviving a disaster (Marshall & Schrank, 2014).

While BBL worked to recover, the repair of infrastructure supporting the operation began. The reopening of the road to Binna Burra on August 31, 2020, was an important milestone in the recovery. The repairs, funded by Australian and Queensland government, represented a $35 million investment (Dick, 2020). Walking trails in the Lamington National Park also needed repairs at a cost of $1 million. In addition to these critical repairs, the state government is currently finalising the construction of a cliff-climbing course, Via Ferrata (iron way), at Binna Burra. The course “will allow visitors to safely scale cliff faces usually only accessible to experienced rock climbers through a system of iron steps fixed in the rock face supported by a safety cable” (Schultz & Barnett, 2020, p. 44).

It is important to appreciate the relationship between BBL and the local community, with BBL playing an important role in the livelihood of the region. An example of the connection between BBL and the community for building the capacity for the long-term success is how the Binna Burra Kitchen continued support for local food suppliers. An innovation during the pandemic has been the development of a “Scenic Rim Farm Box.” This initiative was born out of the COVID-19 lockdown as a collaboration between local farmers, the local government authority, Scenic Rim Regional Council, and distribution partners such as Binna Burra. The Farm Box connects Scenic Rim producers with consumers who were unable to visit the region during the health crisis, with a ‘farm to you’ home delivery business with the region’s best produce, products and locally produced wine and beer. The marketing message was that ‘it makes it easy to eat local every week’ (Cunningham, 2020; Scenic Rim Farm Box, 2020).

As BBL rebuilds from the ashes of the bushfire, one of the critical elements of its recovery has been the support from their clients and friends. “Solidarity tourism,” or the commitment to support those businesses impacted by disaster, has emerged from the experiences of the bushfires. According to Noakes:

Solidarity tourism prioritizes positive attitudes to nature as well as the traditions and the interests of the local communities. It gives locals and visitors the opportunity to connect and support a place like Binna Burra following the difficulties and challenges that have resulted from the bushfire destruction in our community and at the lodge within the Lamington National Park. (Noakes, 2020, p. 1)

The next steps of recovery: Reset, reimagine, recreate

BBL knows that the bushfire will remain an important part of their history, and they recognise the challenge of maintaining progress over the long term. Informed by recovery science, they are committed to avoiding the disillusionment sometimes experienced by disaster survivors. BBL has focused efforts on a “Reset, Reimagine, Recreate” approach that incorporates a long-term vision, a comprehensive master plan, and significant new initiatives to begin immediately. These initiatives are based firmly in BBL’s commitment to sustainable development. As they proceed, BBL recognizes the likely impact of climate change on their future. As Steve Noakes, the Chairman of Binna Burra Lodge, says, “Our responsibility now is to have a vision that is
crafted on the knowledge and understanding of the climate as it will impact the tropical and
subtropical rainforest” (Schultz & Barnett, 2020, p. 51).

BBL is well positioned to leverage the support of state and national industry associations
that are already addressing climate change. BBL will be guided and supported in their
climate strategies by the work of two organisations in particular—the Queensland Tourism
Industry Council (QTIC) and Ecotourism Australia. Tourism operators in Queensland, and
across Australia, have been encouraged by government and NGOs to prepare for the im-
pacts of climate change over the past 15 years. From pioneering work conducted by
CSIRO and Tourism Queensland, to the development of an industry-wide climate change
plan—The Queensland Tourism Climate Change Sector Adaptation Plan (Becken,
Montesalvo, & Whittlesea, 2018), developed by the Queensland Tourism Industry
Council—Queensland tourism providers have been exposed to principles of climate change
preparation. EA also plays an important role in promoting effective climate change adap-
tation and mitigation strategies. BBL has committed to undertaking the “Climate Action”
certification with EA.

Lessons from Binna Burra Lodge

In some ways, Binna Burra Lodge represents a unique case study. Certainly, few ecotourism
organizations could expect to receive the level of support BBL received as it approached its
rebuilding process. This has confirmed its position as a significant nature-based tourism en-
terprise within a World Heritage listed national park accessible to all. Nevertheless, there are
important lessons for all ecotourism products from the experience of BBL. Those key lessons
are as follows:

• Build social capital: The support and goodwill of the community, industry, and govern-
ment is an important asset following a disaster. Building those relationships over time is an
important investment in resilience.

• Be prepared: Climate change is increasing the likelihood of a range of natural disasters. Being ready for the challenges of maintaining business continuity will assist in recovery.
Recognising risks and preparing for them is critical for long-term success.

• Get back to business as soon as possible: Research shows getting back to business as quickly as possible is an important factor for recovery.

• Leverage available resources: There are a wide array of resources available to ecotourism organizations. These resources include tools and training on preparation for disaster. They also include resources to support recovery following the event. By leveraging these re-
sources, ecotourism organisations can apply best practices even in the most difficult times.

There are other lessons from the BBL case as well. Despite following best-practice ecotourism,
BBL was not as focused on the issues of climate change as they are today. In preparing for the
future, they have committed to pay greater attention to the issues of climate change and its
impact on their operations. The case also highlights the systems nature of recovery. BBL is one
element in a system of stakeholders that includes the local community, parks management, the
government, local suppliers, staff, community and friends, and past visitors. Each plays a role in
the recovery process. Finally, the BBL incident highlights the dynamic nature of risk and
vulnerability. Bushfires are rare in temperate rain forests, and the likelihood of the risk of fire at
BBL has been relatively low. Nevertheless, as climate change affects conditions, ecotourism
products must be mindful of the changing risk profile of their operations.
Conclusion

Climate change will have significant impacts on socioenvironmental systems in the coming years. This is true for tourism in general, and ecotourism in particular. Ecotourism’s proximity to a natural world that is responding to a warming world means that our sector of the industry will be on the front lines of change. The direct changes are becoming increasingly certain, while the indirect changes are less predictable.

Tourism must commit to mitigation as part of a universal commitment to reducing GHG. Even while reducing GHG, we must adapt and build resilience to change. As Reinhardt and Toffel (2017) note:

thirty years ago, mitigation and adaptation could have been viewed as substitutes: If we had invested in more aggressive mitigation then, we may not have to invest so much in adaptation now. But that window has shut. [Mitigation] efforts simply cannot obviate the need for extensive adaptation. (pp. 105/106)

Unfortunately, the commitment to GHG mitigation and the impacts of climate change are asymmetrical. Reducing GHG production does not insulate ecotourism products from the impacts of climate change. While ecotourism products must work to mitigate their impacts and reduce their GHG emissions, they must also adapt to anticipated changes in the environment and build their capacity for resilience.

It has been suggested that concern for climate change may overwhelm other legitimate sustainability concerns (Weaver, 2011). This approach overlooks the intersectionality of climate change with many of the other challenges facing the world. Natural space preservation, biodiversity conservation, and Indigenous rights—to name just three critical issues—intersect with climate change. Those committed to ecotourism principles must recognize how each of these issues are interrelated and must work to solve these issues at the same time.

References


