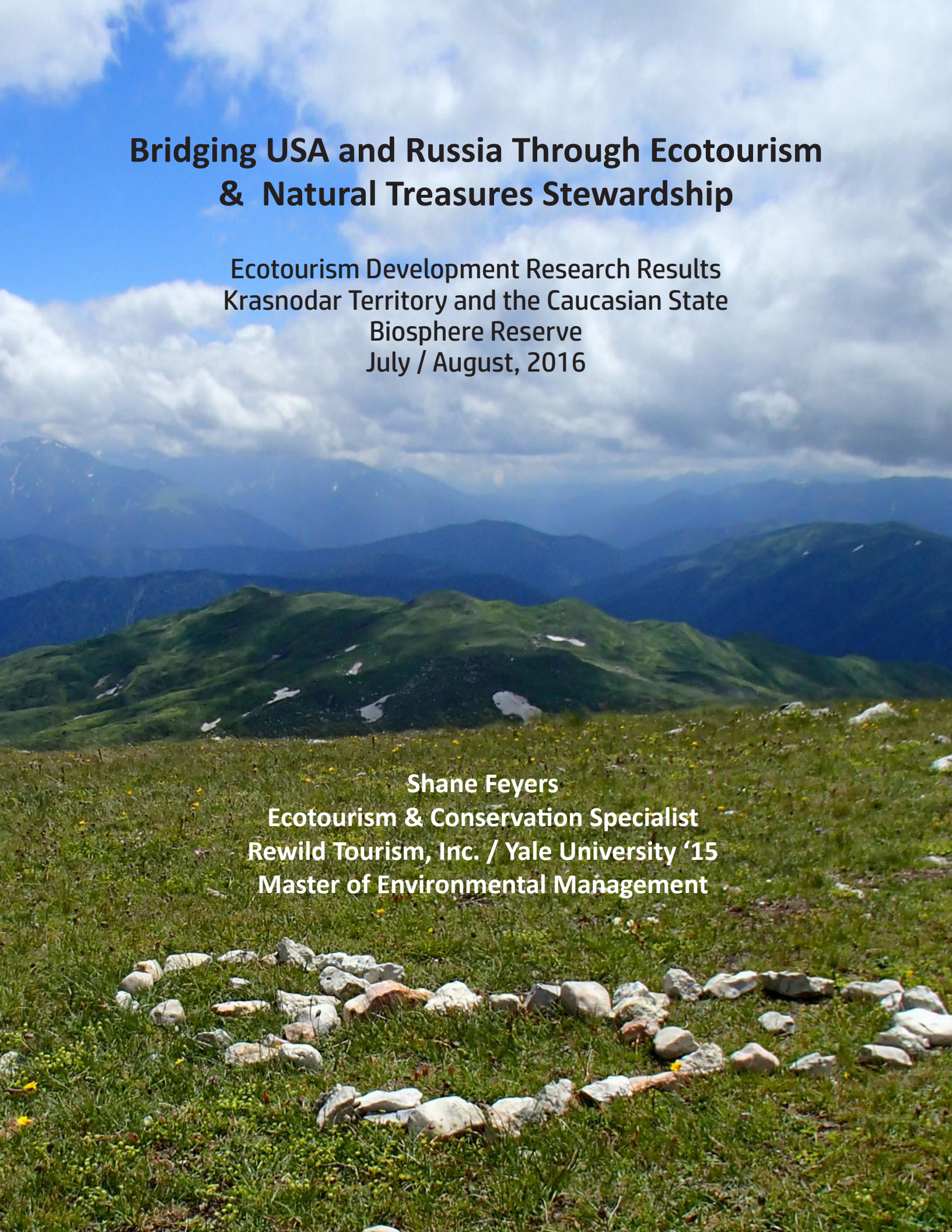
Bridging USA and Russia Through Ecotourism & Natural Treasures Stewardship: Ecotourism Development Research Results, Krasnodar Territory and the Caucasian State Biosphere Reserve

Technical Report · August 2016

DOI: 10.13140/RG.2.2.17751.47527



Bridging USA and Russia Through Ecotourism & Natural Treasures Stewardship

Ecotourism Development Research Results
Krasnodar Territory and the Caucasian State Biosphere Reserve
July / August, 2016

Shane Feyers
Ecotourism & Conservation Specialist
Rewild Tourism, Inc. / Yale University '15
Master of Environmental Management

Summary

Nature-based tourism and visits to protected areas are on the rise in Russia, which is now the ninth most visited country in the world. In interest of new market opportunities, economic growth, and resulting from the pressures of urbanization and socio-political changes, Russia amended legislation in 1995, and more extensively in the past five years, to permit tourism development in protected areas, including ecotourism and educational tourism in strict nature reserves. Although barriers need to be addressed in order for these nature-based tourism operations to effectively contribute to ecotourism through environmental education, community welfare, and conservation in Russia, these changes create considerable opportunities for people to broaden environmental awareness and experience the unique nature of Russia. In Krasnodar Krai, Russia's most popular regional tourist destination, there are a number of protected areas that can be used to model positive ecotourism growth. This research finds, in order to do so, the next phase of development requires investment into human resources, training, and collaboration with other institutions to establish opportunities to attract, inform, and affect park visitors with a positive learning experience. Support for regional protected areas will also be built by engaging communities around protected areas through research and consultation, concession agreements, and by creating and pursuing a broad coalition of volunteers for the parks.

Acknowledgments

This research was sponsored by the Ecotourism Project operated by "Dersu Uzala" Ecotourism Development Fund under the US-Russia Peer-to-Peer Dialogue Program, 2015 (funded by the US Department of State). I would like to sincerely thank Svetlana Kopylova for her hard work organizing and interpreting, her wise guidance, and broad intellectual contribution to this research. Equally, I would like to thank Sergey Shulga for his participation in helping me navigate the social culture of Russia. Additional thanks are owed to Elena Bazhenova for providing and coordinating this opportunity, to Fred Strebeigh for ongoing feedback and motivation, and finally to the park scientists, staff, and all the other individuals who contributed their time to help me complete this analysis.

Methodology

Research for this project included an extensive literature review of ecotourism development in Krasnodar Krai, Russia as well as comprehensive analysis of guidelines and literature for environmental education, environmental interpretation, community engagement, and park management in protected areas in the United States. Field research consisted of formal and informal semi-structured interviews with target scientists, protected area managers, and tour operators. Through these interviews the researcher collected actor and stakeholder perspectives of tourism development and its impacts. Although few community members were directly surveyed because of cultural barriers, informal questions were prepared by the researcher and communicated to the research guide in advance of activities when interactions would be likely. In these instances, the research guide acted as an interview surrogate, asking relevant questions in a culturally appropriate and situationally relevant manner. Site visits to tourism destinations, natural landmarks, private parks, and protected areas were used to observe visitor behavior and landscape conditions.

Limitations

Primary limitations for research include a small research sample size, potential miscommunication because of language barriers, restrictions to accessing certain actor/stakeholder groups, and researcher's political, cultural, and park-management knowledge of Russia. Recommendations are generalized based on visits to several regional and federal-level protected areas.


Feyers, 2016

Introduction

After the dissolution of the Soviet Union in the 1990s Russia transitioned to a market-based economy, drawing many foreign investors and drastically increasing their opportunity for national economic growth[1]. Although Russia did not hold a globally competitive position for industrial production, with travel increasing around the globe Russia saw tourism as an opportunity to increase jobs, attract and retain human capital, and improve quality of life in the country[2]. Doing just that, by 2011 it was estimated that there was 30% annual growth of investment into the tourism industry, and by 2013 Russia had 13,000 hotel-type accommodations for tourists[3]. These investments are paying off. Russia has become the ninth most visited country in the world with 29.8 million tourists visiting in 2014, directly supporting 982,500 tourism-related jobs (1.4% of total employment) and generating RUB1,065.5 billion (1.5% of GDP) for the Russian economy. In 2015 the Russian Federation moved up 18 places, to number 45 of 141 most competitive countries for tourism[4].

Looking beyond urban centers such as Moscow and St. Petersburg for tourism development, Russia has also turned to the rich cultural history, vast landscapes, and well-protected natural heritage of their rural areas for increased revenue streams and foreign investment in the country[5]. In southwest Russia in particular, Krasnodar Krai and Adygeya Republic have become Russia's most productive economic regions because of their coastal and mountainous terrain, transportation infrastructure, agribusiness, energy exports, and network of protected areas[6]. As a result of high population density and market diversity, every type of tourism sector can be found in Krasnodar and Adygeya, including natural, archaeological, social, sport, education, and health[7]. Home to a national park, two strict nature reserves, and many other protected areas, this region has a unique climate, unique geography, and high levels of biodiversity that make it especially attractive for nature-tourism and recreation development[8]. Throughout Krasnodar and Adygeya there are caves, waterfalls, lakes, ledges, springs, glacial peaks, alpine meadows, and remote areas for outdoor adventure[9]. With a large portion of the region now classified as a special economic zone (SEZ) for tourism and recreation development, half of all Russian tourists are drawn to the area to stay in hotels and visit parks, beaches, and ski-resorts, making Krasnodar and Adygeya the most popular tourist destinations in Russia[10]. However, this continued growth has also resulted in many challenges to the nature, culture, and community of the Krasnodar and Adygeya region. Recognizing an opportunity to improve how tourists perceive and interact with these sensitive natural areas that are increasingly visited, the Russian government and NGOs have promoted ecotourism as one way to continue growing the tourism sector while reducing negative impacts on the nature and culture of Krasnodar and the Western Caucasus[11].

When done well, ecotourism has the ability to improve environmental awareness through education and interpretation, improve community welfare through jobs, participation, and benefit sharing, and improve conservation by building a large constituency to protect those resources. When done poorly, ecotourism can create conditions that severely degrade protected areas and outdoor experiences. To avoid negative outcomes for ecotourism growth, and build more support for conservation in the country, the Russian NGO, Dersu Uzala, has turned to outside perspectives to learn how other countries approach ecotourism development. Providing input from a US-based perspective, this report delivers recommendations to improve environmental education and community outreach in Kavkazsky zapovednik and other protected areas of Krasnodar and Adygeya. Describing a brief history of nature-based tourism in Russia, this paper outlines the current situation of tourism development in protected areas of Krasnodar Krai and the Adygeya Republic before providing a collection of recommendations to align park-development with the goals of ecotourism.

Background

In 1917, just one year after the United States created the National Park Service, Russia began developing a significant nature protection system of their own. Today, Russia has one of the largest protected area networks worldwide, with 211 million hectares of land distributed between 103 federal strict nature reserves, 50 national parks, 71 federal nature sanctuaries, 28 nature monuments, and 12,746 local and regional level protected areas. Combined, these reserves and monuments cover 11.4% of Russia's landmass. Setting itself apart from the United States, many of Russia's protected areas were established during Soviet times to protect nature for its own sake, and were strictly controlled for science, monitoring, and preservation[12]. However, through the transition of time and change in political ecology of the country, the approach to conservation in Russia has shifted. In the 1990s, with an emerging free-market economy, the Russian populace began to question the purpose and benefits of protected areas[13]. Attempting to integrate environmental protection into these new social and economic systems, in 1995 the *Law of Protected Areas* was passed, assigning reserves the responsibility of environmental education, public engagement, and use for nature-based tourism. Investment into protected area budgets decreased by 90%, and in the 2000s the *State Committee for Nature Protection* was replaced by the pro-development *Ministry of Natural Resources* and a mandate to expand physical commodity markets using Russia's abundant natural capital[14].

From the 2000s on, Russia's nature protection system started to resemble the western conservation model, where some protected areas use outdoor recreation and commercial activities as revenue sources[15]. Russian political leaders cited the US National Park Service as an example to learn from, and began seeking a return on investment from their parks[16]. Although more protected areas were created, reserves had to increasingly depend on tourism development and natural resource extraction to support staff and

Feyers, 2016

management[17]. Nature-based tourism became an option for zapovedniks and other federal protected areas, which received RUB2.7 billion in 2009 and RUB2.4 billion from 2011-2013 to create tourism infrastructure and reinforce revenue-generating activities[18]. Strict nature reserves, once controlled for research and monitoring only, became viable areas for Russia to explore how ecotourism could contribute to economic growth and environmental education[19]. Officials believed that increasing public access to these areas would stimulate development that supported conservation and sustainable park use, resulting in a win-win scenario for economic growth and nature protection[20].

Many Russians disagree with this decision to open zapovedniks for tourism[21]. Reducing the budget and weakening protections for the reserves has created conditions favorable for encroachment and development at the expense of these protected areas. But "there are no longer sustainable economic means to do it the old way," protecting nature for its own sake[22]. Only .7-.8% of the national budget is dedicated to environmental protection[23]. Though not officially legal, some reserves are turning to logging and other extractive activities just to sustain basic operations. Most rangers earn a very low salary, many of whom maintain a subsistence lifestyle on small plots of land around their stations in the parks and work two or even three jobs[24]. Some people claim that funding is withheld from parks that do not support tourism, and park directors who object are replaced by managers willing to participate in tourism development[25]. In effect, like the western conservation model, these changes have led to gradual commodification of the protected areas in Russia, leading dedicated conservationists to believe that economic development will continue to occur at the expense of environmental protection[26]. Yet, from another perspective, it is quite possible that these changes could lead to a convergence of policies and values that create greater support for nature protection through increased access and experience with nature rather than restriction[27].

Feyers, 2016

Situation Analysis

Following suit with many other countries, supporting a growing population, an urbanizing culture, and rising standards of living, these land-use changes may be necessary but they do not have to be negative. If planned and managed carefully, using ecotourism as a sustainable development tool can address challenges of rural poverty while balancing economic growth with natural and cultural heritage conservation in Russia[28]. Currently, ecotourism makes up only 1-5% of the Russian tourism economy. It is estimated that expanding the nature-based tourism industry could bring in 1.6 million more people a year, creating a lot of new jobs, revenue, and opportunities to experience Russia's unique nature[29].

However, as an alternative to mass tourism, ecotourism development in protected areas faces major challenges[30]. Even though there is moderate awareness and concern about environmental issues of Russia, pro-environmental behavior is still uncommon in Russian culture because of lifestyle, traditional values, and social environments[31]. Ecotourism is new to the country and institutional barriers such as low market demand, lack of operators specializing in responsible tourism, insufficient promotion and investment into environmentally sensitive businesses, market-pricing difficulties, public attitudes towards natural resources, and lack of training for sustainable tourism development are limiting its uptake[32]. Modified or unenforced environmental protection policies are also problematic for positive ecotourism development. Despite that additional federal laws *On Environmental Protection* were created in 2002 to control anthropogenic impacts on protected areas, and have succeeded in preventing some threats, in most protected areas permissible loads have not been established or enforced[33].

Krasnodar Krai and the Adygeya Republic region is one area where all of these challenges and opportunities manifest themselves. This region has one of the most favorable climates in Russia for living and leisure. The creation of a special economic zone in Sochi combined with the 2014 Winter Olympics construction, a unique landscape, and well-established agriculture, fuel, and energy markets has attracted significant development and tourism to the area[34]. This tourism growth is encouraging new activities and drawing people from all over Russia to fill large and small hotels, resorts, and campgrounds across Krasnodar and the Adygeya Republic[35]. The high level of tourism in the national park and growing number of visitors to Kavkazsky strict nature reserve has led to additional investment and revenue for these protected areas and allowed more opportunities for people to engage in environmental education and outdoor activities[36]. Because tourism in the region was originally established in Soviet times, there is also less controversy around nature-based tourism and outdoor recreation in Sochi National Park and Kavkazsky zapovednik[37].

But this rise in nature-based tourism is not without its costs. Tourism growth in Krasnodar and Adygeya has led to ecological impacts to the coast, in Sochi national park, to Utrish zapovednik, and the buffer zones of Kavkazsky zapovednik. Rising numbers of tourists means more cars, emissions, pollution, run-off, human disturbance, and illegal land-uses. Large-scale transformation of local environments from sports facilities, resorts, powerlines, and road construction has changed the connectivity of the protected areas and increased flow of toxins into rivers and the Black Sea[38]**.** Some scientists believe the success of tourism has led to infrastructure development and visitation that far exceeds the recreation capacity of Utrish and Sochi, and though tourism levels in Kavkazsky have not shown major impacts to the ecological health of the strict nature reserve, the extent of trail use already surpasses the carrying capacity recommended by a Moscow State University study[39]. As a result of a growing consumer culture and increased access to protected areas, trash is also a major problem for the reserves[40].

For communities, there remains little in the way of participation or direct benefits from this development as well. Aside from tax deductions, rural business owners do not receive any financial support and funds allocated for

tourism development do not tend to reach small businesses. Few "green" economy projects or jobs exist in the area, and low levels of household income prevents personal investment in small business growth. The absence of business training limits the possibility for new entrepreneurs and innovators to join in expanding the industry in a sustainable way[41].

Rather than investing in small-scale businesses, environmental entrepreneurship, or programming for protected areas, growth is primarily occurring through corporate development, which has empowered large companies to push further into the protected areas and protected area legislation. Major interests are lobbying to develop in Sochi National Park and Kavkazsky zapovednik. In 2011, Law No. 2322-r permitted tourism development in buffer zones of protected areas. In 2012, Federal Order 603-r permitted construction of tourism facilities within Lagonaki Biosphere Polygon. Federal Law No. 406-fz from 2013 authorized large scale tourism infrastructure in strict nature reserves, and 2015 amendments to the *Decrees on Sochi National Park and the Sochi Federal Wildlife Refuge* changed zoning in a way that tourism development could have serious negative impacts on wildlife migration routes of the region[42].

Some of these policy changes have allowed Kavkazsky to innovate ways to generate revenue for the park. However, these legal modifications have also weakened environmental protections, leading to more encroachment and development that could affect the ecological integrity of the Western Caucasus overall. The combination of plans for road construction, tourism and resort development, and illegal land-use activities have qualified this site to be classified as World Heritage in Danger[43]. To avoid this status, in 2015 Russia abandoned its proposal to develop a ski resort in the Lagonaki Plateau[44]. Yet media and conservation organizations continue to report amendments to environmental protection laws and ongoing plans to modify the boundaries of the strict nature reserve. The Rosa Khutor resort company is negotiating to develop another ski-resort on 6,000 hectares of Sochi National Park, and Gazprom, a natural resource extraction and production company, is lobbying for permission to develop outdoor recreation and tourism operations in 10,000 hectares of Kavkazsky[45].

Despite these growing pressures to develop and their potential impacts, most people interviewed remain positive about tourism and outdoor recreation in Krasnodar Krai and the Adygeya Republic, and support continued growth, as long as it is controlled and does not result in major environmental impacts. Demonstrating some positive investments in conservation and the community, in 2016 the Adygeya government began supporting the work of the tourism information center and the development of event and active tourism in the Republic[46]. And, as a result of regional investments into zapovedniki, Kavkazsky managers have established two new visitor centers, 28 interpretive signs, a major boardwalk system in their Yew- and Boxtree Grove, and a wildlife demonstration complex. These outcomes have so far shown that a zapovednik can draw more tourists while balancing conservation with revenue growth[47].

Still, it is clear that current policy changes and investments support the development of mass tourism and national economic growth rather than environmental awareness and local benefits. As a result, evidence from this research indicates that, presently, protected areas must focus on economic strategy rather than community engagement and capacity building. Of course, expanding infrastructure to accommodate more visitors and generate more revenue for the parks is important, but this will not achieve the goals of ecotourism alone. Environmental education, environmental interpretation, and community engagement play the most critical role in increasing awareness and creating pro-environmental behaviors and values for protected areas. The importance of investing into these aspects of park operations may not be readily apparent but are necessary in order to safeguard protected areas during this period of economic and social liberalization[48]. Through new jobs, new investments, and more visitors, they will also contribute to economic growth. The following sections introduce strategies to strengthen the development of ecotourism in protected areas.

Feyers, 2016

Insights and recommendations

Synthesizing US practices with data obtained from interviews and research, this section provides details and recommendations to expand positive ecotourism development. Most natural resource markets and tourism markets are established and growing. Tourism infrastructure in and around protected areas visited also appear to be well developed, limiting the recommendations that can be offered for business products and services. Instead, primarily it seems that environmental education, heritage interpretation, and community benefits need additional support through policy, planning, and capacity building. As a result, though some ideas for new learning products and services are included, these recommendations focus on developing the foundations of ecotourism. In this case, opportunities for economic growth, community benefits, and conservation will occur through concessions, partnerships with schools and NGOs, community presence, interpretive programming, and more volunteers for the park. These recommendations contribute to the tasks of special importance found in the *Concept for Developing the Federal Protected Area Systems to 2020*, to broaden the cooperation of zapovedniks and national parks with NGOs, strive for formation of local support, and facilitate development of small and medium businesses for tourism[49].

Environmental Education & Interpretation

Kavkazsky managers have had to focus mostly on increasing tourism infrastructure and recreation opportunities rather than major investments into education and interpretation programs. Although there is some signage, preventing their damage by visitors is a challenge[50]. There is also absence of programming and qualified staff to accompany this material; the central environmental education office was described as understaffed with few resources and little ability to expand[51]. Near-term development plans continue to focus on dedicating all funds to infrastructure growth in and around the park rather than staff and programming. Nevertheless, there is a need to develop much stronger foundations for ecotourism operations through a combination of information, outreach, and activities in parks and formal learning institutions.

In the US, environmental education and interpretation does not take place through a single entity or event but rather is incorporated broadly into our academic and social environments. More widely than classroom learning, museums, or field-trips, environmental education and interpretation is distributed to audiences through a combination of television, magazine, science curriculums, nature writing, outdoor experiences, nature centers, college courses, summer camps, non-profit messaging, household learning, peer exchange, and community outreach. It also is customized for different age groups from children to adults. Most of our environmental education program tools are place- or state-based.

In US national parks specifically, it is the responsibility of all affiliates to participate in interpretive and educational activities from high level officials to field staff and partners. Learning takes place through information programs, interpretive experience, curriculum-based education programs, and interpretive media. Programs are designed around 1. The geology, ecology, and natural history of the park (natural resources); 2. The legislative history of the parks and the significance they have played in shaping policy and culture today (social relevance); and 3. The mission, goals, and challenges of the parks (conservation significance). Together, these activities add to the understanding and enjoyment of the parks, connecting scientists, managers, visitors, and communities together. The goal is to make parks meaningful to the life of the country. All of this is accomplished through careful planning, collaboration across agencies and with outside organizations, and by adhering to national standards for interpretive and education competency[52].

It is important to distinguish between interpretation and education because although they are interconnected and pursue similar outcomes, they are different systems of learning and thereby require different formulas for impact. Environmental education is a process

that allows people to explore environmental issues and engage in critical-thinking and problem solving through sequential learning in formal institutions[53]. In the United States, environmental education policy is overseen jointly by the US Environmental Protection Agency and the North American Association for Environmental Education, which is a network of actors who help shape environmental education programs and needs for schools, universities, and state departments. The task of design and implementation for environmental education occurs at the local scale and is a mission undertaken by public and private organizations including schools, NGOs, the National Park service, and many others. The goal of environmental education is to help people understand our environments, the problems they face, and to create new attitudes and behavior towards the environment[54].

Interpretation, on the other hand, refers to the communication of information to visitors of natural areas, parks, museums, and science centers. This may include a variety of mediums such as displays, signs, artwork, exhibits, audio-video media, and interactive and immersive experiences. Those who practice interpretation can include rangers, guides, naturalists, curators, visitor service staff, and many others. The goal of interpretation is to improve and enrich a visitor's knowledge and experience by connecting meaning and significance of a place to a visitor's personal life. It fosters increased visitor understanding, appreciation, enjoyment, and stewardship[55].

Because of their interconnections and differences, environmental interpretation and environmental education need to be studied and developed both independently and together to ensure robust design of procedures, curriculums, and interpretive programs and material that complement and build off each other. As interpretation activities are limited in time and scope, it should be noted that depending on interpretive activities alone will not be as effective in influencing positive environmental attitudes and behavior as environmental education, if at all. On the other hand, environmental education cannot assume to succeed in developing broader environmental awareness and stewardship behavior without using tools of interpretation to connect people to place. Conducting both should occur in order to achieve optimal positive results for environmental values. Developing these together can take place through regional collaboration between protected area managers, scientists, private education-NGOs, university faculty, and school teachers and administration.

Feyers, 2016

This collaboration itself will be an excellent tool to draw positive attention and more awareness to regional protected areas.

More specifically, to develop successful environmental education and interpretive learning outcomes, consider:

- Using legislation to draft stronger policies that support measurable education and interpretation objectives and goals: Russian legislation assigns protected areas the responsibility of ecotourism and education tourism. Since 1996 there has been a *State Concept of Environmental Education in Protected Areas* and other strategies for incorporating environmental education into protected areas, but research finds their implementation and financial support could be strengthened. In the US, different legal instruments such as the 1916 *National Park Service Organic Act* and the *National Environmental Education Act* of 1990 established environmental interpretation in National Parks and the need to improve environmental literacy of our country. These legal mandates create the impetus to establish operational and management policies to design, implement and maintain the structure and functioning of interpretive and educational programs. These policies set the groundwork for planning, assign people roles and responsibilities, and outline what services will be provided and how. With these policies in place, not only can programs be developed slowly and wisely, but resulting is a resource to use for public and private fundraising and government funding requests. This can also be a tool to measure progress and gaps of environmental education and interpretation in the individual park programs.

- Building financial resources and partnerships for education activities: The US depends on many forms of partnerships with businesses, NGOs, and academic institutions to design and achieve its learning objectives. Partnerships are an important way for protected areas to expand services beyond what they can provide. They also build capacity and support for their mission and presence in the community. Partnering with museums, schools, and NGOs can help parks expand their capacity for outreach, their ability to design current and relevant education activities and programs that people will enjoy, and broaden the distribution of environmental knowledge. The US National Park Service has established partnerships with organizations like *Nature Bridge*, which acts as the provider

Feyers, 2016

of environmental education and interpretive science programs for children and teens. Through their staff of skilled educators, they work in and out of parks to engage students in the natural environment, improve environmental literacy and create competent environmental stewards. The *Alice Ferguson Foundation* is an organization that provides field studies for students as well as holds workshops to help teachers provide outdoor learning activities. More internally, the *Harpers Ferry Center* provides media development planning, interpretation, education, and visitor experience planning for staff and management. These partnerships greatly expand the ability and effectiveness of protected areas to achieve their missions of growing environmental knowledge, awareness, and action. These partnership organizations are allowed to fundraise and accept donations for the US National Park Service.

- Mandating *positive* protected area entrance signage in all parks: The researcher visited a number of natural monuments where there were high levels of tourism activity but little indication that the area was protected, why it was protected, with no way to learn more. Protected area signs are an opportunity to promote a logo and a positive message. Whether the park is local, regional, or federal, if it is classified as a protected area there should be clear and obvious signs for this. Rather than restrictive, this signage should be inviting and communicate that the area is protected for science, learning, and enjoyment for everyone. This will create identity and awareness for the parks within communities. If designed well, this signage will be a simple starting place for people to learn more about the parks, where they can go to visit, and how to get involved.

- Hiring and training park staff (or building partnerships) to create holistic park-specific interpretive and education programs: Research found that there were few visitor center staff and only a small education office that had a high turnover rate. Employees have very low salaries and depend on bonuses which are only earned by developing activities and materials. As noted, interpretation and education depend on the combination of information, experience, and media. This job requires multiple people with specialized skills and a flexible budget. Without that, effective outputs should expectedly remain low. Interpretation is usually a free-service and will likely depend on other sources of revenue for support. Office/visitor center staff were also reported to have low levels of direct knowledge of natural and cultural heritage of the parks, and are not yet offered special opportunities to work with rangers to broaden that knowledge and develop a passion for local nature. Ensuring that interpreters and education staff have a deep connection and understanding of the local environment is important to their ability to provide quality learning services and materials[56].

- Training and tasking rangers as environmental interpreters: Managers communicated that all protected areas are assigned rangers, but with the increase of protected areas and attendance, rangers must oversee more land and more people than they are able. These rangers are mostly trained for monitoring and regulatory enforcement and there are few incentives to interact with tourists. They are also nervous to enforce some rules because they do not want to discourage visitors. Some rangers have received visitor-sensitivity training, but most are selected for characteristics of care for the parks, respect for the rules, and backcountry resilience. These characteristics may not match the same traits that make good educators. An interpreter's behavior and personality, especially their confidence, passion, sincerity, and charisma, directly influences positive visitor outcomes[57]. As protected areas hire new rangers, they should expand ranger responsibilities to include interpretation and education activities, and seek people with those traits. Training permanent and seasonal employees, including rangers, the US National Park Service has a mandatory *Interpretive Development Program* to teach essential baseline competencies in knowledge, skills, and abilities for interpretation and education that employees must take to meet a national standard[58]. Designing this type of program could be a soft-approach to incorporating interpretation into job responsibilities.

- Hosting regular short-and long-term activities in the parks for people of all ages: Well designed and delivered interpretive experiences and materials, that add to enjoyment and visitor satisfaction, increases knowledge, supports pro-environmental attitudes and behavior, and can increase philanthropic behavior such as donations following interpretation programs[59]. Live programs produce the highest levels of satisfaction in attendees. Programs that aim to change audience behaviors, attitude, and appreciation show higher positive outcomes than those that focus strictly on knowledge and science. Telling stories, provoking reflection, and moving beyond facts into relevancy of our lives also produces better visitor outcomes[60]. Ranger-led hikes for plant and animal identification and bird-watching, campfires, holiday gatherings, park fundraisers, trash-cleanup days, and birthdays are just some of the many ways people could be drawn to parks to spend a few hours learning. Multi-day activities such as educator-led residential learning programs and youth summer-camp programs consistently show positive effects on environmental knowledge, attitude, and behavior[61]. Longer term programs such as *Outward Bound* are also proven to establish strong conservation values and stewardship behavior. Building partnerships with educators and permitting long-term group camping for learning in the parks can be a source of revenue while giving people life-changing nature experiences.

- Creating work-based opportunities in parks for people of all ages: Despite some restrictions to accessing different parts of the parks in the region, trails, entrances, buffer zones, monitoring sites, and other gathering spaces can be used for in-park activities for people of all ages. Designing programs for children and students of all ages to work with managers, rangers, and scientists is a way to expand research and management capacity while building local community interest in parks. The US National Park Service has a *Junior Ranger Program* that works with children ages 5 to 13, encouraging them to investigate different aspects of the history, geology, and ecology of parks while they learn about the mission and importance of stewardship. Their motto is to "explore, learn, and protect!" and all Junior Rangers take an oath to share their stories with friends and family. For this program, during park visits, children complete a series of activities and share answers and ask questions to rangers[62].

Citizen science programs are another tool used by parks to collect information with the help of anyone interested. Designing programs that require little or no training, everyday people assist specialists with scientific tasks such as wildlife counts, ecological surveying, mapping invasive species, and many other small, data-rich scientific activities. Some examples include teaching people how to do bird collection, identification, recording, and banding in *Great Smoky Mountains National Park*. The *Yellowstone Wolf: Project Citizen Science* encourages people to find and take pictures of wolves to track their health and movements. *Bioblitzes* are an annual nation-wide activity that prepares people to collect data over a 24-hour period to document all living things in a particular site[63]. There are countless citizen science projects across the nation now, only limited by the imagination of scientists who have plenty of small tasks they can give to proactive learners. These projects are an exciting opportunity for people to access places and professionals they may otherwise never have had the chance to, and a scientifically valid way for protected area researchers to broaden their scope of study and collection of scientific data[64].

Finally, through the US National Park Service's *Jobs for Students* program, high school, college students, and graduates can work with the US National Park Service in parks across the nation. They are provided travel, food, housing, and a small stipend to spend a summer working on everything from geoscience to biology, communications, business development, air and water quality measurements, and wildlife monitoring. A partnership with the *Student Conservation Association* places 2,600 people each year with the US National Park Service and others. These internships can set people on a stewardship path for life.

- Creating ways to access environmental learning outside of parks: Besides visitor centers and interpretive activities, other opportunities to engage the public in their daily lives can be developed. For example, the Kavkazsky zapovednik headquarters exists in downtown Sochi where thousands of people pass by daily. In a location close to the beach and within driving distance to Sochi National Park, each person should be considered a potential visitor, learning audience, and donor. Having an informal visitor center here to host activities and invite students to learn about nature in these urban environments expands outreach exponentially. Although not in the park, they could be left with materials to share with their friends and families and an invitation to join in activities and events in the protected areas. Beyond this example, in all towns surrounding the protected areas, programs could be created to engage community members with live interpretation, traveling exhibits, and with activities and information about local protected areas, their history, and their value to the community. Proactive environmental education programs are a great marketing and promotion tool that will inform residents about the opportunities to visit and participate in many different activities in the park.

- Creating a digital newsletter and collecting visitor feedback and contact information: As park awareness in the community expands and visits increase, collecting contact information would create a way for park staff or partners to share digital newsletters, announce activities, and conduct outreach for donation. Sign-in books, voluntary requests at the entrance of visitor centers, and options to provide contact details when paying entrance-fees and attending events will quickly develop a database of people that can be used to build social capacity, audience base, and potential volunteers and donors.

- Creating and distributing materials for pre-visit information and post-visit action: Free-choice learning, described as "learning that occurs when the learning is largely under the choice and control of the learner,"[65] will be the primary form of learning that occurs in these protected areas.

Feyers, 2016

Even in early stages of education development, learning activities in parks will provide an important part to raising environmental awareness and pro-environmental behaviors and attitude. Even once formal environmental education and interpretive experiences become available, these will only contribute a small and short-lived amount to understanding and concern for environmental issues. Tools are needed to reinforce positive attitudes and behavior shortly and long after visitors leave. In the absence of reinforcing experiences, changes in attitude and behavior (concern for local parks and nature) will not persist over time. Off-site learning opportunities must be made available through media, web-based learning, newsletters, and outreach by the park. These "action resources" should be behavior oriented rather than entirely informational in order to reinforce and extend the learning effect of interpretive activities. Action resource should provide explicit ways to transforms knowledge into action to improve our environmentally sustainable thoughts and behaviors in daily life. Different types and levels of action resources should be available for different interests and levels of commitment. Because of cultural and social diversity, conducting research with park visitors and communities is necessary to understand how to effectively design and communicate these messages[66].

- Integrating charity messaging and opportunities for donations/donor support into protected areas: Research found that Russia does not have a very prominent charity culture because of social norms and minimal expendable income. As tourism, recreation, and household income levels increase however, this is an opportunity to provide people with a way to use their money for something they enjoy or care about. Throughout the growth of education and interpretation activities there should be non-intrusive ways for people to donate to parks directly and indirectly. Agreements could be made with operators to allow collection containers at entrances and within natural monument path areas. Donations could be requested at the end of interpretive activities or community events. Indirect donation requests could be included on guest-house bills ("do you want to add three rubles to support the

Feyers, 2016

park") and donation options could be available on social media and other digital outlets as a follow-up activity to park visits. "Adoption" programs can be designed for visitors to provide money towards a particular animal in exchange for information and pictures, or to adopt plots of lands within the park to fund cleanup and management of these spaces. Because corporate firms are also a major stakeholder group, park managers or the Ministry could solicit for no-strings-attached donations from large businesses that support or depend on protected areas

- Expanding environmental education programs with schools: As explained, for interpretive experiences to be effective for pro-environmental attitudes and behavior requires action resources as well as formal systematic learning that includes critical thinking. Interpretation should be considered an aspect of environmental education but not environmental education in its the entirety. Interpretive activities lack the time it takes to shift values and behaviors over the long-term. Going beyond the job scope and ability for what park staff and managers can provide, partnerships with educators can be an effective way to supplement resources. Many of these types of initiatives may have already exist, but expanding the frequency and extent of collaboration between educators and interpreters can improve outcomes for holistic environmental learning[67]. Including formal educators in on-site instruction is a powerful method to make the learning experience relevant to different age groups and increases positive outcomes for learning in parks and protected areas[68].

The US National Park Service has a *Parks as Classrooms* program which is a curriculum-based program that matches formal education objectives with the natural heritage, current risks and challenges of a park in a locally relevant manner. The park service provides transportation for children to and from these programs, which are designed to be relevant to the park, to the school curriculum, and involve teachers in planning and development of the activities. Pre-visit materials are provided, on-site activities are guided, and post-visit materials are handed out. Clear criteria for what is being taught and the expected outcomes are also developed. Some activities include studying local flora and fauna, learning about geology or biology, studying air and water, and learning about ecosystems. The US National Park Service also has formal *Research Learning Centers* in different parts of the country that are used to host schools that create ongoing outdoor learning curriculums.

Developing partnerships and providing related education outside and separate from park programs is also an important factor in successful outcomes for environmental learning[69]. In these cases, rangers or park partners can collaborate with schools, teachers, and students to produce fun classroom lessons and activities that are relevant to the school curriculum as well as the protected areas. Rangers can visit schools to give guest lectures, teaching them about the importance and unique value of Sochi National Park, Kavkazsky, and other protected areas in the region. This can be designed into curriculums with younger age groups when learning is broad, or integrated into specialized classes in geology, biology, ecology, and environmental science when students are older[70]. For teachers, the United States Environmental Protection Agency provides an assortment of classroom resources such as lesson plans, teacher guides, and online resources covering topics of air, climate change, ecosystems, energy, waste, water, and more to help integrate these into school curriculums.

Public Participation & Community Engagement

Community participation in conservation initiatives appears to be minimal in the region, with few mechanisms in place to increase community awareness or involvement in the parks or park-related issues. Community members in Adygeya did not seem well aware that these protected areas are now accessible for tourism and recreation[71]. There are continued barriers to small and medium sized business growth at a community level as well. This is a result of both cultural-norms and political barriers. Status within

Feyers, 2016

the community, the home, the workplace, and politics at large has a major influence in what individuals perceive they are able to do in their community[72]. People do not want to create any sources of conflict or draw unnecessary attention to their neighborhoods because of the possibility of breaking environmental regulations at a community level. People do not want to get involved in federal affairs, and because there is little perception of direct dependency on natural resources of the region, they are not inclined to prevent ecological degradation. There is also little financial support or business training opportunity, so competency for environmental entrepreneurship is low[73]. Protected area managers of the region can build a positive identity and more social capacity for the park by facilitating community participation and outreach that addresses some of these social constructs. Many of these recommendations are similar to programs already being developed by the *Zapovedniks Environmental Education Center* and other organizations in Russia[74].

More specifically, in developing successful community engagement and outreach programs to expand constituency for parks and protected areas, consider:

- Consulting community members and visitors regularly for research and development purposes: Expanding management of parks to accommodate new access and use requires informed planning and decision making. Designing the Limits of Acceptable Change, Action Resources, and new programs and materials for environmental education and interpretation should take place through outreach and extended surveying. Multi-stakeholder collaboration (including local communities) will maximize the conservation efficacy of these tools and activities. Should a park lead this effort, protected areas would then begin to represent themselves as a medium for community participation. Their public identity would become one of social democratization and opportunity, then ingraining the protection of parks into the foundation of social progress in the region. The support of protected areas would become a symbol for

Feyers, 2016

establishing broader community rights.

- Creating financial endowments and direct benefits: Apart from the social, economic, and recreational gains, direct-benefits from parks can be used as a more obvious tool to garner conservation support. Although there are few examples where the United States engages in direct benefit sharing with communities, research from many parts of the world finds that these types of initiatives lead to increases in positive perceptions and attitudes towards protected areas at a community level. Using revenue sharing from investments and entrance fees, a community-levy fund could be created and supplied for local community service projects such as improvements to schools and hospitals, materials for classrooms, business training services, or community restoration projects like tree-planting, trash cleanup, and graffiti removal. A community-levy fund would likely reduce the ultimate bottom line for park revenue, but direct benefits would drive increases in civil society support and visitation which would lead to revenue growth. Previous research has found, however, that providing direct benefits to communities from protected areas does lead to a dominant social paradigm that obliges protected areas to provide returns in order to maintain their perceived value to individuals[75].

- Recruiting additional, small-scale vendor and service concessions: Concession operations are a way of attracting visitors and/or providing them products and services that improve their experience in order to increase the likelihood of higher expenditures or repeat visits. It appears there are some concession services in the process of development at one entrance to Lagonaki Biosphere Reserve and the zapovednik Grove. Looking directly towards members of the local community, new concessions could be created for things such as bus and transportation services, gear rental, photography services, interpretation/tour-for-hire services, theatrical performances, street-performances, concert services, learning activities, parking lot fees, and vending machines. All concessionaires operating

Feyers, 2016

in buffer-zones and entrances to the parks should be obligated to establish contractual agreements to uphold certain standards, such as Limits of Acceptable Changes to the park, franchise fees, and the positive promotion of protected areas. Advice for concession management in the US National Park system is provided by *Concessions Management Advisory Board*. UNDP also provides a comprehensive guide for tourism concessions in protected areas that could be effective for planning and management[76]. The US National Park Service has a high level of concessionary use and has had some difficulties with balancing these provisions with the mission of parks. Allowing businesses into parks creates immediate pressures of making tradeoffs between economic gain and conservation. In major US National Parks currently, certain contracts have led to situations where parks have redirected money from the management budget to concessionaires in order to fulfill concession obligations from up-front business investments[77]. Still, allowing in small business owners and others will expand the visitor base as a result of the businesses' clients. Business promotion then becomes park promotion.

- Hosting sustainable land-use training seminars on protected area property: Research found that despite there are no current exact delineations for the boundaries of Kavkazsky and protected areas, the boundaries are generally understood across agencies and determined roughly through geographic and hydrological features of the landscape. New efforts are currently underway to establish a wider and more secure buffer zone with clear land-use policies. If this buffer zone is established and selective, sustainable land-uses are permitted for park revenue, these sites would be a good way to host public learning seminars and training opportunities for local community members to learn how to expand sustainable land-use practices on their property. Teaching sustainable forestry, non-timber forest product development, agroforestry, permaculture, invasive species control, wildlife habitat management, and landscape architecture.

- Promoting and hosting volunteer opportunities and community celebration days: Another approach to community engagement is to host and widely promote special activities in the park such as trash collection days, citizen science projects, trail-marking and management, campsite cleanup, and other days that encourage people to visit the park and engage in management activities in exchange for free admission. Volunteer activities will increase volume and variety of participation in parks, and temporarily increase capacity for projects and park management. It is important to avoid the perception that volunteers are a "free" source of support. Creating and hosting volunteer events will require staff-time dedicated to project design, wide-scale promotion, volunteer orientation and management, and to administering the project activity. Even considering these costs, this investment is a great strategic tool to increase community awareness, participation, and eventually tourism in the park.

- Identifying and recruiting community leaders to establish friend's groups for Sochi National Park, Utrish zapovednik, and Kavkazsky zapovednik: Creating partnerships will not only occur through concessions, NGOs, interpretive facilities, and academic institutions. They must also be created with the community. "Friends" for protected areas are groups that come together to participate in the volunteering activities, help fundraise and promote the park, and provide a legitimacy for the protected areas within the community. "Friends fundraise, friend-raise and advocate."[78] Friends share the goals of the protected area, build trust with park management and staff over time, and then act as intermediary between protected areas and the broader community. Over time Friends groups become a critical source for collaboration on park recreation, tourism, and management activities[79]. Through environmental education and interpretation, volunteer events, community outreach and surveying, and through the collection of contact information, people should be given an opportunity to build this relationship with the park in order to bring together a reliable friend group with good leadership.

Additional tourism-management remarks

So far only slight changes have been made to the management regimes of parks and protected areas, if any. As recreation and visits increase, and infrastructure encroaches, new issues will arise quite rapidly. During the course of research, matters of invasive species, wildlife management, and carrying capacity came up a number of times. These subjects are interrelated with tourism and park management and will affect, and be affected by the increase of ecotourism in parks. Additional comments regarding these topics are included here as a starting point for managers to think more about how they will manage and address these issues as activities and attendance in protected areas grows.

Invasive Species

Opening up protected areas for tourism results in the inevitable introductions of invasive species through recreation use and vehicle traffic, as well as earth-works and physical capital construction. Globalization and global climate change are expected to accelerate rates of invasion, requiring greater investments into prevention, control, and restoration. There will be an expansion of invasive species as development continues. This could become a major challenge. Invasive species cause significant damage to the ecology of parks and are a primary threat to rare and endangered species and ecosystems as a whole. There comes a time where invasive species abundance leads to shift in species composition of a local site, which results in uncontrollable trophic system changes. The costs of *not* managing invasive species are loss of ecosystem function, loss of species and natural heritage, and changes in ecosystem dynamics. The feasibility of prevention is questionable however, and management is difficult and costly. Policy and management actions need to be developed early. The most effective form of management requires a combination of chemicals and manual removal. Designing a constant search-and-removal program is a way to identify and address problems early. Citizen science projects, internships, and other visitor and community programs could be a unique way to combine environmental education and park management capacity while maximizing the success of control[80].

Because zapovedniks are not technically managed, the choice could be made to leave these protected areas as-is, and simply observe and collect information about anthropogenic impacts on wilderness areas. Long-term monitoring programs are important to the global field of science; collecting information on how individual species effect their environments at a local and ecosystem level, what passive indicators are related to different invasive species, what threshold levels are, and how invasive species behave spatially and temporally would be a valuable addition to invasive-species studies. However, not managing invasive species could have serious consequences to the environmental health and trophic structure of protected areas, and thereby their long-term viability for biodiversity protection. For example, the box tree moth (*Cydalima perspectalis)* is believed to have spread because of direct result of landscape ornamentation from the Sochi Olympics. This has led to dramatic losses of boxwood trees, causing a loss of canopy cover and allowing invasive species from travelers to spread underneath. Ornamental palm trees are now taking advantage of the direct sunlight coming through dead forests which will grow quickly, changing the soil composition, micro-biomes, and insect habitats. These types of disturbances further perpetuate opportunities for new plant and animal species to invade, which will continue occur through new visitor activity and more construction[81]. Therefore, it is highly recommended that a specialized taskforce is created to begin monitoring and controlling invasive species.

Wildlife Management

Research found that visits to the wildlife demonstration complex are increasing very quickly. This installment is likely to be Kavkazsky zapovednik's highest earner if growth continues[82]. All across the planet wildlife tourism is increasing. Every year countless numbers of tourists visit zoos and go on safaris to view charismatic wildlife. Tourist connections to animals, attained from in-situ (zoos) and ex-situ (safaris) wildlife tourism experiences are shown to have a significant positive influence on pro-conservation values for individual species and overall biodiversity. These activities also lead to increases in financial support and donations for species and habitat preservation, as well as purchases of wildlife-related merchandise[83]. How people relate to wildlife during these experiences will influence how they participate in co-management, respond to human-wildlife conflicts, and contribute to conservation. Through modernization and the increase of income, education, and urbanization, personal feelings towards wildlife become more mutualistic and caring. It is unknown if this would hold true in Russia, but by communicating informative, positive messages of respect for these animals, there is a greater likelihood that stewardship behaviors are reinforced[84].

Multiple people described interest in expanding wildlife viewing and safari experiences during the course of interviews. These activities would open up new markets that do not currently exist mostly because charismatic wildlife of the region reside in concealed forest habitats and their breeding areas are off limits. It was suggested that feeding or baiting wildlife could be a way to draw out animals for people to interact with. Feeding wildlife is a popular means by which tourists and tourism operators facilitate close observation and interaction with wildlife. It is widespread in practice. Supplemental feeding provides psychological, social, and economic benefits to people. But expectedly, this activity alters natural behavior patterns and population levels of wildlife, increasing the dependency of animals on human food and habituates them to human contact. This establishes social-expectations of how wildlife should behave

Feyers, 2016

around people and leads to direct increases of human-wildlife conflicts[85]. Tourism that includes feeding and direct contact with wildlife can trigger behavioral changes in individual animals, reducing wildlife fearfulness, antipredator responses, and affects the trajectory of populations[86]. It is the opinion of the researcher that wildlife feeding by management or tourists should be highly discouraged. Even if economically advantageous, it would not model pro-conservation behavior.

Approaching the idea of wildlife tourism safaris through the expansion of populations might be considered as possible alternative. This too should be reconsidered. The population dynamics between predators and prey in Kavkazsky have reached a trophic-system equilibrium. Attempts by wildlife biologists to increase population densities of certain species could have major but unpredictable effects on the population dynamics of the region's protected areas. One example from the United States is the extirpation of predators from the Northeast. Their removal allowed deer populations to rise very quickly, benefiting hunters, who kept the population down through sport. After the United States experienced a major reduction in hunting however, deer populations expanded drastically and now cause significant ecological issues in the northeast, including the exchange of zoonotic diseases with other megafauna, and the severe degradation of forests from over browsing.

If wildlife tourism expansion remains a specific goal for the parks, the researcher would recommend managers and scientists study examples like the *Arizona-Sonora Desert Museum* which is a very large, walkable open-air zoo focused entirely on native plants and animals, or the *Northwest Trek Wildlife Park* which takes people through an open wildlife park by tram to have close encounters with uncaged native wildlife species. These types of wildlife tourism demonstrate wildlife behavior in natural environments, allowing a more realistic encounter while delivering a stronger pro-conservation message. Large activity centers like these could be another central area for interpretation, environmental education, charity and fundraising, as well as for internships and volunteering.

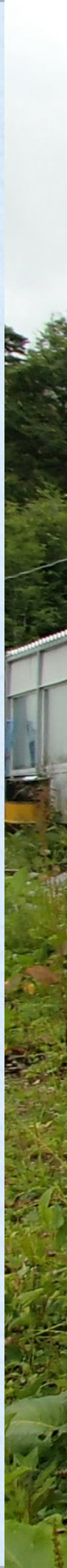
Feyers, 2016

Recreation Capacity and Impact Control

Outdoor recreation activities are increasing in Kavkazsky zapovednik as a result of new contracts with outfitters and tour operators in the park. Kavkazsky has also been very successful in increasing the number of visitors and overnight guests resulting from new food and hotel infrastructure, a new visitor center, and a comprehensive, educational boardwalk trail. Due to Sochinsky's legacy of tourism, abundance of tourism infrastructure, and capital construction being planned in the protected area, Sochi National Park has also been very successful in attracting a mass tourist base. For Sochi, this level of visitation is reported to far exceed the carrying capacity of the park and may be jeopardizing Sochi's efficacy as a biodiversity conservation area. The US National Park Service faces similar issues of severe crowing and encroachment in a number of their parks as a result of having limited restrictions on tourism use. The excess tourist density has not led to improved protections for parks, but instead has increased degradation and created new complex problems[87]. Tourism load is now a central concern for many managers and much is underway to creatively and critically think about how to resolve these challenges.

Studies show that even the presence of non-motorized recreation in parks leads to a significant decline in the density of keystone species and a shift in ecological community composition from native to nonnative species. Simply stated, recreation in parks reduces positive outcomes for biodiversity conservation. Even a small tourism recreation load can have a "disproportionate impact" on sensitive species[88]. Activities such as hiking, horseback riding, and mountain biking contribute to erosion, soil changes, damages to plant communities and species composition, and the spread of weeds and pathogens[89]. Ineffective campfire policies and enforcement allows for substantial spread of fire sites and tree damage. Because campfires are an important and enjoyable part of visitor experiences, prohibitions are perceived as unnecessarily restrictive and not adhered to[90]. High levels of trail-use also lead to subjective feelings of crowding, in which individuals and groups have a measurable decrease in their positive experience because of visitor densities. Together, these impacts add up. But it is not in the interest of tourism to develop no-impact policies. Park managers must decide what the Limits of Acceptable Change are for individual sites and the overall biodiversity of the region. Park managers need to develop site-specific standards and indicators for the levels of crowding and impact that they are willing to impose on natural areas[91].

Studies have been done for carrying capacity in Sochi National Park and Kavkazsky[92], but recreation levels already exceed the recommendations found in these reports. It seems unlikely that managers will reverse growing levels of use. It is therefore important to revisit carrying capacity policies and formally define Limits of Acceptable Change (LAC). The US National Park Service uses a model of *Visitor Experience and Resource Protection* (VERP) to determine what the LAC should be. Identifying explicit impact variables and thresholds to be considered, standards and indicators are then created and monitored over time. In the case of the VERP process, if the Limits of Acceptable Change are reached, restrictions and explicit management actions are taken to address the problem[93]. Because the expansion of tourism in parks is essentially the expansion of stakeholders, it is important that the variables and limits are designed through an inclusive process. Understanding what park-users want and expect, what scientists expect, what park managers want, and what tour operators want is necessary in order to develop the least contentious framework of control that will balance tourism-use with conservation. Establishing strong policies that allow managers to take action when LAC is surpassed is vital to an effective carrying capacity system. This will require an ongoing monitoring program to watch how tourism affects distinct locations and the overall park, which could potentially be incorporated into current or new invasive species monitoring and management programs.



Feyers, 2016

Conclusion

As a result of the economic liberalization and urbanization of Russia, protected areas are now required to establish their own sources of funding and earn their own popular-base for broader socio-political support. But if protected areas are to survive in a market-based climate, they must be able to establish some form of competitive value in this new environment. As a result, Russia has turned to the concepts of ecotourism and cognitive tourism to try and accomplish these goals together. Because the underlying model of ecotourism is one of tradeoffs, ecotourism's advantage is not its ability to provide abundant returns and contribute measurable revenue streams. Instead, it will be through establishing a broad advocacy base by making itself available as a tool for community organization, participation, and knowledge, and by providing invaluable experiences that cannot be replicated anywhere else in the world.

In 2001, Natalia Moraleva said: "the single most urgent objective of ecotourism development in Russia is to increase awareness of the goals and objectives of ecotourism and to heighten public understanding of protected areas not only as recreational areas, but as special territories offering a unique experience that must be enjoyed responsibly."[94] She believed these protected areas can "become an advantageous partner capable of offering the regional administration an ecotourism program that will ultimately increase the flow of visitors to the region, create jobs, improve the investment climate, stimulate national culture,

Feyers, 2016

and beget an influx of supplemental resources for the region's economy." As a result, "people [will] begin to take pride in the zapovednik, which has become a true regional center of cultural education."[95] This research project concludes positively in support of that vision. Through improvements to policy and planning, and by building capacity for environmental education, environmental interpretation, and community benefits, these parks can give rise to new cultural values and swell the social support and economic potential for Russia's natural treasures. This report has provided some ideas for what steps can be taken to establish holistic models of ecotourism in Krasnodar Krai, Adygeya Republic, and beyond, that will influence pro-environmental attitudes and behaviors, contribute to community benefits and environmental awareness, and lead to gains in conservation values for the country. At this time, infrastructure is being built to invite people into the parks to begin this process. The next phase requires an even more socially and financially complex course of action in order to accomplish the lofty goals managers have assigned these protected areas. Yet, by creating broader access and managing the parks to provide a special, life changing experience they have shown they are able to, local residents, regional visitors, and international tourists alike will become just the right kind of champions Russian protected areas in the region need.

Feyers, 2016

References

1. Trofimenko, Oxana, Djafarova, Elmira. (2011) "Development and Opportunities for Ecotourism in Russia." *Sustainable Tourism: Socio-Cultural, Environmental and Economic Impact*. Pp. 339-350.

2. Trukhachev, Alexander. (2015) "Methodology for Evaluating the rural Tourism Potentials: A Tool to Ensure Sustainable Development of Rural Settlements." *Journal of Sustainability*. Vol. 7, pp. 3052-3070; see also Anisimov, Aleksey Pavlovich., Ryzhenkov, Anatoliy, Jakovlevich. (2014) "Ecotourism Development." *Environmental Policy and Law*, 44(6): pp 545-552.

3. Kudelya, Evgeny Vladimirovich., Maksimov, Dmitry Vasilyevich., Minenkova, Vera Vladimirovna., Volkova, Tatiana Aleksandrovna., Karpova, Juliya Igorevna. (2015) "Individual Means of Accommodation on the Resorts of Krasnodar Region." *Asian Social Science*, 11(3): 335-343.

4. UNWTO (2015) "Tourism Highlights 2015 Edition." *United Nations.* Unwto.org; see also World Travel & Tourism Council. (2015) "Travel & Tourism Economic Impact 2015 Russian Federation." *Wttc.org*; see also Moscow Times. (2015) "Russia Climbs 18 Places in Tourism Ranking." *Themoscowtimes.org.*

5. Akimova, O.E., Volkov, S.K. (2014). "Motivation of Entrepreneurial Activity in Rural Tourism (Russia's Experience)" *Scientific results. "Economic Studies" Series.* 1. Cyberleninka.ru; see also op. cit. Kudelya et al., 2015; see also op. cit. Trukhachev, 2015.

6. Pechenaya, Ludmila T., Domarev, Ivan E., Avanesova, Alexandra E., Durdyeva, Jennet A., Aslanov, Dmitriy I. (2016) "Regional Socio-economic System of Krasnodar Territory: The Current State and Development Trends." *International Journal of Economics and Financial Issues*. 6(S1): 133-138.

7. Ibid; see also Volkova, Tatiana A. (2015) "Evaluation Problem of Recreational Resources and Potential in the Development of Regional Tourism." *Eastern European Scientific Journal.* Pp. 1-5.

8. Adamchevskaya, V.G., Ivolga, A.G. (2015) "Problems of Development of a Tourist-Recreational Complex in North Caucasus Region." in *Sustainable Development of Tourism Market: International Practices and Russian Experience.* pp. 4-8. Book of proceedings of III International conference.

9. op. cit. Volkova, 2015.

10. op. cit. Adamchevskaya and Ivolga (2015); see also op. cit. Pechenaya et al., 2016; Zakharova, Irina Yurevna. (2015) "Prospects of development of ecotourism of Krasnodar Krai Taking into Account the Ecological Situation." *Service Economy and Tourism.* Scientific Bulletin YUIM No.2; see also Vasylivna, Tkachenko, Alla. (2016) "Ecological-Hygienic Aspects of the Recreational Zone of the Krasnodar Region." *KubGAU.* Scientific Bulletin No. 116(02): pp 1-16.

11. op. cit. Trofimenko and Djafarova, 2011.

12. Webster, Paul. (2003) "The Wild East: Russia's Zapovedniks" *The Ecologist*. Ecologist.org; see also Zurish, Martin Muller. (2014) "From sacred cow to cash cow: The shifting political ecologies of protected areas in Russia." *Zeitschrift fur Wirtschaftsgeographie*. 58. pp. 127-143.

13. Feyers, S.M. (2016, July 19). Personal Interview with S. Litvinskaya; see also op. cit. Webster, 2003.

14. op. cit. Webster, 2003; see also op. cit. Zurish, 2014.

15. Dzhandzhugazova, Elena A. (2013) "New Forms and Possibilities for Promotion of

Russian National Parks in the Internet Environment." *Middle-East Journal of Scientific Research.* 16 (9) pp. 1238-1244.

16. Odynova, Alexandra. (2012) "Tourism Brings Revenue and Conflict to Russia's Park System" *The TheMoscowTimes.com*; see also Moscow Times. (2010) "Putin Backs Ecotourism Spending." *TheMoscowTimes.com*; see also DiPasquale, Domenick. (2011) "Russian Parks Officials Study How U.S. Manages Protected Areas." *IIP Digital.* USEmbassy.gov; see also op. cit. Zurish (2014).
17. op. cit. Webster, 2003; see also op. cit. Zurish, 2014.
18. op. cit. Zurish, 2014; see also Odynova, 2012.
19. op. cit. Zurish, 2014.
20. op. cit. Odynova, 2012.
21. Feyers, S.M. (2016, July 19). Personal Interview with S. Litvinskaya; see also op. cit. Anisimov and Ryzhenkov, 2014; see also op. cit. Odynova, 2012; see also op. cit. Webster, 2003.
22. op. cit. Webster, 2003.
23. Dovgot'ko, Natal'ja Anatol'evna., Kusakina, Olga Nikolaevna., Rjazancev, Ivan Ivanovich., Cherednichenko, Olga Alexandrovna., Kaznacheeva, Olga Harlampievna. (2016) "Problems of Ecological and Economic Transformation of Natural Management Systems and Territories Example of the South of Russia." *International Journal of Economics and Financial Issues*, 6 (S2). 43-49
24. Feyers, S.M. (2016, July 26) Personal Interview with G. Pillipenko; see also op. cit. Zurish, 2014; see also op. cit. Webster, 2003.
25. op. cit Zurish, 2014; see also op. cit. Odynova, 2012.
26. ibid, Zurish p. 127.
27. Ostergren, David. , Hollenhorst, Steve. (2000) "Converging Protected Area Policy: A Case Study of the Russian Zapovednik (Strict Nature Preserve) and American Wilderness Systems." *USDA Forest Service Proceedings.* RMRS-P-14; see also Moralyova, Natalia, and Elena Ledovskikh. (2001) "Developing Ecotourism in Russia's Zapovedniks." *Ecotourism Development Fund* as quoted by Vonderheide, Lily S. (2015) "Sacred Zones: Examining Wilderness in Yellowstone, Maine and Russia." *Theses, Dissertations, Professional Papers.* ScholarWorks at University of Montana. University of Montana. Paper 4457. pp. 60, 61.
28. op. cit. Akimova and Volkov, 2014.
29. op. cit. Anisimov and Ryzhenkov, 2014; see also Moraleva, Natalia. (2001) "Ecotourism Development in Russia." *Russian Conservation News.* The Ecotourism Association of Russia.
30. op. cit. Trofimenko and Djafarova, 2011.
31. Ratner, Svetlana. (2014) "Environmental Awareness and Sustainable Development" in *Russia: The Case of Krasnodar Region in Sustainable development in the regions and countries*. (eds. E. Bojar, J. Sloniec). Management and Marketing. Lublin University of Technology.
32. op. cit. Anisimov and Ryzhenkov, 2014; see also op. cit. op. cit. Trofimenko and Djafarova, 2011; see also Feyers, S.M. (2016, July 20). Personal interview with staff and director of Bolshoy Thach; see also Feyers, S.M. (2016, July 23). Personal interview with N. Yeskin.
33. op. cit. Anisimov and Ryzhenkov, 2014; see also op. cit. Feyers, July 23 Interview with N. Yeskin.
34. op. cit. Pechenaya et al., 2016; see also + Khrabovchenko, Vladimir. (2000) "Research results on ecotourism

development in mountain regions of southern Russia." *The Mountain Forum.* mtnforum.org.

35. Feyers, S.M. (2016, July 20) Personal interview with O. Ivanova; see also Feyers, S.M. (2016, July 19). Personal interview with V. Schmunk; see also op. cit. Zakharova, 2015.

36. Feyers, S.M. (2016, July 18-30). Personal interviews with S. Shevelev, G. Pillipenko, S. Kopylova, N. Yeskin.

37. Feyers, S.M. (2016, July 23) Personal interview with N. Yeskin; see also Menning, Kurt Martin. (1994) "The paper park tempest of Sochi: Describing analyzing and strategizing protection of the complex of protected natural areas in the greater Sochi region of Russia." *Theses, Dissertations, Professional Papers.* Paper 8564. University of Montana. ScholarWorks at University of Montana.

38. op. cit. Anisimov and Ryzhenkov, 2014; see also op. cit. Zakharova, 2015; see also op. cit. Vasylivna, 2016; see also Feyers, S.M. (2016, July 19) Personal interview with V. Schmunk.

39. Chizhova, Vera. (2004) "Impacts and Management of Hikers in Kavkazsky State Biosphere Reserve, Russia." *Environmental Impacts of Ecotourism* (ed. R. Buckley). Book Series Volume 2. Walingford, GB. CAB International. ProQuest; see also Feyers, S.M. (2016, July 18-30) Personal interviews with N. Yeskin, S. Kopylova; see also Feyers, S.M. (2016, July 23) Powerpoint presentation provided by N. Yeskin.

40. Feyers, S.M. (2016, July 18-30) Personal interviews with A. Bunkova, G. Pillipenko, N. Yeskin, O. Ivanova, A. Kontorina, S. Shevelev, and S. Kopylova.

41. op. cit. Dovgot'ko et al., 2016; see also op. cit. Akimova and Volkov, 2014; see also op. cit. Pechenaya et al., 2016; see also op. cit. Kudelya et al., 2015.

42. op. cit. Zurish, 2014; see also World Heritage Committee. (2016) "WHC/16/40. COM/7B: State of conservation properties inscribed on the World Heritage List" from *Convention Concerning the protection of the World Cultural and Natural Heritage*. United Nations Educational, Scientific and Cultural Organization. Fortieth session. Istanbul, Turkey 10-20 July 2016; see also Feyers, S.M. (2016, July 19) Personal interview with V. Schmunk.

43. Debonnet, Guy. Lethier, Herve. (2012) "WHC-13/37.COM/7B: Joint Reactive Monitoring Mission to the Western Caucasus World Heritage Property. Russian Federation. From 23 to 27 September 2012." *Convention Concerning the protection of the world cultural and natural heritage*. 37th session. Phnom Penh, Cambodia. 16-27 June 2013; see also Feyers, S.M. (2016, July 19) Personal interview with V. Schmunk; see also ENS (2012) "Russia Allows Ski Resort in Caucasus World Heritage Site" in *Latest News.* Environment News. ens-newswire.com; see also Antonova, Maria. (2008) "Logging Called Threat to Krasnodar Reserve." *The Moscow Times.* themoscowtimes.com.

44. op. cit. World Heritage Committee, 2016.

45. Feyers, S.M. (2016, July 23,19,28) Personal interviews with V. Schmunk and N. Yeskin; see also Eugene Schwartz, (June 29, 2016) "Now you can build hotels in reserves?" *WWF Russia;* see also WWF (2016) "Changes in Russian law threaten world famous nature reserves." *WWF Global*; see also WWF (2016) "WWF: World Heritage Committee fails to protect threatened natural sites in Europe." *WWF European Policy Office*; see also Greenpeace. (2012) "Resolutions of the International NGOs Forum "Protection of World Heritage Properties, St. Petersburg, Russia." *Greenpeace Deuth-Russischer Austauch E.V.* pp. 17,19.

46. Feyers, S.M. (2016, July 20). Personal

interview with O. Ivanova.

47. Feyers, S.M. (2016, July 23, 28) Personal interviews with N. Yeskin.

48. Ostergren, David., Jacques, Peter. (2002) "A Political Economy of Russian Nature Conservation Policy: Why Scientists have Taken a Back Seat." *Global Environmental Politics.* 2(4): 102-124. Massachusetts Institute of Technology.

49. Ministry of Natural Resources and Environment of the Russian Federation. n.d. "Engaging Local Communities in Promoting Ecotourism in Protected Areas." (ed. Kseniya, Gasparyan.). print. p. 3.

50. Feyers, S.M. (2016, July 26) Personal interview with G. Pillipenko

51. Feyers, S.M. (2016, July 18-30) Personal interviews with N. Yeskin, G. Pillipenko, and A. Bunkova.

52. National Park Service. (2006) "Management Policies 2006, The Guide to Managing the National Park System." *U.S. Department of the Interior.*

53. Knapp, Doug. N.d. "Environmental Education and Environmental Interpretation: The Relationships." *Environmental Education North Carolina.* eenorthcarolina.org

54. US Environmental Protection Agency. (2016) "Environmental Education (EE)" *epa.gov*; see also

55. op. cit. Knapp, n.d.

56. Powell, Robert B., Stern, Marc J. (2013) "Is It the Program or the Interpreter? Modeling the Influence of Program Characteristics and Interpreter Attributes on Visitor Outcomes." *Journal of Interpretation Research.* Special Issue. Vol. 18(2) pp. 45-60

57. Stern, Marc J., Powell, Robert B. (2013) "What Leads to Better Visitor Outcomes in Live Interpretation?" *Journal of Interpretation Research.* Special Issue. Vol. 18(2) pp. 9-43.

58. National Park Service. "Interpretive Development Program." *U.S. Department of the Interior.* idp.eppley.org.

59. Powell, Robert B., Ham, Sam H. (2008) "Can Ecotourism Interpretation Really Lead to Pro-Conservation Knowledge, Attitudes, and Behaviour? Evidence from the Galapagos Islands. *Journal of Sustainable Tourism.* Taylor & Francis. Vol. 16(4) 467-489.

60. op cit. Stern and Powell, 2013.

61. Stern, Marc J., Powell, Robert B., Ardoin, Nicole M. (2008) "What Difference Does it Make? Assessing Outcomes From Participation in a Residential Environmental Education Program." *The Journal of Environmental Education.* Vol. 39(4): 31-43.

62. National Park Service (2016) "Junior Ranger Programs." *U.S. Department of the Interior*. nps.gov

63. National Park Service. N.d. "Citizen Science" *NPS.gov. U.S. Department of Interior*. nps.gov

64. Cohn, Jeffrey P. (2008) "Citizen Science Can Volunteers Do Real Research?" *BioScience.* 58(3): 192-197.

65. Ballantyne, Roy., Packer, Jan. (2011) "Using tourism free-choice learning experiences to promote environmentally sustainable behaviour: the role of post-visit 'action resources'" *Environmental Education Research.* 17(2): p. 202.

66. ibid., pp. 201-215.

67. op. cit. Knapp, n.d.

68. op cit. Stern et al., 2008.

69. Bowling, Kristin A. (2013) "The Understanding and Implementation of Key Best Practices in National Park Service Education Programs." *Journal of*

Interpretation Research, 17(3): p.83.

70. Stern, Marc J., Wright, M. Elizabeth., Powell, Robert B. (2012) "Motivating Participation in National Park Service Curriculum-Based Education Programs." *Visitor Studies.* 15(1): pp. 28-47.

71. Feyers, S.M. (2016, July 18-30). Personal interviews with O. Ivanova, staff and director of Bolshoy Thach, and S. Kopylova.

72. Manuylov, Aleksandr. "The Practices of 'Privacy' in a South Russian Village." *Forum for Anthropology and Culture.* 5: pp. 380-406.

73. ibid.; see also Feyers, S.M. (2016, July 19) Personal interview with V. Schmunk; see also op. cit. op. cit. Anisimov and Ryzhenkov, 2014.

74. Feyers, S.M. (2016, September 1-10) Presentations in Russian Federation Pavilion at IUCN World Conservation Congress.

75. Ali, Ibrahim M. (2006) "An Anthropocentric Approach to Saving Biodiversity: Kenyan Pupils' Attitudes Towards Parks and Wildlife." *Applied Environmental Education and Communication*. 5(21): 21-32

76. Thompson, A., Massyn, P.J., Pendry, J., Pastorelli, J. (2014). "Tourism Concessions in Protected Natural Areas: Guidelines for Managers." *United Nations Development Programme*.

77. Repanshek, Kurt. (2015) "National Park Service Sitting On Half-A-Billion Dollars of Concessions Obligations." *National Parks Traveler.* Nationalparkstraveler.com.

78. Cherng, Mindy., Heaney, Michael. (2005) "Best Practices in Friends Groups and National Parks." Center for Park Management. Pg4.

79. ibid pp. 1-18

80. Mehta, Shefali V., Haight Robert G., Homans, Frances R., Polasky Stephen., Venette, Robert C. (2007) "Optimal detection and control strategies for invasive species management." *Ecological Economics.* 61: 237-245; see also Blossey, Bernd. (1999) "Before, during and after: the need for long-term monitoring in invasive plant species management." *Biological Invasions.* 1: 301-311; see also Larson, Diane L., Phillips-Mao, Laura., Quiram, Gina., Sharpe, Leah., Stark, Rebecca., Sugita, Shinya., Weiler, Annie. (2011) "A framework for sustainable invasive species management: Environmental, social, and economic objectives." Journal of Environmental Management. 92: 14-22.

81. No Author. (2016) "Cydalima perspectalis (box tree moth)" *Invasive species compendium*. CABI.org; see also Shchurov, V.I.Kuchmistaya, E.V.Vibe, E.N.Bondarenko, A.S.Skvortsov, M.M., Russian Center of Forest Protection, Moscow Region (Russian Federation). (2015). "The box-tree moth Cydalima perspectalis (Walker, 1859) – the real threat to biological diversity of natural forests of the Northwest Caucasus". *Works of the Kuban State Agrarian University.* n.p.

82. Feyers, S.M. (2016, July 23,28) Personal interview with N. Yeskin.

83. Skibins, Jeffrey C., Powell, Robert B., Hallo, Jeffrey C. (2013) "Charisma and conservation: charismatic megafauna's influence on safari and zoo tourists' pro-conservation behaviors." *Biodiversity Conservation.* Vol. 22(4): pp 959–982.

84. Teel, Tara L., Manfredo, Michael J., Jensen, Frank S., Buijs, Arjen E., Fischer, Anke., Riepe, Carsten., Arlinghaus, Robert., Jacons, Maarten H. (2010). "Understanding the Cognitive Basis for Human-Wildlife Relationships as a Key to Successful Protected-Area Management." *International Journal of Sociology.* 40(3): 103-123.

85. Orams, Mark B. (2001) “Feeding wildlife as a tourism attraction: a review of issues and impacts.” *Tourism Management.* 23: 281-293.

86. Geffroy, Benjamin., Samia, Diogo S.M., Bessa, Eduardo., Blumstein, Daniel T. (2015) “How Nature-Based Tourism Might Increase Prey Vulnerability to Predators.” *Trends in Ecology & Evolution.* Vol. 30(12): 755-765.

87. Siegler, Kirk. (2016) “Long Lines, Packed Campsites AND Busy Trails: Our Crowded National Parks.” *NPR.* npr.org.

88. Reed, Sarah E., Merenlender, Adina M. (2008) “Quiet, Nonconsumptive Recreation Reduces Protected Area Effectiveness.” Conservation Letters. 1: 146-154.

89. Pickering, Catherine Marina., Hill, Wendy., Newsome, David., Leung, Yu-Fai. (2010) “Comparing hiking, mountain biking and horse riding impacts on vegetation and soils in Australia and the United States of America.” *Journal of Environmental Management.* 91:551-562.

90. Reid, Scott E., Marion, Jeffrey L. (2005) “A comparison of campfire impacts and policies in seven protected areas.” *Environmental Management.* Vol. 36(1): 48-58.

91. Manning, Robert E. (1999) “crowding and carrying capacity in outdoor recreation: from normative standards to standards of quality.” *Leisure Studies.* University of Vermont; see also D. N., & Stankey, G. H. (1997). “Historical development of Limits of Acceptable Change: conceptual clarifications and possible extensions.” *Technical Paper.* n.p.

92. op. cit. Chizhova, 2004.

93. D. N., & Stankey, G. H. (1997). Historical development of Limits of Acceptable Change: conceptual clarifications and possible extensions.; see also Manning, Robert E. (2002) “How Much is Too Much? Carrying Capacity of National Parks and Protected Areas.” In Monitoring and Management of Visitor Flows in Recreational and Protected Areas. *Conference Proceedings.* Ed s Amberger, A., Brandenburg, C., Muhar, A.. pp. 306-313.

94. op. cit. Moraleva, 2001. n.p.

95. op. cit. Moralyova, 2015. pp. 60,61.

“The increase of real ecotourism is a good thing. It can help shift relationships with nature and change behavior in and towards nature. In this region especially, it allows people to see what they are protecting, why it’s protected. And they want to see this beauty.” Svetlana Kopylova, 2016