

ARCTIC BLUE RESORT

KONTIOLAHTI

CO-RESPONSIBILITY HANDBOOK

Sustainability in Hospitality Towards Zero Emissions, Zero Waste, Zero Impact; Locally Sourced, Locally Produced New Resort Concept in Kontiolahti-North Karelia

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FINLAND FUTURES RESEARCH CENTRE

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PREFACE

The Arctic Blue Resort Kontiolahti is a tourism and leisure destination with a strong focus on environmental sustainability that is opening up in the Joensuu region in North Karelia. As a municipality, we want to promote sustainable investments, responsible tourism and growth of vitality in the region in every possible way. From our part, we want to make it easy to start a leisure center, the municipality owns the land and the masterplan is ready. The location of the Arctic Blue Resort Kontiolahti is a prime location that offers diverse opportunities for top athletes and for tourists who appreciate the importance of wellbeing and nature accessibility.

We want to adhere to the values of responsibility and sustainable development in all our activities. The co-responsibility handbook tells us how we want to operate in Arctic Blue Resort Kontiolahti. At the same time, it guides entrepreneurs and actors with vested interest in the development of Kontiolahti and its region.

On behalf of myself and the municipality of Kontiolahti, I encourage all tourism operators interested in responsible tourism to contact us. Let's work together to create a unique center that will guide future tourism trends, where nature, exercise and responsibility are the main themes.

Jere Penttilä, Mayor, Kontiolahti Municipality





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INTRODUCTION

This handbook introduces important criteria on co-responsibility standards in hospitality for a new ecological development, the Arctic Blue Resort Kontiolahti in North Karelia.

The resort initiative stems from a rich Nordic tradition of honesty, respect and appreciation for nature. It builds on key assets characterizing the region, namely: access to high-quality of air, pure drinking water and pristine forest lands. The resort also rests on the hospitable and environmentally-conscious culture of Karelia and its friendly people considered one of the happiest in the world. The development is unique in that it combines the virtues and healing powers of nature, with efficiency and high standards for environmental hospitality development, products and services.

The sustainability guidelines introduced in this handbook draw from a literature review on the state of global tourism and from case studies of well-established advanced sustainability practices in hospitality and ecotourism outside of Finland. Taking the lessons from these examples, the new Arctic Blue Resort Kontiolahti aims at a new level of ecological and restorative tourism. The resort has unique capacities for providing visitors with a mix of extremely pure bounties of nature coupled with a nature-based design in all the new infrastructure planned for the area. Furthermore, by using a human and nature-centric design, the resort aims to make a positive and lasting impact on the state of nature areas as well as on the local and regional communities.

Collective responsibility is at the core of the Arctic Blue Resort Kontiolahti project represented in the values of the brand and the masterplan. The resort adopts high sustainability standards throughout its practices and services to help conserve and preserve nature, first and foremost, while at the same time provide access for physical encounters with nature. With sustainability at its core, the development uses the four pillars of sustainable development: social, ecological, economic and cultural sustainability, to build the foundation of a new ecotourism operation with deep concern for the environment and the challenges within the tourism industry regarding unsustainable production and consumption patterns.

From a social sustainability perspective, the ABR Kontiolahti, sends a powerful message regarding values of equity and community represented in North Karelian's local and regional capacities. The resort will integrate local knowledge in nature conservation and use site interpretation to offer unique experiences. Approaching tourism as a transformative force for social development, the resort design interacts with nature to offer sport-oriented activities and healing experiences creating opportunities to reconnect with nature in new ways—with this, supporting mental health and physical wellbeing.

Connecting sustainable development with economic progress, the Arctic Blue Resort Kontiolahti aims at creating a clear business approach in which companies and public parties assume a low ecological footprint and closed-cycle approach to their businesses and practices. The key driver is to avoid all unnecessary harm to nature in any form.

Stakeholders are the foundation of partnership creation. To engage with local and international actors, the resort builds on partnerships to leverage competences and know-how. Partnerships will embrace investors, landowners, community organizations, international businesses and start-ups, with proven environmental leadership to their practices. The ABR Kontiolahti wants to generate added value for companies and their brands by developing and maintaining the highest standards in environmental design and operations in hospitality.

At the ABR Kontiolahti, partnerships initiatives are centred around three core values: nature, authenticity and responsibility as the backbone to generate economic value with significant benefits for both people, planet. For this, partnerships will need to prioritize the need for:

- Fostering innovation and a new experience in ecotourism
- Supporting community involvement building social capital
- Improving the brand experience; and
- Multiplying benefits across the entire supply chain

On environmental sustainability, the resort prioritizes the protection and conservation of biodiversity and the management of nature resources crucial for its development. For the ABR Kontiolahti, the main challenges are on how to combine nature conservation with the hotel and tourist industry to balance impacts, all of this without putting at risk the health of nature ecosystems that need to be kept intact today and in the future. Therefore, to mitigate nature impact, the resort monitors its carbon footprint by adopting the highest efficiency standards particularly on three key high emitters: energy, waste; and transport. The resort uses heat pumps from water and the underground to lower its demand on the external electricity supply. It will also create schemes for carbon offsets and compensation measures to balance its carbon footprint. Addressing issues concerning waste, it manages 100% of its organic waste by using waste-to-energy strategies, and fertilizers repurposing waste back into its localized farming practices supporting a closed-cycle approach to material waste.

Addressing cultural sustainability, the ABR Kontiolahti considers tangible and intangible assets found in the Nordic tradition of proximity to nature and silent tourism; the outdoors in ski and winter sports; the healing properties in Finnish sauna rituals; and the Nordic food culture. Connecting culture with environment, the resort aims at developing a variety on-site farming concepts, sourcing and producing the majority of its food and products locally and with that contributing to strengthen North Karelia as a unique destination.

Global tourism, as a human activity is increasingly oriented towards consumerism. The challenges that we face today with regards to sustainability are how to inject new meaning into its philosophy and in how to translate this into real actions and concrete policies. Building from strength, Finland offers unique opportunities for ecological tourism as a one of the countries where access to, and awareness of nature is abundant. Unlike many places in the world, the region of North Karelia offers one of the purest drinking water deposits in Finland, the cleanest air and vast forest areas that give the development a competitive advantage of truly healing nature encounters.

1. VISION

To create the first zero-emissions hospitality and sports venue in Kontiolahti-North Karelia using the highest sustainability standards towards zero emissions, zero waste, zero impact; locally sourced, locally produced hospitality and sports venue.



OUR VALUES



Nature

In all the resort operations, the value in nature comes in first. This means that operations follow an ecological and symbiotic approach to their design, management, and operations integrating land and water biological systems with buildings and other infrastructure. It also means that the resort operates on the basis of conservation and preservation of biodiversity with high responsibility for the integrity and functionality of local biological resources and cycles. Above all, it means that we protect and enhance the irreplaceable value in nature so that we can ensure a sustainable future.

Responsibility

At the ABR Kontiolahti, the experience is approached as a learning experience far beyond its leisure and recreational functions. Co-responsibility means collective action by a community of actors driven by a common purpose. It means building awareness of the impact that human activity has on the environment and mindfulness of the need for collective responsibility and how to use of resources properly. Whether we deal with the local economy, jobs creation or global ecology, our community is one which pursues, above all, solutions that are primarily and fundamentally sustainable.

Authenticity

In the hospitality industry, we promise to “walk the talk.” This means that we are determined to meet and excel the sustainability standards we have set out throughout the entire resort operation. It means raising the bar on current practices to strive for authenticity and excellence. This extends to how we use our energy systems, the type of materials and processes that we generate, the services we contract and outsource, the food we produce and serve, and the nature-supported experiences we offer and promote.



2. KONTIOLAHTI, JOENSUU AND THE REGION OF NORTH KARELIA

Where nature shapes culture

Finland and the Region of North Karelia possess unique qualities important for the future of hospitality and sustainable tourism.

For the years of 2018, 2019 and 2020, Finland has been consecutively rated by the UN World Happiness Report, as the happiest country in the world. This is due to in part to the high levels in healthy life expectancy, social support, freedom, generosity and trust that characterize Finland. But what is this mean in the context of sustainable development? Some would say this is largely due to Finland's highly egalitarian development, trusted public services and people who are known for having a special affinity with nature. In Finland, freshwater is abundant and people have access to some of the purest drinking water available. Furthermore, over the decades and even centuries, the people of Finland have committed themselves to lifelong learning, in particular, that which is linked to the positive effects of nature on overall human health. One can say that the people-nature relationship is very much an essential part of Finnish culture and way of life.

The North Karelia region, in the north-eastern part of Finland, is an example of an area well endowed with natural amenities in its 21,000 km² area surrounded by lakes and forest land. There are approximately 160,000 people living in the region with the city of Joensuu located at the centre. Forest land accounts for more than 80 percent of the total land area

of North Karelia where some areas can still be found in a pristine state. The purity of the air is another important resource. According to research, air quality in the Karelian region has proven to be some of the purest in the world. Given the world's dependence on fossil fuels, good quality of air will continue to draw attention as essential to human health and to building resilient communities.

In addition, the North Karelian region represents one of the most advanced areas in bioeconomy in the world so the region presents opportunities to build on its bioeconomy profile in all forms. At the same time, the region is strongly committed to nature preservation to safeguard the integrity of nature areas for future generations. From this vantage point, North Karelia represents an important platform upon where to pursue sustainability, build knowledge and conservation-minded societies.

Kontiolahti is a town located in the middle of the North Karelian region, only some 20km north of its major city, Joensuu. There is adequate and easy access for local and international travel with the closest international airport located directly in Joensuu. In addition to vast amount of forest areas, at the north of Kontiolahti is Koli mountain and the Koli National Park, a cultural and nature attraction in Finland. Kontiolahti has also vast access to clean water resources and the town is connected to lake Höytäinen, a water body known for its pure water.

Tourism in North Karelia has been built based on the region's exceptionally well-developed infrastructure, strong people competences and natural resources. It is only natural that a new type of progressive hospitality industry should drive new economies in Kontiolahti/ Joensuu and the region of North Karelia, thus consolidate them as a global center for restorative, ecologically-driven tourism.



3. THE MASTERPLAN

Background

Kontiolahti is a small municipality in the region of North Karelia in eastern Finland characterized by a young community (The average age of the Kontiolahti residents is about 39 years old). In 2019, the population of Kontiolahti was 15,000 people. Joensuu, the biggest city in North Karelia is about 25 minutes away from the centre of Kontiolahti.

The primary focus of the Municipality of Kontiolahti is livability. The town promotes sustainable growth through education, attracting people to live and work in a safe, healthy, and nature-rich environment. The town promotes sustainable business models, engaging companies and entrepreneurs from different industries. In the area of tourism, contributions from the industry into the local economy have continuously grown. In 2019, the Kontiolahti/Joensuu area reported a total of 505,000 overnight stays and it is estimated that the number of stays will likely double in the next ten years. One reason for its tourism activity, is that Kontiolahti is well-known for its biathlon competitions and world-class biathlon stadium that contributes to attract athletes and international visitors yearly.

The Municipality of Kontiolahti has also agreed to aim at growth. As the owners of the land, the town is working on improving its current infrastructure, building roads, electricity and water networks in order to prepare for growth. This will also contribute to increase the number of newcomers and business opportunities in the region. Furthermore, the town is investing in the future by taking an active role working closely with a diverse group of investors and regional operators. In capacity building, Kontiolahti is Investing in its local resources, tangible and intangible assets, expanding the communication and knowledge of sustainable products and services in line with the vision for livability and growth planned for the area.



In sustainability, Kontiolahti wants to enable a low threshold access to sustainable thinking by adopting stringent guidelines on building design and energy resource management, developing a diverse profile of low carbon footprint, enabling compensation schemes and prioritizing the sourcing of environmentally responsible materials, products and services as part of the development strategy for progress.

Concept

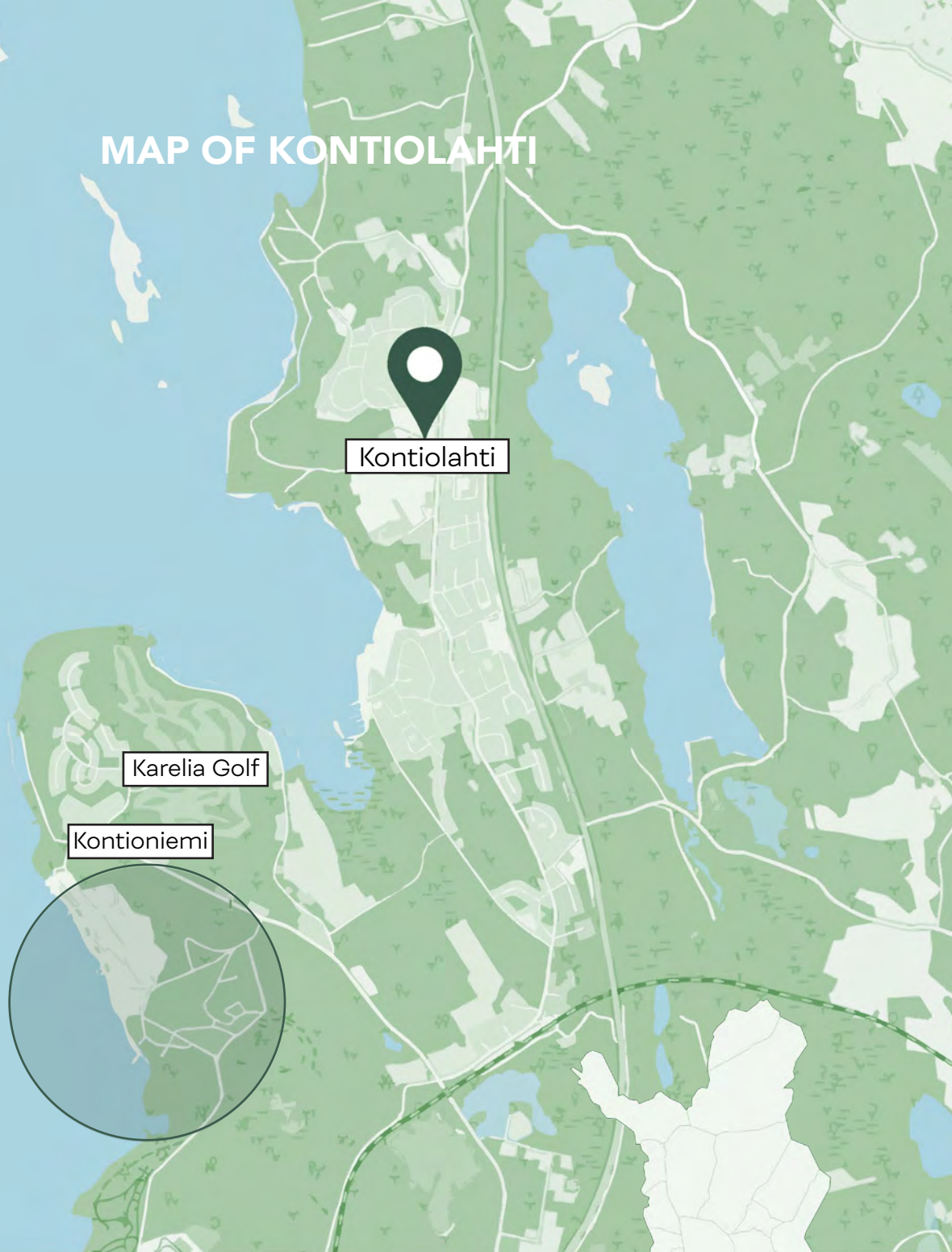
The ABR Kontionlahti is a new development covering a total area of 81 hectares including 115470m² of area for new buildings. The masterplan concept design aims to respect and celebrate the ecological value of the site while at the same time preserving the state of the forest and the unique environmental culture of the town. From this viewpoint, the resort buildings are planned following strict sustainability standards. The architecture and town planning has been designed to interact and to organically follow the terrain forms of the site, preserving its aesthetic value and the water views from the lake. The building typologies are distributed as the following:

- A. Residential buildings = 8740 m²
- B. Service buildings = 1600 m²
- C. Public buildings = 3000 m²
- D. Commercial and office buildings = 56191 m²
- E. Hospitality and recreation = 45939 m²

The logistic planning for access, traffic and mobility is based on the current infrastructure and main routes. Motor vehicles, traffic and parking areas are located in periphery areas. Any new parking facilities are connected to service and housing areas designed primarily for electrical vehicles. Alternative mobility planning prioritizes routes for electric and non-electric bicycles as well as for pedestrian traffic. The different typologies of the resort are connected through forest trails that stimulate physical activity, from running and walking, to snowshoeing and mountain biking. During the winter months, trails can also be accessible for skiers with different levels of training.



MAP OF KONTIOLAHTI



THE ARCTIC BLUE RESORT KONTIOLAHTI / JOENSUU Facts and Figures (2019)

- Mixed-use sustainable development
- Masterplan 2020
- Timeframe of development: 2-years
- Total area for development: 81 h

THE REGION

- Green coverage: 89% nature covered are
- Students: 15,500 university students
- Overnight stays: 505.000 overnight stays



4. SUSTAINABLE DEVELOPMENT



DIMENSIONS OF SUSTAINABLE DEVELOPMENT

The United Nations has recognized the advantages of sustainable tourism and emphasized how a well-designed and managed tourism industry could be of significant contribution. Its well-known framework for sustainable development is based on three core dimensions: environmental, economic, and social sustainability. Nonetheless, the model for sustainable development has extended beyond these three fundamental pillars, to include additional criteria including cultural sustainability. Each pillar has specific targets and objectives that can be summarized as the following:

Environmental sustainability:

Environmental sustainability considers the conservation and protection of wildlife, flora, fauna, cultural and ecological diversity. The criteria for environmental sustainability consider a combination of mitigation and adaptation measures. Mitigation in this case refers to the reduction of the carbon footprint e.g., the increase in non-motorized mobility; while adaptation refers to resilient development and how to adapt to changed circumstances.

Economic sustainability:

Taking a sustainable development approach to economic growth presents opportunities for a more equitable distribution of profits and land resources, to strike the right balance

between people, planet, and prosperity. Connecting tourism with economic sustainability means a new business philosophy in which organizations become aware of the manifold benefits of developing holistic business models that support the local economy, people and the environment.

Social sustainability:

The social pillar of sustainable development follows the economic dimension of development as pivotal for providing human health, livability and quality of life. Social sustainability gives consideration to the needs of future generations. It includes social diversity and aspects that relate to demographics and population changes, ageing, urbanization and migration trends.

Cultural sustainability:

In addition to the three main pillars, cultural sustainability has also be considered a pillar for sustainable development. Within the tourism industry, the aspects linked to sustainable tourism bring attention to the importance of tangible and intangible assets considered vital for future generations.

UN Sustainable Development Goals

The unsustainable patterns in consumption and production are some of the main barriers to sustainable tourism today. The UN Sustainable Development Goal 12, Ensure Sustainable Consumption and Production Patterns ; Goal, 15, Life on Land; and Goal 17, Partnerships for the Goals, have specific targets that relate to the development of sustainable practices holistically. Combined, these three sustainable development goals bring focus to the role that ecological tourism should play for providing the right environment where private.-public collaboration and job creation can intersect the sustainable management and conservation of land resources, biodiversity, and the local culture.

By taking into account the important impact areas of these Goals, the ABR Kontiolahti aims to make a significant contribution to the tourism industry. For this, the development is concentrated on practices and activities that first and foremost, protect and preserve the integrity of nature biodiversity, ensures emission, water and energy reductions, and the careful management of land use. At the ABR Kontiolahti, ambitious targets in energy, waste and transport use, constitute some of the most significant measures that the resort will make in support of a new model for sustainable tourism and hospitality.





5. STAKEHOLDER SURVEY

During February and March of 2020, a number of local actors was invited to participate in a stakeholder survey conducted as part of the steps in the production of this handbook. The purpose of the survey was to gain further insight into the vision for development that was in the region.

The key objectives of the survey were to:

- Explore regional perspectives and capacities from the side of the local actors to get a clearer view on what this new development will enable for the region.
- Identify linkages between the community, the hospitality sector and the environment.
- Analyse socio-cultural well-being in areas attractive as destinations.
- Study the potentiality of responsible ventures and partnerships .
- Build understanding of the vitality of the area.

Some results and perspectives

According to the feedback that was received from the participants in the survey, the following key messages are worth mentioning:

1. The eco-resort development was perceived as absolutely necessary to raise the level of high-quality hospitality supply of the North Karelia region.
2. In general, participants had a positive reaction with regards to investments in new development and viewed that the region is highly suitable for the growth of sustainable tourism and the hospitality industry.
3. Respondents highlighted the importance of having high ecological standards for new development stressing that strict sustainability standards should be followed in all criteria and the activities.
4. As a challenge, it was mentioned that logistically, North Karelia may display problems getting international tourists to travel to the region.
5. Some respondents expressed doubt whether this new destination could find locally, the right level of committed partners.

More broadly, the spirit of the responses indicated highly supportive and overall positive reaction from the side of private and non-private local actors willing to engage, one way or another, in the development actions of this new initiative.

6. THE ARCTIC BLUE RESORT KONTIOLAHTI RULES OF CONDUCT

The Arctic Blue Resort Kontiolahti aspires to develop a responsible model following the most rigid sustainability guidelines ever set out for a hospitality project of the region. For this, important guidelines are to be adopted at each step of the design, planning and construction process of the resort, all the way to the contracting of products, materials, services and activities.

With this in mind, a support system of different actors, companies and operators are to guarantee their commitment to the following five "rules of conduct" which form the core code of the ABR Kontiolahti:

1. All services and products offered and contracted with the different operators and providers must commit to the highest quality standards with the least environmentally harmful impact on people and environment. Visitors and guests have also the option to choose how to lower their carbon footprint offset their travel and user emissions either by planting trees, or through similar measures.
2. In all activities, the ABR Kontiolahti is fully committed to reduce the amount of organic and solid waste to a bare minimum, prioritizing waste-to-energy strategies to meet zero waste targets. All materials and waste should follow a closed-cycle approach that work seamlessly at the highest levels of efficiency.
3. All fresh foods should be produced and consumed as close to their source as possible to lower their carbon footprint. Food-related services should be sourced locally, provided that they meet the highest possible quality and sustainability standards.
4. All management and operations in-house and with outside providers, must follow a zero emission and zero impact approach in all processes. Any emissions generated from the hotel activities is to be mitigated, compensated or replaced with alternatives that meet net zero targets.
5. All equipment used whether for industrial, food processing or other purposes, should be of the highest environmental efficiency and to the extent that it is economically feasible. Similarly, the materials used in the various operations should follow strict circular processes of zero waste and zero emissions and using high ecological standards.

To give a more detailed account of what is to be achieved, the following pages explain in detail the co-responsibility guidelines and commitments of the ABR Kontiolahti, what is their purpose and how they are put into practice.



7. HANDBOOK CO-RESPONSIBILITY GUIDELINES

7.1 NATURE

Purpose

To ensure that nature and biodiversity conservation measures take a central role in all planning activities, the resort aims to minimize the negative impact of development on land and natural ecosystems. For this, the masterplan and internal operations are designed so that managers, companies and the all actors involved adopt responsible practices with the understanding that the wellbeing of nature areas and the protection of nature biodiversity are the first priority. Addressing biodiversity and wildlife in each of its practices, the ABR Kontiolahti will:

- A. Require that green roofs and rainwater ponds are installed as part of an integrated strategy of green infrastructure that can enhance habitat, attract wildlife, and ensure continuation of green areas where nature biodiversity is allowed to grow and thrive.
- B. Connect green spaces, with activities and services to monitor and maintain the integrity of the areas while at the same time, improve their access. Because the integrity of nature areas is a priority, the development considers compensation measures and soil recovery strategies in order to protect and preserve the land.
- C. Make sure that the type of greenery used in all new green infrastructure installations, including green roofs, is done using primarily native plants that promote and expand the local flora and fauna, and that will also reduce the demand for maintenance.
- D. The development uses site interpretation as part of the education efforts to inform visitors how the land should be preserved. Information material will emphasize the mindful use of nature areas and the fragility and sensitivity in nature ecosystems. In all activities, land appreciation as nature heritage of the region is integrated to help minimize disturbances to wildlife and the local environment as a result of visitation.

7.2 WELLBEING

Purpose

Nature is intrinsic to wellbeing. The ABR Kontiolahti creates a responsible corporate culture aim to heal people and environment. With its focus on nature, the concept uses Finnish know-how to deliver the properties of happiness—an essential element of wellbeing. For the resort, wellbeing is to be provided by:

- A. Linking nature conservation and wellbeing, and by giving incentives for people to participate on nature-related activities including tree

planting and gardening, compensating them in return.

- B. Promoting learning activities using talks, farming courses, and activities like mushroom picking and cooking.
- C. Supporting the local community through courses for local school children to learn about sustainable practices in the hotel industry and organic farming.
- D. Physical activity is proven to have positive effects on wellbeing. Kontiolahti has a long tradition of sports and is well-known for its world class biathlon competition stadium. The resort will support this strong sports environment promoting activities like, walking, running, lake swimming, cross-country skiing, and snow shoeing among others.
- E. Forest trails are part of an integrated plan for experiencing nature. The resort will have direct access to nature pathways and promote forest bathing and nature watching.
- F. In the Finnish culture, sauna is key to wellbeing. The resort integrates public and private saunas as part of its wellbeing strategy to encourage visitors to reconnect mentally, physically and spiritually.

7.3 ECO-MATERIALS & METHODS

Purpose

The area is carbon neutral in terms of the waste it produces. The resort prioritizes responsible consumption and production of services, materials, and products. Practices support innovation focusing on the local economy, small businesses and start-ups opting for locally sourced products to reduce the resort's carbon footprint. To move towards a zero-waste hospitality operation, the resort will implement:

- A. Climate and environmentally-responsive architecture that meets design guidelines for sustainable material and methods. In all building practices, the development focus will be on optimizing the environmental performance of materials and products, using wood and other renewable materials to meet impact reduction targets.
- B. Biowaste recycling by repurposing 100% of its organic waste from food and farm processes back into the material cycle. Waste is used as energy fuel when possible and as fertilizer for in-house farm operations for putting nutrients back into soil.
- C. Locally sourced, locally produced: The concept "From Farm to Table" will be integrated into the restaurant program. The resort has its own greenhouse operation to produce quality and nutritious foods grown on-site helping to reduce waste and carbon emissions associated with food traveling long distances.

7.4 ENERGY EFFICIENCY

Purpose

To use a highly efficient and mixed energy system, prioritizing renewable energy sources and innovative strategies to significantly reduce the carbon footprint, lower the energy demand on the grid, and monitor consumption. The development aims to deploy a climate-adaptive architecture and planning approach as part of a set of resource efficiency measures. For this purpose, the following measures are considered:

- A. The use of lake and geothermal energy as alternative to lower the electricity demand for heating from the main grid. Green energy strategies will also explore the potential to introduce on-site, decentralized energy supply systems from local solar, wind and other sources.
- B. In the event that electricity needs to be supplied from the main grid, alternatives for environmental electricity produced from solar, wind, and hydropower sources become the priority. If green energy sources are insufficient, compensation measures in the form of offsets and carbon sequestration have to be adopted.
- C. Solid and organic waste is treated as a resource. The resort will adopt waste-to-energy and closed-cycle strategies in all food-related processes. Organic waste is to be circulated back into energy efficient processes as fuel or use as organic material for composting, as soil nourishment, and/or as fuel in other processes.
- D. Energy-saving measures will be used extensively. All major applications will be endowed with switches and sensors to allow for significant savings.
- E. Through incentives, all guests are given voluntary mitigation options to offset their own carbon footprint. Mitigation options may include planting equivalent number of trees or similar alternatives.
- F. Guests using less energy than standard users, will be rewarded with credits that could mean a lower the cost of their stay or lower cost on the services that are provided.

7.5 INTEGRATED WATER SYSTEMS

Purpose

To have the least impact on water resources. The resort uses an integrated water system of nature-sensitive strategies at the building and street levels aimed to manage rainwater resources close to their source and to mitigate the impact of new development on land ecosystems and on the natural water cycle.

- A. Green roofs (GR):** The resort integrates green roofs on each one of its new housing concepts and hotel buildings using a combination of Intensive and extensive green roof system. Because of the water

retention capability of green roofs (Green roofs can detain more than 50 percent of rainwater per rain event), they will allow rainwater to be treated directly on-site, be channelled back into the ground so that underground water deposits get replenished. Green roofs are also used for their water detention properties to manage rainwater runoff and for pollution control of local lakes and water bodies.

The management of all green roof systems is to be done in partnership with a GR provider specialized in the design, installation, and maintenance of green roofs under extreme weather conditions. All green roofs will need to follow performance guidelines and local regulation. Assessments are to be done on a monthly basis in order to monitor the quality standards and performance of the green roofs.

- B. Rainwater ponds (RPs)** are included as part of an integrated water-sensitive design to manage rainwater resources. Rainwater ponds located at key locations are meant to help safeguard natural infiltration process. The performance of the RPs will allow rainwater to be diverted into shallow landscaped depressions, where pollutants removal mechanisms will treat the water and allow for natural infiltration processes to take place. Rainwater ponds are integrated also for resilience against flooding. Guidelines need to follow the Green Factor Tool (GFT) for climate change adaptation, mitigation and compensation measures.
- C. Self-monitoring:** To promote awareness conserving the quality of water resources and to help managers and users self-monitor consumption, all water systems will have a metering mechanism installed to keep track of the water usage. Meters will need to follow current smart metering ratings to help the development move towards net-zero water operation.

7.6 SUSTAINABLE TRANSPORT AND MOBILITY

Purpose

To combine measures that address air quality, noise and climate change. The ABR Kontiolahti sustainable transport and mobility concept aims to use less polluting and more energy efficient modes of transport that are multimodal and noise-sensitive. Combined strategies for sustainable transport, added to energy efficiency, and zero waste measures, will form the core of the resort's zero-impact concept. Sustainable transport and mobility practices include:

- A. A supply of alternative transport fuels that support low-emission vehicles: Charging and refuelling stations are planned at various points. A variety of options for electric mobility is to be deployed aimed to make transport cleaner.
- B. Clean and more sustainable means of transport, using measures that are multimodal and that include a variety of modes in a single journey.

- C. Walkability: Walking and observing activities are a priority. Building planning is designed so that buildings have direct access to nature pathways while forest trails will promote the use of alternative passive mobility for the purpose of wellbeing.
- D. Cyclability: Cycling for sports and for leisure is guided by a diverse number of attractive and scenic recreational routes, planned as far away possible from motorized traffic.



8. BEST PRACTICES IN ECOTOURISM

As part of an analysis of best practices, this handbook draws from specific examples of long-established sustainability practices in ecotourism and hospitality outside of Finland. We aimed to gain further understanding of the strengths in matured yet complex models of sustainable tourism where nature and hospitality represent the force behind management and operations processes. Through observations, it was possible to gain insight into the challenges faced by the hospitality industry particularly those set out to comply with high standards and targets for carbon neutrality—all of this while delivering benefits for human and economic wellbeing.

In today's world, tourism is viewed as a human activity intrinsic to consumerism. From this vantage point, we should start by formulating some the key questions, for example: What types of new interactions will help tourism move beyond consumerism? How should people travel in the years to come? Or, how can tourism and hospitality be the ignition and transformative force to heal humanity for a better future? The answers to these questions could very well help guide a new order and to better understand the complexity and the contradictions of the industry.

For the analysis of best practices, the three impact hotels, located in Monteverde—Costa Rica: Hotel Belmar, Los Pinos, and Cala Lodge, were examined for their carbon neutrality targets and strong social sustainability profiles. These cases were selected for their criteria having continuity and strong commitment to the environment. The hotels, we found, all meet mandatory as well as voluntary high standards set at level of the Costa Rica Tourism Board, and are considered important cases for ensuring cohesion and longevity in the area. Altogether, these particular examples are part of a dynamic cluster of family-led operations committed to caring highly for the environment.

Thus, to gain further insight, a series of informal face-to-face interviews were conducted with internal managers. The information that was obtained highlighted the individual strengths but also the future collective challenges of the industry with regards to sustainable development. The conversations highlighted the importance of key priority areas: energy, waste, and transport for meeting zero-emissions targets in hospitality.

MONTEVERDE, COSTA RICA

Monteverde is a nature reserve, cloud forest and biodiversity hotpot. The community is characterized as rural, composed of a cluster of families and operators that promote a model for nature-oriented culture and sustainable tourism. Before becoming a destination, Monteverde was first a center for education visited by researches and scientists. Today, Monteverde is a well-known ecological destination that has managed to merge a strong culture of nature conservation with its local social culture creating an interesting model of socio-economic development for the region.

Integration of the rural community in the identification of solutions for tackling environmental problems is part of the approach to sustainability for the region. The principles of care, self-organization and follow-up are an essential part of the practices and the culture of the Monteverde region. Communities identify the priority areas and assigned the most capable and responsible for executing the activities.

The challenges for the region relate to changes in the cultural and socio-environmental landscape from high tourism activity. However, a number of opportunities linked to education, local knowledge, new skills, and new models for ecological tourism are perceived as leverage for future growth.



Above: hotel Belmar

Right: hotel Los Pinos

Below: greenhouse operation at hotel Belmar



Photos by Ana Jones



8.1 HOTEL BELMAR

Strengths:

The Hotel Belmar was awarded one of the highest levels in the Certificate for Sustainable Tourism (CST), in addition to meeting sustainability standards in the "Carbono Neutral" certification given by the Costa Rican government to support sustainable practices. Community and sustainability are an integral part of the Hotel Belmar vision. The hotel is a family establishment operating for the past 35 years with a long-term commitment to the local community. One of hotel's main objective is to educate the community on sustainability-related issues, that staff and guests understand origin of the materials and food that is serve and the processes that are necessary to develop processes that are truly sustainable. Programs like seeds exchange, and greenhouse farming courses for school children and the local community are strategies meant to contribute to sensual experience of nature and to develop awareness of the need to preserve nature.

Challenges:

One of the main challenges the hotel faces is growth. The hotel currently has 25 rooms and it has a high occupancy rate year-round. The hotel uses a closed-cycle approach to all its operations producing locally all the food that is consumed. Another challenge the hotel faces is globalization and disruptive practices on the land by international corporations using disruptive practices and monocrops that put at risk the integrity of the local biodiversity and ecosystems.

8.2 HOTEL LOS PINOS

Challenges:

The hotel Los Pinos is part of tight community of lodges in the areas of Monteverde-Costa Rica. The hotel is a family-owned environmentally responsible operation that creates economic opportunities for the local community while strengthening human capital and the local network of environmentally conscious hotels. The challenges with its operation remain on the continuous building of a common understanding, with other hotels in area, that Monteverde is a sensitive destination that needs the strong support of its community to protect and preserve its local values and identity.

Los Pinos has a long history of integrated practices that unify the local economy with sustainable rural tourism. The hotel has the highest rating-Elite-Certification for Sustainable Tourism (CST) and a carbon neutrality certification. It's code of conduct is based on four values: 1) Local family service; 2) Empathy; and 3) Community protection, and environmental commitment. Responsibility is primarily oriented towards caring and preserving the local community. Walking the extra mile, the hotel is actively involved in the community developing activities that protect and preserve local tradition.

Strengths:

The hotel has the highest rating-Elite- Certification for Tourism Sustainability (CST) and a carbon neutrality certification. It's code of conduct is based on four values: local family service, empathy, community protection, and environmental commitment. Their responsibility is primarily oriented towards the community. Walking the extra mile, the hotel is actively involved with the on activities to continue building strong network to protect and preserve local tradition.

8.3 CALA LODGE

Challenges:

Cala Lodge is part of the cluster of family hotels in the area of Monteverde. The hotel uses the basis of philanthropy and sustainability as motors for social development. The hotel aims at significantly improve gender equality and the empowerment of women who are seen as cornerstones of the family structure. Combining economic development with social sustainability, it promotes participation of small businesses and start-ups led by women. The main challenges concern the impact of tourism in social wellbeing and the potential loss of cultural heritage and local identity due to extensive visitation. Other challenges concern the potential negative effects of tourism on the integrity of land and marine ecosystems.

Strengths:

Providing a stable income for families, the hotel aims to ensure a sustainable future of the region led by a network of family businesses. In 2019, 84 percent of the hotel's staff is local and 62 percent of the hotel personnel is composed of women. The sustainability of its supply chain for products and services is key. The hotels prioritize sustainable consumption and production buying products that are primarily local and certified sustainable. In 2019, the hotel imported only 23 percent of its products. The rest of the came from national suppliers (28 percent) and from local suppliers (49 percent).



Visit us on the internet
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The Arctic Blue Resort Co-Responsibility Handbook has been prepared for the Kontiolahti Municipality in collaboration with the Arctic Brands Group and Innvolve Oy in Helsinki.

The information contained in this handbook is intended for the general public with the hope that this new development plants the seeds of a new culture of tourism and travel in North Karelia-Finland built on the highest ecological standards with collective responsibility and care for people and nature.

Arctic Blue Resort Kontiolahti Co-Responsibility Handbook

Sustainability in Hospitality Towards Zero Emissions, Zero Waste, Zero Impact; Locally Sourced, Locally Produced New Resort Concept in Kontiolahti-North Karelia.

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