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1. NATIONAL LEVEL GOOD GOVERNANCE PRACTICES

1.1 Introduction

Challenges brought about by climate change, including rising temperatures and unpredictable weather conditions, have forced Nordic snow sports venues to improve their approach to snow management, which is primarily a local level activity. Beyond the specific snow management tasks and operational and strategic decision-making at individual ski centres, there is a superior governing frame that established the legal, political and social boundaries for ski centres. This governance framework is referred to in this report as the National Snow Ecosystem. In this analysis, we posit that effective governance practices will play a central role in addressing the future climate related challenges and climate resilience when it comes to the planning and operation of Nordic ski centres and their associated technology, equipment and facilities.

In other words, accessibility of snow for Nordic snow sports in the next 30 years will be heavily dependent on ski centres that have developed viable operational and commercial models that enable them to continue to invest in the latest snow technologies. Therefore, this report (D3.5) focuses on the identification of national level governance good practices and operational level good practices in snow governance.

1.2 Methods

In this part of the SIEPPUR project, we investigated the so-called National Snow Ecosystems in three European countries - Germany, Sweden, and Switzerland - to provide a preliminary mapping of the key determinants involved in effective and climate-resistant development of Nordic ski centres in Europe. To map and compare the major stakeholders in the different countries we used the following data sources:

- 1) Monitoring and survey data (IBU Snow Network surveys since 2021) describing IBU venues state of strategic snow management
- 2) Field visit interviews (SIEPPUR WP2)
- 3) Expert interviews (SIEPPUR WP2)
- 4) Stakeholder interviews (SIEPPUR WP3; see Table 1 below)

COUNTRY	NAME	ORGANISATIONS / POSITIONS
Sweden	Anna Ottosson Blixt	District Director of Sport, Swedish Sport Confederation - Riksidrottsförbundet (RF)
	Jonnie Nordensky	Project leader, Swedish Sport Confederation Riksidrottsförbundet (RF)
	Jonas Braam	Venue Consultant, Swedish Ski Association
	Martin Ohlsson	Economic Director, World Cup Director, Swedish Biathlon Association
	Ulrika Öberg	National Director, Swedish Biathlon Association
	Benny Ljungdal	Director, Röjsmohallen, ski venue operator, Järpen
	Johan Holmlund	Director, Arenabyn sport facilities, Östersund Municipality
	Fredrik Lindberg	Investigator, Culture and Sports Office, Östersund Municipality
	Jonas Braam	Director of Skiing, Kimsta gymnastic and sports club, Norrköping
	Christian Ohlsson	Director of Skiing,Tranemo Sports club, Tranemo
	Latti Östlund	Director, cross country venue, Vålådalens Resort





COUNTRY	NAME	ORGANISATIONS / POSITIONS
Switzerland	Dr. Hippolyt Kempf	Swiss Federal Institute of Sport Magglingen (SFISM); Sport Economics
	Dr. Christelle Ganne-Chedeville	Swiss Federal Institute of Sport Magglingen (SFISM), Sport sustainable transformation
	Christian Flury	Christian Flury, Former Swiss Ski XC Team Manager; Swiss Ski XC Trainer; Head of Davos National Performance Center
	Dr. Marlen Maconi	Swiss-Ski, Head of Strategic Projects
Germany	Klaus Rambach	Managing Director,German Ski Association Verwaltungs GmbH; Head of Strategic Development,German Ski Association
	Alois Reiter	Manager, German Ski Association for Training Centre Ruhpolding; Director of Competition IBU World Cup Ruhpolding
	Erik Schneider	Manager, German Ski Association for Training Centre Oberhof

Interviews with stakeholders were aimed to answer the below listed questions:

- Who are the main organisations/entities involved in the management of ski centres (Nordic vs. Alpine)? Are there differences on national, regional and local levels?
- · Who owns the Nordic ski centres and their equipment / infrastructure?
- Who operates the Nordic ski centres?
- Who sets the future strategies for the Nordic ski centres?
- · Who makes decisions on investment in snow technologies and infrastructure and funds them at these centres?
- \cdot Who make decisions on increased operational funding e.g. staffing, knowhow development?
- What are the various income sources of the Nordic ski centres e.g. government, private?
- How do the different decision-makers collaborate? Governments on all levels, local communities, private stakeholders?
- · Are there any regulations and rules concerning the environment and sustainability of ski centres?
- What role do social pressures, acceptance and tradition of the sport in the respective community play in these activities?





1.3 Swedish Snow Ecosystem:

Citizen involvement and municipal collaboration supported by venue consultants provided by the snow sport associations



Figure 1 Scheme of the Swedish snow ecosystem

In Sweden, there are various types of ski venues in terms of size and governance practices. The main player in the governance of ski venues in Sweden are the municipalities. The reasons for the municipalities to invest in ski venues include enabling a physically active, good life for their citizens (especially the children) in their community, enhancing the attractiveness of the municipality, and supporting the organisation and involvement of their citizens in sport clubs.

A municipality in Sweden can either own, operate and fund a ski venue, or own and/or fund a ski venue while the operation is in the hands of either a private company or a sports club. Most ski venues in Sweden are owned and operated by the municipality, or by a combination of a municipality and a ski club, or alternatively, companies owned by ski clubs. Completely private ski venues are rare or mostly only exist in the mountain areas where they are operated like an alpine venue. In these cases, they have a tourist destination approach and are often owned by the same company that owns the alpine ski venue. Their importance for the sport is based on them serving as early snow destinations or training camp venues.

The Nordic ski sport clubs typically enter a dialogue with the municipality concerning the resources that the municipality should invest into Nordic snow sport venues. The ski club will be supported in this dialogue by the Swedish Sport Confederation (Riksidrottsförbundet, RF). RF also funds the national sports association based on the number of members in their sport. Ski clubs can also apply for funding from RF for investments and upgrades to the venues; the same can also apply to a municipality if the ski club has an agreement to use a municipal venue. RF also works locally within Sweden's 19 districts. In each district, RF is the voice of the sport and helps clubs to negotiate with the municipality. Usually, RF only provides support for about 1/7 of the total investment in a project, the rest will be provided by other national or local funds. One of the most important such funds is Arvsfonden, or the so-called Swedish Inheritance Fund, which is a Swedish state fund with the purpose of supporting non-profit organisations and other voluntary associations.

The Swedish tradition of strong citizen involvement as members in sport clubs lends a strong position to sport in society. It also creates a strong and united voice for sport (supported by RF) towards municipalities to articulate



the needs of sports clubs in each municipality. A good collaboration between the municipality and the sports club is a crucial success factor for the development of ski venues. In ski clubs, volunteers are an important resource. At some ski venues, volunteers are the only workforce for producing snow and grooming the venue. The many complimentary hours of work ensure a good standard for a ski venue at a very low cost. This, together with fees for adults who use the venue (which was introduced and widely spread across the country some 10-15 years ago), has made it possible to have snow production (and the associated costs) at many ski venues even with no or low financial involvement from the municipality. The resources that a municipality spends on Nordic skiing differs hugely amongst the municipalities in the country. Municipalities where the tradition of Nordic skiing is high, or their ski clubs are strong and have many members, where major events take place, or where elite ski schools are located usually spend more resources on ski venues.

In addition to the support from RF, municipalities and ski clubs can benefit from the help of a Swedish snow sport association venue consultant. These venue consultants provide knowledge and know-how to operate ski venues while assisting with funding applications available to ski clubs and municipalities to invest and upgrade their venues. Municipalities also share knowledge among each other.

Weaknesses and future improvements of governance system

The tradition of citizen involvement in ski clubs and many volunteering hours are currently a strength but can also become a weakness if that involvement decreases. As climate change increases the effort and costs of operating Nordic ski venues with the corresponding increase on the work required of the volunteer workforce, there are risks concerning future volunteer commitment. A larger involvement and increased investment by the municipality could be a potential solution. In such cases, a ski venue will be competing for a community's interest in providing public infrastructure for its citizens, competing with swimming pools, other indoor and outdoor arenas as well as cultural facilities. In such cases the ski venue and the skiing community needs to be able to present the benefits of the ski venue to the community, improving the odds for municipality funding.

Summary of governance practices

The strong involvement of citizens in ski clubs in Sweden gives Nordic skiing a strong voice towards the municipalities as well as many volunteers who in some municipalities help secure the operation of the ski venue at a low cost. In these cases, the involvement from the municipality is usually low. The collaboration between the Nordic ski clubs and the municipality is another success factor. There are many types of collaborations and agreements between the municipality and the ski clubs across Sweden concerning the owning, operating and funding of a Nordic ski area.





1.4 German Snow Ecosystem:

Focus on regional youth sport development with federal and state funding

In Germany, the National Snow Ecosystem for Nordic Skiing is largely based on support and funding from the federal and state governments, with the local municipalities often playing an auxiliary role for funding but an important role for operational management and facility maintenance. The snow sports expertise for both strategic planning and sport technical know-how is provided by the German Ski Association (DSV), which is the main snow sports association under the German Sports Confederation (DOSB).

The main task of the German snow sports venues designated as federal (or state) training centres, which includes most, if not all, of the well-developed Nordic snow sports facilities around the country, is to enable high level practice of their specific sport, from the youth to top performance athletes, by ensuring optimal training conditions seven days a week, 10 hours a day. Their tasks include the daily operations but also the construction, maintenance, and strategic development of the facilities. The operational funding for these centres is provided by the so-called training facility grants (TSF) from the government (e.g. the Federal Ministry of the Interior) with responsibility to support elite sports facilities.

Major sports infrastructure development projects also rely heavily on federal and state funding, with a small percentage contributed by the municipalities. The German Ski Association does not directly invest in infrastructure; its role is to lead the sports facility strategy and to provide expert assessment for investment, advice for modernisation needs and expansion, and prioritisation of locations with the best potential to develop future talent and ensure the long-term sustainability of the various disciplines. This expert role is often provided by individuals serving in the role of a training centre manager staffed by the German Ski Association. The state ski associations under the German Ski Association and their ski clubs also play a crucial role in regional development, talent recruitment and youth coaching.

In Germany, there are very few private ski centres, and, in some states, everything is publicly funded. A few small Alpine areas operate privately with some public assistance. Most Nordic facilities depend on public subsidies as they are not financially viable otherwise. However, some local clubs manage small cross-country skiing areas, but these are exceptions.

Most of the federal training centres also host international and national events, however these are not funded by the facility grants and tend to be a distraction from their main mission, which is to promote and coordinate youth sport development in their respective region.

With the progressive impact of climate change, the role of the training centres as key locations for stable access to snow has also significantly increased for both the up-and-coming talents and various levels of national team athletes. As a result, sustainability related topics such as environmental impact and climate expertise are increasingly integrated into the venue development strategies and investment recommendations by the German Ski Association, which contains a separate organisation called Stiftung für Sicherheit im Skisport housing the knowledge centre for the environment and climate.

On a state level, particularly in Saxony, Thuringia, and Bavaria, where winter sports are prestigious, there remains strong support for maintaining snow sports facilities. Changes in political leadership may impact priorities, but the importance of winter sports for tourism and local/regional identity has so far ensured the relevance of major facility development projects.

Weakness and future improvements of governance system

On a local level, especially in regions where climate change has already had a significant impact on the length of the winter season, public support can no longer be taken for granted. This is significant in cases where the municipality – as opposed to a state-owned entity – is responsible for the operational management of a federal/state training centre and as such plays a key role in decision-making concerning investment e.g. in new snow management technologies. In such cases, the future challenge will involve balancing the interests of performance sport, event hosting, and a community's interest in providing public infrastructure for its citizens. Such local infrastructure will increasingly include competing needs for swimming pools, other indoor and outdoor arenas as well as cultural facilities, in addition to ski venues.





Summary of good governance practices

The singular focus of the German Snow Ecosystem on youth sport development through direct state funding is also the greatest strength in the current set up for snow sports governance.

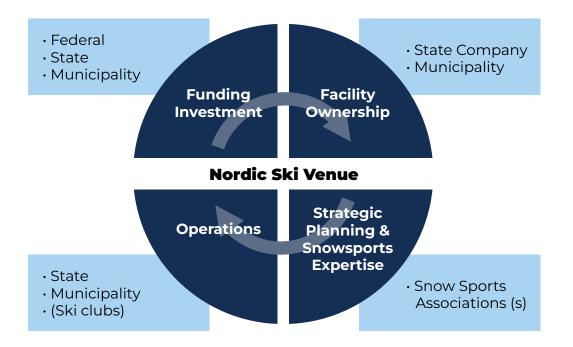


Figure 2 Simplified scheme of the German snow ecosystem for Nordic Skiing





1.5 Swiss Snow Ecosystem:

Infrastructure funding connects municipalities, tourism and ski associations

In Switzerland, the overarching governance instruments are the national and state federal infrastructure funding structures which enhance the collaboration between municipalities, tourism associations in winter sport regions, snow sport association (e.g. Swiss-Ski and its regional associations) as well as private snow sport companies, which are mostly mountain railway companies (sometimes also including the ownership of hotels and other tourism services). The Swiss sports infrastructure funding system establishes legal relations based on contracts between the stakeholders and integrates local, regional and national funding instruments. Through the contractual connection, most of the larger Swiss Nordic ski centres are complementary constructs where municipality, local tourism associations and sport associations (from local to regional and national level) work together. This ensures a long-term cooperation aligned to site-specific use cases.

The National (NASAK) and state federal (KASAK) funding systems for sport infrastructure have a structure that enables a flexible interplay and support of the three stakeholders: 1) owner 2) operator, and 3) user. NASAK and KASAK form the basis of a reliable and long-term operation of snow sport infrastructure for elite (NASAK - infrastructure of national importance), youth-elite, and leisure sport (KASAK - infrastructure of cantonal importance) activities. As a first step, this is done by (partly) funding infrastructure (ownership), which is planned based on the requirements defined by both the user entities and the operator. For Nordic skiing venues, the user entities are mostly the national ski association, local ski and/or tourism associations as well as the municipalities. In contrast to Alpine skiing infrastructure, which is mostly owned by non-government-funded private companies (typically private mountain railway companies), Nordic skiing infrastructure is mostly owned by municipalities. Infrastructural funding is always tied to an operate-and-use concept which needs to be contractually defined amongst all involved stakeholders. It is important that the operational concept fits well with the user scenario and can fulfil the jointly defined requirements. Being frequently both the owner and operator, the municipalities build a reliable backbone for the existence of many Nordic ski centres. The more specific and unprofitable a Nordic skiing infrastructure is, the higher the funding but also the contribution of municipalities and/or tourism associations or private clubs. Therefore, fees for use by adults are commonplace at Nordic ski venues in Switzerland.

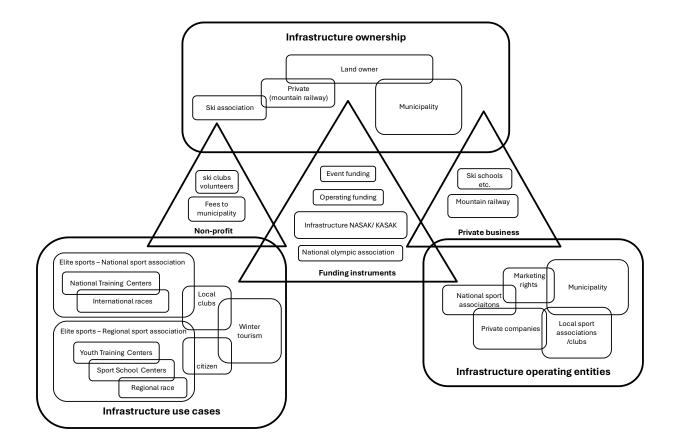


Figure 3 Scheme of a generalised structure of the Swiss snow ecosystem





Besides infrastructural funding, there is also funding by the Swiss Federal Office of Sport (BASPO) for recurring international sport events as well as for one-time international events. Support in terms of manpower for events of national or international relevance can also be applied from the Swiss Army, which is frequently used in most larger sports events for installing temporary infrastructure (e.g. grandstands), or for work-intensive tasks, such as slope preparation.

However, when analysing individual Nordic ski venues there was no single typical operational, local level governance practice identified, which could be generalised for Switzerland. Every venue is embedded within its site-specific constraints leading to site specific governance practices. Those site-specific differences set each venue in a unique frame of constraints. Besides the given geographical, meteorological, topographical and hydrological constraints, also the political, environmental and event-related variables can be very different. Politics as well as laws regulating environmental and construction/infrastructural issues are defined on federal or municipal level. A general scheme of a nation-wide Swiss snow ecosystem is therefore difficult to draw. There are rather several local or regional snow ecosystems describing the relationships of regional and/or local stakeholders.

Weakness and future improvements of governance system

Swiss-Ski, as the national snow sports association, determines the importance of an infrastructure and hence the suitability or potential for funding. The problem herein lies in a potential lack of competence by the snow sports association concerning site requirements which are beyond sport related topics. The suitability of a venue for new or expanding infrastructure in the context of snow management is strongly determined by the local (micro)climate, snow reliability, as well as hydrological constraints, natural hazards exposure and other environmental factors and their potential future changes.

Summary of good governance practices

The Swiss infrastructure funding systems creates a contractual system of investment (for infrastructure), operation and users (sport associations). This provides a functioning framework for economically and socially sustainable operations of Nordic ski centres.





2. OPERATIONAL LEVEL SNOW MANAGEMENT GOOD PRACTICES

2.1 Introduction

An operational good practice is defined as an operational management practice that secures the viability of a Nordic ski venue in a mid-term period of operation (10-15 years). The viability of a ski venue comprises its technical and economical capacity as well as the societal support for the venue including its environmental impact.

2.2 Good practice 1: Municipality owned and operated ski area

An operational good practice is defined as an operational management practice that secures the viability of a Nordic ski venue in a mid-term period of operation (10-15 years). The viability of a ski venue comprises its technical and economical capacity as well as the societal support for the venue including its environmental impact.

Description of good practice: In this operational good practice, a municipality has full control of a ski venue by both owning and operating the ski venue. This includes buildings and infrastructure, such as lighting, snow production system and grooming equipment. The income for operating the venue generally comes from the municipality (the majority) together with ski passes sold and renting the venue to event organisers, businesses and ski / biathlon clubs.

Benefits of implementing: The benefit of this arrangement is that the municipality has full control of the venue and can serve many interest groups at the same time. For example, it enables its citizens and especially the youth to have a good and active lifestyle, while also providing a venue for elite training and top performance events. The direct access to a ski area in a city/municipality increases the attractiveness of the area and can attract additional residents. Ski events and top competitions provide positive incentives for tourism and local businesses in the municipality and can generate additional income for the municipality, thereby justifying further investment in the ski venue.

Potential challenges: A municipality may be a large organisation, with slow decision-making processes, such as tendering. In such a case, a private organisation may be more time-efficient and cost-effective. But if a private profit-making organisation is running the ski venue, focus on short term profit can be a risk for the long-term viability and operations of the venue, e.g. in terms of equipment maintenance. Although a municipality aims to serve all interest groups, there may be conflicts among them. For example, if a venue is closed or partly closed because of events or competitions, it will exclude other groups from training. In municipalities with various stakeholders, it might be necessary to operate multiple venues for different target groups. Alternatively, in these cases, a larger ski area might be required so that it can be split into different parts when an event or one interest group occupies some part of it.

Replicability: If there is strong interest and support for Nordic skiing among the residents, and a strong ski/biathlon club(s) with many members in the municipality, the municipality can allocate a large amount of funding to ensuring Nordic ski opportunities in a ski venue. If there are sports/ski schools and/or large events and competitions held in the municipality, it may be even easier for the municipality to invest resources in the venue. If the tradition and interest for skiing drops, the cost (financial and energy) can be questioned. In such cases, good data on resource use and quantifiable benefits to society are important to have.

Comments: If it is possible to demonstrate the benefits and where the benefits of use by various groups exceed the operational cost (financial and energy) there will be support for financing the operation and development of a ski area.

Example: City of Östersund and the municipality of Östersund, Sweden





2.3 Good practice 2: Ski club owned and operated ski venue

Description of good practice: In this practice, the ski club(s) operates the ski venue. The ownership arrangement can be a bit more complex, usually with the land being publicly owned, or sometimes private but with the right to use the land by the ski club. The infrastructure and snow production units are owned by the ski club or by the municipality. The income for the venue is mostly generated from selling ski passes and private sponsoring from local business, sometimes with the addition of financial support from the municipality to operate the ski venue. The workforce for snow production and grooming usually consists of volunteers from the ski club, a majority being parents of the children in the ski club but sometimes senior citizen help, too, who provide a workforce during daytime when most parents must work. Investment in snow production equipment or other upgrades to the ski venue is usually financed by application to certain funds, sometimes in combination with financial support from the municipality.

Benefits of implementing: The benefit of this model is that the volunteers are working for free, ensuring cheap operations and a strong integration into the community by the volunteers contributing, strengthening the ski club. The ski venue run by the ski club ensures that the needs of the ski club are met first and the use of the venue by other stakeholders may be limited

Potential challenges: Snow production days (and nights) can be up to 20 days a year requiring a minimum of 2 persons at the time for safety reasons working in 3-4 shifts/day. The group of volunteers can be vulnerable if too much work is concentrated on too few people they can burn out, since snow management includes night work on top of a daily job. If climate change is increasing the number of working days and the output, benefit will decrease, it may affect the engagement of the volunteers negative. It is harder to have the same expectations and demand on volunteers as for professional employees; furthermore, the volunteers may not be as efficient or make as high-quality work as paid employees make.

Replicability: This practice works well in Scandinavia where there is a strong involvement of citizens in sport and ski clubs. It is more common in smaller communities, where the municipality does not have significant resources, or where the tradition of skiing is lower, and the municipality does not provide a well-equipped Nordic ski venue. The practice is most suited to small to medium sized venues where less snow and resources are needed to provide skiing and racing conditions. The practice could work outside of Scandinavia if there is a strong local community/ ski club that will take the initiative for providing ski conditions where there is no nationally or regionally supported ski venue in the area. The good practice shows that it is possible to provide Nordic skiing at low cost even in a challenging climate requiring snow production.

Comments: Collaboration with schools to use the venue in daytime can enhance the support from the municipality.

Example of ski area: Tranemo ski venue in Tranemo Muncipality and Kimsta Ski venue in Norrköping municipality, Sweden.

2.4 Good practice 3: Ski club owned, non-profit operated ski venue

Description of good practice: This good practice entails a ski club or a combination of sport clubs with facilities in the same area form a non-profit company to run a ski venue/facility. The municipality buys the service of operating the ski venue/facility from the non-profit company. If the company makes a profit, it is reinvested in the ski venue.

Benefits of implementing: A business-based operating structure can make the operation more efficient compared to a municipality-only operation, reducing the costs. Another benefit is that snow management can be provided by paid employees ensuring a higher quality compared to a volunteer workforce. The volunteers in the ski club can focus on engagement in training and racing activities of the ski club instead.

Potential challenges: Municipalities must tender the selection of a company to operate the ski venue. However, a non-profit company could present the cheapest operator alternative and after gaining some experience it should develop an advantage as well. At the same time, such a company might be susceptible to key people in management roles leaving the company, thereby losing knowledge, leadership and engagement.





Replicability: This good practice could be replicable everywhere a municipality owns the ski venue. It could probably be implemented on a regionally or nationally owned venue as well. It is well suited if there is little operational knowledge within the public entity owning the venue and if there is a strong local ski club and people are engaged in the development of the local community interested to participate in an operating business.

Comments: The practice works well if the company and its employees are committed to delivering the best for the ski club and the local community. If the employees are only doing the job to make money, there is a risk that the benefit will be lost.

Example of ski area: Röjsmohallen in Järpen ski venue in Åre Municipality, Sweden.

2.5 Good practice 4: Multiple parties owning, operating and using a Nordic ski venue

Description of Good Practice: Municipality and ski club owned, diversely funded infrastructure of national importance, operated by a municipality, promoted and supported by a tourism association and a mountain railway company, used for World Cup competitions, citizen activities, and local ski club youth departments, as well as by beginner tourists taking courses offered by local ski schools. In the past, a ski club was needed to represent the interests of cross-country skiers (e.g. prevent buildings blocking the courses) and to serve as a private funding source for Nordic skiing infrastructure. In this model the funding, fees and tourism revenue together with municipal support create a balanced foundation for operations.

Benefits of implementing: The Nordic ski venue has undergone a considerable, step-by-step development in infrastructure, integrating its various users, generating wide public acceptance, and creating a co-existence with other winter sport or tourism stakeholders, while conforming to the sport strategy of the destination. The local snow storage serves a large group of users ranging from elite athletes to youth athletes, residents and tourists. Touristic use of snow storage for Nordic skiing offers growing potential in the venue with a substantial winter tourism business where hotels also benefit during off and early season. This again increases public and political acceptance.

Potential challenges: Communication, division of roles and responsibilities, decision-making processes can all be constrained due to the large number of stakeholders. The complementary nature of user groups, operators and owners requires strong collaboration which in turn requires strong leadership, ideally across various functions (e.g. ski association, municipality or tourism) and regular meetings of all key stakeholders.

Replicability: Very unique and location specific - low replicability.

Comments: None

Example of ski area: Davos Nordic ski venue, Switzerland.





3. CONCLUSION

Effective governance in snow sports management will be crucial for ensuring the long-term sustainability of Nordic ski venues around Europe as climate change progresses and access to natural snow diminishes further. This report has highlighted various governance and operational practices across Sweden, Germany, and Switzerland, demonstrating how different models contribute to maintaining and making these venues climate resilient.

Sweden's approach emphasises strong citizen involvement and municipal collaboration, leveraging volunteer efforts and public funding to sustain operations. Germany's governance model prioritises youth development, relying on substantial federal and state funding to maintain elite training centres. Switzerland integrates municipalities, tourism, and sports associations through a structured infrastructure funding system, fostering long-term investment and sustainability.

At the operational level, various management models—from municipality-run venues to ski club-operated and non-profit structures—offer insights into balancing financial sustainability with accessibility and efficiency. Each model presents unique strengths and challenges, but a recurring theme is the importance of stakeholder collaboration, innovative funding mechanisms, and adaptability to changing environmental and economic conditions.

Given that the scope of this work was limited to only three countries, further research with a scope including more National Snow Ecosystems is recommended. A broader basis of comparison and more in-depth analysis of the various stakeholders' roles and responsibilities would help shed much needed insight into this critical area.

However, it is clear even from this small-scale investigation that moving forward, strengthening governance frameworks and fostering stakeholder cooperation will be key to securing sustainable funding that will be essential for maintaining high-quality Nordic snow sports infrastructure. By adopting best practices tailored to local contexts, Nordic ski venues can continue to thrive in the upcoming three decades despite climate change and associated environmental challenges.





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