

Changing Ski Tourism in Japan: From Mass Tourism to Ecotourism?

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Abstract

Ski tourism in Japan has undergone many changes in the last hundred years; these changes include the rising and falling prominence of skiing as a recreational activity. There is a distinctive contrast in the ski industry between the development period of 1980-1993 and the phase of decline observed after 1994. Most ski destinations are beset with multiple problems: decreasing numbers of visiting skiers, management changes, bankruptcies, closures, etc. At present, global climate change is also a major concern for ski destinations. Ski tourism is often regarded as typical mass tourism with negative consequences for the environment. However, in general, tourist activities have diversified, and this has led to the establishment of alternative forms of tourism such as ecotourism and rural tourism. This study examines the evolutionary process of the Japanese ski tourism industry, focusing on the characteristics of the development of ski destinations. Perspectives of sustainable ski tourism are also discussed in terms of global warming, regional distinctiveness and the evolution of tourism.

Key words: ecotourism, global warming, ski destination, ski industry, skiing, ski tourism

1. Introduction

The Austrian officer, Theodor von Lerch, was the first to introduce skiing systematically to Japan in 1911. Since then, the popularity of skiing has spread throughout Japan. Until the first decades of the twentieth century, throughout the world, skiing was considered to be a means of transport or a mountaineering activity. Since 1920, however, skiing has become a recreational activity. This has led to the evolution of man-made ski destinations equipped with various facilities including ski lifts.

The ski tourism industry saw rapid growth in the 1960s and 1970s. Many ski destinations were inaugurated not only in Japanese mountainous regions, but also in the Alps and Rocky Mountains. Since the 1980s, these ski destinations have been equipped with modern lift facilities with ever increasing transport capacities. In Japan, ski tourism saw impressive growth until the beginning of the 1990s; however, the popularity of skiing is currently in decline.

There have been many discussions on the relationship between recent climatic changes and the ski tourism industry (for example, Abegg, 1996; Bürki, 1998; Bicknell & McManus, 2006; Scott *et al.*, 2006; Agrawala *ed.*, 2007). The ski tourism industry has repeatedly been identified as vulnerable to climate change (Scott *et al.*, 2006). While Japan was previously experiencing relatively warmer winters, since the 1990s, a new problem of unstable winters has affected its ski

tourism industry. As winters have grown warmer, the ski industry has had to shift from expansion to consolidation (Hamilton *et al.*, 2003) or stagnation. In the Alps, it was predicted that the number of naturally snow-reliable ski areas would be only 202 out of the total (666 areas) under a climate warmer by 4°C (Abegg *et al.* 2007). Ski areas with a high altitudinal range are considerably less vulnerable to warmer climate than low-lying areas.

Tourism itself is undergoing many changes across the world. While mass tourism was dominant in the 1960s and 1970s, American and European scientists began discussing alternative forms of tourism around 1980. These alternative forms were in contrast with mass tourism. Ski tourism is often regarded as mass tourism, and is associated with damage to the natural environment. However, some studies have discussed the possibility of sustainable eco-management of ski destinations (Todd & Williams, 1996; Williams & Todd, 1997; Hudson, 2000). Ecotourism is now becoming popular in Japan. However, little attempt has been made to plan eco-tours on snowy landscapes in the mountains, although ecotourism may contribute to sustainable development of Japanese ski resorts, which have had various problems currently.

Research on the Japanese ski tourism industry has been insufficient. Shirasaka (1984) described the locations of ski destinations until the 1970s and discussed the establishment of ski resorts. Kureha (1995) pointed out regional conditions for the development of Japanese

ski resorts and compared them with those in Austria. Recently, the relationship between climate change and the ski industry has also been discussed (Fukushima *et al.*, 2002). Only a few studies deal with the trends observed in the Japanese ski tourism industry and analyze the regional characteristics of the ski market and problems faced by rural ski destinations (Kureha, 2004; 2005).

This study examines the process of change and perspectives of the Japanese ski tourism industry, analyzing historical changes, regional characteristics, adaptation to global warming and possibilities for sustainable ski tourism. First, I describe historical changes in ski tourism by examining the meaning of skiing and the characteristics of the development of ski destinations. Second, I examine the relationship between the ski tourism industry and climate change. Third, I discuss the possibility of sustainable ski tourism against a background of the ski market and the changing form of ski tourism, from mass tourism to ecotourism.

2. Development Phase of the Ski Tourism Industry in Japan

2.1 Initial phase: before World War II

An Austrian officer, Theodor von Lerch, came to Japan in 1910 to inspect the Japanese military. He had learned skiing from Mathias Zdarsky, one of the most important pioneers of the alpine ski technique in Europe. Since the Japanese soldiers started displaying an interest in skiing for military purposes, it was decided that von Lerch would teach them to ski. Therefore, the first training course was conducted primarily for soldiers in January 1911 at a military division in Takada (Niigata, Fig. 1), a city along the Sea of Japan. Training courses were also arranged for schoolteachers and other civilians. Von Lerch moved to a military division in Asahikawa (Hokkaido) in February 1912 and taught the technique there as well. Accordingly, several students mastered the technique and became teachers themselves. These new masters started conducting original training courses for

people in their local regions. In this manner, the skiing phenomenon spread rapidly among the Japanese people. By the mid-1920s, skiing had been introduced to the snowy mountainous regions of northeastern and southwestern Japan.

During this period, skiing became one of the most important recreational activities for locals in the snowy regions of Japan. Furthermore, skiing was characterized as a new recreational activity for the elite and university students in urban areas. Urban skiers often visited hot spring resorts or resort hotels in the mountainous regions in central Japan. Nozawa-Onsen (Nagano, famous ski areas are shown in Fig. 1), Zao (Yamagata), Myoko-Akakura (Niigata), and Shiga-Kogen (Nagano) were the most prominent ski resorts in this initial phase. While many ski trails were opened on slopes behind hot spring resorts, there were no transport facilities within the ski destinations. As skiing techniques became more widely known, skiing became a popular recreational activity within the spatially limited ski fields.

2.2 Growth phase: 1945-1980

Immediately after WWII, the Occupation authorities of the U.S. Army appropriated some terrain in Sapporo (Hokkaido) and Shiga-Kogen to provide recreational activities to U.S. servicemen. The occupation authorities constructed Japan's first ski lifts at both locations in the winter of 1946/47. Since then, there have been several efforts to build ski lifts at the "old" ski areas, which existed before WWII. Moreover, many new ski destinations with ski lifts were opened in other places. This pattern of development was typical of the 1960s and the first half of the 1970s (Fig. 2). The number of ski destinations reached about 400 by the end of the 1970s. While there had been a regional concentration of famous ski destinations in central Japan before WWII, new ski destinations arose in northeastern and southwestern Japan in the post-WWII period (Fig. 3). For example, in Hokkaido, nearly 100 ski destinations were established between 1960 and 1980. Furthermore, old ski fields gradually became larger with a corresponding increase in the number of ski lifts.



Fig. 1 Study area and famous ski resorts in Japan.

The locational pattern of ski destinations also witnessed changes during this period. Prior to 1955, the density of ski destinations was the highest in regions where hot spring resorts abounded (Shirasaka, 1984). The accumulation of accommodations for recuperation in these regions played an important role because many urban skiers had to stay overnight owing to the less-developed railway transport network. However, additional large ski areas became indispensable as the number of skiers increased and there was a general improvement of their skiing techniques. Therefore, many ski destinations were established on slopes behind agricultural settlements. Some farmers converted their residences into small accommodations –*Minshuku*– to lodge ski tourists. In some settlements near ski areas, *Minshuku* became the most important element of the rural landscape, for example, in Hakuba, Togari (both Nagano) and Katashina (Gunma). Further, new ski destinations have been established in unsettled forestland since the beginning of the 1970s. Madarao-Kogen (between Nagano and Niigata) is one such example.

With enlargement of the ski destinations themselves, capital for development became increasingly important. Although, traditionally, the management of ski lifts was entrusted to the local residents, they were unable to invest further. Therefore, during the first ski boom, external capital from urban regions became indispensable. Many ski destinations were established using urban capital from real estate and railway companies in Tokyo. The increasing dependence on urban capital brought a rapid decrease in new development during the second half of the 1970s; this decrease was related to the global oil crises (Fig. 2). Many local governments also began developing ski destinations, which were small in many cases and were opened principally in an effort to

improve the welfare of the local people.

In this period, due to the economic boom, the number of skiers increased rapidly along with an increased availability of leisure time. According to national polls, the proportion of skiers in 1956 was only 0.3% of the total population. However, this figure rose, particularly in the 1960s, from 2.0% in 1959 to 6.0% in 1972. The growth trend in the number of skiers also corresponded with the development of ski destinations. Therefore, the phase between 1960 and 1973 is characterized as the first ski boom in Japan.

2.3 Expansion phase: 1980-1993

There are two distinctive characteristics of the expansion phase between 1980 and 1993: further development of ski destinations and remarkable growth of the ski market. Therefore, this phase is characterized as the second ski boom in Japan.

The number of ski destinations increased again between 1980 and 1993 (Fig. 2). Generally, in Japan, tourism development proliferated significantly during the so-called bubble economy period. The development of ski resorts played an important role in this trend. Several developers from urban regions facilitated the building of new ski areas and creating modern and fashionable spaces. This development was closely related to global trends in technical improvements seen in the transportation and artificial snow-making industries.

The regional distribution of ski destinations became larger in this phase (Fig. 3) and included two new types of ski areas, namely, the resort type and the day-trip type (Kureha, 1995). The former are found mainly in northeastern Japan and featured integrated facilities financed by investments from Tokyo. The urban

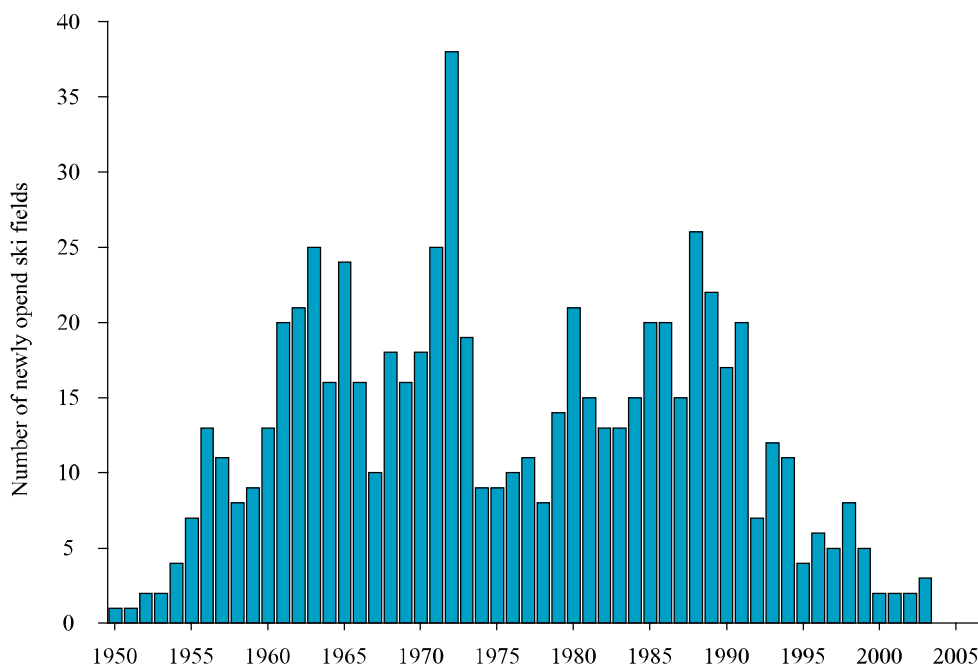


Fig. 2 Changes in the number of newly opened ski fields in Japan, 1950-2006. (Data: End of December in every year, Source: Ministry of Land, Infrastructure, Transport and Tourism; Nippon Cable Co. Ltd.)

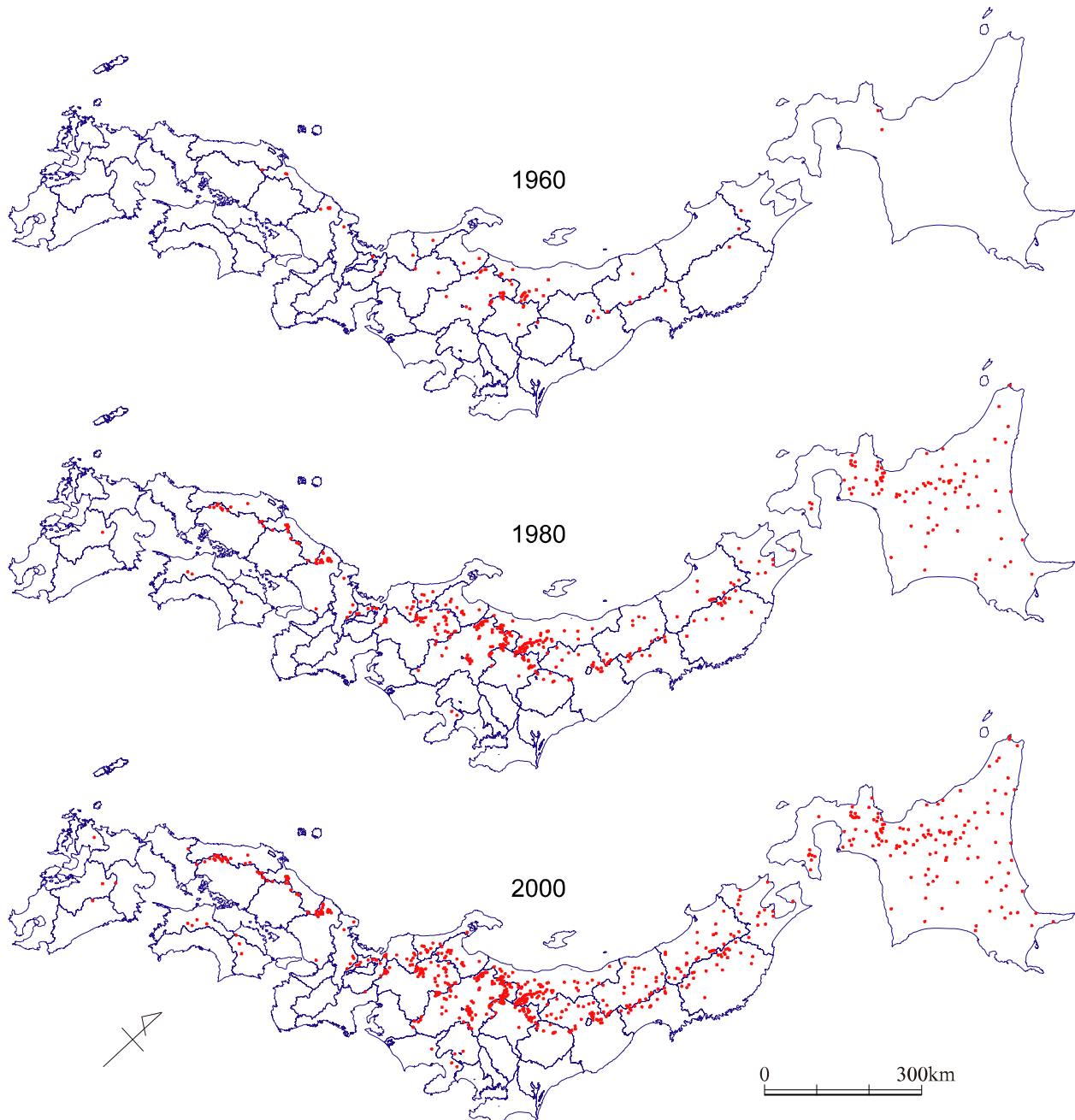


Fig. 3 Changes in the regional distribution of ski fields in Japan, 1960-2000.
(Data: end of December in every year, Source: Ministry of Land, Infrastructure,
Transport and Tourism; Topographic maps)

developers of many ski resorts functionally combined their ski slopes with hotels and other sports facilities, much like the French did in the 1960s (Tuppen, 2000). While the rural image dominated the ski destinations until the 1970s, the new ski resorts became more fashionable and urban and attracted many female skiers in their twenties. Appi-Kogen (Iwate), Alfa-Tomamu, and Sahoro (both Hokkaido) typically exemplify this trend.

In the mountains around the Tokyo region, however, many day-trip type ski destinations were established. The installation of artificial snow machines made this possible, as this region receives inadequate natural snowfall. With several expressways being constructed between large cities and snowy regions by the

mid-1980s, many day-trip type ski destinations were established adjacent to interchanges. They had special facilities and services for day-trip skiers from Tokyo, such as simple accommodations for taking naps before skiing and lift operations commencing at five o'clock in the morning. Consequently, many day-trip skiers visited Kandatsu-Kogen, Gala-Yuzawa (both Niigata) and Kawaba (Gunma) which opened around 1990, because they offered such facilities.

On the other hand, the existing ski destinations were also transformed through renovations and ski trail expansions. Most primitive ski lifts were replaced with new high-capacity ones such as quad lifts and gondola lifts. In addition, new western-style restaurants at the ski destinations supplanted the old Japanese-style ones in

many cases. Further, artificial snow became an essential component of the ski runs, since the ability to ski early in the season was important for skiers. In 1993, in Nagano Prefecture, for example, two thirds of the ski destinations (71 of 109) used artificial snow.

This expansion phase was more capital intensive than the last phase. Urban capital was used for the construction of various facilities at ski destinations and resorts. Some large ski destinations were opened by *third-sector* companies, which were joint ventures between local governments and urban private companies. While urban capital from real estate and railway companies dominated until the 1970s, this phase saw various types of businesses investing in the ski tourism industry.

According to data from the Leisure Development Center, the number of skiers increased immensely in this period, from 8.6 million in 1981 to a peak of 17.7 million in 1993. The percentage of people indulging in skiing also rose from 7.1% to 17% during this period. The same trend can be deduced from the increasing number of persons transported by chair lifts (Fig. 4). The 1987 Japanese film, "Take me skiing," also contributed to the increase in the number of skiers. During this phase, the Japanese ski market was ranked second in world, behind the USA, in terms of the number of skiers (Hudson, 2000).

2.4 Declining phase: 1994 – present

The Japanese ski tourism industry has been witnessing a decline since 1994. The development of ski destinations has decreased as a result of the collapse of the bubble economy in the first half of the 1990s. Further, the number of skiers has also decreased remarkably. New ski destination developments have been rare (Fig. 2); further, renovations of facilities at the existing ski destinations have also been slow. Economic stagnation has led to a withdrawal of urban investment from the ski industry. Therefore, some ski destinations have affiliated themselves with other companies or organizations, whereas others have closed down.

In Japan, 682 ski destinations have thus far been established. Fifty-eight of these opened before 1959, 340 opened between 1960 and 1979, and 236 began operating between 1980 and 1993. However, only 48 ski destinations have been opened since 1994. The construction of ski lifts has also declined. The period of 1980-1993 saw the construction of 2,333 chair lifts; however, only 495 were constructed between 1994 and 2004. Many ski destinations now face problems pertaining to renovation of these old transport facilities.

After the collapse of the bubble economy, urban capital began to withdraw from the ski industry. Some developers walked out of joint ventures, thereby leaving local governments to manage the ski destinations by themselves. Furthermore, after 2000, the ski industry was also witness to some bankruptcies. This situation is a result of developers being heavily in debt due to surplus investments made in the bubble economy and the decreasing number of visitors (Fig. 4). In some cases,

the bankrupt properties were purchased by Japanese firms specializing in ski destination management. Foreign investment firms also took over some of the bankrupt ski destinations. The year 2007 saw 241 ski destinations experiencing management changes.

Prior to 1991, the Japanese ski industry saw few closures. However, the number of closures (147 as of 2007) has been on the rise since the second half of the 1990s, with a closure rate of around 20%. In particular, small ski destinations at lower elevations were often closed. For example in Niigata Prefecture, while the average highest elevation of 25 closed ski fields reached only 499 m above sea level and the average vertical drop was 152 m, these figures rise to 823 m and 408 m, respectively, for 58 operating ski destinations. The lack of interest in skiing brought about a decrease in the number of ski tourists visiting small ski destinations as a result of competition from large ski resorts. Most skiers tend to prefer to visit large ski resorts, which have refined facilities and various ski slopes. The closures have also been a result of the recent inconsistency of snowfall because of their location at lower elevations. Further, since the mid-1990s, there have been several cases of local government-run ski destinations being closed due to financial constraints.

While the number of skiers reached a peak of 17.7 million in 1993, it decreased to 6.1 million in 2006 (data from the successor institute to the Leisure Development Center). The proportion of skiers in the total population also fell from 17.0% to 5.5% in the same interval. Since the mid-1990s, snowboarding has grown as a new winter recreational activity. In 2006, the number of snowboarders was approximately 4.2 million. The total number of skiers and snowboarders together reached 10.3 million, but this appears to be significantly

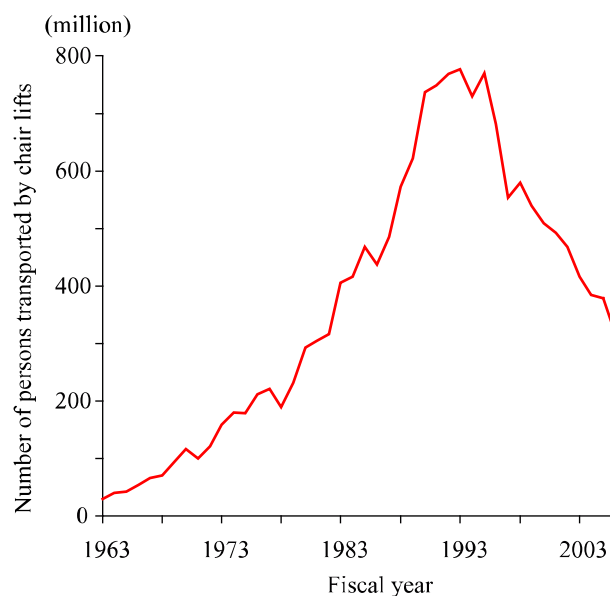


Fig. 4 Changes in the number of persons transported by chair lifts in Japan, 1963-2006. (Source: Ministry of Land, Infrastructure, Transport and Tourism)

less as compared to the number of skiers in 1993. In particular, skiing is no longer the sole fashionable winter activity for young people such as university students.

During this decline, developers of existing ski destinations have attempted to attract ski tourists. The use of artificial snow is increasing to counter unreliable snowfall due to climate change. Ski destinations in Nagano Prefecture, for example, had 1,626 snow-making machines (fan-type: 937; gun-type: 689) in 1995, but the number increased to 2,029 (1,204; 825) in 2002 and 2,083 (1,227; 856) in 2007 (data from Nagano Prefectural Government). Desperate measures have been adopted in relatively warm regions where finely sliced ice derived from large refrigerators is scattered as if it were real snow. This new system enables skiing in November, thus, creating an advantage over other ski destinations. Snowboarding services are also important for young winter tourists. Although, in the interest of ensuring the safety of others, this activity was not permitted at the majority of ski destinations in the early 1990s, there are only a few ski destinations today that do not allow snowboarding. Further, many ski destinations now provide special services for children. Developers have turned to constructing small parks and play areas for sleds so as to draw family tourism.

3. Ski Destinations and Global Warming

Global climate change may significantly affect snow conditions in Japan. Inoue and Yokoyama (1998) estimated snowfall, maximum snow depth and snow cover in Japan based on climate change scenarios derived from various experiments using general circulation models. Their results showed remarkable change in snow conditions under probable global warming scenarios with some exceptions: no significant change in snowfall was obtained in Hokkaido and the northern part of central Japan, but the maximum snow depth decreased. Fukushima *et al.* (2002) predicted expected changes in the number of skiers at Japanese ski destinations due to global warming. Under a 3°C rise in temperature, a drop of more than 30% was forecasted for almost all ski destinations with the exception of Hokkaido and high altitude regions (center of the main island).

Due to global warming the number of ski destinations will continue to decrease, especially in regions with unfavorable conditions (snow depth and topography of ski runs). The decreasing number of skiers will also influence this trend. In this context, the main reason for this decline is the oversupply of ski destinations. In fact, global warming accounts for only a small number of the closures that have occurred. The recent increasing instability in the availability of snow also affects ski areas located at lower elevations which have insufficient snow depth potential. Such ski areas will increasingly depend on artificial snow, although further investments in artificial snowmaking are likely to be difficult. Due to predicaments stemming from global climate change, it is

important for ski destination operators to reduce management risks and take advantage of any strategic opportunities posed by a changed climate (Scott & McBoyle, 2007).

While most ski destinations face no immediate threat from global warming, tough consequences will undoubtedly emerge in the near future. Therefore, ski destinations should adopt management styles to fit their own regional conditions (local natural environment and geographical position). Skiers can enjoy skiing at every ski destination that is equipped with similar facilities and groomed slopes equally. Ski destinations in natural forests can emerge as excellent ecotourism locations, while those in rural areas can serve as rural tourist get-aways.

4. Perspectives of Japanese Ski Tourism

For sustainable development of the ski industry, managers must overcome increasing competition from other ski destinations that offer unique services. During the bubble economy years, few managerial efforts were made because ski resorts were easily able to attract many visitors without offering special services. Therefore, in order to survive, ski destinations have to work to retain their market share. Target segments within the market must be considered: foreign skiers, potential skiers, elderly skiers, and eco-minded skiers.

Since 1970, the Japanese outbound tourist flow has been much higher than the inbound flow. However, international arrivals have registered an increase every year in the 21st century. Though Japanese skiers dominate the Japanese ski market, the number of foreign skiers, especially from Australia and Korea, is now increasing. For example, in Kutchan-Cho (a town in the Niseko region) in Hokkaido, there were no more than a thousand foreign skiers around 2000. The number has rapidly increased since then. In winter season of 2007/08, 13,000 Australian skiers stayed in Kutchan-Cho with 90,000 nights of lodging (data from Hokkaido Prefectural Government). Australian skiers have become more important to the Niseko region and some other ski resorts such as Hakuba (Nagano), where many Australian people have purchased condominiums and utilize the old accommodations and restaurants during their stay.

In Japan, there are many potential skiers who are now around 40 years old and are parents. These potential skiers used to be frequent skiers during the bubble economy but are not skiing presently. It is important for managers to reacquire these potential customers along with their children.

The age structure of the Japanese people has a distinctive character. The number of people born directly after WWII is relatively high. These individuals are now approaching retirement age and have the potential to become an important segment of the skiers market. In order to attract them, ski destinations must offer various services. Obtaining vacation time has been one

of the most difficult problems faced by Japanese tourists. The elderly are not restricted by this traditional custom in the Japanese workforce and, thus, can enjoy ski resorts for longer periods of time.

Mass tourism would be a suitable term for Japanese ski tourism. This is observable in the crowded slopes and accommodations and congested access ways to ski destinations on weekends, which was especially true around 1990. Ski resorts have generally been constructed and managed to cater to this form of mass tourism. Because the importance of ski tourism is now decreasing, alternative forms of tourism must be considered.

Though, skiing on spatially limited slopes has been accepted in Japan, it cannot be overlooked that traditional skiing involves a natural environment with real snow. Further, there are various snow-based leisure activities. In both Europe and North America, many people enjoy not only alpine skiing, but also cross-country skiing, hiking with snowshoes, off-piste (away from marked trails and slopes) skiing, and so on. Therefore, skiing within the confines of man-made ski destinations should only be regarded as one of many snow sports.

Recently, in Japan, ecotourism has gradually gained popularity. Researchers have defined ecotourism from various viewpoints (Fennell, 2001). Buckley (1994), for example, developed a framework for ecotourism based on four main dimensions: nature-based tourism; conservation support; sustainable management; and environmental education. Snowshoe hiking or cross-country skiing in the woods and natural landscapes will play an important role in attracting ecotourists. At some ski resorts, these new activities have already been attempted, thereby creating a new segment in the market. While eco-minded skiers will not directly relate to ski destination management, they will utilize the accommodation facilities therein and contribute to the sustainable development of winter tourism.

5. Concluding Remarks

This study has examined the evolutionary process and perspectives of Japanese ski tourism, which showed remarkable growth between 1980 and 1993, when the development of ski destinations reached its peak and consequently caused an oversupply in the market. However, since the mid-1990s, as the number of active skiers has been decreasing, most developments have been besieged by many problems, including management changes, bankruptcies and, in some cases, closures. While most ski destinations currently face no immediate threat from global warming, tough consequences will undoubtedly emerge in the near future. Therefore, ski destinations also have to adapt to climate change. Global warming is having a particular effect on small ski destinations that are located at lower elevations.

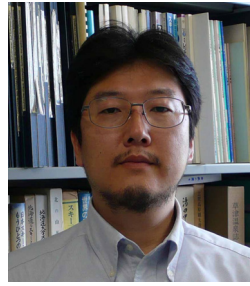
Although the ski market in Japan is currently declining, it is still larger than in markets such as Canada's or

Germany's and France's (Hudson, 2000). However, Japanese tourist activities are quite different from those of Europeans in terms of length of stay at ski resorts. Today, it is necessary to discover and exploit new segments of the market by adopting innovative management strategies based on regional characteristics in order to ensure the sustainable development of ski tourism. Ecotourists, older tourists and potential skiers, in all likelihood, will play an important role in the future. By adopting the measures discussed in this paper, the ski tourism industry can change its form and emerge as an example of ecotourism, different from mass tourism. Skiing on spatially limited man-made ski slopes has been accepted as a recreational activity; this, however, has resulted in mass tourism, especially in Japan. The Japanese ski tourism industry should now reconsider the meaning of skiing, and explore its alternative forms.

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