

2016-07-12

# The Winter Olympics: driving urban change, 1924-2022

ESSEX, Stephen

<http://hdl.handle.net/10026.1/5108>

---

10.4324/9781315735887

Routledge

---

*All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.*

ESSEX, S. & DE GROOT, J. (2017) *The Winter Olympics: driving urban change, 1924-2022*, in Gold, J.R. & M.M. (Eds.) *Olympic Cities*, Third Edition, Routledge, London, pp.64-89.

## **The Winter Olympics: Driving Urban Change, 1924–2022**

Stephen Essex and Jiska de Groot

Dr Stephen Essex,  
School of Geography, Earth and Environmental Science, University of Plymouth,  
Drake Circus, Plymouth, PL4 8AA, Devon, UK.  
(Tel: 01752-585980; Fax: 01752-585998; email: S.essex@plymouth.ac.uk)

Dr Jiska de Groot,  
Energy Research Centre, Faculty of Mechanical Engineering and the Built  
Environment, University of Cape Town, Cape Town 7700, South Africa.  
(email: jiska.degroot@uct.ac.za).

### **Bibliographic notes:**

Dr Stephen Essex is Associate Professor (Reader) in Human Geography at the School of Geography, Earth and Environmental Science, Plymouth University (UK). His teaching and research focuses on urban and rural planning, especially the infrastructural implications of the Olympic Games and post-war reconstruction planning. He has co-authored a number of journal articles and book chapters on the urban impacts and planning of both the Summer and Winter Olympic Games with Professor Brian Chalkley (also at Plymouth University).

Dr Jiska de Groot is a researcher in the Energy Research Centre at the University of Cape Town. Jiska holds a PhD in human geography and her research focuses on development and energy, particularly around place and change.

### **Third Edition**

## **The Winter Olympics: Driving Urban Change, 1924–2022**

**Stephen Essex and Jiska de Groot**

The delay in establishing a separate Winter Olympic Games until 1924, almost 30 years after the revival of the Summer Games, reflected the fact that winter sports were not included in the original conception of the Olympics. Pierre de Coubertin objected to their inclusion partly because of Scandinavian fears that to do so would have possible detrimental effects on their traditional sports festivals, such as the Nordic Games and Holmenkollen Week.<sup>1</sup> However, as the popularity of winter sports spread, the movement to include them in the Olympic programme gathered pace. Some of the early Summer Games included figure skating (London 1908, Antwerp 1920) and ice hockey (Antwerp 1920) in their programmes. In 1924, a separate winter sports week was held at Chamonix six months before the Summer Games in Paris. Following the success of this winter sports week, the International Olympic Committee (IOC) amended its Charter in 1925 to establish the Winter Olympics, with Chamonix retrospectively designated as the first Winter Games. Until 1948, the country hosting the Summer Games (held every four years) also had the opportunity to stage the Winter Games. Thereafter, the selection of the host for the Winter Games was subject to a separate competition decided by a vote of IOC members, but the event was staged in the same year as the Summer Games. From 1992, further change occurred, with the Summer and Winter Games being staged alternately every two years in order to maximize the profile of the Olympics and its television revenue (Borja, 1992).

This chapter documents and reviews the role of the Winter Olympics in changing and modernizing the built environment of its hosts, together with a consideration of the changing organization and funding of the event over time. Certain features, of course, remain relatively fixed. The construction or refurbishment of sports facilities has been a constant requirement on hosts throughout the history of the Winter Games, albeit with different outcomes based on local circumstances. In addition, although the detailed specifications may change, the range of sports facilities required for the event is normally standard. The main sports venues for the Winter Olympics include a stadium, slopes for slalom and down-hill ski runs, cross-country ski-trails, bob-sled and luge runs, and an indoor ice arena. The scale of provision of the associated infrastructure, such as the Olympic Village, Media Centre, hotels and transport, reflect the increasing popularity and interest in the event. However, the impact on host cities involves greater degrees of variability. In this respect, there are inevitable comparisons to draw with the Summer Games, which have witnessed a progression from the minor impact of the early Games to a more substantial, entrepreneurial and business-led approach to urban planning through Olympic-led development (see also Essex and Chalkley, 1998, 2002; Chalkley and Essex, 1999). The Winter Olympics are clearly different from the Summer Olympics in that they are staged on a smaller scale and in fragile landscapes, with less coherence in the types of venues required for the various competitions (mountains to urban ice rinks) and logistical challenges of transporting athletes and spectators to remote venues. The key questions addressed here are whether the Winter Olympics have had the same trajectory of development impacts on host centres, and whether the role of the public sector in the planning and management of the event has contracted in deference to the emergence of more entrepreneurial approaches (Cook and Ward, 2011).

To answer these questions, this chapter draws on the Official Reports of the Organizing Committees and identifies five sequential phases in the development of the event to offer a framework for organising and understanding the experiences of the past 22 hosts of the Winter Olympic Games from 1924 and the cities scheduled to stage the next two events in 2018 and 2022. These phases are characterized as: (1) minimal infrastructural investment (1924–1932); (2) emerging infrastructural demands (1936–1960); (3) tool of regional development (1964–1980); (4) large-scale transformations (1984–1998); and (5) sustainable development and legacy planning (2002-present). While business interests have consistently been instrumental in galvanizing a desire to stage the Games, the public sector has traditionally organized and funded much of the infrastructural investment for the Winter Olympics, as well as accumulating the main debts. Moreover, although private sources of capital, such as television rights and sponsorship, have emerged since 1984, the public sector remains pivotal for the organization of the event (Essex and Chalkley, 2004).

### **Phase 1: Minimal Infrastructural Investment (1924–1932)**

The first three Winter Olympics (see Table 1 and Figure 1) were characterized by relatively low levels of interest and participation. The events were staged in settlements with populations of about 3,000, with less than 500 athletes competing in each of the Games. Nevertheless, the motivations of the hosts in staging the Games allude to some interest in the development prospects, especially given the emerging interest in winter sports tourism. Chamonix, in the Haute-Savoie department of eastern France, appears to have been volunteered as the host by the French Olympic Committee, which was no doubt cognisant of the need to have world-class

facilities to develop winter sports. Similarly, the local Chamber of Commerce was not slow to recognize the economic advantages for the town created by the popular interest in the Games (see Figure 2). Funding of the first Winter Olympics appears to have been shared equally between the public and private sectors. In 1928, the Games in St Moritz were led by the local authority and assisted the consolidation of the resort as an international winter sports destination.

Although the initial idea to stage the Winter Olympics in Lake Placid (USA) in 1932 came from the American Olympic Committee in 1927, it was the Lake Placid Club, which owned existing sports facilities in the area, who had investigated the feasibility of the event. The decision to bid for the Games was made only after a representative of the Lake Placid Club had visited a number of European resorts and the St Moritz Olympics of 1928 to convince himself, on behalf of the community, that Lake Placid could match the highest standards abroad and secure longer-term benefits from the investment required. To support the bid, in July 1928, the Lake Placid Chamber of Commerce set up a guarantee fund of \$50,000, but it was in fact New York State that provided the main funding for infrastructural requirements for the event (see Figure 3). The involvement of New York State eased the concerns of some local residents about the magnitude and responsibility of the task (III OWGC, 1932, p. 43). The organization of the event was a partnership between New York State, Essex County Park Commission, North Elba Town Board, North Elba Park Committee and Lake Placid Village Board (*Ibid.*, p. 74). In 1932, substantial funding from New York State led to the establishment of the New York State Olympic Winter Games Commission to ensure that the money was spent wisely (*Ibid.*, p. 60), which is a model that has been followed in subsequent Games.

Many of the hosts of the early Winter Olympics were especially aware of the long-term viability of facilities when deciding whether to stage the event, mainly because of the settlement's small size and limited capacity to sustain expensive, high-order facilities. For example, the skeleton<sup>2</sup> run constructed at the eastern Swiss resort of St Moritz for the 1928 Games proved to be an expensive and unviable legacy. Fewer than 30 people used the facility after the Games. As a result, the organizers of the subsequent Games at Lake Placid 1932 questioned whether the projected cost (\$25,000) of a similar facility could be justified.<sup>3</sup> In light of the expected high costs and low post-use<sup>4</sup>, the event was eliminated from the programme at Lake Placid and was not re-introduced until Salt Lake City (Utah) in 2002.

In contrast to this prudence, the Lake Placid organizers were criticized for the extravagance of building an indoor ice rink very late in the preparations. The plan was not supported by the State of New York because of the proposed costs (\$375,000). The organizers were responding to a suggestion by the IOC President that such a facility would provide an alternative venue for events in the case of bad weather (which had so badly disrupted the St Moritz Games 1928) and would also be a tangible and physical memorial to the event. The site for the rink was cleared and, with the prospect of a derelict site in the middle of town, the authorities were forced to fund the construction via a bond issue (Ortloff and Ortloff, 1976, p. 77). According to the organizers, the indoor ice rink proved its worth by providing an alternative venue for skating events affected by the unseasonably warm weather and so prevented the programme from being disrupted (III OWGC, 1932, p. 154).

The construction of Olympic Villages or new hotels was certainly not justified in this first phase because of fears of over-provision. Instead, existing accommodation within a wide geographical catchment area were adapted and, if necessary, upgraded for winter occupation. Hotel and cottage owners in the vicinity of Lake Placid were urged to 'winterise' their summer accommodations by the organizers of the Games of 1932 in an effort to house the expected 10,000 visitors. As no additional accommodation capacity was developed near the venue, accommodation in Montreal, which was three and a half hours from Lake Placid, had to be used to cater for the demand (III OWGC, 1932, p. 112).

Despite the small scale nature of the event in Phase 1, some Olympic-related developments proposed for early Winter Games raised environmental protests, marking an issue which was to become much more of a prominent concern in later phases. In March 1930, a local action group (the Association for the Protection of the Adirondacks) brought a successful legal action against a proposed Olympic bob-sled run for the Lake Placid Games on environmental grounds and because building on state land was unconstitutional. As a result, a less sensitive site was found at South Meadows Mountain, later renamed Mount Van Hoevenberg (*Ibid.*).

## **Phase 2: Emerging Infrastructural Demands (1936–1960)**

The second phase bears many of the hallmarks of the first phase: host centres were generally small (normally less than 13,000 residents), and had been offered as hosts by a combination of National Olympic Committees, Sports Federations and local authorities, with infrastructural investment funded predominantly by the public sector. The key difference was that, by 1936, there was substantial growth in the number of

participating countries and athletes. Investment in Olympic-related infrastructure continued to be constrained by the same factors of long-term viability as in the first phase, but with the added pressures created by the temporary influx of larger numbers of competitors and spectators. Initial plans for an Olympic Village at Cortina d'Ampezzo in northern Italy for the Winter Games of 1956 were abandoned after opposition from local hoteliers who feared the effect of an increase in the town's accommodation capacity on their businesses (CONI, 1956, p. 267). The award of the 1960 Games to Squaw Valley, according to the organizers, had transformed a remote mountain valley into a 'throbbing city' (California Olympic Commission, 1960, p. 27). Although the development of the Olympic Village for Squaw Valley 1960 was out of scale with the small local community, but was considered necessary because of the number of athletes now requiring accommodation and because local hotel capacity was required for officials and journalists (Chappelet, 1997, p. 83). Yet, it was only a temporary construction as the town's small population (c. 4,000) meant there was no viable post-Olympic use.

The main exception in this phase was the Norwegian capital Oslo, which hosted the Winter Olympics of 1952. With a resident population of 447,100, the city was by far the largest centre to have hosted the Games by that date. The larger population created new opportunities for the type of facilities provided, as the post-Olympic viability and future use was more assured. In the period before 1960, Oslo was also the only host to have built an Olympic Village, albeit it was dispersed in various locations around the city with planned post-Olympic uses such as university halls of residence, a hospital and an old people's home (Organisasjonskomiteen, 1952, pp. 23, 42). However, new infrastructural requirements were also created by the

increased size of the host settlements. For example, larger urban centres were often at some distance from competition sites. Large numbers of athletes and spectators required transport to cover considerable distances to isolated locations in difficult terrains and within limited time-frames, sometimes compounded by adverse weather conditions. Investment in transport infrastructure, such as new roads, bridges and ski-lifts, therefore became essential to the operation of the Oslo Games of 1952 and subsequent events.

### **Phase 3: Tool of Regional Development (1964–1980)**

The third phase (1964–1980) is characterized by a number of definite shifts: an expansion of the number of athletes, appreciably larger host centres and the emergence of regional development and modernization as a key motivation for staging the Games. Four of the five hosts during this period had populations of more than 100,000, with the other having more than one million. Only Lake Placid in 1980 had a level of population similar to those of previous phases. Both private development companies and local authorities recognized the potential of the Winter Olympics for justifying major infrastructural investment as part of broader modernization programmes. Television revenue was also emerging and grew substantially as a source of income during this phase, which began to shift the onus of the funding from the public sector to the private sector, although the local public sector remained central to the organization of the event. In 1964, the Innsbruck Games received \$597,000 from television rights, while the 1980 Lake Placid Games received \$15.5 million.

Partly because of their increased size, the Winter Olympics were recognized as a tool of regional development from the 1960s. The Innsbruck Winter Games of 1964 was used as a showcase for Austrian businesses, especially those related to ski equipment (Espy, 1979, p. 90). The modernization of the Isère Department was accelerated by the Grenoble Games of 1968 (Borja, 1992) and as a means of remodelling its planning system after a period of rapid growth (1946–1968) (COJO, 1968, p. 46) (see Figure 5). The Sapporo Games of 1972 were viewed by the Japanese government as a unique economic opportunity to invigorate the northern island of Hokkaido (Borja, 1992). Most of the spending was on investment in the urban infrastructure, with less than five per cent of capital improvements for these Games expended on sports facilities (Hall, 1992, p. 69).

With the choice of host centres with larger populations after 1960, the post- Games viability of a purpose-built Olympic Village became more assured, usually as a residential area of the host settlement or a student hall of residence for a local university or college. For example, the Olympic Village at Grenoble was built in a Priority Urbanization Zone and subsequently was used as an 800-room university hall, a 300-room hostel for young workers and a tower block with 52 apartments (COJO, 1968, p. 71) (see Figure 4). In Innsbruck, which staged the Games of both 1964 and 1976, the organizers were forced to build an Olympic Village for each event. The four apartment blocks built for the Winter Games of 1964 were not available for the Games of 1976 as they had become a residential suburb of the town in the interim. The second Olympic Village, consisting of 19 apartment blocks, was therefore built on an adjacent site. The 1976 organizers later reported that having to build another Village was, perhaps, rather extravagant, as not all the

athletes wished to stay there, some preferring to be closer to event sites. In retrospect, they felt that accommodating athletes in hotels might have been preferable from cost, security and transport perspectives (HOOWI, 1967, p. 400). Nevertheless, the two Olympic Villages had created a new residential area at Neu-Arzl in East Innsbruck (Chappelet, 1997).

Olympic-related investment in transport infrastructure was often central to the regional development objectives. Road construction accounted for 20 per cent of the total investment for the Grenoble Games of 1968 in the French Alps (COJO, 1968, p. 46), and was designed to decentralize the region and facilitate economic growth. The investment included a motorway link from Grenoble to Geneva, which acted as a catalyst for the regional economy and transformed the host town into a major conference and university centre (Chappelet, 2002a, p. 11). The city's old airport at Grenoble-Eybens was closed to make way for the Olympic Village and was replaced by two new airports at Saint-Etienne-de-Saint-Geoirs and Versoud (COJO, 1968, p. 290). For the Sapporo Winter Olympics in 1972, transport investments included extensions to two airports, improvements to the main railway station, 41 new or improved roads (213 kilometres) and the construction of a rapid transit system (45 kilometres). This last project had already been started by the City of Sapporo, but was completed for the Winter Games using government funding.

With the increasing scale of the Winter Olympics, the risks associated with staging the Games became greater. First, warnings about the long-term limitations of the event as a tool of regional development began with the debt accumulated by the organizers of the Grenoble Games, which was eventually paid off by 1995 (Terret,

2008, p.1904), together with the abandonment or demolition of some of its venues. It was also during this third phase that the award of the Winter Olympics of 1976 to Denver had to be reassigned, which is the only time in Olympic history that this has happened (Olson, 1974). The reason was local concern about the rising cost of the event and about how the organizers, led by business interests, were ignoring environmental considerations. An action group, 'Citizens for Colorado's Future' was successful in placing the issue on the State and City ballots in November 1972. The citizens then had a vote on whether the Games should be staged using state funding. The turnout was high (93.8 per cent) and 60 per cent voted against the Olympics, which meant that both state and federal funding for the event would not be forthcoming. Denver was therefore forced to withdraw its candidacy for the Winter Games of 1976, which were then staged in Innsbruck at short notice. Second, the changing scale of the event affected the character and operation of the Games. One of the consequences of the Winter Olympics being staged in larger cities and across whole regions was that the focus and impact of the event became dissipated. Critics claimed that the size and dispersed geography of the Games had detracted from the camaraderie of the event and increased transport problems.

In other hosts, efforts were made to mitigate the environmental impacts, though in different ways. For the 1972 Sapporo Games, the only mountain close to the host city and suitable for downhill ski events was Mount Eniwa, within the Shikotsu-Toya National Park. The National Park Council gave permission on condition that all related facilities were removed and the terrain in the affected area restored to its original state. A comparable instance concerned the 1980 Games at Lake Placid, where the town itself lay within Adirondack Park, designated in 1971 and regulated

by Adirondack Park Agency. The park's public lands were directly administered by the State Department of Environmental Conservation, which also operated bob-sled and luge runs, the biathlon and cross-country trails and the Whiteface Mountain Ski area (LPOOC, 1980, p. 18). The extensions of the ski jumps, originally built for the 1932 Games, had to comply with standards set by the Adirondack Park Agency and the Federal Environment Agency (*Ibid.*, p. 38).

#### **Phase 4: Large-Scale Transformations (1984–1998)**

The fourth phase (1984-1998) is characterized by the most significant increase in participation in the Winter Games. By 1994, the ratio of support staff to athletes was 6.5 times bigger than in 1956. Numbers of athletes were also growing, with over 2,000 athletes at Nagano in 1998 (Chappelet, 2002b). The accommodation of athletes, media and spectators became a substantial infrastructural challenge in itself. After 1988, two or more Olympic Villages became necessary to accommodate athletes closer to their event venues. Separate villages for the media were also necessary. These demands have favoured centres with larger populations. Perhaps more significantly, television revenue rose from \$91.5 million in 1984 to \$513 million in 1998, with the additional revenue partly funding ever larger and more ambitious urban redevelopment.

These various changes intensified the advantages of placing the Games in host centres with larger populations. In this phase, the Games were staged in centres with an average population of about 298,000, although three of the five hosts have been substantially larger and two smaller. The role of the Winter Games as a means to secure major urban infrastructural change and modernization has intensified. The

Games staged in Sarajevo in 1984, therefore, were taken as an opportunity to modernize the city by the government. The motivation for the Calgary Games in Canada (1988) and the Lillehammer Games (Norway) in 1994 was to act as a stimulus to revive the local economies (e.g. XV OWGC, 1988, p.5). At Calgary, the Organizing Committee moved some venues originally selected by the Calgary Olympic Development Association to make them more viable after the Games (*Ibid.*) and the Games also caused some facilities to be provided much earlier than would otherwise have occurred. For example, the construction of the Olympic Saddledome (20,000 seats, C\$7 million), home for a professional ice hockey team established in 1980, was fast-tracked to show the city's commitment to its bid (Hiller, 1990, p. 124). Large investments required to stage the 1992 Albertville Games appear, however, to have made more difficulties for other northern French Alpine resorts seeking finance for restructuring (Tuppen, 2000, p. 330). This case shows that Olympic investment has 'opportunity costs' which may postpone or eliminate other forms of investment.

Given the changing circumstances, smaller hosts in this phase faced problems in justifying investment in permanent purpose-built Olympic Villages. Albertville 1992, which had a population of only 20,000 at the time, renovated a small spa at Brides-les-Bains as the Olympic Village rather than constructing a purpose-built facility. However, the village proved to be too far from the sports facilities, so seven smaller Olympic Villages were established in existing hotel accommodation closer to the event sites. After this experience, the IOC stated that it favoured the use of a single Olympic Village in future Games in order to promote contact between athletes from different countries (Charmetant, 1997, p. 115), although this aspiration has not proved possible in more recent events. At Lillehammer 1994, which had a population

of 23,000, a temporary Olympic Village consisting of 200 wooden chalets, was constructed. These examples were significant departures from the trajectory of large-scale infrastructural investment.

The increasing scale of the event has also necessitated more formal recognition of environmental issues in the planning and development of related infrastructure (May, 1995). The intrusion of built structures into fragile environments, as well as the use of chemicals to create the appropriate snow conditions, has become a major issue in the preparations for the Winter Olympics. Most notably, the preparations for the Lillehammer Games of 1994 incorporated, for the first time, the principles of sustainable development. The proposed location of one of the main indoor arenas was moved to protect a bird sanctuary, while its heat circulation operated from excess heat from its refrigeration unit. Contracts with suppliers and contractors included environmental clauses. The approach influenced the IOC to add an environmental commitment to its Charter in 1996 (Cantelon and Letters, 2000), with the candidates for the Winter Games of 2002 being the first to be required to describe their environmental plans in their bid documents (IOC, 1999a, p. 5; Lesjø, 2000).

### **Phase 5: Sustainable development and legacy planning (2002 onwards)**

During the fifth phase (2002 onwards), the trend for the event to require large-scale infrastructural investment has continued, but with a greater emphasis on the protection of the environment, sustainable development and legacy planning. As a consequence, the Games have begun to be staged by large metropolitan cities together with their surrounding mountain communities, essentially making them

multiple-centre events (Chappelet, 2008, p.1897). There have also been other significant pressures which have altered the character of the Winter Olympics, such as the threat from international terrorism and reforms to the host city selection process following corruption over the award of the 2002 event.

As noted earlier, Salt Lake City was the first host city to have been elected after having been required to outline their environmental plans in the bid process. However, the Winter Olympics of 2002 are likely to be better remembered for the corruption scandal that tainted the city's election as host and for the heightened security threat following the terrorist attacks in New York on 11 September, 2001 (five months before the opening ceremony). The Salt Lake Bid Committee, making their second bid and determined to secure the event, allegedly made payments to IOC members for holidays, medical treatment and members' children while at university or working in America, in return for support (Booth, 1999; Lenskyj, 2000; Toohey and Veal, 2000, p. 232). The allegation emerged in December, 1998 and was followed by an *ad hoc* IOC Commission of Inquiry and a US Olympic Committee Special Bid Oversight Commission (Mitchell Commission) in 1999. The Mitchell Commission concluded that the IOC's lack of accountability had contributed directly to the gift-giving culture, which had fostered the actions of the Salt Lake City organisers (Kettle, 1999; Sandomir, 1999). The IOC's own inquiry excluded six members (in addition to four who had resigned and one who had died), issued warnings to ten members and exonerated three (IOC, 1999b). The President/CEO and Senior Vice President of the Salt Lake City Organizing Committee left the organization in January, 1999. The controversy led to reforms in the host city selection process, including the elimination of member visits to candidate cities and

the creation of a permanent Ethics Commission, as well as amendments to the composition of the IOC itself. These changes were relevant to the future selection and conduct of both the Summer and Winter Olympics.

Similarly, the 9/11 terrorist attacks on New York in 2001 made the security risk associated with the Winter Olympics much greater. Salt Lake City was staging the Games only five months after the attacks, so the security measures were enhanced and placed centre stage. Strict constraints were introduced for local air space as well as access to zones within the city (Warren, 2002, p.617). The organizers spent \$200m on security and public safety measures and deployed 9,750 security-related personnel during the Games (Salt Lake City Organizing Committee [SLOC], 2002, p.490 and p.114). Although security had been a major concern and expenditure since the Munich Games of 1972, the Salt Lake City Games set a new benchmark for the implementation of security plans and measures at the Olympic Games in an era of global terrorism.

The development of infrastructure and facilities for the Salt Lake City Games was based on three Master Plans: for Downtown, the University of Utah and Park City. A total of seven permanent venues were constructed, with only three requiring investment by the organizing committee itself. The other four venues were built by public-private partnerships, with a further twenty temporary venues or overlays<sup>5</sup> (*Ibid.*, p.187). There was significant investment in transport infrastructure, involving ten Olympic-related roads and highway projects and four non-Olympic related regional projects, including the reconstruction of two interstate routes and two light rail transit lines (*Ibid.*, p. 179).

All Salt Lake City developments were subject to environmental management systems to minimize adverse environmental impacts. The Environmental Plan contained four 'aggressive objectives', which were all achieved. First, 95.6 per cent of all waste was recycled or composted to achieve the objective of 'zero waste' (*Ibid.*, p.26). Second, the Games succeeded in its goal of 'net zero emissions' by offsetting its carbon footprint of 122,936 metric tons of hazardous and greenhouse gas emissions as well as 243,840 metric tons of pollutants in Utah, the US and Canada (*Ibid.*, p.196). The event was certified as climate neutral by the Climate Neutral Network. Third, the event's advocacy programme for urban forestry resulted in 100,000 trees being planted in Utah and 15m trees planted worldwide (*Ibid.*, p.26). Fourth, zero tolerance for environmental and safety compliance errors was successful (*Ibid.*, 195-8). The environmental and sustainable development agenda had been clearly cemented as part of the organization of the Winter Olympic Games following those in Salt Lake City.

The award of the Winter Olympics of 2006 to Turin, with a population of 1.4m, represented the use of the event as part of a strategy to transform an old industrial city into a modern post-industrial city, a scenario which is normally associated with the Summer Games. Turin as an industrial city had been almost totally dependent upon the motor car manufacturer Fiat for a century, and had become known as the 'Italian Detroit' (Rosso, 2004, p.5). With the contraction of Fiat in the city in the 1980s, involving the loss of 110,000 jobs by 2001 (Winkler, 2007, p.16), there was a need to forge a new urban identity to attract tertiary businesses and improve its tourism potential.

In order to modernize the city's infrastructure, innovations were first required in the city's governance structures. When Fiat had been dominant in the city, a tradition of industrial conflicts and strong economic interests inside the Municipal Council had prevented the creation of an overall vision or strategy for the city (Pinson, 2002, p.483). Instead, town planning interventions had only been allowed to act in a pragmatic and opportunistic way. Following the corruption scandals that led to the collapse of both national and local government in Italy in 1992, national political reforms were introduced involving the directly elected mayors with increased executive powers and resources (Winkler, 2007, pp.18-19). In 1993, the election of Valentino Castellani as Mayor (with backing from the Chamber of Commerce, the University and the Catholic voluntary sector) emphasized the importance of the internationalization agenda to the city's revitalization and long-term future. This focus created a space for dialogue and an opportunity for organizational and entrepreneurial capacity to develop. A new ethos slowly began to evolve which placed the municipality at the centre of collective governance as facilitator with an emphasis on open regional partnership, collaboration and networks rather than centralized secretive confrontation and conflict dominated by Fiat (Pinson, 2002, p.489). Implementation of the emerging vision was assisted by over 15 years of political continuity achieved by the re-election of both Castellani and his successor (Chiamparino) (Winkler, 2007, p.23).

An Urban Master Plan had been prepared in 1995 by architects Cagnardi and Gregotti to alter the city's urban structure and create opportunities for regeneration. The Plan focused on the improvement of transport access and private-led

investment on brownfield sites within clear land use zoning and regulation. The organizing principle of the plan was the 'Spina Centrale', which was a north-south avenue along the railway line, which had fractured the city into two. The railway line was taken underground, as a means of increasing its capacity fourfold, which enabled the surface to be transformed into a 12 km, six-lane arterial road (*Ibid.*, p.28). The change better reconnected the two halves of the city and established a new urban centrality and image along the central backbone (see Figure 5). Along the route, four disused industrial areas totalling over 2.1 million m<sup>2</sup> and owned by the public sector and major private companies (such as Fiat and Michelin) would be redeveloped as mixed use developments (see Figure 6). A new cross-rail system, the 'Passante Ferroviario', was introduced. Key functions such as libraries, theatres, regional government offices and higher education were developed on brownfield sites adjacent to the railway stations, often in iconic landmark buildings. A programme to improve the quality of neighbourhoods, public spaces and cultural and leisure attractions throughout the city was implemented (Falk, 2003).

The award of the Winter Olympics to Turin, on 19 June, 1999, therefore enabled the scope and importance of the new vision for the city to be integrated (Rosso, 2004, p.17), prioritized (Pinson, 2002, p.485) and, above all, to be implemented. The Strategic Plan for Turin was formulated through a highly participatory process and signed by all relevant agencies in February, 2000. It outlined six overall strategies and twenty objectives, which would be achieved by eighty-four specific projects (see Table 2). Implementation was overseen by the Torino Internazionale Association, the 'Invest in Turin and Piedmont' inward investment agency, and Turismo Torino (Pinson, 2002, p.485; Rosso, 2004, p.18; Winkler, 2007, p.28). The Olympics was

perceived as an opportunity to modernize the city's infrastructures (Pinson, 2002, p.485) and galvanize the longer-term vision for the city.

The staging of the Winter Olympics was also organized as a means of regional integration between the three urban centres (Turin, Grugliasco and Pinerolo), which provided venues for the ice competitions, an Olympic Village, Media Village, Press Centre and International Broadcasting Centre; and the surrounding mountain communities, which provided venues for the snow competitions and two Olympic Villages (Torre Pellice, Pragelato, Bardonecchia, Sauze d'Oulx, Claviere, Cesana-San Sicario, Sestriere). The purpose of this strategy was to extend the benefits of Olympic investment beyond the city to the whole region through opportunities to upgrade ski facilities and structures and to extend the tourism season (Danselo, *et al.*, 2003). Substantial improvements were made to the local road networks to increase the area's tourism potential, as well as to benefit daily life for its citizens. The transformation of Turin as a European metropolis was also signalled with plans to connect to the high-speed rail lines to Milan (2009) and Lyon (2011), thus positioning the city in the dynamic Mediterranean arc of technopoles in southern France (Sophia-Antipolis and Montpellier) through to Barcelona (Falk, 2003, p.213).

As with the other recent Winter Olympics, the Turin Games was notable for its emphasis on environmental protection and sustainable development. A strategic evaluation assessment (the so-called 'Green Card') was adopted by the Environment Department of the Turin Organizing Committee (TOROC) to assess the environmental consequences of proposed developments and to monitor environmental impacts<sup>6</sup>. This environmental management system was awarded

ISO14001 status. All plans and projects were assessed by the Consulta Ambientale (Environmental Council) before implementation so that recommendations about environmental sustainability could be implemented. An 'Ambiente 2006' logo was awarded to companies who manufactured goods for the Olympics in compliance with predetermined environmentally sustainable criteria (TOROC, 2006, p.122), and local hotel accommodation was awarded an 'Ecolabel' for adopting sustainable practices (TOROC, 2006, p.124; Bottero, *et al.*, 2012; Bondonio and Guala, 2011). The Games themselves offset 100,000 metric tons of greenhouse gases through the HECTOR programme (Heritage Climate TORino) (TOROC, 2006, p.122). Indeed, Turin secured advances in the minimization of the environmental impact of the event for future Games to emulate. The Turin Winter Olympics was noteworthy for its achievements in transforming the city's structures for governance and in mobilizing the city's long-term redevelopment plan. In this respect, Turin is the closest that the Winter Olympics have come in matching the transformational effects of the Summer Olympics in Barcelona, although there are some questions about the long-term trajectory of the Olympic legacies following the 2008 recession (Vanolo, 2015).

The Winter Olympics in 2010 were held in Vancouver, Canada, which also emphasized its credentials in sustainable development (Holden, *et al.*, 2008). The urban centre of Vancouver acted as the venue for the ice competitions and the neighbouring winter resort of Whistler provided the venues for the snow competitions. New and upgraded facilities were constructed, together with a rapid transit link between the airport and central Vancouver and an upgrade of the 'Sea-to-Sky' highway between Vancouver and Whistler. The 'performance goals' of the organizers focused on accountability, environmental stewardship and impact

reduction, social inclusion and responsibility, aboriginal participation and collaboration, economic benefits from sustainable practices and sport for sustainable living (Chappelet, 2008, p.1896). The provincial government set up an independent not-for-profit company called '2010 Legacies Now' to ensure that each region in British Columbia benefits from the Games, through maximising social and economic opportunities, building community capacity and expanding volunteer resources (2010 Legacies Now, 2009). The agency was funded by grants from various levels of government, contributions by the private sector and investment income and undertook various programmes in schools education, sport and recreation, the arts, volunteerism and literacy to achieve its goals (2010 Legacies Now, 2008). It created a new model for securing 'softer' Olympic legacies related to people, skills and employability rather than simply the 'harder' legacies related to the built environment.

Despite the apparent concern for securing a positive post-Olympic legacy, the organisers in Vancouver have faced criticisms. The onset of a worsening global recession in 2008 threatened to jeopardise the financial viability of many developments, including the Olympic Village where the city government had to subsidise the project in order to ensure its timely completion (O'Connor, 2009). Social impacts resulting from the effects of land speculation and reversals on promises of affordable housing produced substantial concerns about increasing homelessness in the city. During the pre-Olympic development boom, 1,400 low-income housing units were lost from the Downtown Eastside neighbourhood in order to create more space for tourists and corporate investors (Esparza and Prize, 2015, p.32) through rent increases or conversions into high-cost condominiums or boutique hotels, resulting in increased evictions and homelessness. Indeed, the concern of

the authorities to present the best possible image of the city to the world led to various legislation (such as the Assistance to Shelter Act, 2009 which gave powers to local authorities to place the homeless into temporary shelters) and initiatives (such as the Project Civil City, 2006-08) to remove evidence of social inequality from the streets (Boyle and Haggerty, 2011). The PCC initiative involved increased CCTV surveillance; public realm improvements to beautify areas, encourage active use and design out crime; and deploy 'downtown ambassadors' to act as street concierges for visitors and the 'eyes and ears' of the police on the ground (Boyle and Haggerty, 2011). Between 2008 and 2010, anti-poverty activists staged an annual 'Poverty Olympics' to draw attention (by employing irony) to the 'world class poverty' in Vancouver's Downtown Eastside, including events such as 'the poverty-line high jump', 'the welfare hurdles' and the 'broad jump over bedbug infested mattresses' (Esparza and Price, 2015, p.32; Perry and Kang, 2012, p.591).

Indigenous peoples objected to their political groups being co-opted onto the local Olympic organisation as a means for their artists, cultural performance groups and symbols to be appropriated in Olympic events, while continuing to live in disadvantaged conditions and the Olympics being staged in unceded and non-surrendered indigenous lands (No Olympics on Stolen Native Land campaign) (O'Bonsawin, 2010, p.148). Indeed, the use of an inutshuk as the symbol of the 2010 Olympics was considered as disrespectful by some groups as it reduced, objectified and dehumanised over 630 First Nation Aboriginal communities into a singular 'culture', which reflected the dominant colonial view of Canadian nationhood (Perry and Kang, 2012, p.584). Environmental protests against the construction of the 'Sea-to-Sky' highway through Eagleridge Bluffs resulted in twenty arrests and

two jail sentences. The cost of the Vancouver Olympics rose to over \$6 billion (O'Connor, 2009) at a time of severe cutbacks to health care, the arts, education and social assistance (Perry and Kang, 2012, p.579). Public displays of opposition against the Olympics were the first to utilise 'convergence tactics', whereby activists are called to a particular location to protest using mobile/social media communications facilitated by the internet (Esparza and Price, 2015, p.24). The staging of the Winter Olympics had become as contested as their summer equivalents.

The award of the Winter Olympics of 2014 to Sochi in Russia may represent the start of a new phase or even a step backwards in the trajectory of the event (Chappelet, 2008, p.1897). The decision by the IOC in 2007 to award the Winter Olympics to Russia appears to have been a political gesture and/or commercial opportunity to extend Olympism into the former communist world, along the lines of the Summer Olympics of 2008 in Beijing. For Russia and President Vladimir Putin in particular, the Olympics was to be a national project and symbolic of a resurgent Russia (Orttung and Zhemukhov, 2014). The bid proposed to develop the small mountain village of Krasnaya Polyana in the Caucasus Mountains from almost nothing into a new 'world class' winter sports resort to be used for the venues of the snow competitions together with the existing seaside resort of Sochi as the venue for the ice competitions. Sochi is located in a sub-tropical coastal region, while Krasnaya Polyana, 49km away, is part of an alpine mountain range (see Figure 7). Besides eleven new Olympic sports facilities and over 19,000 new hotel rooms (IOC, 2007, pp.18 and 24), substantial investment was made in power and gas lines, telecommunications, water supplies and transport. No less than seven power

stations (some thermoelectric and hydro-electric) were constructed or refurbished to increase the capacity of the region's energy network by 2.5 times and secure a stable power supply for the event and beyond (Sochi Organising Committee, 2009). A new terminal was built at Sochi airport, together with a new offshore terminal at Sochi seaport. A light railway was constructed from the airport to the Olympic Park. Transport between Sochi and Krasnaya Polyana was enhanced by the reconstruction of the railway to a double track line and a new motorway (IOC, 2007, pp.25-26). The total costs associated with these developments have been estimated at more than US\$50 billion (Trubina, 2015, p.2) and so appeared to be at odds with the IOC's concern to reduce the cost and scale of Olympic events. One estimate equated the cost of this government investment to be about 60,000 Euros per inhabitant of the region (Müller, 2012, p.697).

Serious environmental concerns also existed over the preparations as some the venues were located in the Sochi National Park and the Caucasus State Biosphere Reserve (an UNESCO World Heritage Area). Initially, the National Park was to be re-zoned to allow the construction of an Olympic Village in Krasnaya Polyana and the bobsleigh and luge runs in a buffer zone of the Reserve. In July, 2008, Vladimir Putin, then the Russian Prime Minister, ordered the Olympic facilities noted above to be relocated. Putin is reported as having stated that "in setting our priorities and choosing between money and the environment, we're choosing the environment" (Finn, 2008). It later emerged that the boundaries of the reserve were changed to accommodate the development (Alekseyeva, 2014, p.165). An appeal by Greenpeace Russia to the Russian Supreme Court about these environmental concerns was rejected (IOC, 2007, p.14; GamesBids.com, 2007). Müller (2013, p.28)

argues that the sustainability agenda for Sochi was framed by and for an international audience and so was out of tune with the realities of environmental politics in Russia and national conceptions of sustainable development and nature-society relationships (Müller, 2013, p.14).

The Sochi Games were controversial in other ways, not least related to violations of human rights. During the land assembly for the Olympic infrastructure, concerns were raised about the expropriation of property and resettlement of residents with no right of appeal, together with the treatment of migrant construction workers who had to endure poor working and living conditions (Müller, 2014). Other issues raised the threat of international boycotts of the event, such as the discriminatory legislation against lesbian, gay, bisexual and transgender groups and a campaign by a diaspora of an indigenous group (Circassian) who had been defeated by tsarist forces in 1864 on the site of the Olympic facilities (Arnold and Foxall, 2014).

Security concerns were also voiced over the 2014 Winter Olympics because Sochi is located close to the disputed region of Abkhazia (Georgia). A website ([RevoketheGames.com](http://RevoketheGames.com)) was set up to draw attention to Russia's attack on Georgia in 2008 and to campaign for the 2014 event to be moved from Sochi to another host. In November, 2008, the Georgian National Olympic Committee requested that the IOC reconsider its decision to award an Olympics which would be staged close to a conflict zone. The IOC rejected the request because security was the responsibility of the Russian organizers and, of course, the 2014 Games were staged as planned. Nevertheless, it is clear that the Sochi Olympics presented a number of challenges

to the IOC's concerns about the scale, cost and environmental implications of staging the games.

### **The Future**

The host city of the Winter Olympics in 2018 is PyeongChang in the Kangwon province of South Korea, which shares a border with North Korea (Merkel, 2008). The potential of the event to act as an opportunity for reunification and contribute to world peace had formed an important part of the city's previous bids for the Games in 2010 and 2014. Indeed, the two Korean teams had marched together at a number of Olympic Games between 2000 and 2006, but had failed to agree a joint team for the Beijing Olympics in 2008 (Merkel and Kim, 2011, p.2369). Its third and successful bid for the 2018 Games (in 2011) ironically did not feature prominently the idea of improving relations between the two Koreas and was a government-led project rather being led by local institutions (Merkel and Kim, 2011, p.2376). By this time, however, PyeongChang already had a number of venues completed or planned within a 30 minute radius with substantial financial support from the national government and strong public support (93 per cent approval) (see Figure 8). It won the IOC vote outright in the first round. To avoid any boycott of the 2018 Games by North Korea, South Korea might offer some competitions to be staged in the North and/or the two countries might field a joint team and/or arrange high-profile events around reconciliation and reunification (Merkel and Kim, 2011, p.2378). This case represents a very real example of where the Olympic spirit may be able to contribute to reunification where other political means have failed.

The staging of the 2022 Winter Olympics have become more problematic for the IOC. Having started with a good field of potential candidate cities (Krakow, Lviv, Munich, Oslo, St Moritz-Davos, Stockholm), only Almaty (Kazakhstan) and Beijing (China) currently remain as willing hosts. Krakow, Munich and St. Moritz-Davos all withdrew their bids because local residents had voted 'no' to staging the event in referendums. The city government in Stockholm declined to offer financial support and Lviv withdrew its bid because of political unrest in the Ukraine (Associated Press, 31 May, 2014). Beijing, with its track record with the 2008 Olympics, appeared to be a credible bid, although it lacked a natural source of snow and was reliant upon snow-making technology. On the other hand, Almaty had limited experience in hosting major international events and presented some financial risks, but at least had copious amount of snow cover and had most of the venues constructed within a 30km radius (ABC News, 10 June, 2015; IOC, 2015b). The IOC vote on these bids takes place on 31 July, 2015 in Kuala Lumpur.

The apparent increasing reluctance of cities willing to be hosts of the Olympic Games relates to the scale, cost and demands of both the event and the Olympic movement on these places. Reforms suggested by the Olympic Games Study Commission to control and limit the scale of investment in Olympic preparations at the start of Jacques Rogge's period of presidency of the IOC (IOC, 2003) have resurfaced at the start of Thomas Bach's term of office as IOC President (2013-). The Olympic Agenda 2020, agreed by the IOC in December, 2014, has revised the bid process to become an invitation and open dialogue between potential hosts and the IOC rather than as a tender bid, so that the Olympic-related infrastructure can be negotiated to suit the city's long-term development needs rather than being imposed.

The IOC appears to be moving away from the concept of a 'compact games' by allowing greater flexibility in venue locations, which can be outside the host city or even host country (IOC, 2014; IOC, 2015c). The extent to which these reforms will increase the enthusiasm of host cities to stage the Olympic Games will become apparent over the next few years. Certainly, there might be the beginning of a trend away from cities in neoliberal economies who, whilst seeking investment from the private sector, are unable to raise substantial government subsidy. In contrast, countries with a strong state, substantial government funding, and a more top-down planning culture, combined with less concern for environmental issues and a greater push for modernisation and urban transformation, are emerging as the major players as hosts of mega-events in the early twenty-first century (Müller, 2011; 2012; Trubina, 2015).

## **Discussion and Conclusions**

In parallel with the evolving experience of staging the Summer Olympics, a marked growth in the scale, complexity, sophistication, and attendant controversy is discernible in the history of the Winter Games since the 1920s. The chronological sequence of phases adopted as the organising framework of the chapter offers a means to understand both the broad changes in the scope and character of the Winter Olympics, and the specific circumstances that have affected 22 past and two forthcoming hosts of the event. Planning for the Winter Olympics (like the Summer Games) has built incrementally on the experience of past events, the gradual accumulation of knowledge and the desire to constantly raise the spectacle of the event. What emerges from this historical review are a number of clear trends and research themes.

First, the Winter Olympics has shifted from an event that has promoted winter sports tourism in single mountain resorts to an event that has begun to emulate the Summer Olympics in its ability to modernize and stimulate urban regeneration. It is now usual for the host of the Winter Olympics to comprise both a large urban centre and surrounding mountain communities. Nevertheless, the scale of investment can still represent a challenge to the hosts in ensuring that the post-Olympic legacy is positive and facilities are sustainable for what are specialised facilities dispersed around remote and mountainous rural regions. Indeed, the increasing scale of the event has introduced new infrastructural demands, such as major improvements to transport systems, enhanced security measures and projects integrating sustainable development. In some cases, the athletes' demand to be closer to competition venues has required the Winter Olympic Villages to be fragmented into smaller units. Given such investments have associated opportunity costs, the extent to which the Winter Olympic Games therefore represents a cost effective and positive force for sustainable legacies and urban revitalization policies is much contested.

Second, in economic terms, legacies appear mixed, with the impacts often experienced as an 'intermezzo', that is a short dramatic interlude yielding a poor long-term return on investment (Spilling, 1998). In Spilling's research into the effects of the Lillehammer Games of 1994, new business start-ups were substantial immediately after the Games were awarded, but many did not survive. The impact of the event can also be uneven across different sectors. During the Winter Olympics in Salt Lake City, hotels and restaurants prospered (experiencing a combined estimated \$70.6m net increase in taxable sales respectively), while retailers suffered

(with a larger net loss of \$167.4m) (Baade, Baumann and Matheson, 2008). The tangible economic impacts might be short-lived but intangible impacts, such as the creation of new networks, skills and images, can have longer-term importance. Research into the effects of the 1988 Games on Calgary's image in 22 centres in America and Europe between 1986 and 1989 showed an increased awareness immediately before and after the event but tended to dissipate after a few years (Brent Ritchie and Smith, 1991).

Third, in social terms, it has proven extremely difficult to reconcile the demands of the Games with the kinds of built environment that might be suitable for residents of the locality after the Olympics have finished. Indeed, with the host city's concern to use the Winter Olympics as a development and revitalisation tool, in order to create new spaces for inward investment and tourism as well as the best possible place marketing/branding, has often led to insufficient public consultation over redevelopment plans, the displacement of former inhabitants (usually disadvantaged groups) and increased street security and surveillance. In the post-Olympic period, redeveloped areas become gentrified and obvious representations of social equality and exclusion. In some cases, such as Victoria Park following the Calgary Winter Olympics in 1988, a process of residential obsolescence was triggered, whereby uncertainty about future mega events in a residential zone around a stadium impeded investment (Hiller and Moylan, 1999). Intertwined with these issues are those human rights violations (related to land claims, treatment of migrant construction workers and discrimination against minority groups) and the commodification of the symbols of indigenous people for Olympic marketing and external image. The emergence of local action groups opposing bids for Winter

Games in several potential hosts has been indicative of some local perceptions of the negative impacts (for example, Helsinki 2006 Anti-Olympic Committee; Nolympics!, Turin, 2006; No 2010 Network and Native Anti-2010 Resistance, Vancouver, 2010).

Fourth, given that the Winter Olympics are staged in much more fragile landscapes than their summer counterparts, the environmental implications of staging the event have been much more prominent and evident, even in the earliest hosts. Habitat destruction, heat generation from refrigeration units, chemical pollution and unsuccessful restoration schemes have been common concerns in host settlements. Arguably, the sustainability agenda adopted by the IOC in 1996, and now ingrained in all Olympic events, albeit arguably a light green corporate environmentalism (Lenskyj, 1998), was a direct outcome of the criticism of the Albertville Games in 1992 and the example set at Lillehammer in 1994. Each successive Olympic Games has subsequently claimed to be the most sustainable ever, although practices now appear to be relatively established in terms of recycling measures, low carbon emissions and/or offsetting, environmental procurement and compliance standards, and environmental monitoring. The extent to which the Sochi Olympics ran counter to the IOC's expectations in some of these areas raised questions about the institution's ability to hold host cities accountable to their bid promises and accepted international norms.

Fifth, despite more entrepreneurial approaches to the urban management of the Olympics, the role of the public sector appears to remain central to the organization and, to a certain extent, the funding of the event. The initial motivation to stage the

Winter Olympics might emanate from business coalitions and the generation of income through corporate sponsorship and television revenue, but it is public-sector expenditure that is usually pivotal to the success of the event. The French Government treated Grenoble 1968 as an *affaire nationale*, met 80 per cent of the basic sports installation costs and provided a subsidy of 20 million francs for operational expenses (COJO, 1968, p. 39). While the Albertville Games of 1992 were originally conceived as a means of regional modernization by local businessmen, it was the French government that funded the project. Similarly, the Norwegian government covered the huge costs and debts of Lillehammer 1994. The staging of the Winter Olympics in Turin in 2006 was pivotal in the city's transformation from an industrial to a post-industrial centre and the Sochi event in 2014 represented a 'national project' to create a new ski and winter sports resort in Russia.

Sixth, the debate about the increasing size of the Winter Olympics has been a long-running affair. Preparations for the Oslo Winter Games in 1952 included consideration of a proposal to reduce the number of events. It was feared that the increasing size of each Winter Games would detrimentally affect their character and make it impossible for any town to undertake the necessary arrangements.<sup>7</sup> There is no record of the response to this proposal but, in practice, the Games continued to grow. Avery Brundage, the IOC President from 1952 to 1972, criticized the huge expenditures at the Grenoble Games of 1968. He wrote: 'the French spent \$240m ... and when you consider that this was for ten days of amateur sport, it seems to be somewhat out of proportion. With that kind of money involved there is bound to be commercialization of one kind or another' (quoted in Espy, 1979, p. 136). As a result

of related controversies, Brundage hoped that the whole Winter Olympics would receive a 'decent burial' at Denver, the original host of the Winter Games of 1976 (Espy, 1979, p.135). Nonetheless, the Winter Games has survived and, in terms of its scope and size, it has continued its upward trajectory. The risks of staging a Winter Olympics are now immeasurably greater as issues of financial debt, uncertainty over legacy, security and terrorism, political reputation and corruption can potentially taint the best prepared of hosts. The limited field of finalist cities for the 2022 event is the clearest manifestation of these concerns and, depending on the outcomes from the IOC's Olympic Agenda 2020, a potential theme for the next phase in the trajectory of the Winter Olympics.

## **Notes**

1. The Nordic Games, founded in 1901, were organized by the Swedish Central Association for the Promotion of Sports. The Holmenkollen Week is a leading Norwegian winter sports event.
2. 'Skeleton' refers to a one-person sled which is driven by a competitor in a prone, head-first position down an ice track. The availability of the run at St Moritz meant that the event was held there as part of the 1948 Winter Olympics, although it was generally referred to as 'tobogganing'.
3. Olympic Museum Archive, Lake Placid General file 1928–1991. Letter, G. Dewey, Chairman of Lake Placid, to M. Le Comte, President of the International Federation of Bobsleigh and Tobogganing, Paris, 9 November 1929.
4. Olympic Museum Archive, Lake Placid General file 1928–1991. Letter from IOC, 29 March 1930.
5. Overlays are temporary structures such as walkways, which are required for the Games, but might be removed after the event itself.
6. A quality benchmark 'first published as a standard in 1996 and it specifies the requirements for an organisation's environmental management system. It applies to those environmental aspects over which an organisation has control and where it can be expected to have an influence' (BAB, 2010).
7. Olympic Museum Archive, Oslo Correspondence COJO, 1947–1953. Undated draft of suggestion of the Special Committee regarding the reduction of the sports' programme of the Olympic Games, Jeux Olympiques de 1952 Oslo Correspondence COJO, 1947–1953.

## **ACKNOWLEDGEMENTS**

The authors wish to acknowledge use of the IOC Archives, Olympic Studies Centre, Lausanne for some of the material presented in this paper. Thanks also to Professor Brian Chalkley for his collaboration in previous Olympic-related papers and to Professor Mark Brayshay for his comments and advice on an earlier draft of this chapter. Credit also to Tim Absalom and Jamie Quinn for the cartography.

## References

- ABC News (2015) *Underdog Almaty makes good showing in 2022 bid presentation*, 10 June, 2015.
- Alekseyeva, A. (2014) Sochi 2014 and the rhetoric of a new Russia: image construction through mega-events, *East European Politics*, 30 (2), 158-174.
- Arnold, R. and Foxall, A. (2014) Lord of the (Five) Rings, *Problems of Post-Communism*, 61 (1), 3-12.
- Associated Press (2014) *IOC struggling to find cities to host Olympics*, 31 May, 2014.
- Baade, R.A., Baumann, R. and Matheson, V.A. (2008) *Slippery slope? Assessing the economic impact of the 2002 Winter Olympic Games in Salt Lake City, Utah*, Department of Economics Faculty Research Series, Paper 08-15, College of the Holy Cross, Massachusetts.
- BAB (British Assessment Bureau) (2010) ISO 14001:2004 (ISO 14000) Certification. <http://www.british-assessment.co.uk/ISO-14001-certification-services.htm>, accessed 6 April 2010.
- Bondonio, P. and Guala, C. (2011) Gran Torino? The 2006 Olympic Winter Games and the tourism revival of an ancient city, *Journal of Sport and Tourism*, 16 (4), 303-321.
- Booth, D. (1999) Gifts of Corruption? Ambiguities of obligation in the Olympic movement, *Olympika: The International Journal of Olympic Studies*, 8, 43-68.
- Borja, F. (1992) *The Winter Olympic Games: Albertville 1992: A Case Study*, Paris: The American University of Paris.
- Bottero, M., Sacerdotti, S.L. and Mauro, S. (2012) Turin 2006 Olympic Winter Games: impacts and legacies from a tourism perspective, *Journal of Tourism and Cultural Change*, 10 (2), 202-217.
- Boyle, P. and Haggerty, K.D. (2011) Civil Cities and Urban Governance: Regulating Disorder for the Vancouver Winter Olympics, *Urban Studies*, 48 (15), 3185-3201.
- Brent Ritchie, J.R. and Smith, B.H. (1991) The impact of a mega-event on host region awareness: a longitudinal study, *Journal of Travel Research*, 30 (1), 3-10.

California Olympic Commission (1960) *VIII Olympic Winter Games Squaw Valley, California, Final Report*, Squaw Valley: Organising Committee.

Cantelon, H. and Letters, M. (2000) The Making of the IOC Environmental Policy as the third dimension of the Olympic Movement, *International Review for the Sociology of Sport*, 35 (3), 294-308.

Chalkley, B. and Essex, S. (1999) Urban development through hosting international events: a history of the Olympic Games, *Planning Perspectives*, 14 (4), 369-394.

Chappelet, J-L. (1997) From Chamonix to Salt Lake City: Evolution of the Olympic Village Concept at the Winter Games, in De Moragas, M., Llines, M. and Kidd, B. (Eds.) *Olympic Villages: A Hundred Years of Urban Planning and Shared Experiences*, *International Symposium on Olympic Villages*, Lausanne: Documents of the Museum, pp.81-88.

Chappelet, J-L. (2002a) *A short overview of the Olympic Winter Games*, Barcelona: Centre d'Estudis Olímpics I de l'Esport (UAB). 16pp.

Chappelet, J-L. (2002b) From Lake Placid to Salt Lake City: The challenging growth of the Olympic Winter Games since 1980, *European Journal of Sport Science*, 2 (3), 1-21.

Chappelet, J-L. (2008) Olympic environmental concerns as a legacy of the Winter Games, *International Journal of the History of Sport*, 25 (14), 1884-1902.

Charmetant, R. (1997) Albertville: Olympism and Architecture, in De Moragas, M., Llines, M. and Kidd, B. (Eds.) *Olympic Villages: A Hundred Years of Urban Planning and Shared Experiences*, *International Symposium on Olympic Villages*, Lausanne: Documents of the Museum, pp.109-115.

Comitato Olimpico Nazionale Italiano (1956) *VII Giochi Olimpici Inversnali, Cortina D'Ampezzo, Rapporto ufficiale*, Rome: Comitato Olimpico Nazionale Italiano.

Comité D'Organisation des Xemes Jeux Olympiques D'hiver (1968) *Official Report Xth Winter Olympic Games*, Grenoble: Organising Committee.

Cook, I. and Ward, K. (2011) Trans-urban networks of learning, mega events and policy tourism: the case of Manchester's Commonwealth and Olympic Games Projects, *Urban Studies*, 48 (12), 2519-2535.

Dansero, E., Segre, A. and Mela, A. (2003) Spatial and environmental transformations towards Torino 2006: Planning the legacy of the Future, in de Moragas, M., Kennett, C. and Puig, N. (Eds.) *The Legacy of the Olympic Games 1984-2000*, Documents of the Museum, International Olympic Committee, Lausanne, pp.83-93.

Esparza, L.E. and Price, R. (2015) Convergence repertoires: anti-capitalist protest at the 2010 Vancouver Winter Olympics, *Contemporary Justice Review: Issues in Criminal, Social and Restorative Justice*, 18 (1), 22-41.

Espy, R. (1979) *The Politics of the Olympic Games*, Berkeley: University of California Press.

Essex, S. and Chalkley, B. (1998) Olympic Games: catalyst of urban change, *Leisure Studies*, 17 (3), 187-206.

Essex, S. and Chalkley, B. (2002) Il ruolo dei Giochi Olimpici nella trasformazione urbana, in Bobbio, L. and Guala, C. (Eds.) *Olimpiadi e Grandi Eventi*, Rome: Carocci, pp.57-76.

Essex, S. and Chalkley, B. (2004) Mega-Sporting Events in Urban and Regional Policy: A History of the Winter Olympics, *Planning Perspectives*, 19 (2), 201-232.

Falk, N. (2003) Urban renaissance: lessons from Turin, *Town and Country Planning*, 72 (7), 213-215.

Finn, P. (2008) Putin directs organisers of 2014 Winter Olympics to protect wilderness, *The Washington Post*, 3 July, 2008.

GamesBid (2009) Supreme Court rejects environmentalists appeal of Sochi 2014, 21 March, 2007, [www.gamesbid.com/eng/other\\_news/1174503225.html](http://www.gamesbid.com/eng/other_news/1174503225.html) (accessed on 14 August, 2009).

Hall, C.M. (1992) *Hallmark Tourist Events: Impacts, Management and Planning*, London: Belhaven.

Herausgegeben vom Organisationskomitee der IX Olympischen Winterspiele in Innsbruck (1967) *Offizieller Bericht der IX Olympischen Winterspiele Innsbruck 1964*, Wien und Munchen: Österreichischer Bundesverlag für Unterricht, Wissenschaft und Kunst, p.400.

Hiller, H. (1990) The urban transformation of a landmark event: The 1988 Calgary Winter Olympics, *Urban Affairs Quarterly*, 26 (1), 118-137.

Hiller, H. and Moylan, D. (1999) Mega-events and community obsolescence: redevelopment versus rehabilitation in Victoria Park East, *Canadian Journal of Urban Research*, 8, 47-81.

Holden, M., MacKenzie, J. and VanWynsberghe, R. (2008) Vancouver's promise of the world's first sustainable Olympic Games, *Environment and Planning C: Government and Policy*, 26 (5), 882-905.

IOC (1999a) *Final Recommendations for IOC Reform published*, Press Release, 24 November, 1999, Lausanne: IOC.

IOC (1999b) *IOC Crisis and Reform Chronology*, Lausanne: IOC.

IOC (2003) *Olympic Games Study Commission: Report to the 115<sup>th</sup> IOC Session, Prague, July, 2003*, Lausanne: IOC.

IOC (2007) *IOC 2014 Evaluation Committee Report for XXII Olympic Winter Games in 2014*, Lausanne: IOC.

IOC (2014) *Olympic Agenda 2020: Context and Background*, Lausanne: IOC.

IOC (2015a) Olympic Winter Games. [http://www.olympic.org/uk/games/index\\_uk.asp](http://www.olympic.org/uk/games/index_uk.asp), accessed 9 June, 2015.

IOC (2015b) *Report of the 2022 Evaluation Commission*, Lausanne: IOC.

IOC (2015c) Bidding for Success: by invitation, *Olympic Review*, April-May-June, Number 95, Lausanne: IOC, pp.31-33.

IOC Olympic Studies Centre (various) *Archives: Documentation files*, Lausanne: IOC OSC.

Kettle, M. (1999) Corruption probe spares Samaranch, *Guardian*, 2 March, 1999.

Lake Placid Olympic Organising Committee (1980) *XIII Olympic Winter Games, Lake Placid New York, Final Report*, Lake Placid: Lake Placid Olympic Organising Committee.

Lenskyj, H. (1998) Sport and Corporate Environmentalism: The Case of the Sydney 2000 Olympics, *International Review for the Sociology of Sport*, 33 (4), 341-354.

Lenskyj, H. (2000) *Inside the Olympic Industry: Power, Politics and Activism*, Albany: State University of New York Press.

Lesjø, J.H. (2000) Lillehammer 1994: Planning, Figurations and the 'Green' Winter Games, *International Review for the Sociology of Sport*, 35 (3), 282-293.

May, V. (1995) Environmental implications of the 1992 Winter Olympic Games, *Tourism Management*, 16 (4), 269-275.

Merkel, U. (2008) The politics of sport diplomacy and reunification in divided Korea, *International Review for the Sociology of Sport*, 43 (3), 289-311.

Merkel, U. and Kim, M. (2011) Third time lucky!? PyeongChang's bid to host the 2018 Winter Olympics-politics, policy and practice, *The International Journal of the History of Sport*, 28 (16), 2365-2383.

Müller, M. (2011) State dirigisme in megaprojects: governing the 2014 Winter Olympics in Sochi, *Environment and Planning A*, 43, 2091-2108.

Müller, M. (2012) Popular perception of urban transformation through megaevents: understanding support for the 2014 Winter Olympics in Sochi, *Environment and Planning C*, 30, 693-711.

Müller, M. (2013) Greening Russia? Mobilising sustainability for the 2014 Olympic Games in Sochi, Working Paper, April, 2013. Available from [www.martin-muller.net](http://www.martin-muller.net)

Müller, M. (2014) Introduction: Winter Olympics Sochi 2014: what is at stake?, *East European Politics*, 30 (2), 153-157.

O'Bonsawin, C.M. (2010) 'No Olympics on stolen native land': contesting Olympic narratives and asserting indigenous rights within the discourse of the 2010 Vancouver Games, *Sport and Society: Cultures, Commerce, Media, Politics*, 13 (1), 143-156.

O'Connor, A. (2009) Vancouver struggling to cover cost of Winter Olympics, *Times*, 12 February, 2009.

Olson, L.L.K. (1974) *Power, Public Policy and the Environment: The Defeat of the 1976 Winter Olympics in Colorado*, University of Colorado: PhD thesis, Department of Political Science.

Organisasjonskomiteen (1952) *VI Olympiske Vinterleker Oslo 1952*, Oslo: Organisasjonskomiteen.

Ortloff, G.C. and Ortloff, S.C. (1976) *Lake Placid: The Olympic Years, 1937-1980*, Lake Placid: Macromedia.

Orttung, R.W. and Zhemukhov, S. (2014) The 2014 Sochi Olympic mega-project and Russia's political economy, *East European Politics*, 30 (2), 175-191.

Perry, K-M. E. and Kang, H.H. (2012) When Symbols Clash: Legitimacy, Legality and the 2010 Winter Olympics, *Mass Communication and Society*, 15 (4), 578-597.

Pinson, G. (2002) Political Government and Governance: strategic planning and the reshaping of political capacity in Turin, *International Journal of Urban and Regional Research*, 26 (3), 477-493.

PyeongChang Olympic and Paralympic Winter Games Bid Committee (2011) *PyeongChang 2018 New Horizons, Volume 2*, PyeongChang 2018 Olympic and Paralympic Winter Games Bid Committee, PyeongChang, South Korea.

Rosso, E. (2004) *Torino: policies and actions at a metropolitan level*, Paper presented at the La Gouvernance Metropolitaine Conference, Montreal, 7-8 October, 2004.

Salt Lake City Organizing Committee (2002) *Official Report of the XIX Olympic Winter Games, Volume 1*, SLOC, Salt Lake City.

Sandomir, R. (1999) Olympics: Inquiry cites Olympic 'culture' of impropriety, *The New York Times*, 2 March, 1999.

Sochi Olympic Organising Committee (2009) *Games 2014 will double Sochi power supply*, <http://sochi2014.com/87868> (accessed on 10 August, 2009).

Spilling, O. (1998) Beyond intermezzo? On the long-term industrial impacts of mega-events: the case of Lillehammer 1994, *Festival Management and Event Tourism*, 5, 101-122.

Terret, T. (2008) The Albertville Winter Olympics: Unexpected legacies – failed expectations for regional economic development, *The International Journal of the History of Sport*, 25 (14), 1903-1921.

Toohey, K. and Veal, A.J. (2000) *The Olympic Games: A Social Science Perspective*, Wallingford: CAB International.

Trubina, E. (2015) Mega-events in the context of capitalist modernity: the case of 2014 Sochi Winter Olympics, *Eurasian Geography and Economics*, DOI:10.1080/15387216.2015.1037780

Tuppen, J. (2000) The Restructuring of Winter Sports Resorts in the French Alps: Problems, Processes and Policies, *International Journal of Tourism Research*, 2, 327-344.

Turin Winter Olympic Games Organizing Committee (TOROC) (2006) *Sustainability Report for XX Olympic Winter Games Torino 2006*, TOROC, Turin.

Vanolo, A. (2015) The image of the creative city, eight years later: Turin, urban branding and the economic crisis taboo, *Cities*, 46, 1-7.

Warren, R. (2002) Situating the city and September 11<sup>th</sup>: military urban doctrine, 'pop-up' armies and spatial chess, *International Journal of Urban and Regional Research*, 26 (3), 614-619.

Winkler, A. (2007) *Torino: City Report*, Centre for Analysis of Social Exclusion, London: London School of Economics.

III Olympic Winter Games Committee (1932) *Official Report III Olympic Winter Games, Lake Placid*, New York: III Olympic Winter Games Committee.

XV Olympic Winter Games Committee/Calgary Olympic Development Association (1988) *XV Olympic Winter Games: Official Report*, Calgary: Organising Committee.

2010 Legacies Now (2008) *Collaborate, Participate, Celebrate: Annual Review 2007-08*, Vancouver: 2010 Legacies Now.

2010 Legacies Now (2009) *About us website*, [http://www.2010legaciesnow.com/about\\_us/](http://www.2010legaciesnow.com/about_us/) (accessed 12 August, 2009).

**Table 1. Host cities and candidate cities for the Winter Olympic Games, 1924-2006**

Games	Host city	Host nation	Other candidate cities
1924	Chamonix	France	-
1928	St. Moritz	Switzerland	Davos, Engelberg, (Switzerland)
1932	Lake Placid	USA	Montreal (Canada), Bear Mountain, Yosemite Valley, Lake Tahoe, Duluth, Minneapolis, Denver (USA)
1936	Garmisch-Partenkirchen	Germany	St Moritz (Switzerland)
1948	St. Moritz	Switzerland	Lake Placid (USA)
1952	Oslo	Norway	Cortina (Italy), Lake Placid (USA)
1956	Cortina	Italy	Colorado Springs, Lake Placid (USA), Montreal (Canada)
1960	Squaw Valley	USA	Innsbruck (Austria), St Moritz (Switzerland), Garmish-Partenkirchen (Germany)
1964	Innsbruck	Austria	Calgary (Canada), Lahti/Are, (Sweden)
1968	Grenoble	France	Calgary (Canada), Lahti/Are (Sweden), Sapporo (Japan), Oslo (Norway), Lake Placid (USA)
1972	Sapporo	Japan	Banff (Canada), Lahti/Are (Sweden), Salt Lake City (USA)
1976	Innsbruck	Austria	Denver (USA), Sion (Switzerland), Tampere/Are (Finland), Vancouver (Canada)
1980	Lake Placid	USA	Vancouver-Garibaldi (Canada): withdrew before final vote
1984	Sarajevo	Yugoslavia	Sapporo (Japan), Falun/Göteborg (Sweden)
1988	Calgary	Canada	Falun (Switzerland), Cortina (Italy)
1992	Albertville	France	Anchorage (USA), Berchtesgaden (Germany), Cortina (Italy), Lillehammer (Norway), Falun (Sweden), Sofia (Bulgaria)
1994	Lillehammer	Norway	Anchorage (USA), Östersund/Are (Sweden), Sofia (Bulgaria)
1998	Nagano	Japan	Aoste (Italy), Jaca (Spain), Östersund (Sweden), Salt Lake City (USA)
2002	Salt Lake City	USA	Östersund (Sweden), Quebec City (Canada), Sion (Switzerland)
2006	Turin	Italy	Helsinki (Finland), Klagenfurt (Austria), Poprad-Tatry (Slovakia), Sion (Switzerland), Zakopane (Poland)
2010	Vancouver	Canada	PyeongChang (South Korea), Salzburg (Austria)
2014	Sochi	Russia	PyeongChang (South Korea), Salzburg (Austria)
2018	Pyeongchang	South Korea	Annecy (France), Munich (Germany)
2022	To be decided on 31 July 2015 at 128th IOC Session, Kuala Lumpur		Almaty (Kazakhstan), Beijing (China). Withdrawn: Oslo (Norway)

Source: Compiled by the authors from IOC (2015a).

**Table 2. The Strategic Plan for Turin, 2000**

Six lines of strategy	20 objectives (examples)	84 actions
To integrate the metropolitan area into the international system	<ul style="list-style-type: none"> <li>To develop international cooperation networks</li> <li>To facilitate access to Turin</li> <li>To improve mobility within the city</li> </ul>	<ul style="list-style-type: none"> <li>A standardized, integrated communication plan for the international promotion of Turin</li> <li>Privatization and expansion of – and improved access to – Torino-Caselle airport</li> <li>Participation in the creation of the Turin-Milan and Turin-Lyon sections of the high-speed railway</li> <li>Construction of an underground rail network linking the various Turin mainline stations</li> <li>Construction of a metro line between Collegno and Lingotto via Porta Nouva</li> </ul>
To construct metropolitan government	<ul style="list-style-type: none"> <li>To create new forms of governance</li> <li>To construct services for the metropolitan area</li> </ul>	<ul style="list-style-type: none"> <li>To institute a Metropolitan Conference</li> <li>To constitute the Torino Internazionale Association to monitor the strategic plan</li> <li>To create a Metropolitan Transport Agency</li> </ul>
To develop training and research as strategic resources	<ul style="list-style-type: none"> <li>To strengthen a university centre of international level and appeal</li> <li>To foster the development of research in tandem with economic initiatives</li> <li>To promote vocational training and work-training integration</li> </ul>	<ul style="list-style-type: none"> <li>To build new university sites</li> <li>Enlargement of the Polytechnic</li> <li>To involve research centres in international collaboration networks</li> <li>To establish links between research and business</li> <li>To create two business incubators within the city's two universities</li> </ul>

<p>To promote enterprise and employment</p>	<ul style="list-style-type: none"> <li>• To develop the innovative potential of the production system</li> <li>• To create conditions favourable to the development of new enterprise</li> <li>• To promote local development and active employment policies</li> </ul>	<ul style="list-style-type: none"> <li>• To upgrade 'technology districts' by setting up shared services in the fields of training, quality assurance and the environment</li> <li>• To create a structure for technology transfer</li> <li>• To develop an aerospace centre around the Alenia company</li> <li>• To develop an Internet Exchange at the Environment Park</li> <li>• To develop an Information and Communication Technology Centre around the Telecom Italia and Motorola research centres</li> <li>• To develop an insurance and financial services centre</li> <li>• To create a new body to assist business start-up activity</li> <li>• To support the 'territorial pacts' launched by the Province of Turin</li> </ul>
<p>To promote Turin as a city of culture, tourism, commerce and sport</p>	<ul style="list-style-type: none"> <li>• To enhance and develop the city's cultural heritage</li> <li>• To coordinate cultural activities and to schedule events of international standing</li> <li>• To develop the tourist industry</li> <li>• To position Turin/Piedmont in the national and international tourist markets</li> <li>• To support growth and innovation of the region's commercial</li> </ul>	<ul style="list-style-type: none"> <li>• To rethink the city's system of museums and relocate the Egyptian Museum</li> <li>• To promote Turin as a 'Cinema City' centred around the National Cinema Museum in Mole Antonelliana</li> <li>• To improve and develop hotel facilities for the 2006 Winter Olympic Games</li> <li>• To develop tourist activities linked to sport</li> <li>• To build an Olympic village to contribute to</li> </ul>

	<p>network</p> <ul style="list-style-type: none"> <li>• To use the 2006 Winter Olympic Games as a driver for development and international promotion</li> </ul>	<p>urban regeneration</p> <ul style="list-style-type: none"> <li>• To build new sports infrastructures</li> </ul>
<p>To improve the quality of the city</p>	<ul style="list-style-type: none"> <li>• New 'centres' providing focal points for local facilities; urban renewal and social integration as a strategy for spreading prosperity, cohesion and urban regeneration</li> <li>• Local Agenda 21, sustainable development and environmental innovation as the guide and foundation for the city's strategies</li> </ul>	<ul style="list-style-type: none"> <li>• To regenerate depressed and/or outlying districts on the model of the 'Special Project for Peripheral Areas'</li> <li>• To develop 'centres' of urban development and local identity in outlying districts</li> <li>• To create an Urban Centre</li> <li>• To promote Turin as a centre of excellence in the non-profit sector and to attract the European Third-Sector Authority to locate in the city</li> <li>• To reclaim the city's rivers and riverbanks</li> <li>• To revive public spaces</li> </ul>

SOURCE: Pinson (2002, pp.486-487).

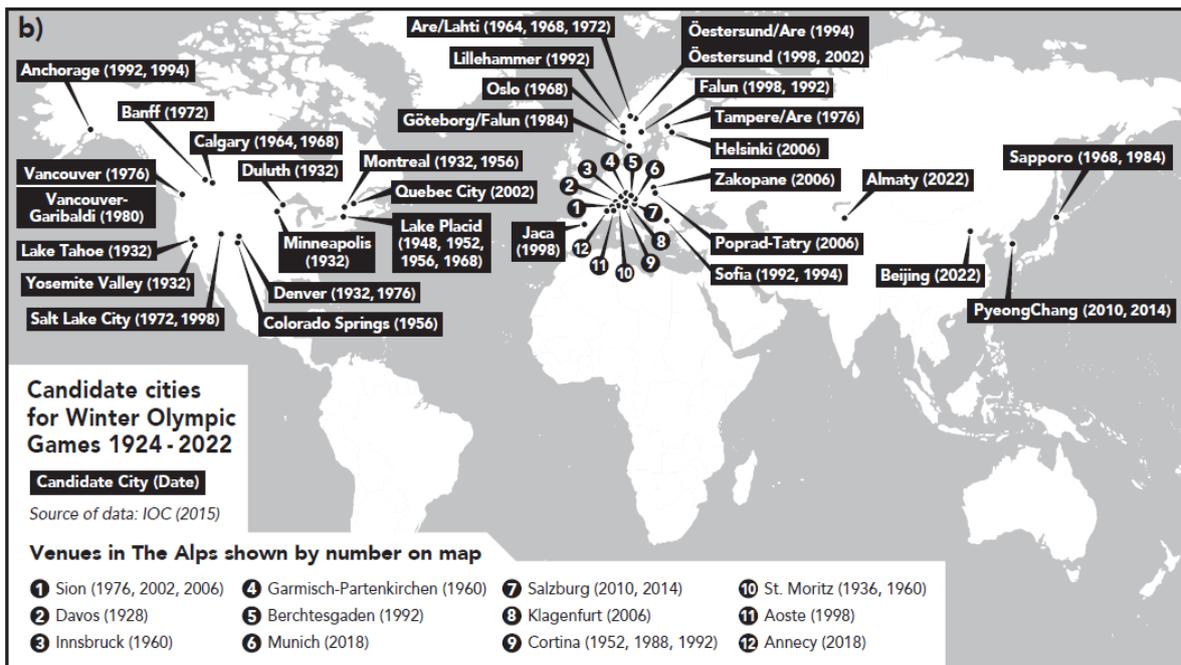
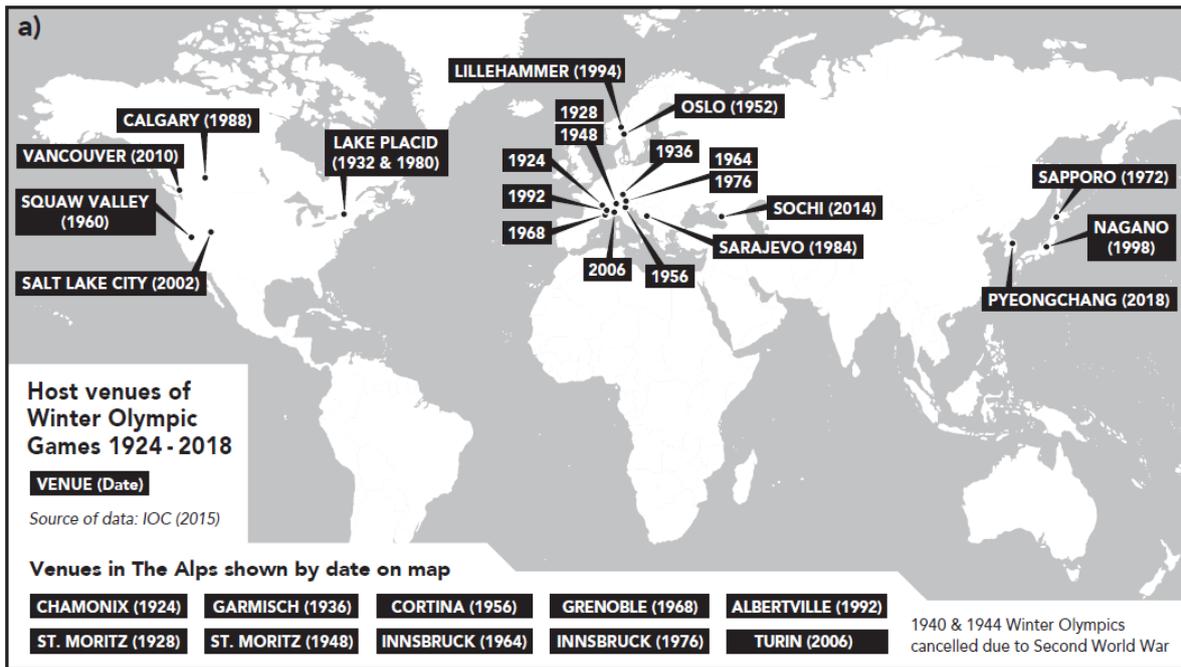


Figure 1. a) Host venues for the Winter Olympic Games, 1924-2018 and b) Candidate venues for the Winter Olympic Games, 1924-2022 (Source: International Olympic Committee, 2015a).



Figure 2 The stadium for the Winter Olympics in Chamonix in 1924.  
(Source: IOC/Olympic Museum Collections. Photograph by Auguste Couttet, used in Comité Olympique Français (1924) *Rapport Officiel, Les Jeux de la VIII Olympiade Paris*, COF, Paris, page 648).

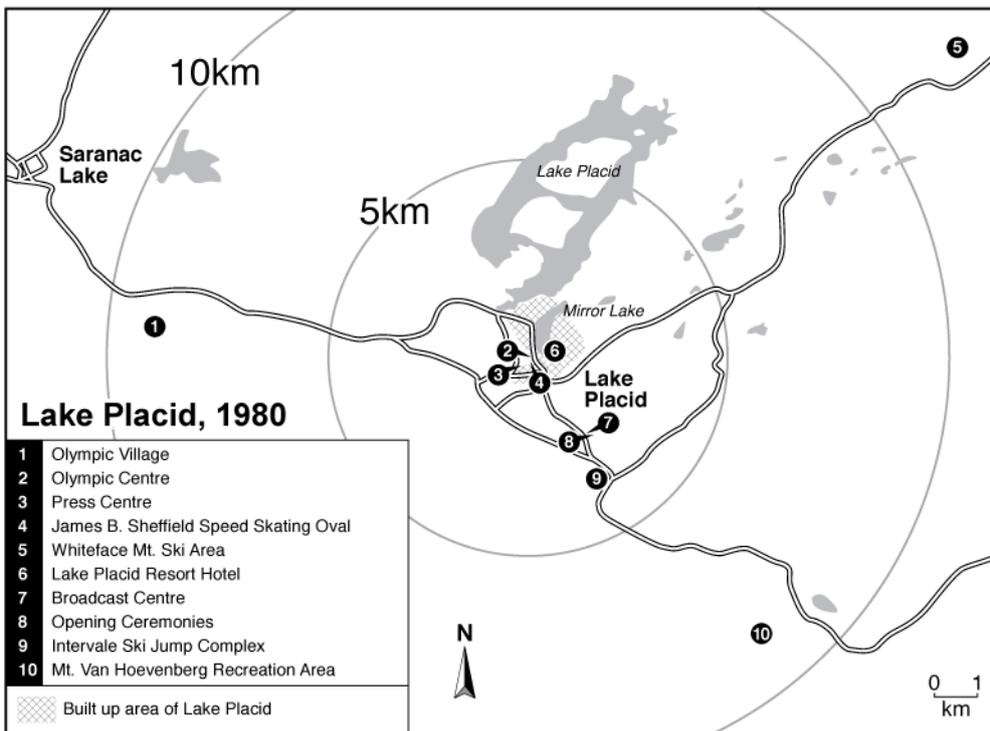
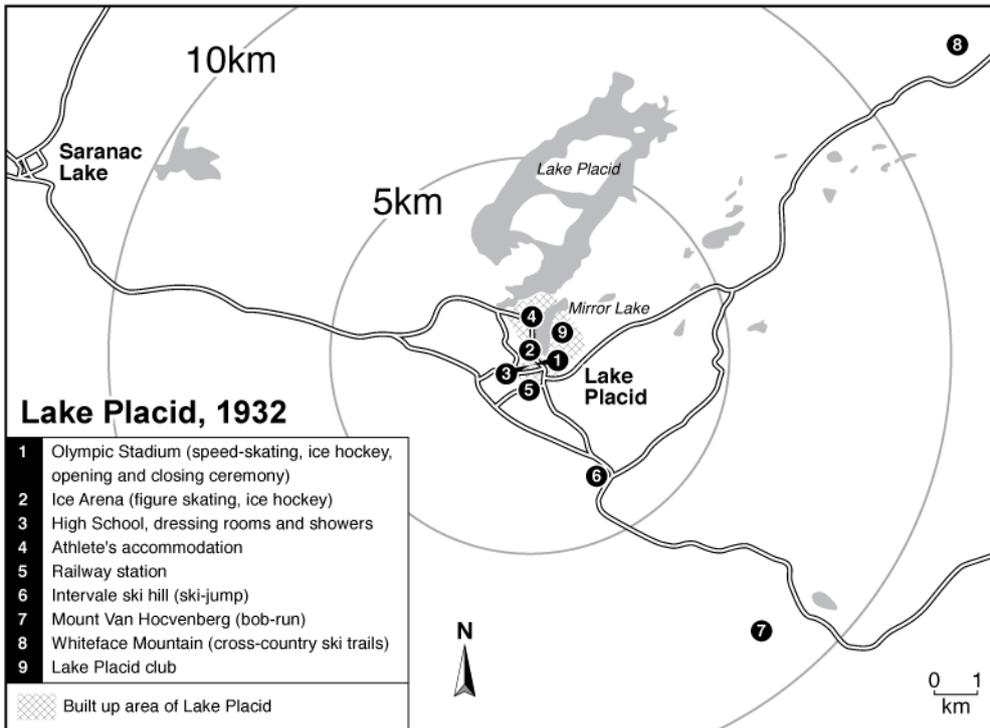


Figure 3. Comparison of the Olympic facilities provided for the Winter Olympic Games of 1932 and 1980 in Lake Placid, USA (Source: III Olympic Winter Games Committee, 1932 and Lake Placid Olympic Organising Committee, 1980).



Figure 4 The Olympic Village constructed for the Winter Olympics in Grenoble in 1968. The event was used as a tool of regional development. (Source: IOC/Olympic Museum Collections).

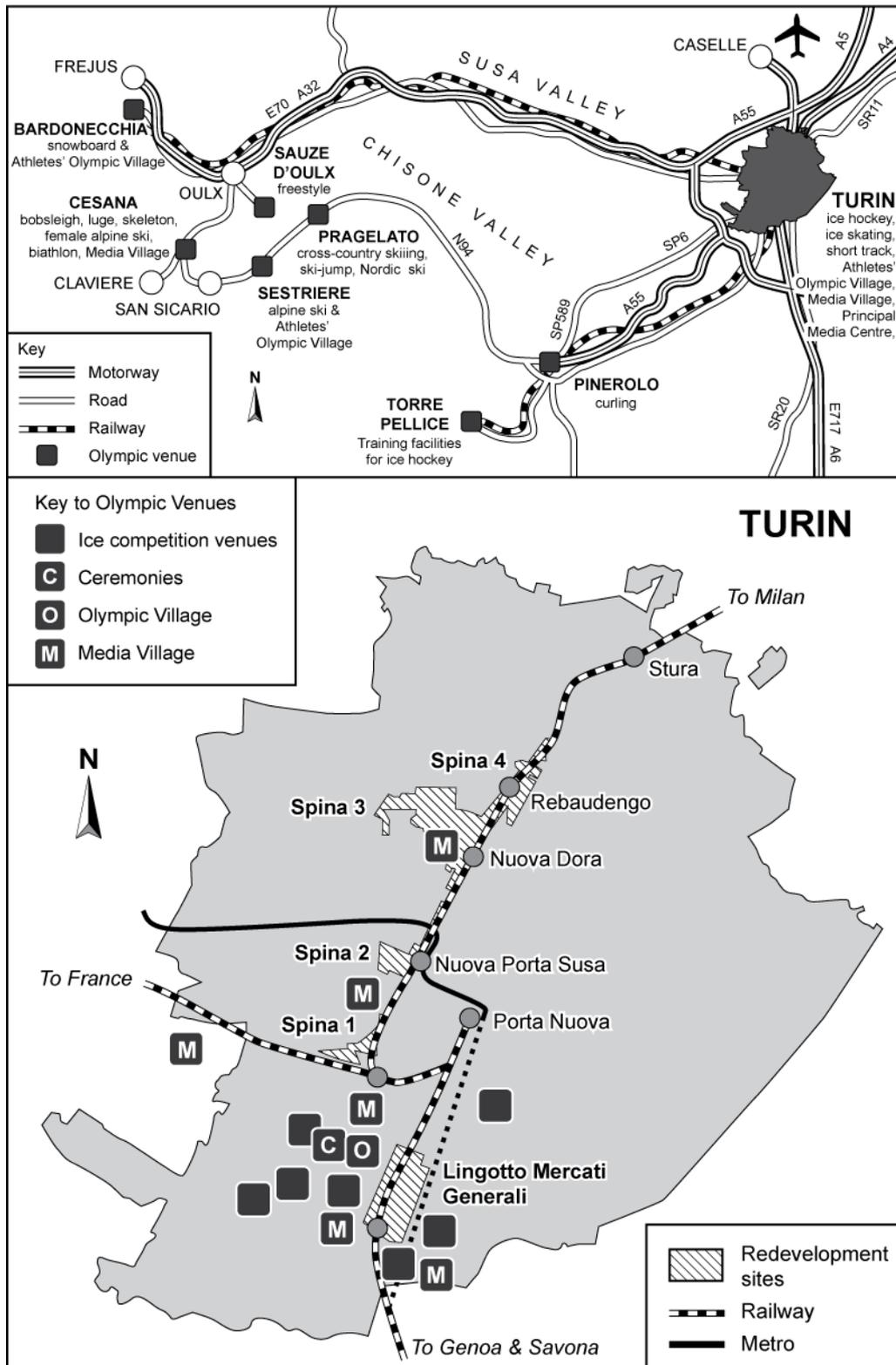


Figure 5. The regional setting of the 2006 Winter Olympics in Turin and the Urban Master Plan for the city's redevelopment devised in 1995. (Source: Winkler, 2007)



Figure 6. Redevelopment along the Spina Centrale in Turin, which reconnected the two halves of the city previously separated by a railway line, and became part of the urban transformations associated with the Winter Olympics in 2006. The restored older buildings on the left were originally a prison (1870-1986), which now operates as a museum (Museo del Carcere Le Nuove). The tower (Il Nuovo Centro Direzionale di Torino) is the headquarters of the banking group Intesa, which accommodates 2,000 employees together with a 364-seater public hall at ground level and a restaurant on the roof. This building was opened in December, 2014. (Source: Professor Christopher Balch, Plymouth University).

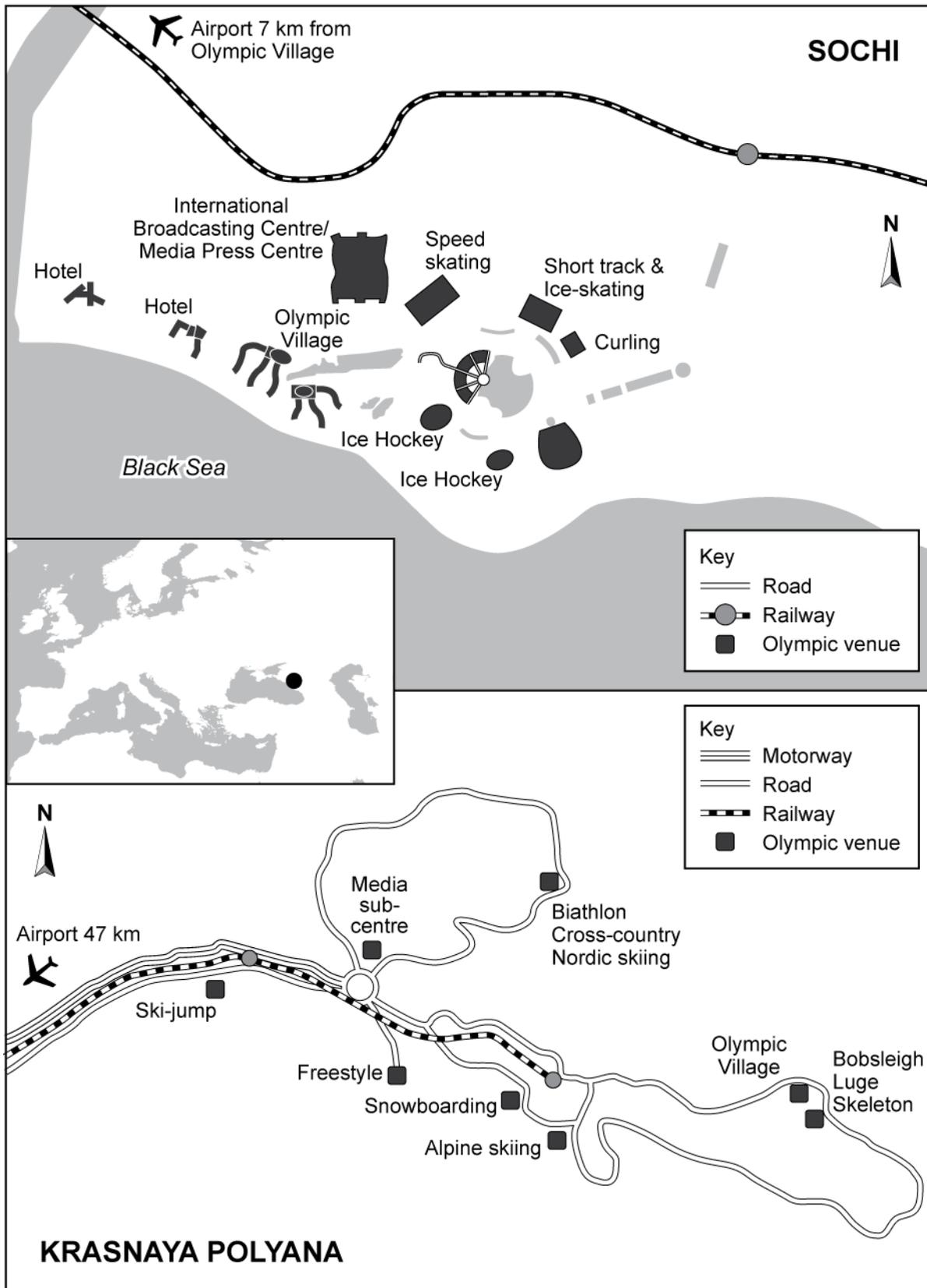


Figure 7. The geography of the Winter Olympic Games to be staged in Sochi, Russia in 2014 (Source: Sochi Olympic Organising Committee, 2009).

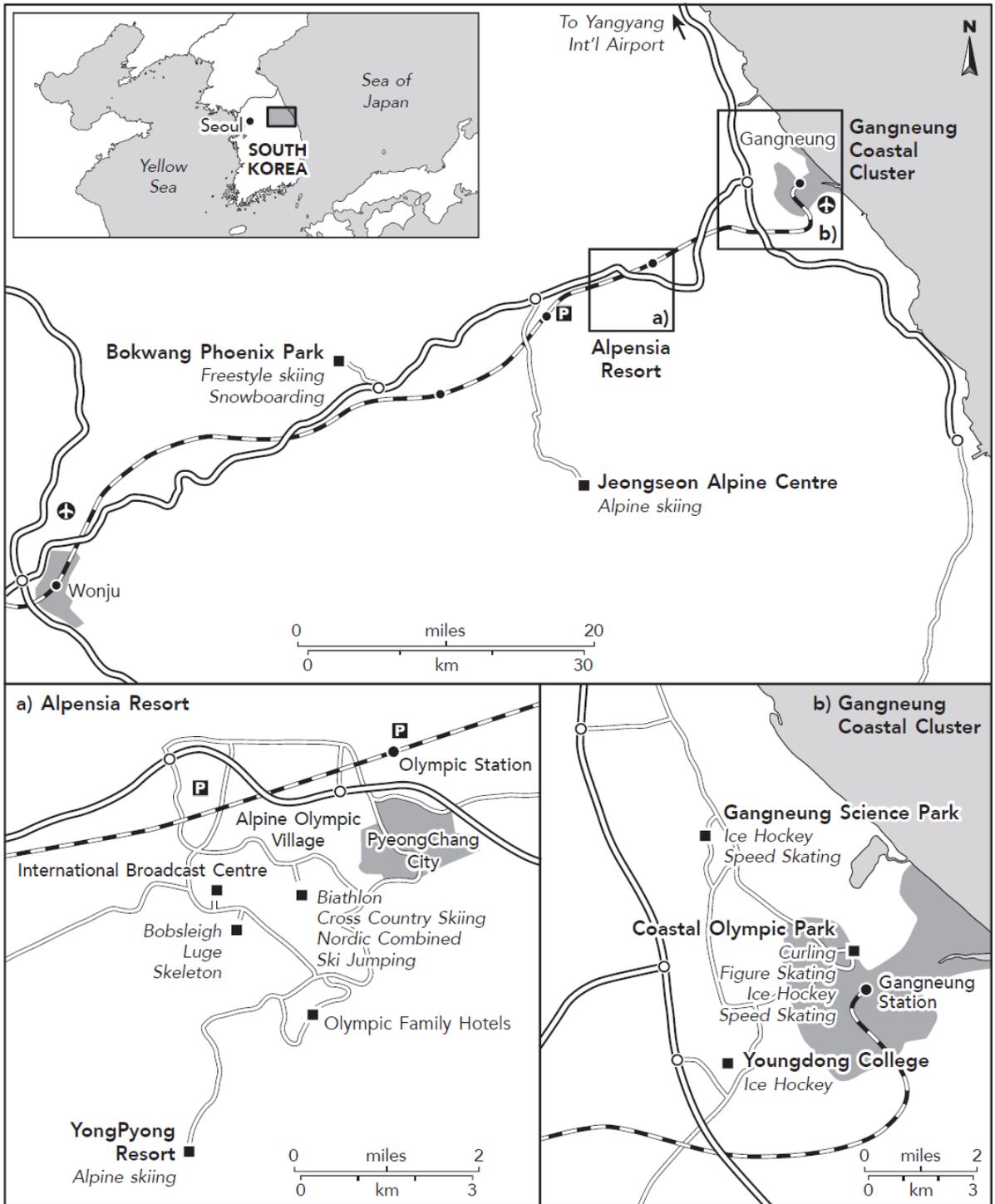


Figure 8. The geography of the Winter Olympic Games to be staged in PyeongChang, South Korea in 2018 (Source: PyeongChang Olympic and Paralympic Winter Games Bid Committee, 2011).