

AUSTRIA AND GERMANY (BAVARIA)

- Germany

For Germany, the low-lying ski areas of Bavaria will be highly affected, even by small increases in the line of natural snow-reliability. There is a considerable difference in the percentage of naturally snow-reliable ski areas between Schwaben/Swabia and Oberbayern/Upper Bavaria, with percentages of 47% and 90% respectively under present conditions, and 16% and 40% respectively under the 1 °C warming scenario. According to Matulla *et al.* (2005), regional climate classification for the Alpine arc, Swabia belongs to the northwest-southwest climatic region, and Upper Bavaria to the northeast-east climatic region. The difference in the percentage of naturally snow-reliable ski areas can therefore be explained by the different modification of the baseline of natural snow-reliability. However, under a 2 °C warming scenario and a 300 m increase in the line of natural snow-reliability, the percentage of snow-reliable ski areas would drop to 15% for Upper Bavaria and 11% for Swabia, showing hardly any difference between the two sub-regions. In general, the height of the Bavarian Alps offers very little opportunity to operate on higher elevations, making the Bavarian ski areas particularly sensitive to changes in the line of natural snow-reliability.

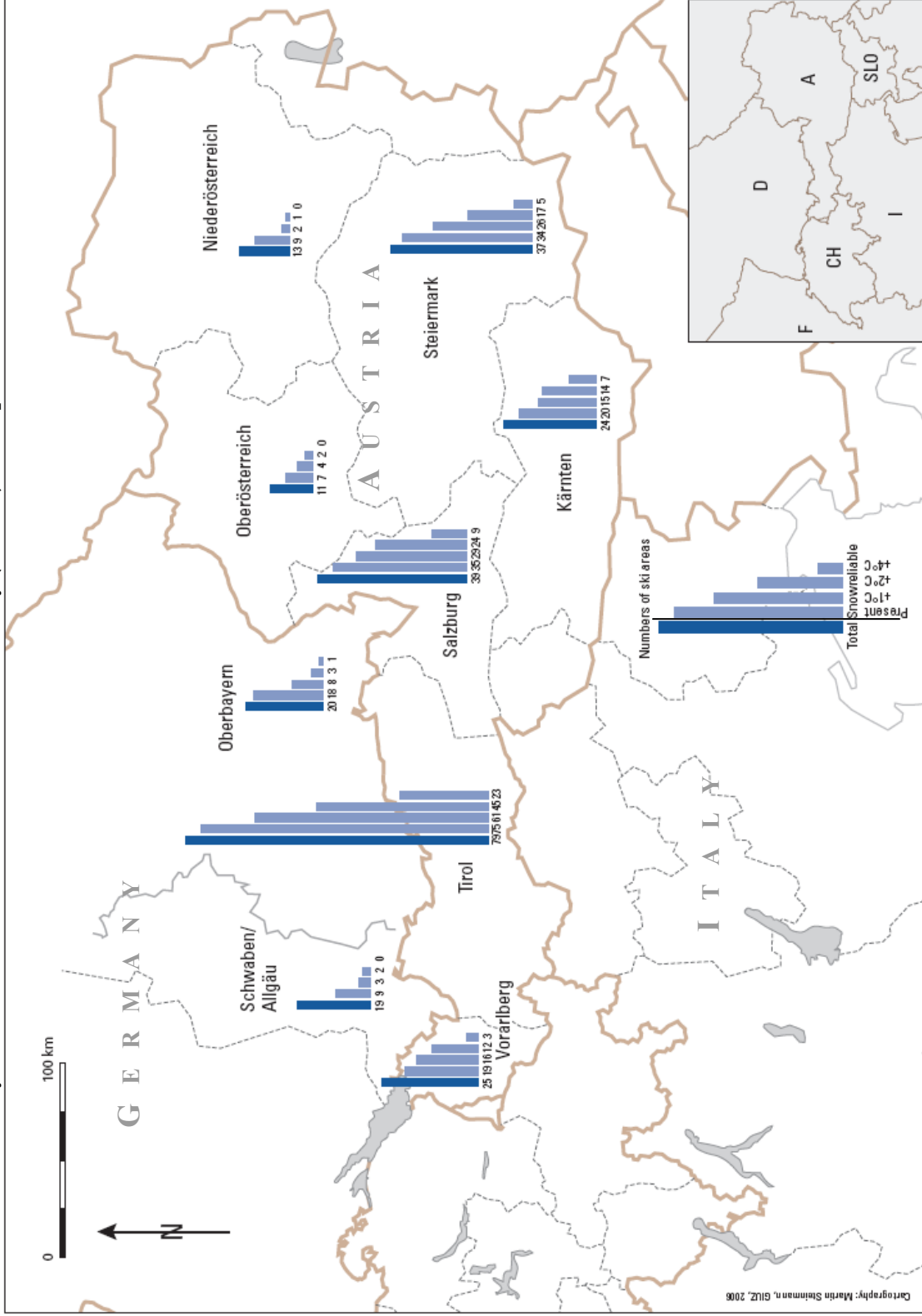
- Austria

With climate change the natural snow-reliability of the Austrian ski areas will decrease substantially. This is mainly due to the low altitudinal range of the ski areas. Many of the Austrian ski areas have low base points. For example, the world famous resorts of Schladming and Kitzbühel are situated at only 745 m and 800 m above sea level. The lack of higher altitudes in many of the Austrian mountain ranges makes it impossible to operate on high-elevation sites. The negative effect of the relatively low altitude – for example in comparison to Switzerland – is not offset by the colder, more continental climate in Austria.

With a 300 m rise (plus 2°C by 2050s) in the line of natural snow-reliability, the number of naturally snow-reliable ski areas in Austria would drop to between 8% (Niederösterreich/Lower Austria) and 62% (Salzburg) of the present level, indicating a strong difference between the most and least sensitive regions in Austria. The north-eastern “Bundesländer” of Lower and Upper Austria will be highly affected, whereas other regions may count on approximately 50% of naturally snow-reliable ski areas.

See snow-reliability map at the back

Number of naturally snow-reliable ski areas in Austria and Germany (Bavaria) under present and future climate conditions



Note: A = Austria, CH = Switzerland, D = Germany, F = France, I = Italy, SLO = Slovenia