A RECREATIONAL ACTIVITY IN THE SCOPE OF WINTER TOURISM OPPORTUNITIES OF SIVAS: FROZEN WATERFALL CLIMBING

Emin ARSLAN\textsuperscript{a}  Hakan KENDİR\textsuperscript{b}  Haydar ASAN\textsuperscript{c}

\textsuperscript{a}Tokat Gaziosmanpaşa Üniversitesi, Zile Dinçerler T.I.O.Y.O, Dr. Öğr. Üy., Tokat, Türkiye (emin.arslan@gop.edu.tr)
\textsuperscript{b}Tokat Gaziosmanpaşa Üniversitesi, Zile Dinçerler T.I.O.Y.O, Dr. Öğr. Üy., Tokat, Türkiye (hakan.kendir@gop.edu.tr)
\textsuperscript{c}Ordu Üniversitesi, Mesudiye M.Y.O, Öğr. Gör, Ordu, Türkiye (haydarasan@hotmail.com)

EXTENSIVE SUMMARY

Winter tourism creates a significant economic value world wide. For example, it provides significant benefits to the economic stability of many states in the United States. According to the winter tourism report published in the USA in 2010, 38 of the 50 states in the country have provided added value to the state economy through winter tourism activities (Hungenberg vd., 2013:313).

Winter sports activities are carried out in 6 thousand winter tourism centers and more than 2 thousand hotels in more than 70 countries worldwide. In terms of tourism sector, it is known that winter sports activities contribute to economic development and prosperity in many regions suitable for winter tourism (Tuppen, 2000; Tsiotsou, 2006). This case has a very important place in the related literature (Bonnefoy-Claudet ve Ghantous, 2013: 624).

Skiing is like a locomotive for winter tourism. In addition to skiing, it is important to develop other winter sports such as ice climbing, frozen waterfall climbing and winter hiking and to evaluate it from a recreational point of view. Nowadays, ice and frozen waterfall climbing is carried out by climbers, adventurers and adrenaline enthusiasts engaged in winter sports in many countries (USA, Canada, Russia, China, India, England, Sweden, Norway, Italy, France, Austria, Slovenia, Switzerland, New Zealand, etc.).

Frozen waterfall climbing is known to be more risky and dangerous than other types of climbing. Frozen waterfall climbing is a winter sports activity that is not very old in history. First, small groups and individual athletes started to do in the 1970s in the frozen waterfalls of the Alps. Nowadays, more and more participants are interested in this activity (Howstuffworks, 2018).

In this study, it is aimed to reveal the applicability of frozen waterfall climbing in Sivas. In addition, this study aims to contribute to increase the potential of winter tourism in the region. The cold climate of Sivas is caused to frequent freezing of waterfalls at high altitudes in winter. The waterfalls in Sivas are sometimes the agenda of national and local press. Some of these waterfalls are:

\textbf{Sızır Waterfall}

Sızır Waterfall, located in Sızır Town of Gemerek District of Sivas, has an altitude of 1350 meters. In winter the temperature drops down to -25\degree C degrees and the waterfall freezes. For this reason, Sızır Waterfall allows to winter recreation activities such as frozen waterfall and ice climbing.
Paşabahçe Waterfall

Paşabahçe Waterfall is located in the Pasha Factory Promenade and Recreation Area, 7 km north of Sivas city center. The waterfall, which is poured from a height of 20 meters, has an altitude of 1370 meters from the sea. In winter the temperature drops down to \(-20\) °C degrees and the waterfall freezes. Covered by a thick layer of ice, the waterfall is suitable for climbing.

Orta Köprü Waterfall

Orta Köprü Waterfall is located in the town of Suşehri in Sivas. It is capable of freezing for long periods in winter with its altitude of 1880 meters above sea level. Spilled from a height of 25 meters, the waterfall has a favorable environment for ice climbing.

The most important reason for the evaluation of these 3 waterfalls with in the scope of the frozen waterfall climbing activity is the high altitude. Therefore, waterfalls have the potential to freeze to a great extent. Frozen waterfalls are reached by long walks in harsh winter conditions. Therefore, the supply of the necessary materials and equipment is of great importance in ice climbing. At the same time, frozen waterfall climbing has risks such as injury and death unless adequate safety measures are taken.

In recent years, a serious investment such as Yıldızdağı Winter Sports Tourism Center, Sivas has become an important destination for winter tourism. In Sivas, which is on the way to becoming a winter tourism center, diversification of winter tourism activities is of great importance. At this point, the suggestions offered by the researchers are:

- The inventory of waterfalls in the province of Sivas should be prepared, the volume of waterfalls, freezing potentials and freezing times should be determined.
- By making technical measurements, the slope of the ice wall formed by the waterfalls should be determined. The degree of difficulty in terms of climbing waterfalls should be put forward.
- Finally, an artificial waterfall or icewall of about 10 meters in Yıldızdağı can be formed, creating a different source for ice climbing activity.