



LIFE Population level management and
DINALP conservation of brown bears in northern
BEAR Dinaric Mountains and the Alps



PROPER USE AND OPERATION OF THE BEAR-PROOF GARBAGE CANS AND COMPOST BINS IN THE MUNICIPALITY OF IG – TECHNICAL REPORT

Action C.1: Conflict mitigation in the hot-spot areas – organic waste

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1. Introduction

On the southern part of the municipality of Ig (see map 1), human-bear conflict situations occur quite dispersed. For that reason, we closely collaborated with waste management company Snaga to find the locations, where conflicts are the most frequent. On this location we distributed both bear-proof garbage cans and also compost bins to prevent bears to access anthropogenic food and therefore coming in the nearest vicinity of the houses.



Map 1: Location of the municipality of Ig in Slovenia (in green).

2. Description of implemented measures on the »hot-spot«

Garbage can enclosures were set up at two locations: Selnik and Iški vintgar (see map 2). In the distribution plan, beside these two locations, also the third in Visoko was planned. During the implementation of the prevention measure, the method of the waste collection changed in that area. There was no longer joint place for waste collection. Instead, individual garbage cans were distributed to every household. Therefore, we decided to distribute individual garbage cans to the nearest settlement. At the same time, there was a need for a greater number of bear-proof housings for large (~ 1000 litre) containers in the Iški vintgar, due to the rising number of tourists. The latter is important touristic point, with constant bear visits. Mainly because of high anthropogenic food availability. Since the inhabitants of settlements Golo, Draga and Zapotok (see map 2) reported the most frequent bear encountering to the nearest vicinity of the houses and browsing the compost, we offered them bear-proof compost bins, to prevent bears to encounter settlements.



Map 2: Locations of implemented measures in the “hot-spot”.

3. State of implemented measures on different locations

3.1 Bear-proof garbage housings

3.1.1 Selnik

Local people accepted implemented measures very well. Besides its effectiveness and easy to use, the aesthetic design of enclosures surely contributes to better acceptance among local people. After the control visits of the place of implemented measure, the operation of bear-proof garbage cans we found to be in a very good condition (figure 1 and 2), even if they were exposed to severe weather conditions during the winter-time.



Figure 1 and 2: Good operation of the “bear-proof” garbage housings for large (~ 1000 litre) containers.

During control visits we found minor irregularities:

- a) **technical irregularities:** in two of the garbage containers, there was a missing pin that connects the garbage cover to the cover of the housing (figure 3), because of the garbage containers replacement.

The observed irregularities do not affect the overall proper operation of the enclosures and their protection against the access of bears to the contents. Nevertheless, we informed local communal community Snaga. They started to solve the problem immediately and install the new pins on the replace garbage cans' covers, which points to our well-established communication



Figure 3: Missing cover pins of the two newly replaced garbage containers' cover.

3.1.2 Iški vintgar

Iški vintgar is a popular touristic location near Ljubljana, with the most frequent visits in the summer-time, especially on weekends. Due to many visitors and consequently highest amount of waste, eleven “bear-proof” garbage housings for large (~ 1000 litre) containers were installed on the location. The control visits showed their overall good operation.



Figure 4 and 5: Good operation of all installed “bear-proof” garbage housings for large (~ 1000 litre) containers.

During our control visits minor irregularities were found:

- technical irregularities:** in some of the garbage containers, there was a missing (figure 6) pin that connects the container’s cover to the cover of the housing, because the garbage containers were newly installed.
- inconsistent use:** after the sunny summer weekend, we noticed that one garbage containers for collection of mixed package collection were overfilled (figure 7). The situation was not the result of the waste management company schedule, but mainly because of frequent tourist visits. Therefore, the cover of the housing could not be closed.

Because of successful cooperation with the waste management company Snaga, technical irregularities were quickly solved. Overfilled garbage container is a result of the tourists’ ignorance. They are often throwing garbage into the nearest garbage container, while the adjacent garbage container with the same type of waste stay half empty. We have found a solution for the mentioned problem. A local assistant will be hired to help raise people awareness about the importance and use of “bear-proof” garbage housings.



Figure 6: Missing cover pin of the newly replaced container.



Figure 7: After the sunny summer weekend with lot of tourist visitors, one of the garbage containers was overfilled.

3.2 Bear-proof compost bins

The bear-proof compost bins were implemented in the settlement Golo, Draga and Zapotok. In the settlement Golo and Draga, only one compost bin was distributed in each location. Mainly because in this settlement, the conflict saturations are not so frequent than in settlement Zapotok. The operation of both compost bin, in Golo and Draga is flawless. Also the use is consistent. The compost bin in Golo is located in the nearest vicinity of the houses, in a private agricultural area, which is in the immediate vicinity of the forest (figure 8), with frequent bear visits. After the measure implementation, the owner reposts significantly fewer bear visits. Both owners are very satisfied with its prevention role, and nevertheless also its appearance and easy usage.



Figure 8: The location of the “bear-proof” compost bin in Golo with its satisfied owner.

In settlement Zapotok, nine compost bins were distributed. The control visits showed that all of the installed compost bin are operating very well (figure 9 and 10).



Figure 9 and 10: Good operation and condition of the compost bins on the location.

The recipients stressed out minor irregularities:

- a) **technical irregularities:** during the winter-time, the cover lid in some cases become rusted (figure 11). In one of the compost bins, because of the moisture, the cover become tensed and is hard to close.

This limited the "bear-proofness" of compost bins, so we informed the recipients about the importance of maintaining their compost bins additionally. Afterwards, all of the irregularities were immediately solved by the compost bin owners. They coated it with a rust remover. In most of the other users, the pin does not rust because of constant use of prevention (anti-rust coating agents). Recipients, which cover of the compost bin become slightly tensed during the winter, he adds an extra weight to the lid and therefore make it easier to open.



Figure 11: Slightly rusted, but operating cover lid.



4. Overall measures condition and implications for further usage

4.1 Bear-proof garbage housings

Even if some minor irregularities were observed during the control visits, the operation of the bear-proof enclosure for garbage cans is very good. About the technical irregularity, the missing cover pin of the container, we informed the waste management company Snaga, which immediately solved the problem. To solve the problem in inconsistent use of the garbage housings in Iški vintgar, we will hire a local assistant to raise awareness among people, especially in summer-time with the most frequent tourist visit. We also agreed with the waste management company Snaga to remove the waste at the location during the summer regularly, because of a larger amount of waste, especially food residues. For the purpose of informing the locals about the importance of the correct and consistent use of the garbage housings, we will also organize a lecture/workshop on this subject.

4.2 Bear-proof compost bins

A major problem did not occur, until now, bear-proof compost bins have been serving their purpose very well. In some of the compost bins, cover lid rusted. The problem was immediately solved by the owners, and did not need any special intervention. Cover lid usually do not rust if the user consistently takes care of the compost bins and coat lids with protective agents. Since we did not find any irregularities in compost bins' use, it can be assumed that our individual consultations with the users have been very successful.