

# Teaching Material on Biodiversity Conservation (TMBC)

**Title:** Reconnecting of habitats

**Author:** Rike Gärtner

**Quality Assessment:** Carsten Hobohm (UF)

**Level:** secondary school

**Type of material:** Information for the teacher, as well as a game about reconnecting habitats with tasks and short texts: Reconnecting of habitats; European Green Belt

**Aim:** Getting to know the concept of habitat reconnection, impacts and where areas of successful reconnections can be found

## Information for the teacher

**Introduction:** First, the students have to cut out the playing cards. The cards should then be placed on the free fields of the game board. The cards have to be laid out so that the habitats are connected.

Short information about the lesson; explanation of the game, dividing of students into groups of five and distribution of tasks to the students (who can be divided into either homogeneous or heterogeneous learning groups).

**About the game:** The game is unsolvable and intends to show that it is not possible to connect all different types of habitats. By playing the game and discussing it afterwards, the students should find out about this dilemma and also get to know the European Green Belt as a unique kind of reconnection.

**End of lesson:** Compiling the facts learned while playing the game and while discussing. Important concluding question: What is the special feature of the Green Belt? What kind of opportunities does this conservation area offer for the animals?

### Further information:

Now the students know the reconnection project as well as the Green Belt. The students could work further on possible connections. If these are possible, how can they be achieved? Possible: forest, grassland,... Impossible: river (has never been linked), lake, moor,...

Why is it impossible to achieve a reconnection for each and every habitat? Were all kinds of habitats linked at one time? (No, they were not, rivers have never been linked!) The students can collect information on their own and develop their own theories. → historical consideration.

## **Internet resources for teachers**

### The European Green Belt

Anonymous (Hrsg., 24.11.2013): European Green Belt:

([http://en.wikipedia.org/wiki/European\\_Green\\_Belt](http://en.wikipedia.org/wiki/European_Green_Belt), Stand 01.12.2013)

Anonymous (Hrsg., 2013): (<http://www.europeangreenbelt.org/>, Stand: 01.12.2013)

Anonymous (Hrsg., 2013): Grünes Band Deutschland:

(<http://www.erlebnisgruenesband.de/en/gruenes-band/europa.html>, Stand: 01.12.2013)

Henkmüller (2002): animal bridge: (<http://commons.wikimedia.org/wiki/File:Cerviduct.jpg>)

## Tasks for the students

Form groups of five.

**Task 1:** Try to connect the lake, forest, and grassland habitats with the help of the game board within your group.

You are only allowed to use the cards at hand and you can only put them on free spaces. You have 10 minutes to finish your task.

**Task2:** Discuss the results in your group. Is it possible to connect the same habitats?

**Task 3:** Read the text about the reconnecting of habitats and in your groups discuss if this is possible for the given habitats.

**Task 4:** Read the text: The European Green Belt. Discuss the following questions with your group:

- a. What is special about the Green Belt?
- b. What is caused by the Green Belt and in what way?

## Reconnecting habitats

The expansion of the transport network and the associated increase of traffic density in many countries often means that individual habitats are broken up. Consequences of this fragmentation are: accidents involving wild animals, isolation and deterioration of both animal and plant habitats.

Thus, the genetic exchange of animal and plant species is severely affected, leading to a reduction of biodiversity. There is a growing risk that species (animals and plants) will become extinct. Reconnecting habitats reduces this risk. There are animal bridges which ensure that animals can cross the highways without any danger, so genetic exchange can occur. At present, habitat reconnection projects are only known in a few countries. However, the idea is becoming globally more important.



free for use: animal bridge (Henkmuller, 2002)

## The European Green Belt - Unusual reconnection

For a long time, Western and Eastern Europe were separated by walls or barbed wire fences, consequences of World War II. Plants and animals were able to settle in these dreary places. Now Europe is only divided by a green strip of vegetation, between 50 and 200 m in width. It is, however, 12,500 km long, and provides suitable habitat for many animal and plant species which should be protected from human interference.

Genetic exchange can easily succeed here, since the animals, especially deer, can move along the Green Belt without being disturbed by cars, trains or even directly by humans. Car bridges and animal bridges have been built to maintain the continuity of the Green Belt. Moreover, some animal and plant species that were believed to be extinct have found a habitat and have been seen more often along the Green Belt.

This untouched green space that runs through Europe is unique in the world and is a nature reserve. This should ensure that this world created by chance, by political circumstances, will remain as it is today.



free for use: European Green Belt (o.A., 24.11.2013)