

**SEEING THE WORLD THROUGH NATURE**

**SCHOOL WORK SHEETS**

**BLOCK 11:**

**WETLAND**

**BIRDS**





### Download the project's app

To complete some of the tasks outlined in the school work sheets you will need our special smartphone app.  
To download this app, please go to the online app store (App Store for iOS or Google Play for Android)  
and enter the name "Meet the Birds" in the search field.



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Erasmus+ Programme  
of the European Union



## BLOCK 11

# WETLAND BIRDS

**Background:** Construct a wetland in the classroom (in a fish tank or a bowl), including plants, or make a model of a wetland. Create posters showing various types of wetland, e.g., a river valley, a pond, etc.

DETAILED PROBLEMS	What are wetlands and how can we identify them?	What birds are found near ponds, wet meadows and streams? Why do wetland birds have long beaks?	What threats do waterbirds face? What human activities threaten birds?
Activities in the field	When in a meadow, pay attention to what plants are present and find the ones that are typical of wet meadows. Try to identify them. Is your meadow a wet meadow? (See <b>S11/A/1</b> .)	During the trip, identify as many bird species as possible by sight and sound, using our special smartphone app. During the trip, note the shape and length of the birds' beaks and pay attention to their feet.	A natural river means natural biodiversity, as it is home to many animals. Because humans have been settling closer and closer to rivers, they have started to regulate them. As a result, many rivers are not as wild as they used to be. Check with the students, 'Is your river a wild one?' (see <b>S11/C/1</b> ).
Indoor observations and experiments	Carry out experiments to illustrate what wetlands are ( <b>S11/A/2</b> ) and what happens to the soil when it rains ( <b>S11/A/3</b> ).	Check how birds are adapted to finding food in wetlands, e.g., why do waterbirds need long beaks? (See <b>S11/B/1</b> ).	Field observations can stimulate thinking about the threats that birds face. Do the 'Meandering rivers' activity ( <b>S11/C/2</b> ). You can do similar tasks by comparing ponds, e.g., 'Field ponds' ( <b>S8/A/2</b> ); 'Why do dried-out wetlands pose a threat to birds?' ( <b>S11/C/3</b> ).
Artistic tasks		Plasticine animals ( <b>S11/B/2</b> ). Felt birds ( <b>S11/B/3</b> ).	Design a poster promoting World Wetland Day (February 2 <sup>nd</sup> ).
Linguistic and written tasks		Using felt birds, re-enact scenes from the life of a wetland.	
Mathematical tasks	Set some maths tasks using the 'Meandering river' activity ( <b>S11/A/4</b> ).		



## IS THERE A WET GRASSLAND NEAR YOU?

**Guidelines for teachers:** Discuss wet grassland habitats with the students. Visit a local wet grassland, if possible, and ask students the questions below.

### What you will need

- Paper
- Strainer

### Tasks and questions

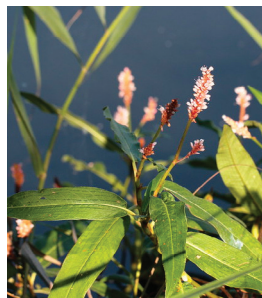
- 1 Do you leave footprints when standing on the meadow and then walking away?
- 2 Do your footprints fill with water?
- 3 Do you feel a dampness while putting a piece of tissue on the surface of the meadow and pressing with your hands? Is the tissue soaked?
- 4 Does the water appear when putting a strainer on the surface of the soil and then pushing it into the surface?
- 5 Put your hands between the plants and push them aside. Did the plants return to their place after you took your hands away?





(CK)

Bogbean



(NE)

Amphibious Bistort



(IM)

Bulrush



(IM)

Creeping Buttercup



(IM)

Purple Loosestrife



(IM)

Water Forget-me-not



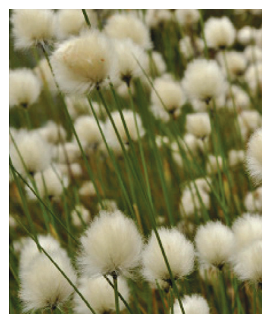
(IM)

Water Horsetail



(IM)

Yellow Flag



(CK)

Cottongrass



(IM)

Meadowsweet



(IM)

Willow



(IM)

Comfrey



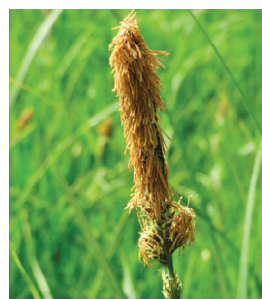
(PX)

Marsh Marigold



(PX)

Common Reed



(PX)

Carex sedge



## MAKING A WETLAND AND A LAKE

**Guidelines for teachers:** Assist blind and visually impaired students as required.

### What you will need

- Four plastic bowls
- Horticultural soil
- A plastic cup
- A bottle of water
- Paper towels

### Tasks and questions

- 1 Put two cups of garden soil into each of the four bowls.
- 2 How many cups of water do you need to add to the soil to create different types of humidity?

Bowl 1 (dry soil)	Bowl 2 (wet soil)
Bowl 3 (wet soil)	Bowl 4 (very wet soil)

### Consider:

- In which bowl did you make a wetland?
- In which bowl did you make a lake?



## WHAT HAPPENS TO A WETLAND WHEN IT RAINS?

**Guidelines for teachers:** We recommend preparing the bowls and letting the mud dry ahead of time. The drying process may take a few days.

**Your guess** .....

### What you will need

- One bowl full of dry mud (prepared earlier)
- One bowl full of recently prepared mud
- A watering can full of water

### Tasks and questions

- 1 Carefully touch the surface of the dry mud and examine it. What do you feel?
- 2 What will happen if you pour the same amount of water into each bowl?
- 3 Carry out the experiment and observe.
- 4 What happens when, suddenly, a lot of rain falls down to earth?

### Consider:

- What will happen if the wetlands dry up?
- Is it safe to construct homes immediately beside a river?
- How do animals cope during heavy rain?





## MEANDERING RIVER

**Guidelines for teachers:** For blind students, you will need to create a tactile image based on the graphic below.

### Tasks and questions

- 1 Count how many times the river turns left and how many time it turns to the right.
- 2 Count how many islands there are.
- 3 Where is the river narrower and where is it wider?







## WHY DO WATERBIRDS NEED LONG BEAKS?

**Guidelines for teachers:** Talk about the differences in bill sizes and show the students images of birds such as Curlew and Lapwing. You may make tactile models of these birds for blind and visually impaired students, if required.

### What you will need

- A plastic bowl or aquarium
- Mud
- Short tweezers
- Long tweezers
- Some grains of rice or pasta

### Tasks and questions

- 1 Fill the bowl or aquarium with mud.
- 2 Add rice and mix thoroughly.
- 3 Which tweezers do a better job of picking grains of rice from the mud?

### Consider:

- Why do different birds have beaks of different lengths?
- Can a Mallard feed in the same way that a Snipe can?



(RM)

Curlew



(RM)

Lapwing



## PLASTICINE ANIMALS

**Guidelines for teachers:** Assist students, if required. Get them to model a bird. This can be done from a tactile reference if students are visually impaired.

### What you will need

- A bowl
- Plasticine, or Play-Doh, or modelling clay (or even mud)

### Method

- Mould your favourite wetland bird using the modelling material.
- You can make wings, feet, beaks, etc, using leaves, small stones or sticks.



(PX)



## FELT BIRDS: HERON AND KINGFISHER

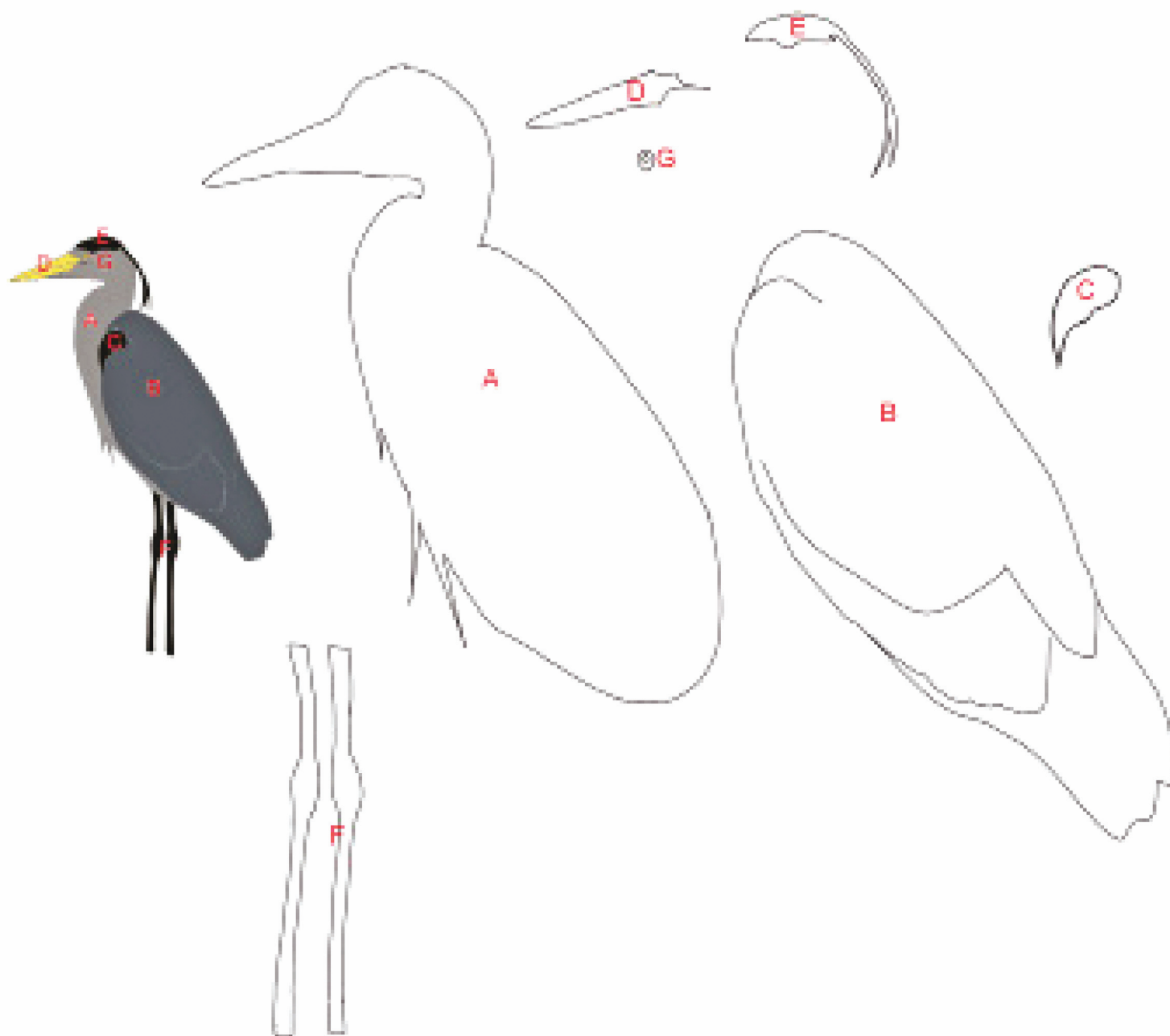
**Guidelines for teachers:** Prepare a tactile model for blind and visually impaired students to refer to, and provide assistance where necessary, particularly with cutting the felt.

### What you will need

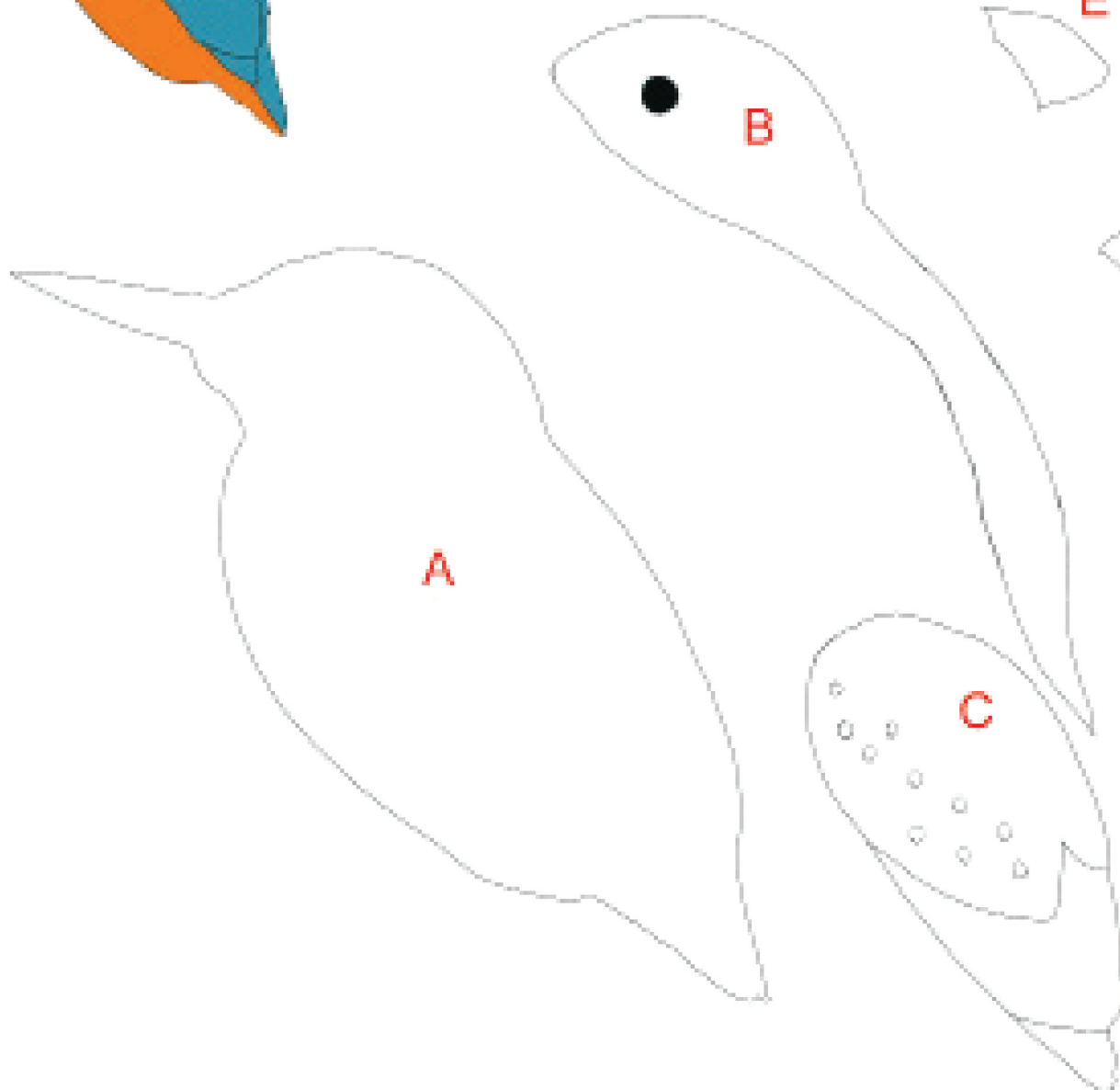
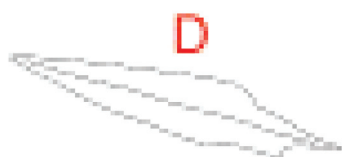
- Felt in suitable colours
- Fabric glue
- A black marker pen
- Scissors

### Method

- Cut the paper templates (next two pages).
- Place them on the felt and draw around them with the marker pen.
- Carefully cut out the shapes from the felt.
- Lay out the biggest elements on the table first, then glue on the smaller ones.









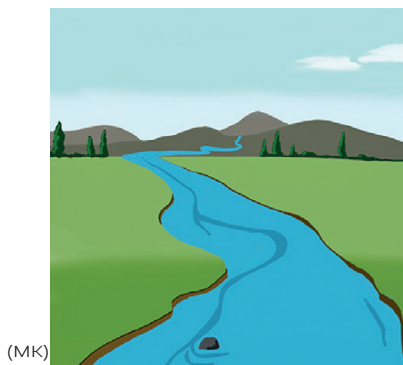
## IS YOUR RIVER WILD?

Your guess .....

### Tasks and questions

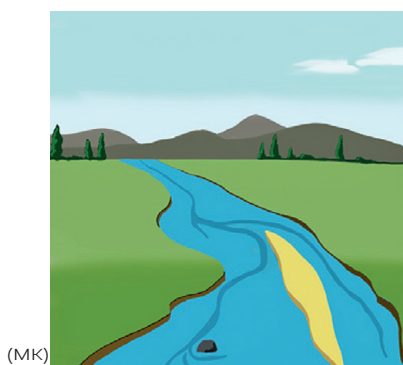
- 1 Look carefully at the river over which you are standing, and then note your findings in the answer sheet (below).
- 2 Is the river you studied friendly to animals, especially birds? Why do you think this?
- 3 What human activities threaten waterbirds?
- 4 Did you like the place that you visited? Why?
- 5 Are wild rivers dangerous?

### ANSWER SHEET



(MK)

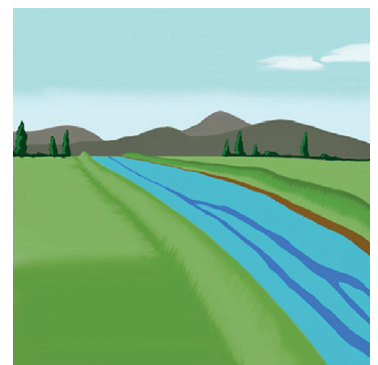
Natural river



(MK)

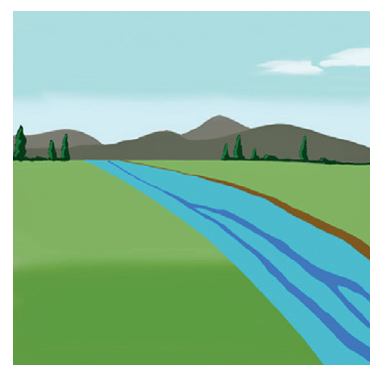
Natural river with island

<b>What type of bed does your river have?</b>	
Natural	Walled banks
<b>What shape is your river?</b>	
With bends	Straight
<b>Are there banks along your river?</b>	
Without banks	With banks
<b>Are there wetlands along your river?</b>	
Yes	No
<b>Are there islands in your river?</b>	
Yes	No



(MK)

River regulated by embankments



(MK)

Straightened river

### Consider:

- What does “taming a river” mean?
- Do you think that floodplains are wasted space? Are they needed? If so, for what?

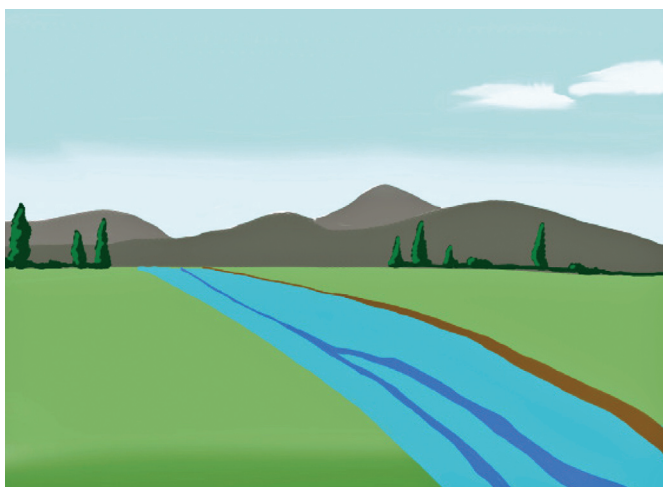


## RIVER VALLEYS

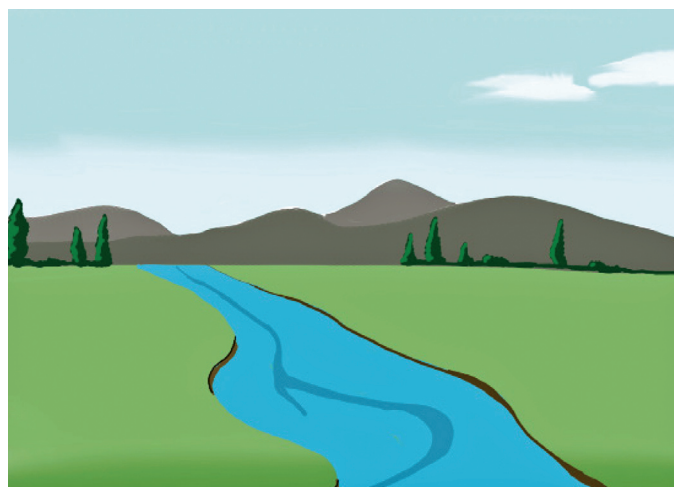
**Guidelines for teachers:** For this exercise to be accessible to blind students, it is necessary to create tactile images based on the illustrations below.

### Tasks and questions

Below, there are two pictures of river valleys. Examine the images, then compare the illustrations and mark the differences. Which type of river can you find in your home town, or which one have you noticed during a trip?



(MK)



(MK)

### Consider:

- Which meadow in the river valley is wetter?
- Where is there the greatest variety of plants?
- Which river do you think is more friendly to animals? Why do you think so?
- Which river can take more water from the rain?



## WHY DO DRIED-OUT WETLANDS POSE A THREAT TO BIRDS?

### What you will need

- One bowl which has been filled earlier with mud that has been allowed to dry out
- One bowl filled with fresh mud
- Wooden skewers, sticks and/or tweezers (to represent birds' beaks)

### Tasks and questions

- 1 Gently probe the surface of both bowls of mud with your fingers. What do you feel?
- 2 Now put the skewers/sticks/tweezers into both bowls of mud. What do you notice?





These materials for teachers working with blind and visually impaired children have been prepared within the project “Seeing the World Through Nature.” These are based on the educational resources that resulted from the project “Empowering Teachers and Pupils for a Better Life Through Nature,” and the suggestions contained therein have been adapted to work with children with impaired vision in order to enable them to learn as much as possible about nature through direct contact with it.

Non-governmental organisations involved in bird protection, partners in international federation BirdLife International, participated in the project. The Polish Society for the Protection of Birds (OTOP) was the leader of this educational initiative, which also involved the associations BirdWatch Ireland, BirdLife Malta and BirdLife Cyprus. The Polish Association for the Blind was the partner cooperating in the field of adaptation of source materials for the needs of teaching blind and visually impaired children.

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**BIRDWATCH IRELAND** is the largest independent conservation organisation in Ireland. A registered charity, its aim is the conservation of wild birds and their natural habitats. It has over 15,000 members and a network of 30 local branches. It manages nature reserves which protect threatened habitats and their wildlife, works to conserve Ireland's biodiversity, and carries out education, survey and research work. For more information, go to [www.birdwatchireland.ie](http://www.birdwatchireland.ie)

