



## Guideline application EyeOnWater



### What is EyeOnWater-Colour?

EyeOnWater **consists of an app and a website** developed in the Citclops research project to measure the water quality of natural water bodies. The app allows us to contribute to science by submitting data on the water quality of local water bodies. All measurements are made publicly available on the EyeOnWater website. The data is used e.g., by research institutions and water authorities worldwide to contribute to research and improvement of water quality of water bodies.

### What is being measured and why?

EyeOnWater uses the method of **measuring water color**, because one of the most obvious properties of water to the human eye is water color. The water color of bodies of water indicates the content of algae and organic matter in the water that feed the organisms and thus gives an indication of the quality of the water. Scientists have been measuring this in natural waters for more than 200 years using, among other things, the so-called Forel-Ule scale. This is a color scale that can be used to determine the color of a body of water - from the colors of the clearest oceans to the colors of the muddiest ponds and rivers. This FU scale was recently calibrated with modern spectrometers and it was proven that the method of color comparison can be transferred and extended to today's measurement techniques with smartphones.

### Why do we want to collect data in Parkli using the EyeOnWater app?

Within the framework of our research project Parkli, we would like to contribute to the adaptation of local water bodies to the consequences of climate change. To do this, we first need a good database on the current state of our local environment so that we can investigate short- and long-term changes. In order to achieve the broadest possible and regular monitoring of local waters, we are dependent on the support of committed climate detectives. Together with you, we would like to go on a search for clues and use the EyeOnWater app to collect data on the quality of local water bodies.

You can contribute now by downloading the EyeOnWater app! With the help of the app you can take photos with your smartphone and determine the water color of bodies of water through a digital color scale. We have put together a guide that explains how to use the EyeOnWater app in English.

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## Quick guide EyeOnWater

### Download the application (app):

You can download the apps via [App Store](#) or [Google Play](#):

More information can be found on the EyeOnWater website:

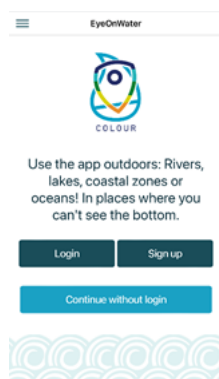
<https://www.eyeonwater.org>

The app is available in English. Detailed step-by-step instructions with integrated images are available in the app: <https://crowdwater.ch/en/crowdwaterapp-en/>

The instructions may seem very long at first glance, but they will help you to use the app! So don't panic if the long text scares you off at first. Below you will find a summary of how to use the EyeOnWater app.

In general, this guide is based on app version 2.4.1 and uses the display on mobile devices with the Android operating system, so minor deviations may occur on devices with a different operating system or version.

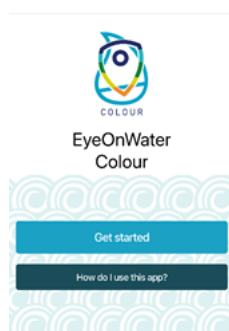
### First steps:



**Sign up:** At the beginning you can register at first use.

**Login:** Once you are registered, you can log in with your chosen login details.

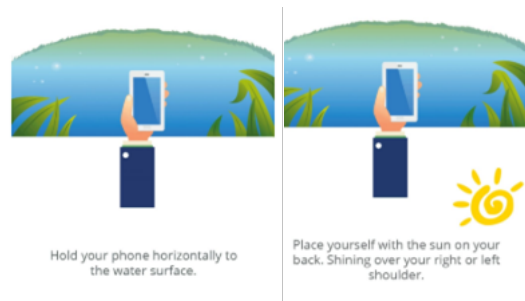
**Continue without login:** You can also use the app without registering and logging in by skipping this step.



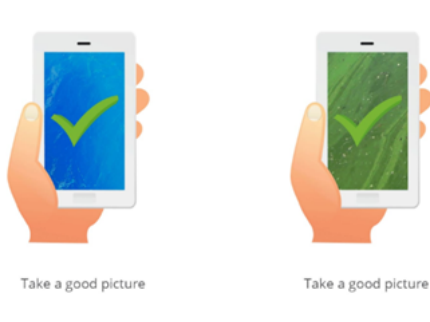
**Get started:** Next, you could get started right away and take photos.

**How do I use this app?** Or you can start with a short introduction to the app.

### Step 1:

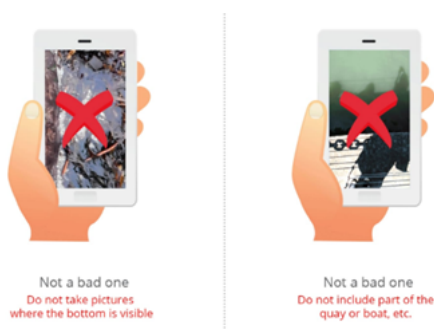


- Hold your smartphone horizontally above the water surface.
- Place yourself with your back to the sun. The sun should shine over your right or left shoulder.



### Step 2:

- Take a good photo.
- The color and surface of the water should be clearly visible on it.



- Do not take a bad photo.
- Do not take a photo where the bottom of the water is visible.

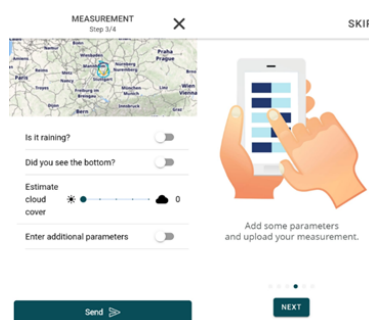
- Do not take a photo that shows any part of the shore, wharf, boat, etc. (This may not be easy, as clouds or yourself may be reflected in the surface. But don't let that stop you. It is important for us to have a large number of pictures in order to get a good evaluation.

### Step 3:



- From the given bars, pick one that best matches the color of the water in your photo.
- Often there will not be a perfect match between the color of the water and a point on the color scale. This is not a bad thing. Choose the hue on the scale that most closely matches the color of the water.

### Step 4:

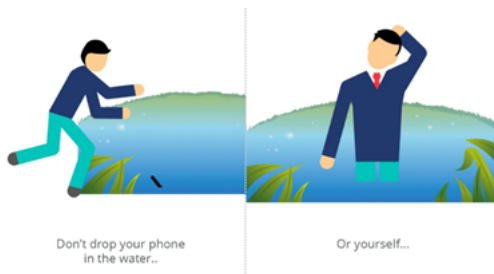


- Add if possible some key figures/parameters:
  - o Is it raining?
  - o Can you see the ground?
  - o Estimate the density of the cloud cover

- Additional parameters that could be entered (by checking "enter additional parameters"):
  - o Secchi Disk depth of view in meters [0 – 80]
  - o Temperature in °C [0 – 35]

### Step 5:

- Perfect. Now you can send your data.
- Thank you for your participation!



### Other important tips

- Take care of your smartphone and do not let it fall into the water!
- Always find a firm footing and take care of yourself! Be careful not to fall into the water yourself!
- Make sure you have good internet or WiFi when uploading your results.
- If there is no good internet available at your location, make sure to check again at home if your upload worked. If it didn't work just upload your findings on the "Upload observations" button.

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For more questions about the app and or about what ParKli does with the data collected through EyeOnWater, feel free to check out our [website](#) or contact us by email at [parkli@os4os.eu](mailto:parkli@os4os.eu).