



The Nitrate App: Instantaneous, on-farm nitrate data

Your environment should be healthy, but how can you tell when there are threats or risks to yourself or to nature that you can't notice?

Elevated levels of nitrate in drinking water can lead to circulatory problems, especially in infants who can develop 'blue baby syndrome'. In surface water, nitrate can lead to algal blooms and result in toxic water conditions for many species. Nitrate is especially found in agricultural areas due to fertilizers and manure, but can also be present in urban areas. Moreover, you can't see, smell, or taste nitrate.

What is it?

Deltares has developed the Nitrate App for smartphones to enable farmers and citizens to collect and share nitrate concentration measurements from both surface and groundwater sources. The app accurately reads and interprets nitrate test strips, directly displays the measured concentration, and gives the option to share the result. The shared results are immediately visualised in the online Delta Data Viewer. Within this viewer, user groups can specify which background maps, monitoring data, and study area characteristics they wish to visualize. The technology is also transferable to other relevant solutes for which test strips are available, like ammonium, phosphate, sulphate, chloride, and pH.

Who is it for?

Farmers, rural residents, water boards, conservation authorities, and decision-makers: the Nitrate App allows you to test surface and groundwater sources, identify sources and priority areas, and monitor nitrate reduction measures.



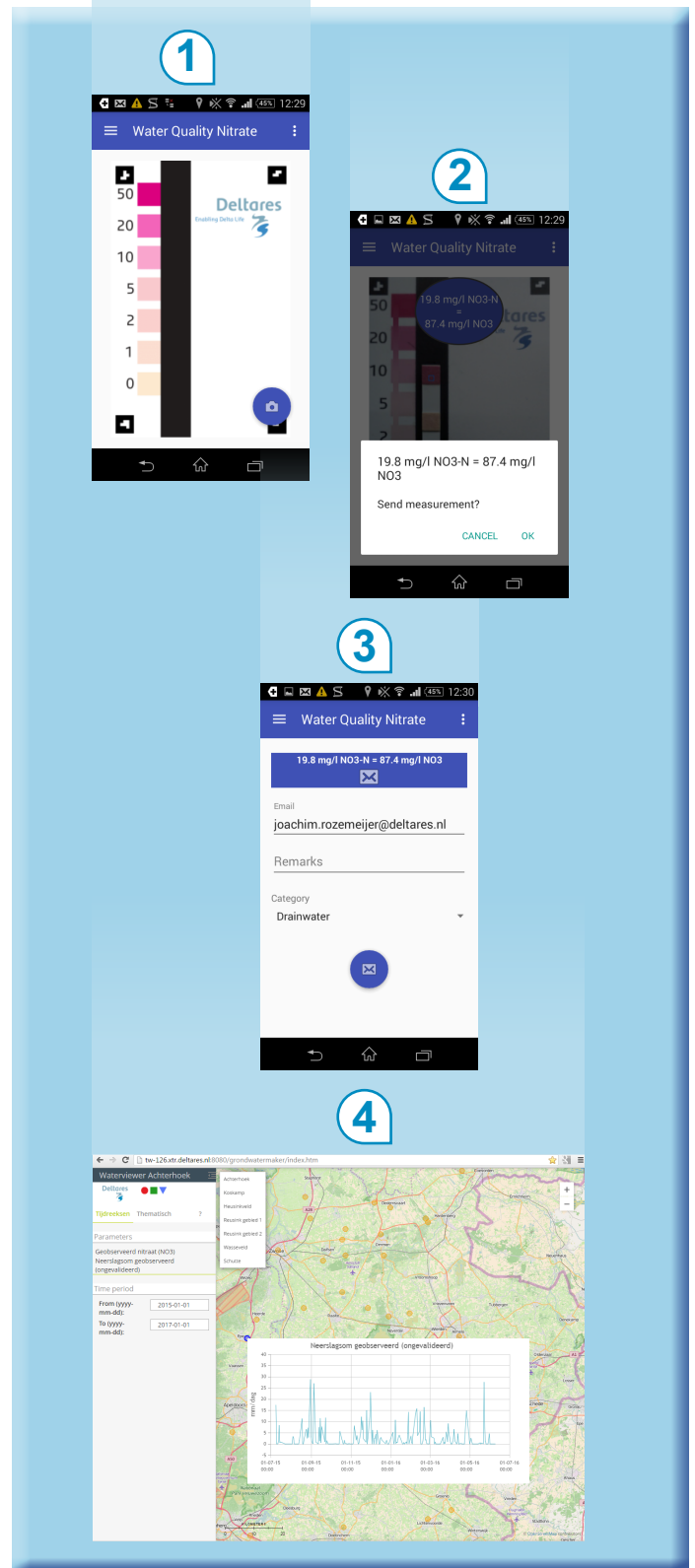
How does it work?

All you need is nitrate test strips, a reference card, and a smart-phone with the free Nitrate App.

1. Start the Nitrate App, take a water sample, and dip the test strip in the water.
2. Place the test strip on the legend card and scan it with the Nitrate App. Receive a reading immediately and decide if you want to upload it or not.
3. Add comments to your measurement and upload the measurement. If you are not connected to the Internet, it will be uploaded the next time you are in a Wi-Fi zone.
4. Visualize your measurements in the web-based Delta Data Viewer.

Want to know more?

Deltares is an independent institute for applied research in the field of water, subsurface and infrastructure. Throughout the world, we work on smart solutions, innovations and applications for people, environment and society. Contact Joachim Rozemeijer (Joachim.Rozemeijer@Deltares.nl) or Sheila Ball (Sheila.Ball@Deltares.nl) for more information about the Nitrate App and other options for water quality monitoring.



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