



## **School CO<sub>2</sub>-Net: Network of secondary schools observing CO<sub>2</sub> in the air, The Netherlands**

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The increase of the concentration of greenhouse gases in the atmosphere, most notoriously CO<sub>2</sub>, is meanwhile commonly known. Still, general knowledge about the cycling of carbon, sources and sinks, and about the magnitude of emissions, is low. Let alone that people realise how easily measurable and "real" the effects on atmospheric CO<sub>2</sub> are. Therefore, we have initiated a project in which pupils from secondary schools get hand-on experience with real CO<sub>2</sub> measurements. Initially, three of the participating schools have been provided with a suitable CO<sub>2</sub> sensor combined with basic meteorological instruments. This sensor has been positioned on the roof of the school building. The sensor is connected to a dedicated computer for read-out and storage of the measurements in a central web-based database, using dedicated software developed by university informatics students. This database is part of the project's web site ([www.rug.nl/fwn/school-co2net](http://www.rug.nl/fwn/school-co2net)) and is open to everyone. A continuous record is being built up, in which day-night cycles (depending on the current weather), and wind-directional effects soon will be visible. Depending on the site of the school (large city, small city, rural) different aspects of the carbon cycle and the anthropogenic influences become apparent. From time to time, the sensor will also be used to monitor CO<sub>2</sub> in a number of environments, such as close to a busy road, in woods, meadows etc. For these "measurement campaigns" the system is made hand-held using a portable data-logger and read-out system. The development of adequate educational material is crucial to the project. This development is taking place in the framework of the existing co-operation between the IDO and the network of secondary schools, with scientific assistance by the CIO. As the project is multi-disciplinary, teachers in Physics, Chemistry and Biology are involved.