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## CAE in Vietnam at the Scientific Conference on "New Technologies in Hydro-meteorological and Environmental Monitoring"

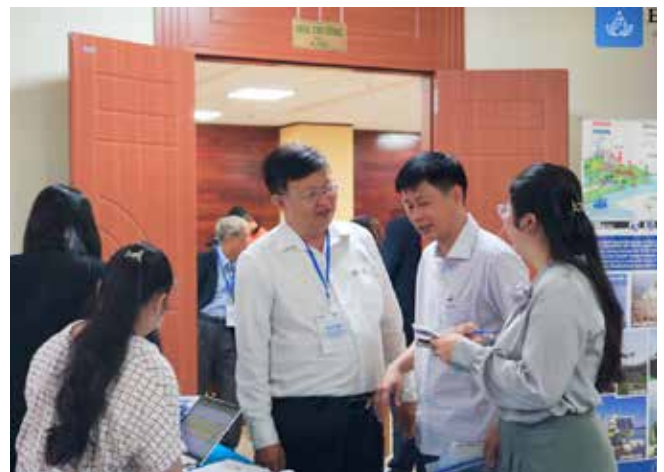
December 12th, Ho Chi Minh City | A Scientific Conference on "**New Technologies in Hydro-meteorological and Environmental Monitoring**" was held last December 12th in Ho Chi Minh City, Vietnam. The Conference also had the honor of welcoming the **Consul General of Italy in Ho Chi Minh City, Dr. Enrico Padula**.

The Seminar was organized by CAE's **exclusive partner in Vietnam, ENMO SEA**, and involved **experts and scholars in technological innovation for environmental monitoring**, within a dynamic context where new technologies and their applica-





tions play a key role in mitigating natural hazards. During the Conference, **speakers**, including CAE international sales team, **Alberto Bertocco** and **Thu Trang Tran**, presented the latest innovations enabling safe and reliable measurement and transmission of information to the field. With many discussion topics on the agenda, **CAE brought its own experience** by presenting the **Compact Plus**, from the Datalogger line and its own **river discharge monitoring system**. Among others, the main topics of discussion were: **the network**







of hydrometeorological monitoring stations in Vietnam; the implementation of a software platform to integrate warnings, flood forecasts, and flooding in river basins in **Khanh Hoa Province**, and more generally, the role of an **integrated system for hydrological meteorological monitoring and early warning service, natural disaster**

**prevention, economic development, and social security.**

The Scientific Conference created an effective space to meet, exchange ideas and discuss together to promote knowledge and development of the field. The lively debate enabled the **interested and active involvement of all participants.** ■

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## Kyrgyzstan: installed the 8 stations for agro-meteorological monitoring

CAE has returned to Kyrgyzstan to **finish work on the latest project of the Hydro-Meteorological Service**. The **8 agro-meteorological monitoring stations** that expand the national network to a total of 36 stations have, in fact, been installed.

Ozgorush, Tugol-Sai, Jerge-Tal, Daroot-Korgon, Jany-Nookat AA, Too-Moyun, Rawat and Salamalik are the eight sites now equipped with the reliability of CAE technology. The **challenge** was to provide **complex and reliable stations** suitable for installation in a **very harsh environment** where **power consumption is high** due to the number of sensors and heaters. For this purpose, there is a **manhole with six underground batteries** at the stations, and connection to the **power grid** has







also been arranged for each station. This provides the **energy redundancy** needed to support the equipment in such environments.

Each station is equipped with **CAEtech CompactPlus datalogger**, **THS thermo-hygrometer** for air and soil humidity and temperature, **UL-M30/N ultrasonic nivometer**, webcams, precipitation, pressure and visibility sensors, and present weather sensors.

In addition to the sensors and supports for the power supply and communication system, CAE provided **several ancillary services to the installation**, starting with **site surveys** and including **electrical connection, integration of calibration**, done by the Kyrgyzhydromet laboratory, **registration of the equipment** in the Kyrgyz State Registry, **integration into the Kyrgyzhydromet Data Center**, and user **training** in Russian. ■





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## Work completed for Citizens' Observatory on the Tagliamento River



**CAE installations**, on behalf of the Eastern Alps Hydrographic District (DAO), **have been completed**. CAE was the group leader formed together with CONIT and SoftLab for the **creation of the Citizens' Observatory** also on the **catchment area of the Tagliamento River**, in the stretch between Pinzano and the mouth, have been completed. The activity, carried out under a Convention between the DAO and the Ministry of Ecological Transition, and which we had talked about [here](#), saw the creation of a **hydrometric and river discharge monitoring network** that interfaces with a **customized forecasting computer platform** capable of acqui-

ring, managing and storing data from citizens by integrating them with available hydraulic models. The Tagliamento River is considered an **extremely valuable and interesting ecosystem**, being considered the **last morphologically intact river corridor in the Alps**. For a large part of its course, man's invasive intervention has been almost nil, and the river dynamics present a **degree of naturalness that is almost unique in Europe**. Only here, in fact, can one still observe an intertwined channeled riverbed of such magnitude. Its **catchment area is being studied** by universities and research institutes around the world, and is a **model**



#### for river renaturalization efforts.

Therefore, the interventions on the stretch between Pinzano and the mouth improve the implementation of forecast models of hydrological development, disposing the Administration of more information related to the hydrometric and hydrological conditions of the said basin.

In addition, thanks to the IT platform, the **data** will be **accessible** to all those involved in the Observatory's activities, facilitating the **exchange of communications between decision-makers, emergency responders** and even individual **citizens**. Data are communicated in real time via GPRS and satellite. Moreover, again through the

downloadable app via the QR code placed on the hydrometric rod, **data can be entered manually**, with a guided procedure, thus completing this **innovative participatory monitoring model**.

In parallel with the installation of the **4 remote**







**sensing stations for hydrometric and discharge monitoring**, CAE carried out important **surveys** that allowed the creation of a **hydraulic model** of the area of interest. In fact, **5 section surveys** were carried out **for each of the stations**: one near the hydrometric rod, two upstream and two downstream. **Total stations** on vessels were used for these surveys, with GPS technology used in both RTK and static modes, so it was possible to obtain surveys in sea level elevations. **Flow measurements**, on the other hand, were made with both level and flow fixed gauges, **ADCP Acoustic Doppler Correntimeter Profiler**, and fixed gauges were then calibrated on the stations.

The network is a valuable tool, which made it possible, for example, to monitor the **recent flooding** of the Tagliamento River last **November 3rd** and at the **end of February**. ■

To learn more about CAE's solutions for the mitigation of hydraulic and hydrological risk click [here](#).



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# CAE returns to Tajikistan for a new project for meteorological monitoring

The **Hydro-meteorological Service of Tajikistan** continues to invest in **CAE's technology**, as it is **reliable** and **suitable** for installation in **highly hostile environments**.

This new contract, which will be implemented in cooperation with a local partner, includes the **supply, installation, and commissioning of weather stations** and a **data visualization center**. These activities will enable **real-time and reliable monitoring of key agro-meteorological parameters** such as wind direction and speed, air temperature and humidity, atmospheric pressure, rainfall intensity and amount, solar radiation, and soil temperature and moisture.

The stations will be equipped with **Compact Plus Dataloggers** and with the following sensors:

- **THSthermohygrometer**
- sonic anemometer;
- bascule rain gauge;
- pyranometer;
- barometer
- soil temperature and humidity.

Each station sends the **data** to a local center where it will be **displayed by the CAE Aegis visualization web platform**. This allows **remote access from any device** with connectivity (laptop, smartphone, tablet, etc.).







**Sensor calibration kits** will also be provided in order to make the end customer autonomous in the field sensor calibration processes.

In this regard, the usual **training service** is planned, through sessions that CAE will conduct on-site to transfer technological skills and make the custo-

mer autonomous in the subsequent network maintenance phase.

This new project **follows CAE's previous successful project in Tajikistan** in 2019 to implement the Early Warning system for Lake Sarez, and which we had discussed [here](#) and [here](#). ■



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## A new app made in CAE for viewing data on maps

**MyObserver** is the new **mobile app** developed by **CAE** for **viewing data on maps**. The graphic layout is innovative, and the App features **real-time data browsing** functions, as well as **integration with alerts** from the **Sentry** central software. MyObserver is a unique app that is compatible with any **smartphone** or **tablet**, regardless of the operating system installed.

This new product has been developed on a Google open-source framework for the creation of native interfaces for iOS, Android, Linux, macOS and Windows.

MyObserver allows remote access to a monitoring network, showing the stations both in Map and

List view. It also allows you to **view** and **filter data**, **create graphs**, also overlapping, make **selective calls**, **display alarms thresholds** and **rapidly share** those information. MyObserver is capable of **handling multiple configurations and receiving notifications from Sentry** regarding alarm events, accurately reporting all essential information to analyze the severity of the event. Last but not least, to facilitate operational work, the App **can access the user's location** and instantly provide directions to the desired site.

MyObserver is **multilingual** and can be downloaded from **Apple Store** and **Google Play Store**.■

To learn more [click here](#).

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## CAE MAGAZINE

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