

SEMINAIRE CNRM-GAME**N° 2015_13*****mardi 26 mai 2015 à 10h*****ADDING VALUE TO THE GLOBAL OBSERVING SYSTEM :
MAKING SENSE OF HIGH-RESOLUTION OBSERVATIONS
FROM UBIQUITOUS SENSING AND CITIZEN SCIENCE****par William LAHOZ
(NILU, Norvège)****en salle de conférences Joël Noilhan****Abstract :**

With increasing amount of environmental observations available from increasing use of high-resolution low-cost sensors, a major challenge is making sense of the amount of collected observations and providing citizens with value-added products. The expectation is that this new information will extend traditional in situ and satellite observations.

For air quality, and meteorology, a high-density network of low-cost sensors has significant potential for improving spatial mapping in urban areas. These data provide information at spatio-temporal scales of interest to citizens, 100 m; a few minutes. However, most of these datasets contain data gaps and are generally point measurements. This poses significant challenges for mapping applications. One way to overcome this is to combine these data with data from a model. We discuss efforts to apply data fusion and data assimilation techniques to urban air quality information, highlighting opportunities and challenges, drawing from the EU-funded CITI-SENSE project. Opportunities include extending traditional observations; challenges include simulation of smaller spatial scales, noisy data and error representation.