

Agro-Insurance

Agriculture provides essential social benefits: supply of food and commodities, economic development and employment. About 37% of Earth's land surface is employed for agricultural purposes, about 11% of it used for growing crops and the other 26% for pasture. In turn, agriculture is under growing pressure arising from increased productivity requirements, soil erosion and sealing, water scarcity, effects of various natural hazards and weather extremes due to changes in climate patterns.

Earth Observation (EO) is a powerful technique used to continuously provide geospatial information across the agricultural value chain, measure productivity and increase in efficiency of agriculture, identify sustainability of farming practices and strengthening the resilience of rural communities. Satellites can be applied to agriculture in several ways, initially as a means of estimating crop biomass and potential yields. Optical and radar sensors can provide an accurate picture of the acreage being cultivated, while also differentiating between crop types and determining their health and maturity. The latter ones can be used to discover and monitor impacts of extreme weather events on this sector.

Agricultural insurance is likely to have an increasing role as a risk management tool in arable crops, horticulture and livestock farming. Several common forms of insurance for the agricultural sector can be distinguished: indemnity-based, yield-based and index-based structures. Hail Insurance and the Multi-Peril Crop Insurance (MPCI) are often either indemnity based or yield based products.

Only in recent decades, new insurance solutions have been developed that do not only cover crop loss due to hail, but also protect against other natural hazards. Changes in climatic patterns increase yield losses due to higher frequency and severity of extreme natural events forces, which pushes the insurance sector to address the negative effects of more natural hazards covered by various insurance products.

Given this, the insurance sector has a significant emphasis on identifying, gathering and aggregating data and getting access to local to regional information, including history of losses due to effects and crop exposure to effects of relevant risks that could now be sourced from remote sensing and earth observation data.