

Digital agriculture atlas of Nepal

apps.geoportal.icimod.org/agricultureatlas



FOR MOUNTAINS AND PEOPLE

Agriculture is one of the most important sectors in Nepal. Two-thirds of the country's population depend on agriculture for their subsistence and the agriculture sector constitutes more than a third of gross domestic product (GDP). Ensuring effective agriculture production across the country has been a serious challenge due to the high degree of spatial and temporal climate variability, irrigated, and rainfed agriculture systems, coupled with farmers' fragile social and economic situations and unique mountain agricultural practices.

The Ministry of Agricultural Development, Government of Nepal, in close collaboration with the International Centre for Integrated Mountain Development (ICIMOD), has developed a Digital Agriculture Atlas of Nepal application, which provides free access to information on crops and livestock products for agriculture planning, research, and the overall economic development of the country. The Ministry is striving to develop a comprehensive Agriculture Management Information System (AMIS) in the country, of which this Atlas is an early component.

The Ministry of Agricultural Development and ICIMOD are also working together to operationalize an agriculture monitoring system to provide key agriculture information, such as monthly drought severity conditions and area of crops sown during the early to mid-season for major cereals crops (maize, wheat and rice), among other things. This work has been supported by the United States Agency for International Development (USAID) and the United States National Aeronautics and Space Administration (NASA) under the SERVIR-Himalaya initiative.

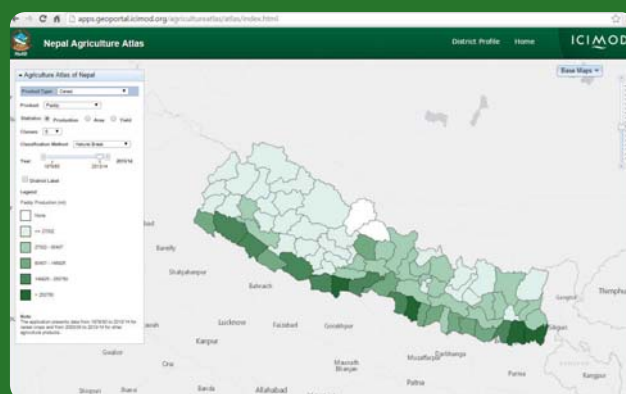
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The Ministry of Agricultural Development regularly produces statistics on comprehensive parameters related to national-level food security, which are disseminated to users in print as well as e-copies. The Digital Agriculture Atlas replaces conventional dissemination mechanisms and makes information easily available through the Internet to a wide audience. The application is multilingual, so users can view the information in English or Nepali languages.

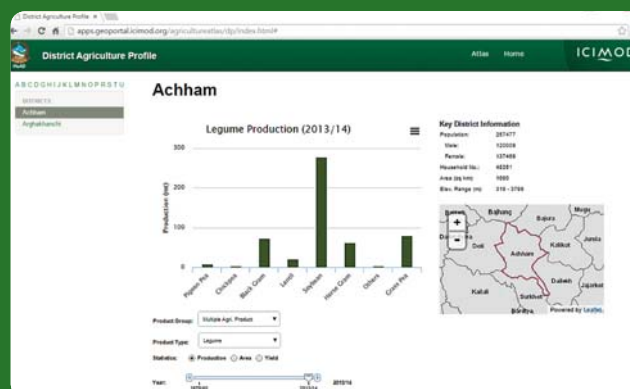
The atlas allows users to visualize district-based agriculture statistics on cereal crops, cash crops, legumes, vegetables, fruit, and livestock in the form of a map atlas. The statistics can be viewed for different years using the time slider tool. The user can also specify the number of classes and the classification method and view the map accordingly.

The application provides an alternative way of visualizing statistics in the form of a District Agriculture Profile. Under this section, the user can view agriculture statistics for any given district in the form of chart. The user can view a chart of multiple agriculture products for any given product type (e.g., cereals, cash crops) for different years using the time slider tool. Alternatively, the user can view a time series chart of statistics for individual agriculture products.

Distribution of paddy production in 2013/14



Legume production in Achham in 2013/14



The application currently contains data on cereal crops from 1979/80 to 2013/14 and other crops from 2003/04 to 2013/14. The population, number of households, and area of the districts contained in the District Agriculture Profile section are drawn from the Central Bureau of Statistics' 2011 Census. The information on district elevation range in the same section is derived from the global Shuttle Radar Topography Mission (SRTM) 90 m Digital Elevation Model dataset.



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ICIMOD gratefully acknowledges the support of its core donors: the Governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and the United Kingdom.