



2019年第30期总197期

农业与资源环境信息工程专题

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1. 数字农业经济系统与电子农业集约化发展

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▶ 前沿资讯

1 . The Digital Revolution: Opportunities and challenges for sustainable development (数字化革新：可持续发展的机遇和挑战)

简介：数字化革命，一个经常被用来描述广泛技术变革的词语现在已经成为全球性论述的主题，而且显而易见，数字化变革是促进社会转型的驱动力并可能为地球变化带来影响。该报告描述了数字化将如何改变世界，以及2030年后我们应该如果利用数字化对这些变化进行提前规划。

来源：国际应用系统分析研究所 (IIASA)

发布日期:2019-07-11

全文链接:<http://www.iiasa.ac.at/web/home/about/news/190711-TWI2050-digitalization-report.html>

2 . When Drought Threatens Crops: NASA's Role in Famine Warnings (当干旱威胁作物时，NASA卫星系统在饥荒预警中的作用)

简介：NASA's satellite imagery and model forecasts regularly help agricultural and aid agencies to monitor the performance of crops worldwide and prepare for food shortages. "In the 1970's the U.S. realized that drought impacts on global agriculture were severely affecting trade and food aid decisions, while ground based information and forecasting of drought was very limited," said Brad Doorn, water resources program manager in the Earth Science Division at NASA Headquarters, Washington. "Earth observations from space provide the persistent, global information needed to detect precipitation, temperature, soil moisture, and vegetation conditions that give us a more complete picture of conditions that lead to drought, as well as its impacts."

来源：美国国家航空航天局 (NASA)

发布日期:2019-07-01

全文链接:<https://www.nasa.gov/feature/goddard/2019/when-drought-threatens-crops-nasa-s-role-in-famine-warnings>

3 . GODAN: Online Course in Open Data Management in Agriculture and Nutrition (GODAN农业与营养开放数据管理在线课程)

简介：The Open Data Management in Agriculture and Nutrition online course, developed by GODAN Action as part of its capacity development remit, might be of some interest. The course is aimed at policy makers, researchers and communications specialists working in the areas of agriculture, nutrition, weather and climate, and land data. It consists of five units as follows including 18 lessons. The course is the result of a collaboration between various GODAN partners, including GODAN Action, Wageningen Environmental Research, AgroKnow, AidData, the Food and Agriculture Organization of the United Nations (FAO), the Global Forum on Agricultural Research (GFAR), the Institute of Development Studies (IDS), the Land Portal, the Open Data Institute (ODI) and the Technical Centre for Agriculture and Rural Cooperation (CTA).

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来源: 全球农业与营养开放数据网 (GODAN)

发布日期: 2019-06-21

全文链接: <https://www.godan.info/news/online-course-open-data-management-agriculture-and-nutrition>

学术文献

1 . Spatial targeting of ICT-based weather and agro-advisory services for climate risk management in agriculture (基于信息与通信技术的天气和农业咨询服务的空间目标, 用于农业气候风险管理)

简介: The increasing frequency of climatic risks, such as flood, drought, heat and cold waves, is causing significant loss of farm productivity and income in agriculturally dependent communities. Timely availability of reliable information on weather conditions, agro-advisories, and market information can help to minimize losses in agriculture. This paper presents a scientific and integrated approach to identify areas of high agriculture vulnerability to climate change and availability of ICT services for dissemination of CSA information in the vulnerable areas. This study was illustrated for India where the majority of the population depends on agriculture for their livelihoods, and this sector is highly vulnerable to climate change. The study presents four regions: i) high agriculture vulnerability and low ICT services, ii) high agriculture vulnerability and high ICT services, iii) low agriculture vulnerability and low ICT services, and iv) low agriculture vulnerability and high ICT services. This methodology, which is simple, uses available data, and is easy to apply, can be useful to prioritize locations for climate-smart interventions, mode of CSA information dissemination using ICT services, and increase coverage of agro-ICT services through development of ICT services in the locations where climate change impact is high and ICT services are very low. This study also showed that there is a need to improve the quality of existing climate information and agro-advisory services in the climate risk-prone areas.

来源: Climatic Change

发布日期: 2019-07-25

全文链接: <http://agri.ckcest.cn/file1/M00/06/8A/Csgk0F05FzSATQ2UADVbqIJffzMO84.pdf>

科技图书

1 . Digital Agricultural Economic System and Electronic Agricultural Development Intensification (数字农业经济系统与电子农业集约化发展)

简介: This article is about methodological and methodical questions of digital agriculture based on system and electronic intensification of expanded reproduction process. Industrial

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specifics of agriculture significantly affect the efficiency of the intensification process, its digitalization: agriculture is a living organism depending on weather conditions, agricultural production is a creativity-intensive process. The goal of agriculture is to provide conditions for an expanded self-reproduction based on solution of 3 tasks: reproduction of socially necessary products, rural populations, soil and nature environment. The unity of purpose of agriculture functioning (reproduction) and its forms (economic system), define the systems reproduction approach content. The authors examine the essence of basic economic categories: reproduction (the goal of the economic system), the intensification (means of achieving a goal), efficiency (cost and speed of achieving a goal—ratio of goals and means). Intensification is connected with additional costs, providing a balance of production factors. Electronic (digital) economy is a form of computer-based management, quantitative justification of resources for the agriculture subsystems development. The purpose of intensification process digitalization is definition of management teams to improve the process of agriculture development management. Experience of organizational-economic work on digital agriculture economy formation and development is regarded applicable for selected crops and activities, the authors provides the experience of Belgorod region farms where digital technologies are successfully applied in agricultural, livestock, land reclamation, construction activities. There is a need to improve economic mechanisms (taxes, loans, grants) of corporations' transit to e-production. Currently there is a lot of research on the digitalization of a technology system. Research lie ahead to the rest of the systems of agricultural economy: social, environmental, economic, organizational.

来源: Ubiquitous Computing and the Internet of Things: Prerequisites for the Development of ICT

发布日期: 2019-05-16

全文链接: <http://agri.ckcest.cn/file1/M00/06/8A/Csgk0F05GDGAEUjrAAKxZ12oq1Q117.pdf>