



2018年第49期总153期

农业与资源环境信息工程专题

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▶ 前沿资讯

1 . New Platform Launching to Scale-up Climate-Smart Solutions for Food Security and Climate Change (新上线的平台可扩大气候智慧型农业对粮食安全和气候变化的影响)

简介: Global food systems are under increasing pressure from climate change and a growing world population. We must increase food production to achieve food security for all, even as the largely negative effects of climate change impact agriculture. We also need to enhance the resilience of farming communities to these impacts, while reducing greenhouse gas emissions from the agriculture sector. Addressing these challenges requires rapid action to transform our food systems. Climate-smart agriculture has emerged as a promising approach for achieving the transformation needed in agriculture, with the potential to not only help farmers adapt to climate change impacts, but also mitigate the impact of agriculture on climate. The power of climate-smart agriculture is demonstrated by recent outcomes from the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and its partners, who have focused on developing and scaling the approach for nearly a decade. For instance, new meteorological tools developed by the program and its partners provide better climate forecasting for a population of 125 million in East and West Africa, allowing farmers to seed and harvest at the right moment, enhancing productivity and minimizing crop losses.

来源: 国际农业研究磋商组织 (CGIAR)

发布日期: 2018-11-23

全文链接: https://ccafs.cgiar.org/news/media-centre/press-releases/new-platform-launching-scale-climate-smart-solutions-food-security#.W_xeuLt-UI

2 . Climate analysis toolbox updated (欧洲宇航局升级气候工具分析功能)

简介: 欧洲宇航局气候分析工具箱的更新结合了从众多卫星任务中收集的信息, 现在已经可以获取并且可以为科学家和研究生提供气候变化研究的数据。该工具箱由欧洲宇航局与的气候变化倡议 (CCI) 开发, 允许用户访问、分析和可视化过去40年中全球卫星衍生气候观测数据, 包括最近一代哥白尼哨兵任务的数据。

来源: 欧洲宇航局 (ESA)

发布日期: 2018-11-22

全文链接: http://www.esa.int/Our_Activities/Observing_the_Earth/Space_for_our_climate/Climate_analysis_toolbox_updated

▶ 学术文献

1 . The role of big data and knowledge management in improving projects and project-based organizations (大数据和知识管理在项目提

升和项目组织中的角色)

简介: Knowledge management plays a significant role in organizations; supporting organizations to deal effectively with changes, increasing their productivity and paving the way to development and innovation. Several scientific studies have addressed the relevance of applying knowledge management initiatives to improve projects as well as organizations that conduct projects. This paper will look at the interaction between knowledge management and big data within the context of projects. In this regard, this paper will discuss, among other things, (1) how big data can contribute to enhance knowledge management in projects and project-based organizations (2) what kind of pitfalls, challenges and opportunities that are associated with the interplay between knowledge management and big data (3) how this interplay can improve projects so that the projects can be carried out effectively and efficiently. These three questions are addressed by taking into consideration some of the important, underlying issues that are essential for ensuring improved decision making and performance in projects and project-based organizations.

来源: Procedia Computer Science

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全文链接: http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_s0GAMSp6AAg2n4JmonM262.pdf

2 . A novel decision support system for the interpretation of remote sensing big data (一种新型遥感大数据解译决策支持系统)

简介: Applications of remote sensing (RS) data cover several fields such as: cartography, surveillance, land-use planning, archaeology, environmental studies, resources management, etc. However, the amount of RS data has grown considerably due to the increase of aerial and satellite sensors. With this continuous increase, the necessity of having automated tools for the interpretation and analysis of RS big data is clearly obvious. The manual interpretation becomes a time consuming and expensive task. In this paper, a novel tool for interpreting and analyzing RS big data is described. The proposed system allows knowledge gathering for decision support in RS fields. It helps users easily make decisions in many fields related to RS by providing descriptive, predictive and prescriptive analytics. The paper outlines the design and development of a framework based on three steps: RS data acquisition, modeling, and analysis & interpretation. The performance of the proposed system has been demonstrated through three models: clustering, decision tree and association rules. Results show that the proposed tool can provide efficient decision support (descriptive and predictive) which can be adapted to several RS users' requests. Additionally, assessing these results show good performances of the developed tool.

来源: Earth Science Informatics

发布日期: 2018-03

全文链接: http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_svuAAC0SACTwH0JLjFc483.pdf

3 . GlobeLand30: Operational global land cover mapping and big-data

analysis (GlobeLand30: 全球土地覆盖测绘与大数据分析)

简介: Information regarding Land cover and change (LCC) over time is essential for a variety of Societal Benefits Areas (SBA), such as environmental change analysis, geographical condition monitoring, urban and rural management, earth surface process modeling, and sustainable development. Since the middle of 1990s, the international scientific communities have devoted tremendous efforts to Global Land Cover (GLC) mapping, and developed a number of coarser resolution (ranging from 300-m to 1 km) data products. As these products could not provide sufficient spatial details and are far from satisfactory for many applications, the Groupon Earth Observations (GEO) and some other international organizations called for actions to move towards finer resolution GLC mapping and monitoring in 2010. In order to meet increasing user needs, China launched an operational GLC mapping project and produced a 30-m GLC data product, GlobeLand30, with 10 classes for years 2000 and 2010. In September 2014, GlobeLand30 was donated by China to the United Nations for open access and international sharing. It was reported by Nature as “China: Open access to Earth land-cover map” and recognized by international experts as “a milestone achievement in the Earth Observation and open geo-information access. In order to further report the innovative developments and applications of GlobeLand30, Science China Earth Sciences has published a special issue, entitled “GlobeLand30 remote sensing mapping innovation and big data analysis”, in the end of 2016.

来源: Science China Earth Sciences

发布日期: 2018-09-05

全文链接: http://agri.ckcest.cn/file1/M00/02/9E/Csgk0Fv_slmARqn-AAMfIZnKNyg154.pdf