

MONITOR

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Sustainable urban planning and management increasingly demands innovative concepts and techniques to obtain up-to-date and area-wide information on the characteristics and development of the urban system.

The proposal aims at the definition and application of indicators at the urban scale as supported by EO data. It is believed that the proposal carries significant potential and may support sustainable urban planning and management with respect to land environment and hydrology. In addition the proposal reflects continuation of a well established scientific cooperation in between European and Chinese entities within Dragon – 2 (e.g. Project on the use of earth observation in support of major sport events).

The main objective of the project will be to bridge the gap between EO scientists and urban managers/planners by demonstrating the ability of current EO systems to support the definition and application of a set of dynamic urban indicators with distinct social and environmental interest.

Several R&D projects addressed the EO capabilities to support urban planning, but few integrated developed EO-based indicators capable of supporting urban planning and management. It is true that a fully operational automatic online information system leading to an assessment of current town planning decisions cannot be developed yet, due to the physical and technical constraints related to the spatial resolution and revisit time of satellite sensors. However, past and future town planning decisions can be assessed by a set of EO-derived urban indicators, enabling the assessment of the environment in cities.

EO data is the main input for the definition of the indicators. Well-known EO analysis methods will be used to calculate products from raw data. It should be noted that the development of new EO data processing tools is not among the objectives of MONITOR; instead state of the art methods will be implemented and improved if it is necessary to better support the local scale analysis. Some of the indicators, especially in regional scale, could be evaluated by EO higher level products available on-line.

基于多元遥感数据的北京市城市水灾监测与评估

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可持续城市规划和管理越来越需要创新的概念和技术来获取城市体系日新月异的发展和特征信息。

该项目的目标是在观测数据支持下定义和发展城市尺度下的城市发展指标。相信该项目具有巨大的执行潜力，并能在土地环境和水文方面为城市的可持续规划和管理提供支持。另外，项目反映了在龙计划二期中建立的良好欧洲与中国科技合作机制的延续（如利用对地观测对重大体育赛事的支持）。

该项目的主要目标是通过展示现有对地观测系统对城市发展动态指标定义和应用的能力，为从事对地观测研究的科学家和城市规划者和管理者之间建立桥梁。这些城市发展动态指标集合了不同社会和环境背景。

许多项目已证明对地观测系统在支持城市规划方面的能力，但很少有项目涉及整合先进的城市发展指标来支持城市的规划和发展。由于与卫星时空分辨率相关的物理和技术参数的限制，一个完整的自动的在线的用于评价现有城市规划决策的信息系统还未形成。然而，过去和未来的城市规划决策可以通过一系列的城市发展指标进行评价，同时，还可以对城市环境进行评价。

对地观测数据是城市指标定义的主要数据源，众所周知的对地观测分析系统被用来对源数据进行处理。不过，发展新的对地观测数据分析工具并不是监测研究的目的。如果能够更好地支持城市尺度的分析，一些艺术上的方法将被引入到研究中。一些指标，特别是在区域尺度，可以利用在线的对地观测系统更高级产品进行评价。