Monitoring on Ecological Environment of Subsidence Area of Huainan Coal Mining,China

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After long-term underground coal mining activities, there has been formed coal mining subsidence area in a large scale. The environment problems of the subsidence area are closely bound up with the local people's livelihood, so it is of great practical significance to the coal mining subsidence area by monitoring soil heavy metal distribution and water eutrophication. This paper takes Huainan mining area of China as the study area to monitor Chlorophyll-a, Secchi disk transparency and other water quality index trends based on field spectral data and satellite data. Various statistical regression models were tested to correlate water quality index with remotely sensed spectral reflectance. The soil heavy metal distribution map shows the spatial distribution characteristics and the sources of the heavy metal. These research works could provide important technical support to realize the target of coal mining subsidence area environment remote sensing monitoring and early warning in the future.