

Supplementary Materials

The downloaded datasets were first filtered to extract the list of literature on rice research using remote sensing techniques available for the VMD using the conditional formatting and filter tool in Excel. The selected datasets were exported for further use. The SCOPUS list provides in-depth information based on the category Authors, Author full names, Author(s) ID, Title, Year, Source title, Volume Issue Art. No., Page start, Page end, Page count, DOI, Cited by, Link, Abstract, Author Keywords, Indexed Keywords, Document Type, Publication Stage, Open Access, Source, EID (Scopus ID). The list of Indexed Keywords and Author's Keywords provided in the SCOPUS database was amalgamated into a single list of keywords using the Excel function. There were instances when duplicate values in the combined keywords list were removed using a code in Excel (Supplementary Table 1). The cleaned data had variation in many places, such as in some literature, it was reported to be land use; in some, it was reported as land-use; other instances were normalized difference vegetation index, NDVI, etc. These variations were standardized to a single form for further analysis.

Supplementary Table S1: Targeted and related keywords list

No	Target keyword	Similar keywords to target keyword
1	EO	Earth observation, Earth observations
2	LULC	land use, land use and land cover; land use change; land use pattern; land use planning; land use status map, land use type; land use land-cover change; land-use change; landcover classification
3	Air Quality	air pollutant, air pollution, air pollution assessments, air pollution control, air quality, air quality impacts, air quality modeling,
4	Crop	Crops,
5	NDVI	Normalized Vegetation Difference Index, Normalized vegetation difference index
6	NDWI	Normalized Difference Water Index
7	Vietnam Mekong Delta	Vietnam, Mekong, Vietnamese Mekong Delta
8	Biomass	above ground biomass; above-ground biomass, biomass, biomass air quality model, biomass burning
9	Aerosol	Aerosol; aerosol parameters; aerosol properties
10	Agriculture	agricultural activities, agricultural areas, agricultural crops, agricultural environments, agricultural intensification, agricultural livelihoods, agricultural monitoring, agricultural practice, agricultural production, agriculture, agriculture development, agriculture field agriculture forecasting, agriculture monitoring, agriculture sector
11	Image classification	Classification, Classification Accuracy Assessment, Classification Accuracy Assessment Assessments, Classification Algorithm, Classification Approach, Classification Methods, Classification Procedure, Classification Results, Classification Technique, Classification Data Fusion
12	Data Processing	Data Acquisition, Data Assimilation, Data Collection Method Data Fusion, Data Handling, Data Integration, Data Pre-Processing, Data Processing, Data Searching, Image Processing, Image Processing And Analysis
13	GIS	Geospatial Assessment, Geospatial Information, Geographic Information Systems, Geographic Information Systems, GIS Modelling

14	Irrigation	Irrigation, Irrigation Canals, Irrigation Pond, Irrigation Practices Irrigation Systems, Irrigation Waters
15	LULC	Land Cover, Land Cover Change, Land Cover Classification, Land Cover Mapping, Land Use, Land Use and Land Cover, Land Use Change, Land Use, Land Use Pattern, Land Use Planning, Land Use Status Map, Land Use Type, Land-Cover Change, Land-Use Change, Landcover Classification, Landuse Change
16	MODIS	Moderate Resolution Imaging Spectroradiometer, Moderate Resolution Imaging Spectroradiometer Datum, Moderate Resolution Imaging Spectroradiometer Satellites, Modis, Modis Satellite, Modis Time Series
17	Remote Sensing	Remote Sensing Analysis, Remote Sensing and GIS, Remote Sensing Approach, Remote Sensing Classification, Remote Sensing Composite Swidden, Remote Sensing Data, Remote Sensing Data Assimilations, Remote Sensing Techniques, Remote Sensing Technology, Remote Sensing NDVI
18	Rice Yield	Rice Crop Yield, Rice Yield, Rice Yield Estimation
19	Rice mapping	Rice Cropping, Rice Cropping Patterns, Rice Cropping System Mapping, Rice Cropping Systems, Rice Crops, Rice Cultivation, Rice Distribution, Rice Monitoring, Rice Paddy, Rice Paddy Mapping, Rice Phenology, Rice Production, Rice Seasons, Rice Sowing.