In this work, the authors present a long-term rice distribution dataset covering South and Southeast Asia at a five-year interval. The paddy flooding signals and vegetation indices are used to identify multi-paddy fields. The overall concept of the study is sound, and the manuscript is clearly written. However, several issues require further clarification and justification. My detailed comments are as follows:

1. Issues related to figure presentation. It is recommended that Figure S1 be moved to the main text, as both readers interested in the methodology and potential data users would benefit from a clear visualization of the study area. In addition, representative remote-sensing image examples of rice fields should be included to better illustrate the spectral and phenological characteristics used for rice identification. Furthermore, Figure S3 lacks a legend, making it difficult for readers unfamiliar with rice phenology to distinguish between the two curves shown.

2. Section 2 states that the data source is based on five-year median composite imagery. However, rice planting patterns in South and Southeast Asia may exhibit considerable interannual variability, including crop rotation and alternating cultivation of different crops. It is unclear whether compositing over five years could obscure such variability and potentially affect the reliability of rice mapping. Please provide quantitative or statistical evidence to demonstrate that the five-year compositing strategy does not significantly distort the spatial distribution of rice. Without such justification, the robustness of the mapping methodology and the reliability of the resulting dataset remain questionable.

3. It is recommended that the process of collecting and labeling the sample point validation data be re-described and placed in Section 2. Describing point-based and statistic-based validation data in one section can improve readability.

4. When accessing the interactive map through Google Earth Engine (GEE), noticeable mosaic-like artifacts appear in many mapped areas, and the boundaries between rice and cropland classes show poor spatial consistency. Please explain the potential causes of these mapping quality issues. In addition, I believe that a published dataset should not only demonstrate high accuracy in statistical metrics or sample-based validation, but should also provide sufficient spatial consistency and reliability to support downstream applications and reuse by the research community.
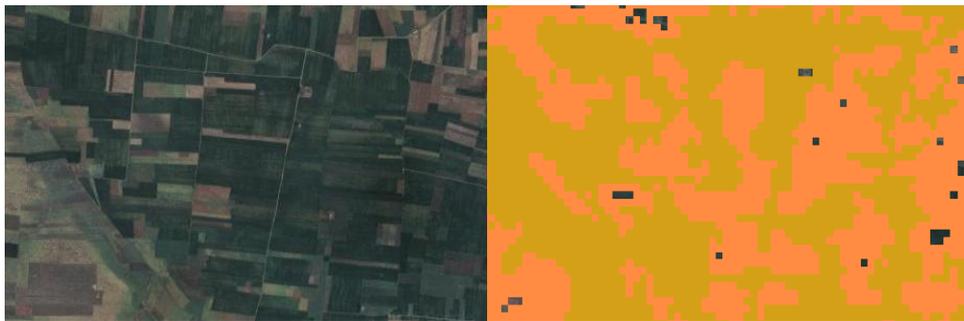

Figure C1 Imagery in 2024 and corresponding mapping results

5. The qualitative comparison results presented in Figures 4, 5, and S2 do not include corresponding remote-sensing images, making it difficult to visually assess the reliability of the mapping outcomes. Moreover, the figures mainly show large-scale regional patterns, while finer spatial details are not adequately displayed. It is recommended to include zoomed-in comparisons with reference imagery to better demonstrate the spatial accuracy and consistency of the rice mapping results.