Response to Reviewer 1 Comments

Point 1: Line 101: what is the source of the study area-Maritime Silk Road? When googling it, there are different maps of Maritime Silk Road.

Response 1: Maritime Silk Road itself is a relatively broad concept, and it sets in constant development and change; however, its core idea is to link the market chain of East Asia, Southeast Asia, South Asia, West Asia, North Africa, Europe and other economic plates. With comprehensive reference to relevant research results, this paper selected six sub-regions of East Asia, Southeast Asia, South Asia, West Asia, Northeast Africa and Southern Europe to define the study area. Specifically, from Japan in East Asia, this area passes through more than 60 countries and territories, and finally reaches Spain in Southern Europe. Notably, in line 106, we added two latest articles as a theoretical support.

Point 2: Line 142: Why did you resample to 300 meters? Not in 30 or 500 meters.

Response 2: Due to the use of three source datasets with different resolutions, additional data resampling is required at the pre-processing stage. Specifically, spatial up-scaling and down-scaling were applied to generate consistent land use/land cover datasets in three spatial resolution levels (i.e., 30 m, 300 m, 500 m). Then, area estimation biases for land use/land cover datasets at different resolutions were evaluated. Finally, we found that the datasets with a 300 m resolution had relatively superior classification results.

Point 3: Table 2: What is the number?

Response 3: The numbers in Table 2 are the type codes of the original classification system of the three land use/land cover datasets. They are the most fundamental attribute values of multi-source land use/land cover datasets. To avoid ambiguity, we added a detailed note at the bottom of Table 2.

Point 4: Figure 2: prove in higher quality.

Response 4: In response to reviewer's comment, we have redone Figure 2 to give it a higher quality.

Point 5: Figure 2: how did you adjust the different land classes in three data sources? 10 types and 22 types,... Did you reclassify? What are the sources?

Response 5: Due to the use of the three source datasets with different land use/land cover classification systems, the reasonable reclassification of land use/land cover types in three source datasets is required. Specifically, Section 3.2. and Section 3.3. were the establishment of a unified and generalized classification system and the reclassification of three source datasets, respectively, and Table 3 and Table 4 showed how we adjusted the different land use/land cover types in three source datasets. Overall, the land use/land cover types of three source datasets (i.e., 17 types, 22 types, 10 types) were reclassified into eight target types, as shown in Table 4.

Point 6: Please simplify the flowchart.
Response 6: Figure 2 is a summary of research contents and technical approaches of the article. It includes not only data collection and data pre-processing involved in the previous sections, but also multi-source data fusion and data accuracy analysis involved in the following sections. In response to reviewer's comment, we simplified it.

Point 7: Line 175 to line 185: it is not clear. Please explain clearly, if you did reclassify the three data sources and then agreement analysis or vice versa?

Response 7: That's right. In this part of the article, we first reclassified the three input data sources (i.e., Table 4) and then carried out agreement analysis to determine the agreements and disagreements of three datasets. In response to reviewer's comment, we repeatedly embellished the language to make it clearer.

Point 8: In the method, please add the complete information about the ground-based data obtained visually by google earth.

Response 8: Point 8 is consistent with Point 9 and Point 10, that is, the processes of verification sample collection and mapping accuracy analysis in line 261 to line 273 of the originally submitted manuscript should be placed in the method. On reflection, we think these points are extremely valuable. Thus, we have made a substantial adjustment to this part of the article.

Point 9: Line 242: this should be results.

Response 9: Chapter 4 mainly included two aspects: multi-source data fusion results (i.e., Section 4.1) and accuracy analysis of fusion results (i.e., Sections 4.2~4.4). Of course, these were all results. But, there were statements about the research methods in this chapter of the originally submitted manuscript. As shown in Point 8 and Point 10, these statements were moved to methods.

Point 10: Line 261 to line 273: I think some parts should move to method.

Response 10: We have adjusted this part of the article. Please see Point 8 and Point 9 for details.

Point 11: Line 265: why 5896 sampling points? Sampling points is a good word?

Response 11: In this paper, a layer of sampling points was set, and then the reference data were established based on Google Earth high-resolution images, which is an extremely important step for the accuracy analysis of land use/land cover remote sensing mapping. Notably, the layer of sampling points was randomly generated within the study area at a sampling interval of 5 km, and 5896 sampling points were finally obtained. Additionally, the land use/land cover classification information at the sampling point is not the classification information at this point, but the information of the most dominant land type within the 300 m × 300 m area around the sampling point, that is, the sampling points are not points, but pixels.

Point 12: Line 268: it is not clear how did you give a label to 5896 data? It is based on visual analysis? If your 8 land use categories clearly distinguishable by visual analysis?
**Response 12:** In this paper, the coastal land use/land cover were divided into eight main types: 1 cropland, 2 forest, 3 grassland, 4 shrubland, 5 wetland, 6 artificial surfaces, 7 bare land and 8 permanent snow and ice (Table 3). Notably, the Numbers 1-8 are labels for land types. Of course, Section 4.2 of this article is based on visual interpretation. The interpretation keys of visual analysis based on the Google Earth high-resolution images are as follows:

<table>
<thead>
<tr>
<th>Land type</th>
<th>Interpretation key</th>
<th>Land type</th>
<th>Interpretation key</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cropland</td>
<td><img src="image1.png" alt="Cropland Image" /></td>
<td>5 wetland</td>
<td><img src="image5.png" alt="Wetland Image" /></td>
</tr>
<tr>
<td>2 forest</td>
<td><img src="image2.png" alt="Forest Image" /></td>
<td>6 artificial surfaces</td>
<td><img src="image6.png" alt="Artificial Surfaces Image" /></td>
</tr>
<tr>
<td>3 grassland</td>
<td><img src="image3.png" alt="Grassland Image" /></td>
<td>7 bare land</td>
<td><img src="image7.png" alt="Bare Land Image" /></td>
</tr>
<tr>
<td>4 shrubland</td>
<td><img src="image4.png" alt="Shrubland Image" /></td>
<td>8 permanent snow and ice</td>
<td><img src="image8.png" alt="Permanent Snow and Ice Image" /></td>
</tr>
</tbody>
</table>

Overall, the abovementioned eight land types can be clearly distinguished by visual analysis.