Here are the ideas how to solve problem in the most effective way:

1) Accordingly, the major factors that influence soil erosion in forest are FVC, vegetation health status, soil exposure degree and slope. The vegetation health status can be determined by two factors, yellow leaf index and nitrogen index. The selected factors are essential to identify the spots in forest that are particularly prone to erosion and thus were considered in the SEUFM model development. All five factors can be derived directly from remote sensing data. This provides a quick and easy way to detect soil erosion potential in forest. (link for more information about each factor: A remote sensing Based Method to Detect Soil Erosion in Forests)
2) From the satellite images we can get information about the set of erosion factors - the topography, soils, vegetation, land use. Terrain characteristics can be obtained from digital elevation models created by satellite image processing, such as ALOS, SRTM, ASTER GDEM. On this basis, the slope and shape of the slope profile, aspect of slope, horizontal and vertical dismemberment of the earth's surface can be calculated. These indicators detect areas with different potential for the development of erosion processes - plane and linear erosion. (https://www.earthdoc.org/content/papers/10.3997/2214-4609.2020geo131?crawler=true)

3) Spectral indices based on the reflectivity of the soil surface such as form index (FI), coloration index (CI), brightness index (BI) are used to characterize the soil condition. Color is an important parameter which can characterize the condition of the soil. The spectral reflectance of soil, which is characterized by form index, depends on the content of iron oxides and carbon compounds. Low reflectance is usually associated with a low degree of erosion (the presence of iron oxides, the absence of carbonates). Brightness index allows you to distinguish vegetation from uncovered soil. Therefore, it is widely used as an indicator of soil erosion. The low level of brightness index is explained by the vegetation cover, and the high level is explained by the uncovered surface. (https://www.earthdoc.org/content/papers/10.3997/2214-4609.2020geo131?crawler=true)

4) It is necessary to convert the predicted grid output into corresponding vector data results through a series of post-processing operations. The entire process from image prediction output to vector is as follows.

    1) Grid splicing: Because the output must be divided into administrative regions, this step splits the previously input and cropped image prediction results into an entire grid image in the unit of administrative regions.
    2) Adding spatial coordinates: Because the output raster image has no coordinate information, it is necessary to inherit the spatial coordinate information from the input image.
    3) Filtering of small spots: Because the network predicts the image pixel-by-pixel, there are some small spots in the output result. According to the requirements of soil and water conservation projects, a spot area threshold of 400 m^2 can be set, and the spot whose pixel point is less than this threshold can be filled with the pixel value of the nearest spot.

    (https://www.researchgate.net/publication/360193574_Application_of_Deep_Learning_in_Land_Use_Classification_for_Soil_Erosion_Using_Remote_Sensing)

5) Since we have class imbalanced classification (there are more instances of no-erosion, than erosion), it's important to choose right metric. The F-Measure is good metric for the imbalanced classification and can be safely used.