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The *Imperata* grasslands of tropical Asia: area, distribution, and typology

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Abstract. The rehabilitation or intensified use of *Imperata* grasslands will require a much better understanding of their area, distribution, and characteristics. We generated estimates of the area of *Imperata* grasslands in tropical Asia, and suggested a typology of *Imperata* grasslands that may be useful to define the pathways toward appropriate land use intensification. We conclude that the area of *Imperata* grasslands in Asia is about 35 million ha. This is about 4% of the total land area. The countries with the largest area of *Imperata* grasslands are Indonesia (8.5 million ha) and India (8.0 million ha). Those with the largest proportion of their surface area covered with *Imperata* are Sri Lanka (23%), the Philippines (17%), and Vietnam (9%). Laos, Thailand, Myanmar, and Bangladesh evidently all have similar proportions of their land area infested with *Imperata* (about 3 to 4%). Malaysia (< 1%), Cambodia (1%), and the southern part of China (2%) have but a minor proportion of their total land area in *Imperata*. The species was found widely distributed on the full range of soil orders. It occupied both fertile (e.g. some of the Inceptisols and Andisols) and infertile soils (Ultisols and Oxisols) across a wide range of climates and elevations. *Imperata* lands fall into four mapping scale-related categories: *Mega-grasslands*, *macro-grasslands*, *meso-grasslands*, and *micro-grasslands*. The mega-grasslands are often referred to as 'sheet *Imperata*'. They are the large contiguous areas of *Imperata* that would appear on small-scale maps of say 1:1,000,000. We propose that this basic typology be supplemented with a number of additional components that have a key influence on intensification pathways: land quality, market access, and the source of power for tillage. The typology was applied in a case study of Indonesian villages in the vicinity of *Imperata* grasslands. We propose an international initiative to map and derive a more complete and uniform picture of the area of the *Imperata* grasslands. This should include selected studies to understand conditions at the local level. These are critical to build the appreciation of change agents for the indigenous systems of resource exploitation, and how they relate to local needs, values, and constraints.