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STELLINGEN
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**Impact of Land use Changes on the Human-elephant Conflict**
**Feeding ecology and movements of the Bornean elephant**
(*Elephas maximus borneensis*) in North Kalimantan, Indonesia

1. The fact that the elephant populations in North Kalimantan, Indonesia often cross the Indonesian-Malaysian border into Malaysia makes them a migrating trans-boundary population. This fact complicates conservation efforts by the two countries (Malaysia and Indonesia) (this thesis).

2. The information on dispersal and migration corridors of Bornean elephants in Indonesia is a condition for management recommendations on minimum sizes of high conservation value forest needed for the conservation of the Bornean elephant in North Kalimantan (this thesis).

3. Bornean elephants show a sophisticated selection of food based on different nutritional properties of the food plants and parts of plants (fruit, bark, leaves etc.). Monocots, such as palms, bamboos, bananas, and plants of the ginger family, seem to be important in the diet of Bornean elephants. Wild food plants in the Sebuku forest appear to be adequate to support the nutritional requirements of Bornean elephants, especially for family herds (this thesis).

4. Bornean elephants follow a strategy to maximize energy intake by selecting food items rich in sugar, protein, and hemicellulose. It is suggested that glutamate which can enhance the sensory qualities of food might play an important role in the foraging and palatable food searching behavior of Bornean elephants (this thesis).

5. The ability of Bornean elephants to adapt their behavior to exploit preferred habitat elements within human-dominated landscapes supports the high correlation between the areas under smallholder land and the presence of elephant dispersal corridors. This results in severe conflicts between
elephants and farmers. Therefore, conserving the remaining patches of natural forest and preventing further encroachment of this critical habitat are important for the human-elephant conflict alleviation (this thesis).

6 There is evidence that food selection by wild herbivores involves neurally mediated interactions between the senses of taste and mechanisms to sense the consequences of food ingestion, such as satiety (experienced when animals ingest adequate kinds and amounts of nutritious food) and malaise (experienced when animals ingest excesses of nutrients or toxins or experience nutrient deficits) (Provenza 1995).

7 Acquired behaviour within Bornean elephants is likely as they remember areas containing their preferred food choices and come back to those areas after sufficient time has elapsed for resources to replenish (English et al. 2014; Hart et al., 2008).

8 In the future, efforts to save the elephant and its habitat may be won or lost in the battle for public awareness and perception (Nyhus et al. 2000).

9 Balancing economic development with international commitments to protect biodiversity is a global challenge (Runting et al. 2015).

10 The general mindset ‘environmental conservation and economic development are mutually exclusive’ should be changed (Meijaard & Sheil 2008).

11 Various ‘best practices’ for minimizing the environmental impacts of oil palm plantations have been developed, but few independent assessments of their application and effectiveness have been made (Sheil et al. 2009).