



SAVE THE ELEPHANTS

STE's Human-Elephant Coexistence Toolbox

➤ Reference List

(List includes compilation of existing & relevant resources for each section of the toolbox)

HEC Toolbox website (English) : <https://ste-coexistence-toolbox.info/en/>

1. UNDERSTANDING ELEPHANTS:

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Different HEC Projects around the world:

Killon et al. (2020)

- ‘Active guarding, fencing, repellents and socio-economic mechanisms consistently led to co benefits across species and contexts’
- Wildlife damage to crops, livestock, property and human life is regarded one of the biggest problems worldwide

Weinmann, S. (2018) – Impacts of elephant crop-raiding on subsistence farmers and approaches to reduce human-elephant farming conflict in Sagalla, Kenya, Thesis presented in partial fulfillment of the requirements for

the degree of Master of Science in Resource Conservation, International Conservation and Development, the University of Montana, Missoula, MT

Thapa (2010)

- It was found that crop varieties, stage of crops, distance of the farm from the park boundary, crop season and the surrounding ecology were the main factors in crop damage variation.
- Most methods are temporary
- Households combining both traditional and modern means to guard crops
- Crop guarding is an intensive process and is not full proof with completely preventing crop damage
- Site specific management strategies

Gross (2017)

- Images of crop types – maize, sorghum, finger millet, pumpkins, ground nuts, cotton *cash crop (study sites – India, Nepal, Zambia and Tanzania)
- Frightening devices – fear provoking stimuli are used to increase animals' fear of areas where crops are located (Spotlights for elephants)
- One main constraint – effect of habituation
- Olfactory repellents – difficulty is that smell easily evaporates or washes away in the rain
- Chilli is an alternative cash crop
- Page 23 – Awely developed a standardized system to assess and analyse damages by wildlife (crop damage, property damage, livestock predation, and accidents with humans).

BEEHIVE FENCES

Websites:

- Bees for development website resources - [Resource Centre](#)
- STE / Elephants and Bees Publications Library - <https://savetheelephants.org/research/research-library/>

Books, Journals & Publications:

- **Mountains ADAPT solutions from East Africa. (2022).** <https://wedocs.unep.org/bitstream/handle/20.500.11822/39787/MASEA.pdf>
- King, L. E., Tiller, L., Mwambingu, E., Serem, E., Nzumu, H., Mugo, G., Raja, N., Brennan, E., Kisiang'ani Wanjala, D., Ndongi, V., Leneuyia, K., Williams, H., Lala, F., Pope, F., & Douglas-Hamilton, I. (2024). Impact of drought and development on the effectiveness of beehive fences as elephant deterrents over 9 years in Kenya. *Conservation Science and Practice*, e13242. <https://doi.org/10.1111/csp2.13242>.
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- King, L.E (2013) Elephants and Bees, Could honey bees be effective deterrents for Asia's crop-raiding elephants? Sanctuary Asia, Conflict Resolution, October 2013- <https://savetheelephants.org/wp-content/uploads/2016/11/2013KingElephantsAndBeesInAsia.pdf>
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Videos & YouTube links:

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- TED Talk. (2020, February 28). ***How bees can keep the peace between elephants and humans | Lucy King*** [Video]. YouTube. <https://www.youtube.com/watch?v=on0B0iCovOo>

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Thesis-

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GABIONS AND STONE WALLS

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NIGHT GUARDING WITH LIGHT & FIRE DETERRENTS

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TRIP ALARMS

Websites:

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CELLPHONE AND LED LIGHTS BASED SYSTEM

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INFRARED/ MOTION-TRIGGERED SENSORS

Websites:

- **Nature Conservation Foundation** - <https://www.ncf-india.org>
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WATCHTOWERS/OBSERVATION TOWERS

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THANK YOU!

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