



STE's Human-Elephant Coexistence Illustrated Toolbox

Reference List

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

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METAL STRIP FENCE

Books, Journals & Publications:

- **Von Hagen, R. L., Kasaine, S., Githiru, M., Amakobe, B., Mutwiwa, U. N., & Schulte, B. A. (2020).** Metal strip fences for preventing African elephant (*Loxodonta africana*) crop foraging in the Kasigau Wildlife Corridor, Kenya. *African Journal of Ecology*, 59(1), 293–298. <https://doi.org/10.1111/aje.12821>
- **Von Hagen, Lynn & Kasaine, Simon & Githiru, Mwangi & Mutwiwa, Urbanus & Amakobe, Bernard & Schulte, Bruce. (2021).** Kasaine Metal Strip Fence Construction Guide. https://www.researchgate.net/publication/348819261_Kasaine_Metal_Strip_Fence_Construction_Guide
- **Worley, J. W. (2006, June 1).** *Fences for the Farm*. University of Georgia. <https://extension.uga.edu/publications/detail.html?number=C774&title=Fences%20for%20the%20Farm>

FOOD STORAGE AND PROTECTION

Websites:

- **Awely, Wildlife and People 2015** – Human Wildlife Conflicts, Sustainable Development.
- **Behind the scenes with Conservation Lower Zambezi** - <https://www.safaribookings.com/blog/196>
- **International Elephant Foundation** – HEC in Nkala Game Management Area. <https://elephantconservation.org/hec-in-nkala-game-management-area/>
- **Conservation Lower Zambezi** – Felumbus <https://www.conservationlowerzambezi.org/community-support/>
- **Living with Elephants**, Ulule.com - <https://www.ulule.com/vivre-elephants/>
- **NRI Post harvest** lost reduction center - <https://postharvest.nri.org/loss-reduction/choosing-the-right-grain-store/storage-search/96-cocoons>
- **Wildlife Protection in the Lower Zambezi** - <https://www.peoplenotpoaching.org/wildlife-protection-lower-zambezi>

- **Storage techniques of maize products** - <https://myfarmbase.com.ng/2018/08/14/storage-techniques-of-maize-and-maize-products/#:~:text=Maize%20can%20be%20stored%20for%20a%20long%20period,must%20be%20protected%20from%20insects%2C%20rodents%20and%20birds>

Books, Journals & Publications:

- ***How to reduce damage by elephants***. (2015). Awely, Wildlife and People. <https://encosh.org/wp-content/uploads/formidable/2/LivretGranaryStore-Final-2.pdf>
- **Where the elephants walk, The Weekend Australian, February 7-8, 2015**, Travel and Indulgence https://www.suewatt.co.uk/docs/the_austrian_-_zambia_-_where_the_elephants_walk.pdf
- ***Elephant Village***. (2022). <https://www.earthmattersfoundation.org/Elephantvillage.pdf>
- FAO Grain storage techniques - <http://www.fao.org/3/t1838e/T1838E12.htm>
- **Gross, E. M., Lakhar, B. P., Subedi, N., Nyirenda, V.R., Klebelsberg, E. and Jakoby, O. (2020)** Elephants in the village: Causes and Consequences of property damage in Asia and Africa <https://conbio.onlinelibrary.wiley.com/doi/epdf/10.1111/csp2.343>
- **Gross, E. M (2019)** Tackling routes to coexistence, Human-elephant conflict in Sub-Saharan Africa, GIZ Partnership against Poaching and Illegal Wildlife Trade
- **Nyirenda, V. R., Nkhata, B.A., and Tembo, O. (2018)** Elephant Crop Damage: Subsistence farmers Social Vulnerability, Livelihood Sustainability and Elephant Conservation, Sustainability, 10 (10): 1-19 https://www.researchgate.net/publication/328137628_Elephant_Crop_Damage_Subsistence_Farmers'_Social_Vulnerability_Livelihood_Sustainability_and_Elephant_Conservation
- **Mobolade, A. J., Bunindro, N., Sahoo, D., Rajashekar, Y. (2019)** Traditional methods of food grains preservation and storage in Nigeria and India, Annals of Agricultural Sciences

Different HEC Projects around the world:

- **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

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

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** - <http://resources.beesfordevelopment.org>
- **Elephants and Bees Media Library** - <https://elephantsandbees.com/elephant-behaviour-elephants-bees-media-library/>

Books, Journals & Publications:

- **King, L.E (2019)** Beehive Fence Construction Manual, A step by step guide to building a protective beehive fence to deter crop-raiding elephants from small scale farmland, Elephants and Bees Project, Save the Elephants- <https://elephantsandbees.com/wp-content/uploads/2014/05/Beehive-Fence-Construction-Manual-2014-ss.pdf>
- **King, L. E., Lala, F., Nzumu, H., Mwambingu, E., & Douglas-Hamilton, I. (2017).** Beehive fences as a multidimensional conflict-mitigation tool for farmers coexisting with elephants. *Conservation Biology*, 31(4), 743–752. <https://doi.org/10.1111/cobi.12898>
- **King LE, Soltis J, Douglas-Hamilton I, Savage A, Vollrath F, (2010).** Bee threat elicits alarm calls in African elephants. *PLoS One.*;5(4):e10346. pmid:20436682 <https://doi.org/10.1371/journal.pone.0010346>
- **King LE, Lawrence A, Douglas-Hamilton I, Vollrath F. (2009)** Beehive fence deters crop-raiding elephants. *Afr J Ecol.*;47(2):131–7. <https://doi.org/10.1111/j.1365-2028.2009.01114.x>
- **King LE.** The interaction between the African elephant (*Loxodonta africana africana*) and the African honey bee (*Apis mellifera scutellata*) and its potential application as an elephant deterrent. [PhD Thesis]. University of Oxford, UK; 2010. Available: <http://link.springer.com/article/10.1007/s00114-002-0375-2>
- **Vollrath F, Douglas-Hamilton I.** African bees to control African elephants. *Naturwissenschaften.* 2002;89(11):508–11. pmid:12451453 <https://doi.org/10.1007/s00114-002-0375-2>
- **Butler, K. M. (2019)** Behaviour and crop-raiding patterns of Asian elephants (*Elephas Maximus*): Can beehive fences help mitigate human-elephant conflict in Sri Lanka?
- **Scheijen, C. P. J., Richards, S. A., Smit, J., Jones, T., & Nowak, K. (2018).** Efficacy of beehive fences as barriers to African elephants: A case study in Tanzania. *Oryx*, 53(1), 92–99
- **King, L., Pardo, M., Weerathunga, S., Kumara, T.V., Jayasena, N., Soltis, J. and de Silva, S (2018)** Wild Sri Lankan elephants retreat from the sound of disturbed Asian honey bees, *Current Biology* 28, R51–R65, January 22. DOI: 10.1016/j.cub.2017.12.018- [http://www.cell.com/current-biology/abstract/S0960-9822\(17\)31649-4](http://www.cell.com/current-biology/abstract/S0960-9822(17)31649-4)
- **King, L. (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>
- **King, L.E., Lawrence, A., Douglas-Hamilton, I., and Vollrath, F. (2009)** Beehive fence deters crop-raiding elephants. *African Journal of Ecology*, 47, 131-137 <https://doi.org/10.1111/j.1365-2028.2009.01114.x>
- **King, L.E (2010)** The interaction between the African elephant (*Loxodonta Africana Africana*) and the African honey bees (*Apis mellifera scutellata*) and its potential application as an elephant deterrent, PHD Thesis, University of Oxford- <https://www.savetheelephants.org/wp-content/uploads/2014/03/2010AfricanBeeDeterent.pdf>
- **King, L. E, Douglas-Hamilton, I., Vollrath, F. (2007)** African elephants run from the sound of disturbed bees, *Current Biology*, Vol 17 No. 19. R832- <https://doi.org/10.1016/j.cub.2007.07.038>

Videos & YouTube links:

- Save the Elephants. (2015, November 14). *African honey bees change lives and save elephants* [Video]. YouTube. <https://www.youtube.com/watch?v=wkpNZx8YY-o>
- Save the Elephants. (2013, September 19). *Bee project by Lucy King* [Video]. YouTube. <https://www.youtube.com/watch?v=3Oe9rtBnCKM>
- **Mater, T. (2022, May 6).** *How Angry Bees Save Elephant Lives* [Video]. YouTube. <https://www.youtube.com/watch?v=AAyG1YGya4>
- 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>

ELECTRIC FENCING (document in progress)

Books, Journals & Publications:

- **Graham MD, Gichohi N, Kamau F, Aike G, Craig B, Douglas-Hamilton I, Adams WM. 2009.** The use of electrified fences to reduce human–elephant conflict: a case study of the Ol Pejeta Conservancy, Laikipia District, Kenya. *Laikipia Elephant Project*, Nanyuki
- **Graham MD, Notter B, Adams WM, Lee PC, Ochieng TN. 2010.** Patterns of crop- raiding by elephants, *Loxodonta africana*, in Laikipia, Kenya, and the management of human–elephant conflict. *Systematics and Biodiversity* 8(4):435–445.
- **Gunaratne, L. H. P. and P. K. Premaratne (2006).** Controlling elephants with electric fences in Sri Lanka, *Economy and Environment Program for Southeast Asia (EEPSEA)*: 76
- **Evans, L., & Adams, W. (2016).** Fencing elephants: The hidden politics of wildlife fencing in Laikipia. *Kenya Land Use Policy*, 51, 215–228

Kenya

- **C. W. Holloway (1965)** The Impact of Big Game on Forest Policy in the Mount Kenya and North-East Aberdare Forest Reserves (O.D.C. 156), *East African Agricultural and Forestry Journal*, 30:4, 370-380
- **Dupuis-Desormeaux, M., Davidson, Z., Pratt, L., Mwololo, M., & MacDonald, S. E. (2016).** Testing the effects of perimeter fencing and elephant enclosures on lion predation patterns in a Kenyan wildlife conservancy. *PeerJ*, 4, e1681.

- **Evans, L. A., & Adams, W. M. (2016).** Fencing elephants: The hidden politics of wildlife fencing in Laikipia, Kenya. *Land Use Policy*, 51, 215–228.
- **Graham M., Gichohi N., Kamau F., G., Aike B., Craig B., Douglas-Hamilton I., Adams W. M. (2009)** The Use of Electrified Fences to Reduce Human Elephant Conflict: A Case Study of the Ol Pejeta Conservancy, Laikipia District, Kenya. Laikipia Elephant Project Working Paper No. 1.
- **Graham, M.D., Nyumba, T.O. Kahiho, G., Ngotho, M. and Adams, W.M. (2009)** Trials of Farm-Based Deterrents to Mitigate Crop-raiding by Elephants Adjacent to the Rumuruti Forest in Laikipia, Kenya, Laikipia Elephant Project Project Working Paper No. 5.
- **Kenya Wildlife Service Environmental Impact Assessment Study Report for the Proposed Electric Fence and Associated Civil Works for the Mount Kenya East Pilot Project (MKEPP-GEF)** https://rhinoark.org/wp-content/uploads/2014/10/EIA_Study_Mt-Kenya_Proposed_ElectricFence_Final-Report.pdf
- **Kioko J., Muruthi P., Omondi P., and Chiyo P. I. (2008)** The performance of electric fences as elephant barriers in Amboseli, Kenya, *South African Journal of Wildlife Research* 38(1), 52-58.
- **Knickerbocker, T. J., & Waithaka J. (2005)** People and elephants in the Shimba Hills, Kenya. Pages 224-238 in A. Rabinowitz, R. Woodroffe, and S. Thirgood, editors. *People and wildlife, conflict or co-existence?* Cambridge University Press, Cambridge.
- **Mutinda M, Chenge G, Gakuya F, Otiende M, Omondi P, Kasiki S, et al. (2014)** Detusking Fence-Breaker Elephants as an Approach in Human-Elephant Conflict Mitigation. *PLoS ONE* 9(3): e91749.
- **Omondi, P., E. Bitok, & J. Kagiri (2004)** Managing human-elephant conflicts: the Kenyan experience. *Pachyderm* 36, 80–86.
- **Osipova, L, Okello, MM, Njumbi, SJ, et al.** Fencing solves human-wildlife conflict locally but shifts problems elsewhere: A case study using functional connectivity modelling of the African elephant. *J Appl Ecol.* 2018; 55: 2673– 2684.
- **Paglieri M. (2018)** Fence-Breaking and Crop-Raiding Behavior of Bull Elephants in The Laikipia Plateau, Kenya, and a Proposal to Modify This Behavior, Thesis for Master of Arts from Prescott College in Environmental Studies: Conservation Behavior, ProQuest 10809492.
- **Singh Soorae P. (1994)** The biology and use of the cactus (*Opuntia exaltata*) as a game defence barrier. Thesis for Master of Science (MSc) Degree in Biology of Conservation University of Nairobi.
- **Thouless, C. R., and J. Sakwa. (1995)** Shocking elephants - fences and crop raiders in Laikipia district, Kenya. *Biological Conservation* 72:99-107.
- **Van Eden M., Ellis E. & Bruyere B. (2016)** The Influence of Human–Elephant Conflict on Electric Fence Management and Perception Among Different Rural Communities in Laikipia County, Kenya, *Human Dimensions of Wildlife*, 21:4, 283-296,

Other African Countries

- **Bonnington, C., Grainger, M., Dangerfield, S., & Fanning, E. (2010).** The influence of electric fences on large mammal movements in the Kilombero Valley, Tanzania. *African Journal of Ecology*, 48(1), 280–284.
- **Durant S. et al. (2015)** Developing fencing policies for dryland ecosystems. *J Appl Ecol*, 52: 544-551.
- **Hayward M.W. & Kerley G.I.H. (2009)** Fencing for conservation: Restriction of evolutionary potential or a riposte to threatening processes? *Biological Conservation*, 142, 1–13.
- **Hoare, R. E. (1992).** Present and Future Use of Fencing in the Management of Larger African Mammals. *Environmental Conservation*, 19(02), 160.
- **Hoare, R.E. (1992 a)** Wildlife Fencing as a Management Tool for Protected Areas in Africa. *IUCN Parks* 3(2): Pg 35-39.
- **Hoare, R.E. (1995)** Options for the control of elephants in conflict with people. *Pachyderm* 19: 54–63.
- **Hoare, R.E. (2001)** A decision support system for managing human–elephant conflict situations in Africa. *IUCN/SSC African Elephant Specialist Group*.
- **Hoare, R.E. (2015).** Lessons From 20 Years of Human–Elephant Conflict Mitigation in Africa. *Human Dimensions of Wildlife*, 20(4), 289–295.
- **Hoare, R.E. 2003.** Fencing and other barriers against problem elephants. AfESG Technical Brief Series. <http://www.iucn.org/afesg/hec/pdfs/hecfencen.pdf>
- **Nelson, A. Bidwell, P. and Sillero-Zubiri, C. (2003).** A review of humane elephant conflict management strategies. People and Wildlife Initiative. Wildlife Conservation Research Unit, Oxford University. www.peopleandwildlife.org.uk/crmanuals/HumanElephantConflictP&WManual
- **Pekor, A., Miller, J. R. B., Flyman, M. V., Kasiki, S., Kesch, M. K., Miller, S. M., ... Lindsey, P. A. (2019).** Fencing Africa's protected areas: Costs, benefits, and management issues. *Biological Conservation*, 229, 67–75.
- **Slotow, R. (2011).** Fencing for Purpose: A Case Study of Elephants in South Africa. *Fencing for Conservation*, 91–104. Chapter in: Somers M. & Hayward M. (eds.) (2012), *Fencing for Conservation: 91 Restriction of Evolutionary Potential or a Riposte to Threatening Processes?* Springer Science + Business Media, LLC
- Asia
- **Gunaryadi, D., Sugiyo, & Hedges, S. (2017).** Community-based human–elephant conflict mitigation: The value of an evidence-based approach in promoting the uptake of effective methods. *PLOS ONE*, 12(5), e0173742.
- **Kalam, T., Kumar Baishya, H., & Smith, D. (2018).** Lethal Fence Electrocution: A Major Threat to Asian Elephants in Assam, India. *Tropical Conservation Science*, 11, 194008291881728.

- **Prithiviraj F., M. Ananda Kumar, A. Christy Williams, Eric Wikramanayake, Tariq Aziz, Sameer M. Singh (2008)** Review of Human-Elephant Conflict Mitigation Measures Practiced in South Asia (AREAS Technical Support Document Submitted to World Bank), WWF - World Wide Fund for Nature. World Bank-WWF Alliance for Forest Conservation & Sustainable Use
- **Prithiviraj Fernando (2020)** Guide for implementing Community-Based Electric Fences for the effective mitigation of human-elephant conflict, Centre for Conservation and Research, Sri Lanka, The World Bank.
- **Zimmermann, A., T. E. Davies, N. Hazarika, S. Wilson, J. Chakrabarty, B. Hazarika, and D. Das. (2009)** Community-based human-elephant conflict management in Assam. *Gajah* 30:34-40.

Thesis-

- **Wilkinson, CE, McInturff, A., Kelly, M., & Brashares, JS. (2021).** Quantifying wildlife responses to conservation fencing in East Africa. UC Berkeley. Report #: ARTN 109071. (This looks like a fascinating paper on a case study of Lake Nakuru National Park's electric fence and its impact on mammal movement.)
- **Kaguria R. (2008)** Assessing the effectiveness of the Lower Imenti Forest Reserve electric fence in mitigating human-wildlife conflict, Masters Thesis, Kenyatta University, Nairobi.
- **Gichohi P. M. (2013)** The effectiveness of electric fence in mitigating human-elephant conflicts in the Aberdare National Park, Kenya, Masters Thesis, Kenyatta University, Nairobi.

Other African countries

- **Massey, A. L., King, A. A., and Foulfopoulos, J. (2014).** Fencing protected areas: a long-term assessment of the effects of reserve establishment and fencing on African mammalian diversity. *Biol. Conserv.* 176, 162–171.
- **Prithiviraj Fernando (2020)** Guide for implementing Community-Based Electric Fences for the effective mitigation of human-elephant conflict, Centre for Conservation and Research, Sri Lanka, The World Bank.
- This is THE comprehensive document on electric fences in Asia, specifically Sri Lanka and India.

3. EARLY WARNING SYSTEMS:

TRIP ALARMS

Websites:

- **Art of Living with Elephants by Prachi Mehta** - <https://www.wrscindia.org/post/art-of-living-with-the-elephants>
- **Wildlife and Research Conservation Society** - www.wrscindia.org

Books, Journals & Publications:

- **Gunaryadi D, Sugiyo, Hedges S (2017)** Community-based human–elephant conflict mitigation: The value of an evidence-based approach in promoting the uptake of effective methods. *PLoS ONE* 12(5): e0173742. <https://doi.org/10.1371/journal.pone.0173742>

Videos & YouTube links:

- Detect the presence of elephants in your crop field with a trip alarm, **Wildlife Research and Conservation Society, Pune** - https://www.youtube.com/watch?v=7rPfFTi_Elg-
- **Elephants without Borders.** (2020, November 25). Botswana's Farmers Use Sensory Toolkit to Drive Away Elephants[Video]. YouTube. <https://www.youtube.com/watch?v=Y1rH5I-4pHU>

CELLPHONE AND LED LIGHTS BASED SYSTEM

Books, Journals & Publications:

- **Thuppil V, Coss RG. 2013** Wild Asian elephants distinguish aggressive tiger and leopard growls according to perceived danger. *Biology Letters* 9: 20130518- <https://doi.org/10.1098/rsbl.2013.0518>
- **Mongabay (2015)** Tapping into evolutionary responses to guard crops against elephants - <https://wildtech.mongabay.com/2015/04/tapping-into-evolutionary-responses-to-guard-crops-against-elephants/>
- **Graham, M.D., Greenwood, C. Kahiro, G., and Adams, W.M. (2009)** The Use of 'Push to Talk' Mobile Phone Technology to Reduce Human Elephant Conflict, Laikipia District, Kenya, Working Paper 2, Laikipia Elephant Project, Nanyuki, Kenya <http://130.92.62.66/xmlui/handle/123456789/24>
- **Graham, M., Adams, W., & Kahiro, G. (2012).** Mobile phone communication in effective human-elephant conflict management in Laikipia County Kenya. *Oryx*, 46, 137–144- <https://doi.org/10.1017/S0030605311001104> [Opens in a new window]
- **Sugumar SJ, Jayaparvathy R (2013)** An early warning system for elephant intrusion along the forest border areas. *Current Science* 104:1515-1526- https://www.academia.edu/7178682/An_early_warning_system_for_elephant_intrusion_along_the_forest_border_areas
- **Kumar MA, Raghunathan G (2014)** Fostering human-elephant coexistence in the Valparai landscape, Anamalai Tiger Reserve, Tamil Nadu. In: Office SFC (ed) Human-Wildlife Conflict in the Mountains of SAARC Region. Compilation

of Successful Management Strategies and Practices. South Asian Association for Regional Cooperation, Thimphu, Bhutan, pp 14-26- <http://doi.org/10.13140/RG.2.1.1862.7283>

INFRARED/ MOTION-TRIGGERED SENSORS

Websites:

- **Nature Conservation Foundation** - <https://www.ncf-india.org>
- **Down to Earth** - Early elephant warning systems help, but are short-term measures: experts- <https://www.downtoearth.org.in/news/wildlife-biodiversity/early-elephant-warning-systems-help-but-are-short-term-measures-experts-63311>
- **Narayanan, Sumana (2015)** Early Warning System in reducing Human elephant Conflict in India, Earth Island Journal- https://www.earthisland.org/journal/index.php/articles/entry/early_warning_system_is_reducing_human-elephant_conflict_in_india/
- **Mongabay (2014)** - Elephants in the midst: warning system prevents human-elephant conflicts in India, saves lives, Mongabay - <https://news.mongabay.com/2014/05/elephants-in-the-midst-warning-system-prevents-human-elephant-conflicts-in-india-saves-lives/>

WATCHTOWERS/OBSERVATION TOWERS

Books, Journals & Publications:

- **FAO** - Human wildlife conflict in Africa, Causes, consequences and management strategies- <http://www.fao.org/3/i1048e/i1048e00.pdf>
- **Gross, E. M., Lahkar, B. P., Subedi, N., Nyirenda, V. R., Lichtenfield, L.L., Jakoby, O. (2019)** Does traditional and advanced guarding reduce crop losses due to wildlife? A comparative analysis from Africa and Asia, Journal for Nature Conservation, Volume 50, August 2019, 125712. (Night guarding/ communal guarding, crop protection, elephants, fencing, human wildlife conflict, mitigation strategies)- <https://doi.org/10.1016/j.jnc.2019.125712>
- **Thapa, S. (2010)** Effectiveness of crop protection methods against wildlife damage: A case study of two villages at Bardia National Park, Nepal, Crop Protection, 29; 11, 1297-1304, <https://doi.org/10.1016/j.cropro.2010.06.015>
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- **Nelson, A., Bidwell, P. and Sillero-Zubiri, C. (2003)** A review of human-elephant conflict management strategies, People and Wildlife Initiative, A Wildlife Conservation Research Unit , Oxford University Partnership, www.peopleandwildlife.org.uk/crmanuals/HumanElephantConflictP&WManual

4.ELEPHANT-COMPATIBLE FARMING:

TREE PROTECTION METHODS

Websites:

- **Smuts, S. (2021, August 13).** *Bees, Trees – and now “elephant friendly” honey!* Elephants Alive. <https://elephantsalive.org/bees-trees-and-now-elephant-friendly-honey/>
- **Save the Elephants.** (2015, August 28). *Bees to Protect Trees in Kruger, South Africa.* Elephants & Bees. <https://elephantsandbees.com/bees-to-protect-trees-in-kruger-south-africa/>
- **Llewellyn, J. (2018, December 15).** *Elephants and Big Trees - Mitigation Methods.* Ingwelala. <https://www.ingwelala.co.za/archives/conservation/elephants-and-big-trees-mitigation-methods.html>
- Use chili to deter crop damage by mammals to reduce human-wildlife conflict- <https://www.conservationevidence.com/actions/2492>
- Honeybees used to protect large trees from elephant impact, says new study (2017)- <https://www.savetheelephants.org/about-ste-2/press-media/?detail=honeybees-used-to-protect-large-trees-from-elephant-impact-says-new-study>

Books, Journals & Publications:

- **Henley, M.D. & Cook, R.M. (2019).** The management dilemma: Removing elephants to save large trees. Koedoe 61(1), a1564. <https://doi.org/10.4102/koedoe.v61i1.1564>
- **Edge, A., Henley, M.D., Daday, J., Schulte, B. (2017)** Examining Human Perception of Elephants and Large Trees for Insights into Conservation of an African Savannah Ecosystem, (2017) Human Dimensions of Wildlife, 22(3): 1-15- https://www.researchgate.net/publication/314484474_Examining_Human_Perception_of_Elephants_and_Large_Trees_for_Insights_Into_Conservation_of_an_African_Savanna_Ecosystem
- **Littlewood, N.A., Rocha, R., Smith, R.K., Martin, P.A., Lockhart, S.L., Schoonover, R.F., Wilman, E., Bladon, A.J., Sainsbury, K.A., Pimm S. and Sutherland, W.J. (2020)** Terrestrial Mammal Conservation: Global Evidence for the Effects of Interventions for terrestrial mammals excluding bats and primates. Synopses of Conservation Evidence Series. University of Cambridge, Cambridge, UK- <https://www.conservationevidence.com/synopsis/pdf/20>
- **Wright, M. G., Spencer, C., Cook, R. M., Henley, M. D., North, W., & Mafra-Neto, A. (2018).** African bush elephants respond to a honey bee alarm pheromone blend. Current Biology, 28, R778-R780.

- <https://africawild-forum.com/viewtopic.php?t=9881>
- Ngama, S., Korte, L., Bindelle, J., Vermeulen, C., Poulsen, J. R. (2016) How Bees Deter Elephants: Beehive Trials with Forest Elephants (*Loxodonta africana cyclotis*) in Gabon, PLOS <https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0155690>
- Cook, R. M., Parrini, F., King, L. E., Witkowski, E. T. F., & Henley, M. D. (2018). African honeybees as a mitigation method for elephant impact on trees. *Biological Conservation*, 217, 329-336. <https://doi.org/10.1016/j.biocon.2017.11.024>

Videos & YouTube links:

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