

Postal Address: 52 Poole Road, GLASS HOUSE MOUNTAINS QLD 4518 Vanda Grabowski - Koala Action Inc. | https://koalaactioninc.org/

Koala Action Inc. (KAI) is a volunteer not for profit incorporated association made up of individuals concerned about the long-term survival of the koala in Queensland. KAI's objectives are to help koalas by urging local, state and federal government as well as businesses to retain native bushland habitat, provide resources to rehabilitate degraded bush land to increase its' carrying capacity and encourage/fund the replanting of koala food trees and other natives in parks, reserves and open spaces.

KAI provides free koala education and awareness presentations to community groups, schools and private enterprise. Members are involved in the rescue, care and rehabilitation of sick, injured adult and orphaned koalas. KAI actively facilitates the creation of and grows koala food tree plantations. KAI applies for grants and funding at all government levels to rehabilitate degraded bushland habitat and replant koala food trees and other natives wherever possible. KAI also provides support to those raising koala orphans from their homes.

KAI's work also involves advocating on behalf of the koala to address the perils facing koalas as they seek food, shelter and dispersal opportunities. Information is provided to ameliorate those perils in a simple, cost-effective manner. Writing submissions, making recommendations and objecting to inappropriate development is also part of KAI's advocacy role.

KAI was involved in the establishment of groups such as Queensland Koala Crusaders Inc. (QKC) based in Noosa; the Moreton Bay Eco Alliance (MBEA) that focuses on habitat loss and fragmentation and the National Koala Alliance (NKA) made up of koala groups based in Queensland, New South Wales, Victoria and South Australia.

## **ACHIEVEMENTS TO DATE:**

- Joint venture projects were funded with Hinterland Bushlinks on the Sunshine Coast and Pine Rivers
  Catchment Association in the Moreton Bay region who also applied for additional funding via government
  grants to undertake replanting projects. These were undertaken in 2023 and 2024 on local government
  land designated as koala habitat and private property to enhance and extend options to provide food,
  shelter and dispersal opportunities for endangered koalas.
- 2. YMCA Camp Warrawee Bundalong Replanting Project (64 Byrnes Road North, Joyner) a joint venture project begun in February 2022 and continued through 2023. Funds provided by Koala Action Inc. and Moreton Bay Koala Rescue were used to plant koala food trees and other natives at 2 locations on site measuring 2,193m2. The funds covered the cost of the purchase, delivery and spreading of the mulch, auguring holes and the required tube stock.
- 3. Additional landscape installation, plant and maintenance work was undertaken in September 2021 at Williamson Road Park, Morayfield using KAI funds amounting to \$900.
- 4. Birdlife Australia received a donation of \$250 from KAI on 28/6/21 to be used specifically for a scientific project to test Powerful Owls for rodenticide poisoning.
- 5. After consultation with the Management Committee members decided to donate a pledged gift of \$1,500 to both the Detection Dogs Unit and the Koala Vaccine Programmes at the University of the Sunshine Coast on 26/5/21.
- 6. Detection Dogs Unit (USC) \$3,000 was donated on 22/4/20 to facilitate the use of dogs to detect and rescue koalas in bush fire affected areas.
- 7. In February 2020, \$8,000 was provided to Bonnie (Chaban) Quigley, PhD Research Fellow, University of the Sunshine Coast to research "Looking for Koala Retrovirus (KoRV) medicine for koalas in eucalyptus trees".
- 8. Birdlife Australia received \$2,000 to help establish nesting boxes as part of the bushfire appeal in February 2020.
- 9. Ongoing maintenance work continued in 2019 on Stage 1 and Stage 2, 217 Williamson Road Park, Morayfield in preparation to hand back this site to Moreton Bay Regional Council in 2020.

- 10. In October 2018, \$5,000 was donated to the University of the Sunshine Coast to determine the relationship between habitat quality and the progression/severity of Chlamydial disease in koalas. The research was undertaken by Amy Robbins.
- 11. In September 2018 a Moreton Bay Regional Council Community Activities Grant of \$5,000 was used to rehabilitate a 5,000m2 section of the riparian corridor of Burpengary Creek to improve the carrying capacity of secondary habitat at the Caboolture Regional Environmental and Education Centre. Holes were dug, mulch/water provided and an additional 250 tube-stock was planted with ¼ being koala food trees.
- 12. In March 2018 KAI completed extensive rehabilitation works at a cost of \$2,000 in land adjacent to the above project site by slashing, spraying and removing exotic weed species. Endemic native grasses, shrubs and trees were replanted, watered and maintained in that area.
- 13. In October 2017, \$11,000 was donated to the University of the Sunshine Coast, Chlamydial Research Unit to understand why koalas get clinical Chlamydial disease. The funds will be used to research the contribution of KoRV and Chlamydia using wild koalas from the Moreton Bay region. Amy Robbins from Endeavour Veterinary Ecology undertook this research.
- 14. On 10/4/17 the Koala Action Gift Fund was successfully entered onto the Register of Environmental Organisations. Donations made to this fund are eligible for tax deduction under the *Income Tax Assessment Act 1997*.
- 15. In January 2016, \$5,000 was donated to the University of the Sunshine Coast, Detection Dogs for Conservation unit to support two (2) dogs, a researcher to gather koala scat in the field for two weeks and analyse that data for genetic and health markers. Ongoing donations will be provided when the funds are available.
- 16. In July 2015 KAI provided \$10,000 to sponsor the laboratory costs for Professor Peter Timms new PhD Doctoral Candidate Sharon Nyari, University of the Sunshine Coast who was recruited to continue the development of a single dose Koala Chlamydia vaccine.
- 17. In March 2017, a Moreton Bay Regional Council Community Smarty Grant provided \$5,000 which was used to plant Stage 2, 217 Williamson Road Park, Morayfield. The funds were used to mark and spray the site, buy, deliver and spread weed free forest mulch. The Australian Koala Foundation purchased native tube stock ¼ of which were koala food trees and members augured the holes as well as undertook the planting.
  - KAI utilised its own funds (\$12,500) in June 2015 to plant 970 native tube-stock on Stage 1, of the above site, ¼ of which were koala food trees. Barung Landcare undertook site preparation which included marking the area, destroying exotic weed/grasses, spreading weed-free forest mulch, digging the holes and planting. The Australian Koala Foundation (AKF) kindly donated \$1,237 to purchase the tube stock.
  - 18. Members planted a koala food tree plantation at Madeline Drive Park, Morayfield in September 2013 with a \$12,700 grant obtained from the State Government's Koala Rescue and Rehabilitation Fund. The funding was used to rip/aerate the compacted soil before mulch was delivered and spread over the marked-out beds. The grant also funded a watering regime and the purchase of tools for carers to use when cutting the leaf. KAI paid for the koala food trees and members undertook the planting.
- 19. In January 2012 KAI was nominated for and won the Moreton Bay Regional Council's Australia Day Award for Environmental Achievement for the work they have done and are doing to ensure a sustainable future for koalas in this region.
- 20. Moreton Bay Regional Council (Pine Rivers Shire Council) Grants provided \$5,000 to pay for the purchase, delivery and spreading of mulch, auguring holes and watering koala food trees and other native plants at sites known to support residential koalas which include: -
  - 2011/2012 at Williams Road, Burpengary;
  - 2008/2011 at Young's Crossing Road Reserve-Stage 1 and 2, Joyner;
  - 2007/2008 at the Corner Baker Street and Francis Road, Lawnton;
  - 2007/2008 at the Corner Bunya Crossing Rd and Drapers Rd, Eaton's Hill; 2006/2007 at Ebert Park and Lockyer Drive, Bray Park;
  - 2006/2007 in Stanley Street, Strathpine;
  - 2005/2006 in Bult Drive Parkland off Leitchs Road, Brendale;
  - 2005/2006 at the Francis Road and Todds Road Koala Reserve, Lawnton.
  - 21. In 2009 KAI received \$11,048 from the Australian Federal Government's Caring for Country Community Coastcare Grant to rehabilitate native vegetation abutting the North Pine River incorporating endangered remnant bush land at Mungarra Reserve, Petrie.
- 22. In May 2009 KAI utilised its own funds to extend the wildlife corridor at Ebert Park along Lockyer Drive to Dean Street, Bray Park by planting additional koala food trees and other natives.
- 23. In December 2006 the Australian Federal Government's Envirofund Grant provided \$12,480 to remove weed trees species at the Les Hughes Sporting Complex, Bray Park. Members planted koala food trees and other natives in mulched beds to provide food and shelter opportunities for all native wildlife.

## **General Background Information**

The presence of koalas depends on the presence and abundance of suitable koala food trees (both primary and secondary species) that make up most of their diet. Koala numbers have declined substantially across large parts of their range, particularly in Queensland and NSW due to key threatening processes (McAlpine et al., 2015, Ashman et al., 2019).

Habitat loss and degradation have significantly reduced the quantity/quality of suitable koala habitat and increased the exposures to as well as the severity of other threats including disease, predation by dogs and vehicle strike. Remaining areas of koala habitat are becoming increasingly fragmented primarily due to human activities.

This in turn influences koala movement, landscape use, home range size, as well as population and metapopulation dynamics. The increasing severity and frequency of heatwaves, drought and fires as a result of climate change have contributed substantially to declines in koala populations.

Climate change reduces the nutritional quality and water content of koala food trees in Queensland by increasing atmospheric carbon dioxide (CO2), intensifying droughts and heatwaves. This leads to a decline in the protein and overall health of eucalyptus leaves, creating malnutrition and dehydration in koalas. The altered tree leaves also have higher tannin levels, making them toxic and less appealing for consumption.

## **How Climate Change Affects Koala Food Trees**

Reduced Nutritional Value - higher atmospheric CO2 levels, a product of climate change, directly impacts the chemical composition of eucalyptus leaves. This results in reduced levels of protein and essential nutrients, making the leaves less nourishing for koalas.

*Increased Toxicity* - rising CO2 also elevates the concentration of toxic tannins in the leaves. Tannins interfere with nutrient absorption and are poisonous, further compromising the quality of koala food.

Altered Water Content - climate change is also causing increased intensity and frequency of droughts and extreme heatwaves. This leads to eucalyptus leaves drying out, which reduces their water content and makes them even less suitable for koalas to hydrate.

Habitat Impacts - climate change-driven bushfires are more frequent and severe, directly destroying koala habitats and food sources. Changes in rainfall patterns can also make certain areas unsuitable for the specific eucalyptus species that koalas rely on.

## Consequences for Koalas and other arboreal species

Koalas are becoming malnourished and dehydrated as they cannot get enough protein and water from their food. The reduced quality and water content of leaves force koalas to descend from their trees and venture into unfamiliar and dangerous territories to find food and water. This puts them at risk from motor vehicle strikes, attacks from domestic, feral and wild dogs as well as other threats, contributing to population declines. The combined stresses of hunger, thirst, and physiological stress can increase the likelihood of outbreaks of diseases like chlamydiosis.

Koalas are highly dependent on eucalyptus trees, and the changes to these trees make their habitats less suitable. The degradation of their food sources, coupled with increased disease and stress, contributes to declining koala populations.

There is an urgent need for action and Koala Action Inc. (KAI) is doing just that by undertaking a range of activities that include facilitating the retention of remaining habitat, protecting, rehabilitating and restoring koala habitat as well as replanting koala food trees and other natives wherever possible to give koalas the best chance to survive as the climate continues to change.