

## Post-war recovery of the African lion in response to large-scale ecosystem restoration

*Biological Conservation* ( IF 4.66 ) Pub Date : 2018-09-22 , DOI: [10.1016/j.biocon.2018.08.024](https://doi.org/10.1016/j.biocon.2018.08.024)

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We present data from the first, long-term study underway of a recovering population of indigenous, free-ranging *Panthera leo* in Gorongosa National Park (GNP), Mozambique. GNP is undergoing post-war recovery and large-scale ecological restoration under a 25-year private-governmental partnership – the “Gorongosa Project (GP),” – offering a rare opportunity to elucidate the long-term recovery dynamics of a population of lion in response to strategic conservation interventions. GNP forms a core part of the greater Gorongosa-Marromeu Lion Conservation Unit which is designated as a “potential lion stronghold.” Within the Park we established an intensive study area of 1100 km<sup>2</sup> encompassing prime areas of herbivore productivity. Between 2012 and 2016, 104 lions were documented and 6 prides and 7 males or coalitions in our study area were satellite-collared and intensively monitored. We describe seasonal male and female home-ranges, prey utilization, estimated *versus* predicted lion densities in relation to recovering herbivore biomass, and anthropogenic factors limiting the population's full recovery potential. The dominant factor observed to be negatively impacting the population was top-down and anthropogenic in the form of by-catch by wire snares and steel-jaw traps set by bushmeat hunters. These findings have since resulted in tangible and measurable interventions to reduce these impacts and resultant future datasets will elucidate detailed demography and how management interventions impacted the trajectory of large-carnivore recovery.