

# Goat Buy Back Project

The 2013-2017 Nature Policy for the Caribbean Netherlands flagged the threat of invasive species as a high priority, with recent inventories documenting no less than 211 exotic alien species in the Dutch Caribbean (MinEZ 2013; Smith et al, 2014). Invasive species are regarded as one of the most significant ecological threats to islands worldwide as they can decimate the islands' native flora and fauna (Smith et al, 2014; Debrot, 2016). Roaming livestock introduced to the region in the 1700s has become one of the most significant ecological challenges for the islands of the Caribbean Netherlands (Buurt & Debrot, 2012; Debrot, 2016). Saba is home to a wide range of forest habitats such as cloud forest and succulent evergreen shrubland that are rich in rare and endangered plant and animal species and these habitats are threatened by overgrazing caused by free-roaming goats. Thanks to generous funding from The Netherlands Ministry of Economic Affairs through the Nature Fund, the government of Saba has led a 3-year project to cull most of Saba's goat population and offer goat-owners a viable economic alternative in return.

Goats (*Capra hircus*) were introduced onto Saba by the Dutch in the 1700s, and have since become the island's main livestock (Buurt & Debrot, 2012). Nowadays, the number of goats on Saba is very high, with many roaming freely. The impact of these goats on Saba's vegetation has been significant. Goats cause extensive damage to the vegetation because of their preference for young seedlings, twigs and germinating plants, preventing the natural regeneration of plant species. On Curaçao, Debrot and de Freitas (1993) found that goats also alter plant communities. Vegetation that was inaccessible to livestock had a completely different species composition and diversity (high densities of bromeliads and orchids) than those grazed by livestock

(principally cacti and Acacia) (Debrot and de Freitas, 1993). A loss in vegetation cover also means a loss of habitat and food for many terrestrial species. Saba's endemic and endangered red-bellied racer snake has less than 10% of its original habitat remaining, due in part to goat overgrazing. Free-roaming goats also threaten breeding seabird populations because overgrazing degrades breeding habitat (Lowrie et al, 2009).

The goats' insatiable appetite for Saba's vegetation has resulted in an increase in erosion and run-off, which threatens the health of the island's coral reefs. The bare soil left behind by goats has less water retention and is therefore more susceptible to wind and water erosion. Goats tend to prefer steep terrain and cliffs, which are more prone to erosion, exacerbating the problem. Goats have also become a nuisance to local residents because they consume agricultural produce and cause rolling rocks on the roads.

Goat control measures have taken place in other Dutch Caribbean islands with various degrees of success. On Curaçao, goats have been caught and removed from Christoffelpark since 1993 using various forms of trapping and systematic shooting. This removal of goats has been very successful: goat densities average 0.1 goat per hectare and there has been a large-scale improvement in vegetation densities as well as recovery of rare plants (Buurt et Debrot, 2012). On Bonaire, a goat-catching project was started in the Washington Slagbaai National Park in 2015, but an assessment of the methodology showed it had little success. The number of caught goats averaged to about 25% of the population caught yearly and this was found to be insufficient to reduce goat density in the long-term (Geurts, 2015).



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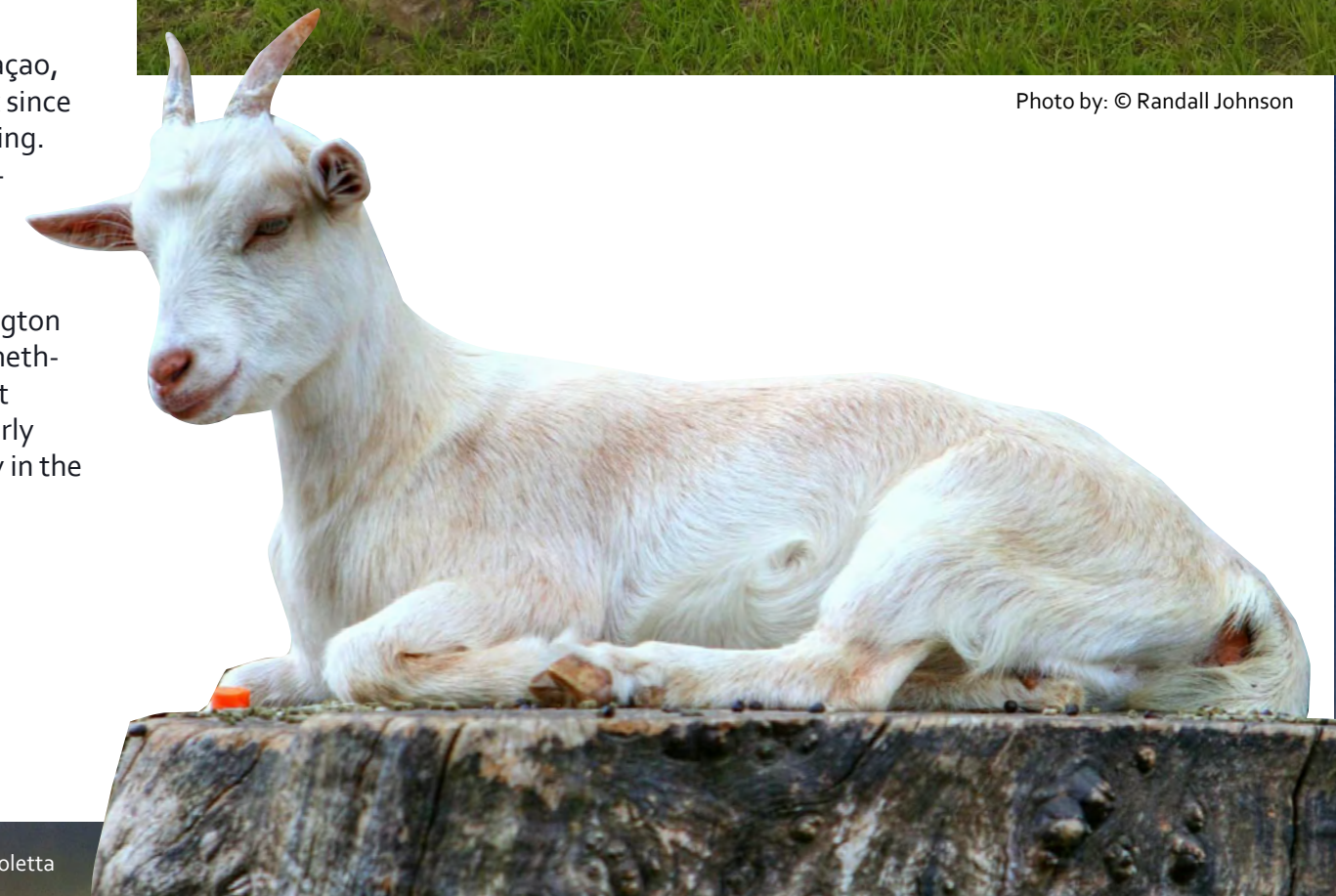


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The eradication of goats from Saba is difficult because when threatened, goats are able to hide in inaccessible gullies and cliffs. The goal of the Government of Saba is therefore to decrease free roaming populations of goats by 70 to 80% by shooting or otherwise slaughtering the goats and selling or exporting the meat. Goat owners are offered a compensation of \$5 per pound when they deliver the meat of their slaughtered goat(s) to the Department of Agriculture. The meat is then frozen and stored, inspected and sold on to the local and export (St Maarten) market. Between November 2014 and March 2016, a total of 21391,10 pounds of goat meat was delivered to the Department of Agriculture, which represents approximately 1426 goats. As a result, the number of free-roaming goats in the villages of St. Johns, Windwardside and Zion's Hill has been drastically reduced and goat owners will continue to hunt goats on their own and sell the meat to buyers on St. Maarten. The island government had to designate goat hunters to cull goats in the village The Bottom as too few goats had been killed by



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goat owners during the allocated time period and the population of roaming goats was still too high. The goat population in The Bottom has since decreased. The selected hunters can now hunt in any village on the island with permission from the Governor or Island Secretary.

The remaining goat population on Saba is being controlled through better enforcement of legislation, particularly the "Identification and Registration of Livestock and Domestic Animals Ordinance (AB2004)". This ordinance sets regulations controlling the keeping and importing of livestock and domestic animals and the registration of free roaming animals. Goat owners must ensure their goats are tagged and kept in fenced areas. The island Government and Police Department are cooperating to ensure continued enforcement of the ordinance beyond the project end-date. This is essential to control number of roaming goats, which will otherwise rapidly increase again to unsustainable levels.

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