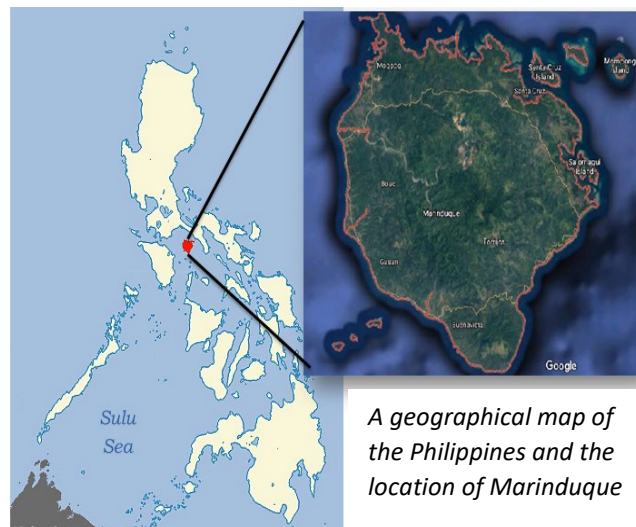


RABIES ERADICATION: THE MARINDUQUE EXPERIENCE

The Philippines

Marinduque is an island province located at the heart of the Philippines. It belongs to the Southwestern Tagalog Region or MIMAROPA, an acronym for the provinces that comprise the region. It has a total land area of 95,924 hectares with six municipalities and approximately 49,753 households. In a 2000 survey conducted by the Marinduque Provincial Veterinary Office (PVO), a total of 52,538 dogs, 82% of which were free-roaming or strays, and 18,463 cats were recorded.



A geographical map of the Philippines and the location of Marinduque

The Marinduque Provincial Hospital reported Rabies as one of the top 10 leading causes of mortalities in the province and was the only zoonotic disease present in the island until it was eradicated in 2012.

Before 2001, the Marinduque Provincial Hospital recorded an average of 21 human rabies cases per year. The high number of cases may be attributed to a high number of dog bites wherein victims, instead of seeking medical intervention, resorted to the traditional way of treating dog bites, locally known as *tandok*. To address the alarming number of dog bite cases and human deaths from rabies, the six-year Marinduque Rabies Eradication Program was launched in 2001. The main goal was to eradicate human rabies in Marinduque. Before the start of the program, animal rabies cases were not properly reported due to the distance between Marinduque and the nearest Animal Disease Diagnostic Reference Laboratory (ADDRL) that was located in Quezon City in Manila, and a lack of knowledge of the locals on the importance of sending specimens of suspected rabies cases for laboratory testing. The objectives of this project were to reduce the dog population to a manageable proportion (from a baseline of 52,000 to a target of 35,000 heads) and to reduce the number of dog bite cases by 80% (from a baseline 850-925 to a target of 170-185). The program was divided into two phases: Information and Prevention Phase (CY 2001-2003) and Control and Eradication Phase (2004-2007).



Staff of PVO-Marinduque conducting IEC campaigns and advocacies on responsible pet ownership

Phase I: Information and Prevention. Massive information, education, and communication (IEC) campaigns and advocacies on responsible pet ownership, and vaccination programs were initiated by PVO-Marinduque in 2001. After almost a year of intense IEC campaigns and mass vaccination programs without significant results, stray and unowned dogs continued to present a hazard to the community as vectors of disease and, occasionally, the cause of road accidents. **It was decided that Phase II of the program had to be conducted earlier than the proposed timeline (2004).**

Phase II: Control and Eradication. Population control measures of stray and ferocious dogs commenced in 2002, alongside continuous mass vaccination, and IEC campaigns. This was done following ordinances based on provisions of the national law **Republic Act 8485 "Animal Welfare Act of 1998"** (Section 6.5: Euthanizing an animal for the purpose of animal control). For the first time in 2003, the province recorded zero cases of human rabies, attributed to a combination of mass dog vaccinations, IEC campaigns, and strict implementation of dog population management. These activities were maintained until 2007.

After the completion of the six-year Marinduque Rabies Eradication Program in 2007, responsibility of the rabies program was transferred to the Municipal Local Government Units (MLGUs). With this change, some municipalities experienced a virtual halt in implementation of activities in the rabies program. The Provincial Government then decided to take back the program in 2010.

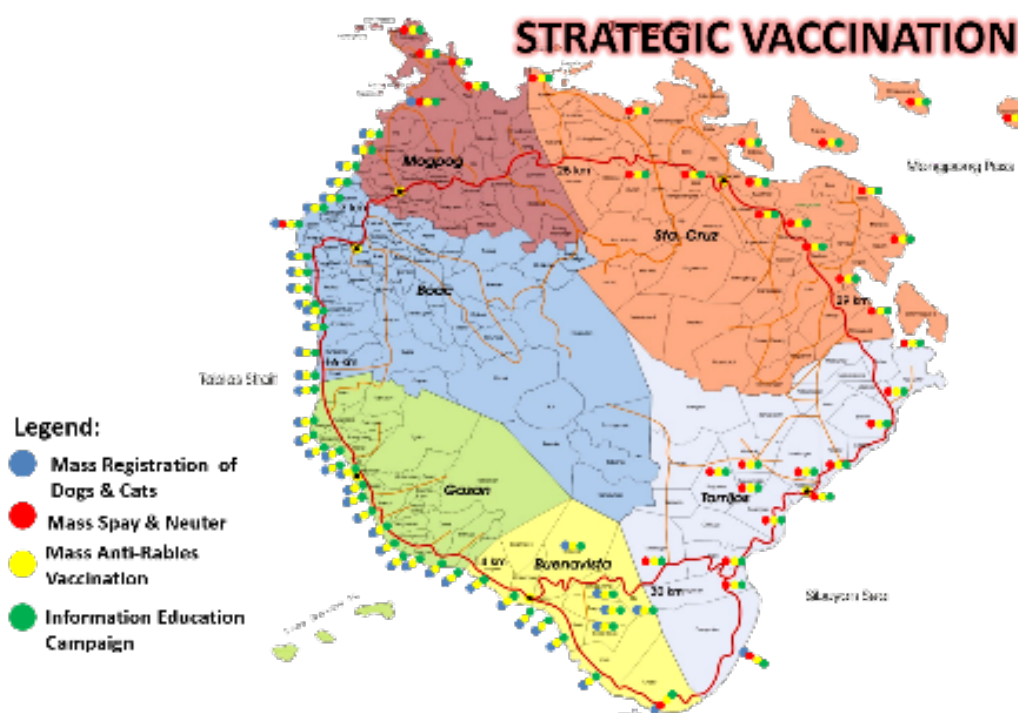
In 2010, the Provincial Veterinary Office was included in a project sponsored by the Japan International Cooperation Agency Zoonoses-Prevention and Control Association (JICA-ZPCA) in association with the Bureau of Animal Industry (BAI). The spay and castration training courtesy of JICA-ZPCA-BAI re-affirmed the compelling need for a continuing education program to enhance skills and update the team with the current trends on field veterinary surgery. This sparked the launching of the Marinduque Expanded Rabies Eradication Program 2011-2013. The target of this new program was for Marinduque to be declared as a Rabies-Free Province (based on the [National Rabies Prevention and Control Program Manual of Operations, 2012](#)).

Phase III: Intensified Phase. In 2011, the Animal Birth Control Center was established to reduce the dog population through spay and castration. Intensified mass dog vaccinations, dog registration, radio broadcasting, and regular dialogues with the communities were also conducted. Even the most remote *barangays* (singular: *barangay* – a native Filipino term for the smallest administrative division in the Philippines) in the area were included. Neutering activities were conducted provincewide, vaccinations, and other animal health services (deworming of large animals, livestock assessment, and providing medication) were delivered at the barangay level, catering to a wider area of coverage.



Staff of PVO-Marinduque cross a river by foot to provide animal health services to the innermost barangays of the province

Strategic Vaccination. A rabies immune belt was created around the coastal barangays by vaccinating dogs residing in the coastal areas, followed by vaccination of dogs in the inland barangays.



A map showing the initial approach of the strategic vaccination plan wherein the PVO vaccinated barangays near the coast. This was then followed by vaccination programs in inner barangays.

Veterinary Field Hospital. The Marinduque Mobile Veterinary Services' mission is to provide compassionate veterinary care to companion and farm animals in rural and small communities. The Mobile Clinic provides multi-faceted services all over the island closer to homes. Since 2010, the team neutered an average of 2,195 dogs and cats per year, with a peak of 3,915 in 2019.



Marinduque was nationally declared as a Rabies-Free Zone through a joint declaration by the Department of Health and Department of Agriculture during the celebration of World Rabies Day held at Makati City Hall, Makati City on September 28, 2012.



Phase IV: Maintenance Phase. To maintain the present status of the island as a rabies-free zone, the PVO-Marinduque continuously intensifies concerted efforts with the Local Governments Units. Active population control measures are implemented, namely, stray dog-catching, free mass neutering programs, mandatory leashing, and penalizing violators based on the stipulations in **RA 9482 "The Anti-Rabies Act of 2007"**. Pet registration is done for concise dog population numbers. Prevention by annual mass anti-rabies vaccination programs. Promotion of responsible pet ownership and animal welfare awareness through intensive IEC campaigns among members of the local community are also conducted.

We are all in this together. The PVO is not alone in achieving and maintaining this endeavor. The Department of Agriculture Regional Field Office-MIMAROPA (DA-RFO-MIMAROPA), BAI, and non-government organizations provided supplies like IEC materials, vaccines, medicines, and anesthetics. Intensive collaborations with other agencies was another key to the program's success. The Department of Education (DepEd) oversees the information dissemination and rabies awareness at the primary and secondary school levels. The Department of Interior and Local Government (DILG) and Local Government Units (LGUs) ensure that pertinent Administrative Orders, memoranda, and other legal issuances regarding the implementation of laws on responsible pet ownership are well-placed and known to local government officials and community members down to the barangay level. A collaborative effort between the Department of Health (DOH), the Provincial Hospital and the PVO was forged by sharing important information on the number of dog bite victims treated with pre- or post-exposure vaccines, and information on whether the animal in question was vaccinated or not.

Looking into the future. As Marinduque maintains its rabies-free status, goals and targets have changed. PVO-Marinduque has now set its sights on sharing its status with the provinces of MIMAROPA. The MIMAROPA Initiative is an offshoot program from the Marinduque Rabies Eradication Program that aims for the region to be the first Rabies-Free region in the Philippines. Once achieved, the program will be used as a template to be implemented in the entire country as the world moves towards Rabies freedom by 2030.

(Dr. Josue M. Victoria and Dr. Jeandeluz B. Reboca)



The people behind the hard work -- Staff of the Provincial Veterinary Office of Marinduque

(Insert) National recognition awarded to the Province of Marinduque during World Rabies Day 2018 for maintaining the province as a rabies-free zone and being one of the best rabies program implementers in the country.

Photos courtesy of Dr. Josue Victoria