Mid Project Evaluation

Following decades of culling (strychnine poisoning) of roaming dogs, Kathmandu Metropolitan City (KMC) agreed to work with a local organisation, the Jane Goodall Institute Nepal, to launch Manu Mitra (Nepali meaning “friend of human”). Envisioning a healthy, safe dog population, managed by the community, Manu Mitra works to build social infrastructure to enable the humane and sustainable management of dogs and other roaming animals. In January 2019, the project was externally evaluated in order to establish progress and collate lessons learnt for management and dissemination to other dog/rabies control stakeholders. This is a summary of the full evaluation, the details of which can be found at *. 

* [Link to full evaluation](#)
Manu Mitra aims to establish a humane animal management system within local government, whereby communities are empowered and supported to adaptively manage roaming animal populations, mitigate human-animal conflict and promote a culture of lifelong care for animals that enhances human and animal wellbeing.

**Manu Mitra Outcomes Framework**

A healthy, safe dog population managed by the community

- Widespread adoption of responsible dog ownership behaviours within community
- High rabies vaccination coverage maintained in dog population
- Sterilisation and preventive veterinary care is accessible and affordable

**Partners**

- Agriculture Division, Kathmandu Metropolitan City (KMC), provides veterinary costs and will assume ultimate responsibility for the program (2016 – ongoing);
- The Jane Goodall Institute Nepal (JGIN), provides local technical implementation (2016 – ongoing);
- International Aid for the Protection and Welfare of Animals (IAPWA), provides ongoing technical and financial support (since 2018);
- The International Fund for Animal Welfare (IFAW), provides both financial and technical support;
- Dr Elly Hiby (International Companion Animal Management Coalition/Independent Consultant) provides scientific support for monitoring, evaluation and impact assessment (2016 – ongoing);

**Project Overview**

The programme is devolved to the smallest unit of local government (the ward) and established through an animal management committee (AMC), supported by community volunteers (animal management assistants; AMAs) that care for dogs – they are empowered to provide additional care for dogs and help to select the most appropriate dogs for intervention.

Dogs are hand caught by animal welfare officers (AWOs), often with the help of AMAs, their owners and the community members, for vaccination on an annual basis. They are also selected for sterilisation; consent is obtained for sterilisation from the most appropriate person (owner, community member or AMA), the dogs are transported short distances to a field facility, which has optimal animal welfare standards for the local conditions. After sufficient recovery, the dogs are transported back to the community, where owners, community members or volunteers take responsibility for their (post-surgical) aftercare.

AMAs provide ongoing monitoring of their local dog population; identifying new dogs in need of sterilisation and vaccination and any welfare concerns; to be addressed by a combination of the local community, AMC and Manu Mitra.

**Manu Mitra Outcomes Framework**

- Adoption and fostering network maintained throughout ward
- Community-run clinics provide access to safe, affordable preventative veterinary care
- Community-facilitated dog sterilisation via health camps and collection/return
- Communications designed according to unique ward attributes (e.g. events, rallies, murals, competitions)
- Effective rabies surveillance and outbreak response
- City-wide coordination and support of ward AMCAs and AMA network
- Frontline Animal Welfare Officers respond rapidly to complaints and mitigate human-dog conflict

**Other municipalities receive dog management training**
The evaluation combined objective data analysis, semi-structured interviews with key stakeholders, observation of project activities and a participatory event with AMAs. The DAC Criteria for Evaluating Development Assistance were used to develop a series of questions addressing relevance, effectiveness, efficiency, impact and sustainability. Stakeholders included the project team, the KMC (departments of Urban Health and Agriculture), national government representatives involved with zoonotic disease control, the AMCs, AMAs and community representatives.

**Impact**

**Roaming dog breeding has reduced**

Evidence for a stabilising population was found from numerous sources including a statistically significant decline in the proportion of breeding (lactating) females over time ($R^2 = 0.177, p < 0.001$) and observations of fewer pups by several stakeholders. A total of 6000 dogs have been sterilised and 7300 rabies-vaccinated since the project launched.

**Roaming dog welfare is improving**

The percentage of dogs suffering from visible skin disease was found to be significantly reduced ($R^2 = 0.181, p < 0.001$). The percentage of emaciated dogs remains very low ($R^2 = 0.0003, p = 0.864$).

**Mass rabies vaccination is achieving high coverage**

In each ward, mass vaccination is facilitated by AMAs and repeated annually. AMAs know their community dogs, the dogs are relatively easy to catch and those that evade the first attempt are noted and are targets for later attempts at vaccination by the AMAs or AWOs.

**Dogs are becoming calmer and less aggressive**

Several stakeholders reported this change, which is probably due to a reduction in dog breeding and maternal behaviour.

**People are more accepting of dogs in the community**

Changes in dog behaviour, along with the reduced rabies risk, appears to have helped the public feel more at ease with their community dogs, able to walk the streets more comfortably. In one ward, requests for dog removal have evolved to requests for sterilisation and vaccination.

**Government is supportive and proud of Manu Mitra**

The Mayor’s request for a reduction in roaming dogs has been redefined to ‘safe’ roaming dogs. Support is forthcoming through different layers of KMC, including the Mayor, Chiefs of Agriculture and Environment, and many ward chairmen (some of whom are AMC members). Manu Mitra has been proposed by the National Concern and Coordination Committee as a project of ‘National Pride’.
Manu Mitra has focused on community dogs (dogs that receive regular care from one or more households), but a large proportion of the roaming dog population consists of owned dogs (allowed to roam unsupervised by their owners). To reduce the roaming dog population it will be crucial to target owned roaming dogs; an important source of abandoned and future community dogs. Household survey data suggests dog owners are willing to pay for sterilisation and other DPM services, so cost recovery should be explored. Furthermore, as Manu Mitra aims to increase pride and a sense of responsible ownership of dogs, it follows that people will be increasingly willing to seek veterinary services, above and beyond sterilisation and vaccination. Currently, however, Kathmandu lacks affordable, skilled primary veterinary services to enable communities to provide lifelong care for their animals.

A quality and affordable healthcare system for KMC should encompass preventive and reactive care as well as sterilisation and vaccination. Options to explore include creating a central KMC clinic, engaging private vets and the government hospital in subsidised services, NGO clinics, engaging the KMC Department of Agriculture new technical staff and creating community clinics run by AMCs (piloting in willing wards). Systems for encouraging and processing payment from owners, even if a subsidised rate, will help sustainability and also maintain a value on veterinary services. Maintaining quality and monitoring performance needs careful consideration.

Rabies is endemic in Nepal and there have been several cases of dog rabies cases within the KMC in the last three months. Manu Mitra has reduced rabies risk by increasing herd immunity through dog vaccination, however limited rabies surveillance and poor access to rabies related data (including dog bites, dog rabies cases and human deaths) make objective assessment of rabies risk and progress difficult. National statistics have been shared but without a breakdown to KMC this is of limited use for project evaluation. To achieve rabies control and eventual elimination (as per the 2030 goal) the surveillance of rabies must be improved. The KMC is the perfect location to trial Integrated Bite Case Management (IBCM) for Nepal - better reporting of bite cases and dog rabies cases would ensure reduced rabies exposure, better treatment of people, more lives saved and more accurate assessment of rabies control. Manu Mitra could engage in the redrafting of national rabies policy for the new decentralised governance system, and facilitate the trialling of IBCM nationally.

Engage in national rabies strategy and improve rabies surveillance
The target of 80% dogs to be sterilised and rabies-vaccinated is not useful scientifically, and has created some confusion (e.g. community members express concern regarding the remaining 20% of unvaccinated and unsterilised dogs). In some wards, with the help of AMAs, all community dogs have been found to be accessible and hence 100% would be a more ideal target (assuming the aim is to humanely drive the community dog population to zero, which would only occur in the absence of abandonment and immigration, unlikely in the near-term). For rabies, if aiming to eliminate the virus in the shortest time possible, a target of 100% vaccination is recommended.

The total roaming dog population estimate of ~22,000 has also been problematic, as this figure includes a large number of owned dogs, which we’re not Manu Mitra’s primary target. A new database should enable the proportions of community and owned roaming dogs to be estimated.

For roaming dogs that are owned, ideally their sterilisation and vaccination would be achieved by their owners rather than Manu Mitra. Not all their puppies will be unwanted and with an estimated 65,000 owned dogs that roam, there are practical concerns related to the veterinary capacity to sterilise all these dogs. Rather than a percentage target for sterilisation, the objective could be to improve access to sterilisation for all owned dogs and enhance appreciation of sterilisation benefits by owners. For rabies, household survey data reveals that 91% of owned dogs that were fully roaming (i.e. never confined) were already vaccinated at baseline. Hence, the target could be reasonably increased to maintaining >90% vaccination coverage in owned roaming dogs.

AMCs have been established in 20 of the city’s 32 wards, effectively holding many responsibilities for animal management including appointing AMAs, monitoring and supporting AMA activity, responding to complaints/concerns about dogs, public awareness and accessing resources. AMCs show potential to be very effective advocates and actors for the welfare of all animals in the ward although currently there is great variation in the level of their effectiveness. AMCs could be supported and trained to make the most of their AMAs and future financial resources, and develop an actionable vision for animals in their ward. Opportunities could be generated for AMCs to share their experiences and support each other, in a way that does not depend on Manu Mitra.

There are 200 AMAs in KMC currently, expected to rise to 300. They vary in their backgrounds, although many are ‘dog lovers’ who were already using their personal time and energy to help community dogs; others are female community health volunteers engaged in other health programmes with community outreach responsibilities. AMAs have proven very effective at ensuring sterilisation and vaccination coverage and their motivation to help dogs and their community connections is a major component of Manu Mitra’s effectiveness. Further AMA training could reward long-term commitment and refresh their understanding of their broad remit and treatment options, including euthanasia. AMAs should be supported to access pre-exposure rabies vaccination; potentially including costs of pre-exposure vaccination in AMC budgets.
KMC recognise their funding and leadership role and have made several contributions to the project, however they currently lack the technical capacity and expertise to assume responsibility for Manu Mitra. The Department of Agriculture is planning to allocate budget to build a new KMC vet clinic for providing veterinary services, including for DPM, potentially taking on at least part of the service provision currently provided by the Manu Mitra clinic.

The animal management system introduced by Manu Mitra needs to be enshrined in a municipal regulation. Before this can be enacted the Department of Agriculture must secure an Act establishing general provisions for veterinary public health. The regulation should include anti-cruelty and neglect wording, but more specific responsible ownership measures can be reserved for later guidance, encouraging good practice but not making ownership onerous or expensive (this risks reducing adoption of community dogs). When resources allow, Manu Mitra could test a voluntary dog registration system for KMC, focusing on the benefits, functionality, and registering a critical mass of dog owners before making it mandatory.

The Nepal government system was decentralised in 2017. Significant changes in staffing and structure led to an interruption in KMC in-kind support (including vaccines and sterilisation meds). However, the greater power now divested in municipal authorities aligns nicely with the approach of Manu Mitra.

A clear sustainability plan will need focused action to drive it forwards and should include milestones for monitoring progress. Investment in regular updates and reporting to KMC (e.g. the six-monthly survey findings) will establish the expectation of reporting within the KMC and how this data can be interpreted and used to evaluate progress. KMC staff should be trained in how to conduct street surveys and manage project data so these practices begin to become embedded.

Manu Mitra needs to be sustained until ‘completion’ of all wards in KMC (i.e. an AMC and AMA network is established and ward sterilisation and vaccination targets are reached). This is estimated to take another 12 months. A further 12 months will be needed to institutionalise the system within KMC, including training/monitoring of KMC staff and ongoing training of AMCs/AMAs. A further 12 months could be focused on replication in other municipalities, potentially targeting those neighbouring KMC to help protect KMC from local immigration and abandonment. Replication should focus on training others to set up and implement DPM rather than reliance on Manu Mitra staff to implement.

Enshrine Manu Mitra in legislation and develop a clear sustainability plan which incorporates KMC and neighbouring municipalities

Manu Mitra’s roadmap to achieve sustainable dog population management at the ward level