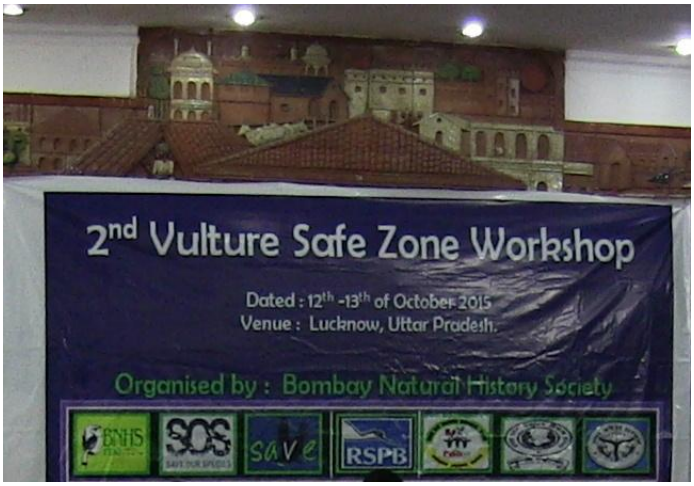
In-situ Conservation of South Asian Vultures: Developing the Vulture Safe Zone Approach



Report of the 2nd Vulture Safe Zone Review Workshop

Compiled by: Dr. Ananya Mukherjee & Chris Bowden

Lucknow 12-13 October 2015

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1. About this report and the development of the Vulture Safe Zone (VSZ) Concept

1.1 Aims & Objectives of the Workshop & this Report

The main aim of the second VSZ workshop was to bring together various practitioners actively engaged in *in-situ* vulture conservation work in South Asia (India, Nepal, and Bangladesh), to review, share and update good practice, and to understand what does and doesn't work well.

The first such workshop was held in Pinjore, Haryana in March 2013 when the Vulture Safe Zone concept was still very new. That meeting was largely devoted to defining the key activities, building capacity through advocacy training and developing the appropriate VSZ team composition. This second meeting was far more advanced in the process, and focussed on the sharing of best practice activities and experiences, and this report highlights those and provides further guidance for all current and prospective VSZ initiatives - together with the *Mistnet* article (Mukherjee *et al* 2014) that details the basic structure and the primary advocacy targets. It is particularly pleasing that the concept of Vulture Safe Zones (VSZ) has also been adopted by a number of NGOs outside the SAVE network, and some of these are presented here.

The workshop also acted as a forum for building links and updating the VSZ progress between the various initiatives, and there was an active advocacy training component, as well as instruction on the pharmacy survey methodology.

Finally, this forum was an appropriate platform and occasion to formally announce and welcome the first two 'SAVE Associates', a new category of SAVE members which is explained in more detail in the report.

1.2 General concept of VSZ work

In order to ensure that wild vulture populations recover from the devastating declines caused by diclofenac poisoning, and that a safe environment exists for captive-bred vultures to be released, the veterinary use of diclofenac and other similar vulture-toxic NSAIDs needs to be eliminated. This is a huge challenge and requires concerted efforts. In this context, Nepal was the first to pioneer the concept of VSZs and SAVE partners have taken this forward and initiated *in situ* vulture conservation work using VSZ concepts in India, Pakistan, and Bangladesh.

VSZs are a means of focusing effort on the priority actions needed to remove diclofenac and other vulture-toxic NSAIDs for a network of areas where vultures persist. In 2011, the Saving Asia's Vultures from Extinction (SAVE) Technical Advisory Committee agreed that a VSZ could be defined as an area of 30,000 km2 (ie a circular area of 100 km in radius, a distance which is based upon documented ranging behaviour of the vultures) where, after 2 years of searching:

(1) no diclofenac is found in pharmacies for veterinary use, and

(2) no diclofenac is found in a minimum of 800 cattle carcass liver samples;

and after 5 years of regular intensive monitoring[1]:

(3) no diclofenac or visceral gout is found in dead vultures within the area, and

(4) vulture populations within the VSZ are either stable or increasing.

Until the SAVE committee has the above evidence, a VSZ is regarded only as a Provisional VSZ (pVSZ).

Based on this guidance, VSZ work was initiated in Nepal and then shortly after in India in early 2012. The models for each of these countries do have some differences in emphasis and how they have evolved. Bangladesh has been the latest entrant to SAVE and VSZ work started in June 2014 using the VSZ concept. However, there is a stronger local community involvement in the work than there is in India. They have also been the first SAVE member to assign a legal status to VSZs in Bangladesh with the help of the forest department. Currently Bangladesh is actively lobbying for a ban on ketoprofen and it is expected that they will be able to achieve this in the coming months.

1.3 The variety of structures/models being used for VSZ work

Vulture Safe Zones have been initiated in Nepal, India, Bangladesh and Pakistan, and the models vary from country to country and even across India. These differences relate to the evolution of the concept as well as the capacity of implementing partners and other geo-political variations.

1.31 Nepal

The Nepalese VSZ model was the pioneer, and has evolved from a District level approach, working very closely with communities and local community leaders and groups to declare 'Diclofenac-free zones' (DFZ) with commitments to enforce them.

To advocate enforcement of the diclofenac ban and maintain a captive population of vultures, Bird Conservation Nepal (BCN) initiated the pioneering idea of working with local communities to establish a VSZ since 2009 (Paudel *et al* 2013). A VSZ is an area surrounding one or more wild vulture nesting colonies, large enough to encompass the mean foraging range (>30,000km^2), and completely free from diclofenac. The Provisional VSZ in the western lowlands of Nepal extends from the Chitwan National Park to the western border with India. Within this area, 30 nesting colonies of vulture are protected through advocating conservation at the district and community level. A network of 20 local conservation groups has been established throughout this area to advocate vulture conservation and to monitor breeding colonies.

The VSZ initiative has been made a SAVE priority for in situ vulture conservation in all range countries, and captive bred vultures will be released into VSZs. In addition, DFZs have been created in different districts of Nepal. The districts are declared as DFZ after monitoring the diclofenac in veterinary pharmacies and where the absence of diclofenac in the district was confirmed through the monitoring.

[1] Some updates/alternatives regarding intensive monitoring of tracked birds have been put forward by SAVE where this may not be feasible.

"Diclofenac-free District" represented an objective rather than a reality, but when combined, these districts make up the Nepal pVSZ. This automatically creates pressure for the local people to adhere to the ban alongside which community efforts are made to protect vulture nests and prevent the misuse of diclofenac. Up to October 2014, the provisional Vulture Safe Zone (pVSZ) in Nepal covered 36 districts and an area of 71,462 km^2. By October 2015, the pVSZ has extended to cover another ten districts, making a total of 46 districts covering an area of 101,160 km^2. 46 districts have been declared as DFZ under the stewardship of district level government agencies and leadership of District Livestock Service Office. This was coordinated by BCN and its local partners. These veterinary diclofenac free districts cover a total area of 101,160 km^2.

Two *in-situ* measures have been adopted to reduce mortality in the wild: (a) the exchange of diclofenac for meloxicam in areas surrounding natural breeding colonies: and (b) provision of safe food near the breeding colony areas. BCN led these initiatives and utilised vulture feeding stations or restaurants as the publicity and awareness focus. Other sustainable initiatives have been combined with these focal points to further convey the advocacy messages both locally and more widely. The idea to extend the approach on a 100km radius scale arose much later.

BCN expanded the pVSZ through advocacy and awareness-raising from district decision-makers to village communities, which included signing a declaration to make each district diclofenac free.

Support for Nepal VSZ mainly came from the UK government funded Darwin Initiative alongside RSPB's ongoing support. BCN also secured the Small Grants funding from UNDP to initiate community based vulture work to further promote vulture conservation work in Nepal. Other funding contributors include Critical Ecosystem Partnership Fund (CEPF), WWF Nepal Programme, Conservation Leadership Programme (CLP), Rufford Small Grants, International Trust for Nature Conservation (ITNC).

1.32 India

Six pVSZs have been identified in India using this model. Each provisional VSZ is centred on at least one surviving nesting colony of at least one of the three Critically Endangered Gyps vultures. Based on range sizes of Oriental White-backed Vultures, determined using satellite telemetry, a VSZ needs to cover an area that has a radius of at least 100 km in every direction from a colony (SAVE 2014a). This equals a total area of over 30,000 km^2. Such a large area may enclose hundreds of settlements, millions of NSAID users, tens of millions of livestock, and may cross state and national borders. Therefore, creating a VSZ is a major undertaking. Some of these initiatives are undertaken by assembling a team of field biologists along with field assistants and various other local assistants in those sites, which are led by BNHS.

Prior to the awareness and advocacy work, a policy advocacy strategy was developed which helped to outline the awareness and advocacy plan in the sites where vulture safe zone work is undertaken. The field biologists and other members of the team were then trained in nest monitoring and advocacy work to carry on the vulture safe zone work. However, not all teams (eg SNM, Arulagam, GIST, TCF) have been able to inculcate the VSZ model (Mukherjee *et al*, 2014) and the full 100 km radius mainly because resources are limited for some of these NGOs and assembling such a team requires a steady supply of resource.

Some NGOs such as Arulagam and TCF, however, have independently been able to leverage funding from other sources through (in part due to the help or endorsement of SAVE and BNHS) which has enabled them to initiate some of the awareness and advocacy work following the guidelines set out in the

Mistnet article. These include CEPF, Rufford Small Grants, Mohammed bin Zayed Foundation and some other small grant bodies which have been crucial to allowing this work to develop.

1.33 Bangladesh

VSZs have been declared in Bangladesh under the Wildlife (Conservation and Security) Act, 2012, as specialized 'landscape zones' recognized within the Wildlife Act. The total area of VSZs of Greater Sylhet and Greater Khulna are 19,663.18 km^2 and 27717.26 km^2, respectively. These VSZs share boundaries with India. For the management of VSZs, the Bangladesh government has already approved a three tier institutional mechanism that includes the already formed RSC (Regional Steering Committee), the BNVRC (Bangladesh National Vulture Recovery Committee), and the local level conservation team called the Vulture Conservation Team (VCT). The Vulture (*Gyps bengalensis*) Conservation Project in Bangladesh collaborated with Bangladesh Forest Department and formed six Village VCTs in different areas to enhance the vulture conservation at the community level.

Several steps and procedures were followed before declaring the VSZ. They were:

(a) Conducting baseline surveys like population survey, nesting and roosting tree identification, hotspot demarcation, pharmacy surveys etc.

(b) Identification of the main threats for vultures.

(c) Development of draft proposal with proper mapping and a compiled list of harmful and safe activities.

(d) The draft proposal was shared with various local stakeholders within the possible identified Vulture Safe Zone Area.

(e) Incorporation of comments and suggestions from the stakeholders in the draft proposal.

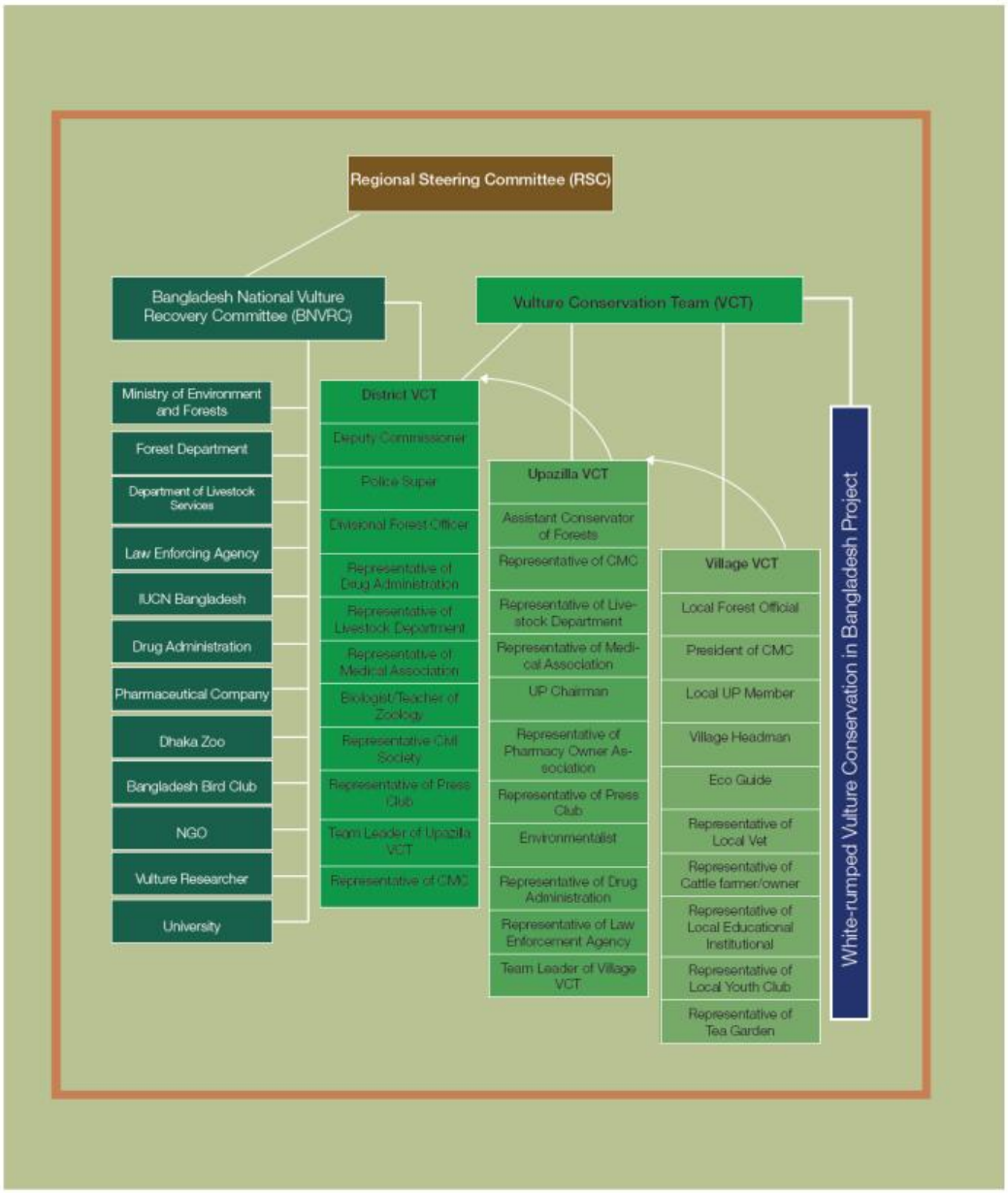
(f) Validation meeting with the same stakeholders on the revised draft proposals.

(g) Meeting with national level stakeholder where high officials were involved.

(h) Finalization of the proposal and sent to the Ministry of Environment and Forest for approval

The Vulture Safe Zones (VSZs) of Bangladesh are the only VSZs so far that have been formally endorsed by government (on 23 December, 2014). Government also formally recognises the following structure (Figure 1) which has taken implementation of the VSZ model to a new level, providing an exemplary template for other VSZs to consider replicating elsewhere.

Figure 1. Government endorsed structure and composition of VSZ work in Bangladesh



2. Programme Schedule for 2nd Vulture Safe Zone Workshop

12th -13th October 2015 - Venue: Hotel Gomti, Sapru marg, Lucknow, Uttar Pradesh

Day 1	**12th October**
9:30 am	Welcome address – Dr Vibhu Prakash, BNHS Senior Scientist
9.35 am	Opening remarks – Chris Bowden, SAVE Programme Manager
9:45 am	Workshop aims and context of Vulture Safe Zone work within the wider vulture conservation priorities & introduction to SAVE – Chris Bowden, SAVE Programme Manager
10:00 am	Keynote address- Outline of Meeting with reference to In situ Conservation work in South Asia on vultures – Dr Ananya Mukherjee, VSZ Co-ordinator.
10:30 am	Inauguration and opening remarks by PCCF Forest Department and CEO AHD Address by Dr. Vibhu Prakash
10:50 am	Welcome note – Programme manager of SAVE
11 am	Break for Tea
11:15 am	Presentation & Updates on progress of vulture conservation work in your respective states or areas
Session 1	***West Zone - chaired by Dr Vibhu Prakash***
11:20 am	Presentation I by BNHS Saurashtra Gujarat team
11:40 am	Presentation II by BNHS Central Gujarat team
12.00 pm	Presentation III by BNHS MP team
12:20 pm	Presentation IV by SNM
Session 2	***East Zone - chaired by Chris Bowden***
12:40 pm	Presentation V by Bangladesh team
1 pm	Break for Lunch
2 pm	Presentation VI by Nepal Team
2:20 pm	Presentation VII by BNHS Assam Team
Session 3	***South Zone and other NGOs - chaired by Ananya Mukherjee***
2:40 pm	Presentation VIII by Arulagam
3:00 pm	Presentation IX by Corbett Foundation
Session 4	***North Zone- chaired by Dr. Vibhu Prakash***
3:40 pm	Presentation X by BNHS UP team
4pm	Tea Break- 20 mins
4:20 -5:20 pm	Learning and sharing through experience some of the challenges faced on the ground whilst working on vulture safe zones- discussion chaired by [Chris and Vibhu]. Groups divided into zones to highlight and discuss issues
5:20-5:45pm	Setting the scene for the Advocacy training programme including team divisions and list of things to prepare for the training course- Ananya Mukherjee
Day 2	**13th October**
9:30-10:30	Undercover pharmacy survey methodology and pitfalls- Mandar Kulkarni
10:30 am	Break for Tea
10:45am - 1pm	Advocacy Training Session Ananya
1-2pm	Lunch Break
2- 2:15pm	SAVE Associate Category Announcement Chris Bowden
2:15-3:45 pm	Discussion on the Vision ahead for VSZ work in South Asia including trans-boundary relationship chaired by Chris.
4pm	Conclusion: Vote of Thanks to participants and BNHS team members
4:30pm	Tea Break and Workshop Ends

3. Participants and VSZs represented

1. Mr. P. Arunagirinathan	Arulagam- Coimbatore (SAVE Associate)
2. Mr. Kedar Gore & Devesh Gadhvi	The Corbett Foundation (SAVE Associate)
3. Mr. Ramashish	SNM
4. Mr. Sherwin Everett & Mr Kartik Shastri	Central Gujarat VSZ team, BNHS
5. Mr. Divyaraj Shah	Saurashtra Gujarat VSZ team, BNHS
6. Ms. Indumoni Chetia & Ms Sangita Medhi	Assam VSZ team, BNHS
7. Ms.Alka Dubey	UP VSZ team
8. Mr. Mandar Kulkarni	MP VSZ team
9. Mr. Sarowar Alam & Mr. Abu Zafar Md Hasabur Rahman	IUCN Bangladesh & Bangladesh Forest Department
10. Mr. Khadananda Paudel & Mr Bhupal Nepali	BCN, Nepal
11. Dr. Vibhu Prakash	BNHS
12. Mr. Chris Bowden	RSPB
13. Dr. Ananya Mukherjee	RSPB
14. Mr. Prashant Verma, CCF	UP Forest Dept. Distinguished Guest
15. Mr A.K. Mehrotra	UP Food & Drug Administration, Distinguished Guest
16. Dr. B.B.S. Yadav	UP Livestock & Animal Husbandry Department, Distinguished Guest

Apologies - Ruchi Dave, GIST and Neo-Human Foundation

4. Monitoring and impact of VSZ work

4.1 Undercover and open pharmacy surveys – the primary means to monitor how effective VSZ work is – from presentation by Mandar Kulkarni

A - Pharmacy surveys are carried out as undercover and open surveys. In the undercover surveys the surveyor's identity is not disclosed to the pharmacists. The surveyor visits the pharmacy as a cattle owner and asks for painkiller to treat cattle for injury and inflammation. One of the most important aspects of pharmacy surveys is the selection of locations for carrying out the surveys in the proposed vulture safe zone sites which is an area of approximately 30,000 km^2. The selected locations must have pharmacies selling drugs for livestock treatment and must also cover the complete area of the proposed vulture safe zone.

Purpose of the pharmacy survey:

- Practical tool to find out the prevalence of diclofenac.
- To find out prevalence of other NSAIDs available for treating livestock.
- To design strategies to address the impediments based on the results of pharmacy surveys.

Although the most reliable method to determine the actual use of NSAIDs is through tissue sampling of dead cattle(Taggart *et al*, 2007), this method offers a far easier and quicker way, that can be carried out by VSZ teams:

How do you select your locations for the pharmacy survey?

- Random
- Tehsil/taluka (administrative units) based approach
- Control and test regions

The selection of locations for carrying out undercover and open surveys is described in the following section.

The first step in the pharmacy survey is to select locations in the proposed vulture safe zone, ie the 30,000 km^2. Once selected, mark the locations in a map with an oval. About 70-90 locations must be selected for surveying and the number of locations may vary depending on the size of the proposed vulture safe zone and type of area (eg rural, urban, semi-urban, forested etc). The locations must be selected by following either of the methods mentioned below.

Random selection of the locations can be used in an area with uniform cover of forest land, rural, semi-urban and urban areas. The map of the vulture safe zone should be divided into 300-400 blocks using horizontal and vertical gridlines on the map. Each of the blocks should be numbered from left to right and top to bottom sequentially. Among these block, numbers from 1-300/400 70-90 random number should be selected using Microsoft Excel (Figure 2) and the corresponding blocks on the map should be highlighted. The selection of random numbers can be assisted using Microsoft Excel. In the highlighted blocks towns

or villages or cities should be selected where pharmacies sell drugs for treating livestock. These locations once marked and identified should be surveyed.

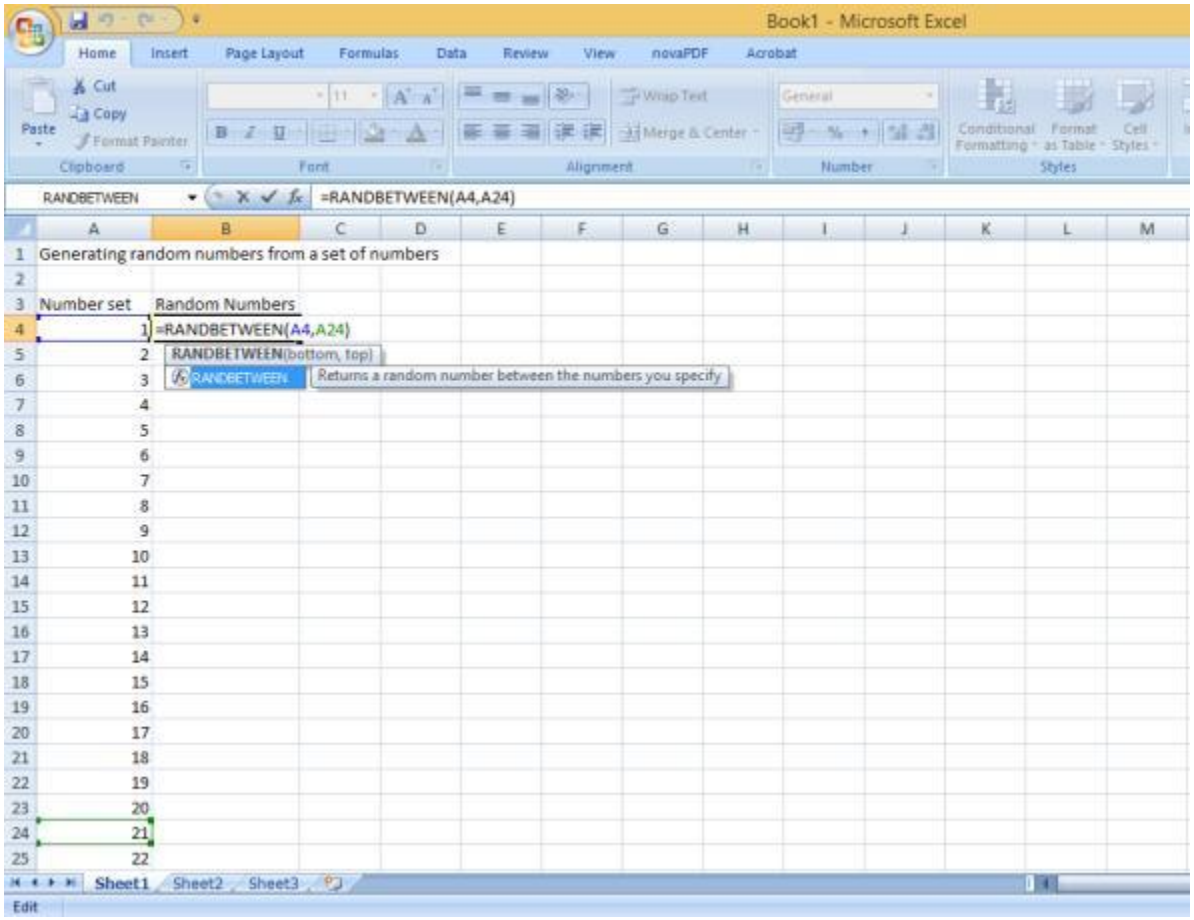


Figure 2: Generating random numbers using RANDBETWEEN function in Microsoft Excel.

Tehsil/taluka (administrative units) based approach: this approach is used for selection of locations and can be used in an area with number of tehsils/talukas evenly distributed across the proposed area. The administrative units which are distributed uniformly throughout the vulture safe are marked for carrying out pharmacy surveys.

Marking control locations: Identifying and marking control locations in VSZis also very important. At the control locations no targeted awareness and advocacy programmes will be carried out. The results of undercover survey from control locations and other locations can be compared to find out the effectiveness of targeted advocacy and awareness programmes on prevalence of various NSAIDs. The control locations should be at least 10% of the total number of locations chosen for pharmacy survey. The control locations could be at the periphery of the VSZ or at different administrative units other than the core region of the VSZ, just to make sure that the targeted advocacy at administrative units does not affect the control locations. The control locations can also be marked outside the periphery of VSZ.

First undercover pharmacy survey: methodology

- For a 30,000 sq.km area 70-90 settlements should be surveyed (can vary as per the VSZ area).
- Once selected a team of trained biologist and local assistant should carry out the survey.
- The local assistant or a local person appointed just for this exercise should be sent to buy medicine for treating cattle for pain and inflammation.
- The biologist must not visit the pharmacies but should record data such as name of pharmacy, its GPS locations, address and the details of the medicine provided by the pharmacy.

Open survey or second pharmacy survey

- All the 70-90 settlements selected randomly across the area of the VSZ should be visited by a team of biologist and field assistant
- The team must visit all the pharmacies in the selected settlements and they should be made aware of the vulture conservation, effect of diclofenac on vultures, their important roles and should be requested not to sell human formulations of the drug diclofenac for treating cattle during one to one meetings. They should also be asked whether paravets buy diclofenac for treating livestock.
- The open pharmacy surveys are not carried out at the control locations. In the open pharmacy surveys a team of biologists and field assistants visit each and every pharmacy of the selected locations except the control locations and every pharmacist is made aware about the vulture conservation, diclofenac toxicity to vultures, ban on manufacture and sell of diclofenac in veterinary sector and how pharmacists can help in vulture conservation by not selling human formulations for veterinary use. The biologists also collects information about which painkillers are sold at the store for treating livestock, and this data is filled in the datasheet given at the end of the document. No medicines are purchased during open pharmacy surveys.
- Help from district, state and national level associations of pharmacist also can be requested to motivate the pharmacists not to sell human diclofenac formulations for veterinary use during the open pharmacy surveys. The pharmacist's association could also request all their members to follow the instructions issued by Government of India in the form of Gazetted notifications to stop the sale of human diclofenac formulations for treating livestock.
- Help from Food and Drugs Administration at state and district level can also be requested to stop the sale of human diclofenac formulations for livestock treatment. The Drug Controller of the state and Drug Inspectors can also issue instructions to their subordinates and pharmacies in their jurisdiction to cooperate in vulture conservation work.
- Help from District Administration can also prove very useful to stop the sale of human diclofenac formulations for treating livestock.

4.2 Brief mention of other monitoring indices eg Government input, funds, tagging, carcass sampling, publicity achieved

Although pharmacy surveys are probably the primary source of information that can be collected relatively quickly to determine baseline and then updated levels of safe and dangerous NSAIDs available and in use, there are several other indices of the impact the VSZ or wider advocacy work is having:

- State Government engagement in the process – eg numbers of meetings, circulars issued, attendance of meetings etc
    - Related to this is Government funds put towards the VSZ actions
    - Press and media coverage is another related output that can be monitored
- Cattle carcass tissue sampling has been the main way, randomly sampling organs of dead cattle dumped and potentially available to vultures. This is probably the best method in many ways, but does require specialist analysis to ensure reliable results, and it requires considerable manpower, a vehicle etc and therefore significant expense.
- A new approach is to satellite tag vultures in the area and have a team available to respond quickly and find and collect a vulture carcass should it die. With enough such birds, this would allow us to be confident of the safety of an area, and full NSAIDs analyses would reveal any ongoing issues (or other problems).

5. Selected successful ideas and initiatives used in VSZ work presented as good practice for replication elsewhere presented as good practice for replication elsewhere

Signature campaign, Tamil Nadu (Arulagam)

Signature campaign for establishing diclofenac free zone. This was carried out among public and vet doctors

Vultures In Art form - Tamil Nadu (Arulagam)

In Art Form: for vultures and gyps carnival programme conducted by students. Art forms such as street theatre, puppet show, - was utilized for sensitizing the stakeholders

Animal Health check-up camps, Maharashtra (Sahayadri Nisarga Mitra)

Diclofenac-free village concept, Maharashtra (Sahayadri Nisarga Mitra)

- Diclofenac Free Village
  - Methodology
    - Animal Health check up camps
    - Distribution of Animal Health Cards
    - Vulture Safe Village Competition
    - Vulture Help Line – Rescue, Carcass Dumping
  - Outcomes
    - Active involvement of Forest and Animal Husbandry Departments through quarterly meetings
    - Active Participation of locals – "Botulism Free Holi" by Gothe Group Gram Panchayat
    - Carcass Disposal Guidelines being reviewed by AHD

Strategic placement of banners/posters (Assam VSZ Team, BNHS)

Saplings with vulture stickers - (Assam VSZ Team, BNHS)

Free distribution of sapling with Save the Vulture Sticker - successful state government lobbying

Posters – (Saurashtra Gujarat VSZ, BNHS)

Striking posters such as this which highlight key messages – then placing them in strategic places to make them effective

TV chat-show panel discussion (Central Gujarat VSZ, BNHS)

Vulture Talk show on local TV in Gujarat

Free meloxicam distribution, Gujarat, (The Corbett Foundation)

Carefully targeted free Meloxicam distribution work (TCF) – also done in UP, Gujarat.

Sports tournaments vulture trophy, Tamil Nadu (Arulagam)

Themed tournaments organised that raised the profile of issues and Vultures in general

Engaging eye-catching pageants for photo shoot! (BCN, Nepal)

Nepalese Beauty Pageants endorsing Vultures on World Environment Day

Undercover surveys (UP, BNHS)

First state-wide undercover pharmacy survey –with the entire UP VSZ team (UP, BNHS) – done by all VSZ teams

Active engagement of regional government in vulture conservation work in UP and free meloxicam distribution to the vet community on International Vulture Awareness Day, 2015 (UP, BNHS)

Legal endorsement (Bangladesh VSZ team, IUCN & Bangladesh Forest Dept)

Legal endorsement of 2 VSZs by Bangladesh government GIST

Forest Staff: Capacity Building in the Field (GIST, Kerala)

C. Sashikumar explaining the features of Site visit: Wildlife Warden observing Vulture Nest Doddady, Tholpetty range. White-rumped vulture at nesting location, Tholpetty range

Murals, art competitions (Saurashtra VSZ, BNHS)

Approximately 1870 artists came together to paint the walls of Victoria nature reserve in Bhavnagar organised by Bhavnagar forest department. It was a mass awareness campaign. In Saurashtra VSZ, BNHS, diclofenac availability is under control and is not sold by pharmacies without a proper prescription.

Exhibitions, Tamil Nadu (Arulagam)

Vulture Exhibition on various species of vultures & their ecology/environmental role

Children's masks, Tamil Nadu (Arulagam)

Vulture mask rally conducted for awareness on diclofenac ban in the local area

Exhibition at show, including local vulture handicrafts (Assam VSZ, BNHS)

Contact meetings (UP VSZ, BNHS)

First sensitisation work at Katerniaghat (Indo-Nepalese border) engaging with BCN, BNHS, local NGO, UP Forest Department, RSPB and the local vet community in UP VSZ

Marches (IUCN Bangladesh VSZ team)

International Vulture Awareness Day March, 2015 in Bangladesh

Marches (BCN, Nepal VSZ team)

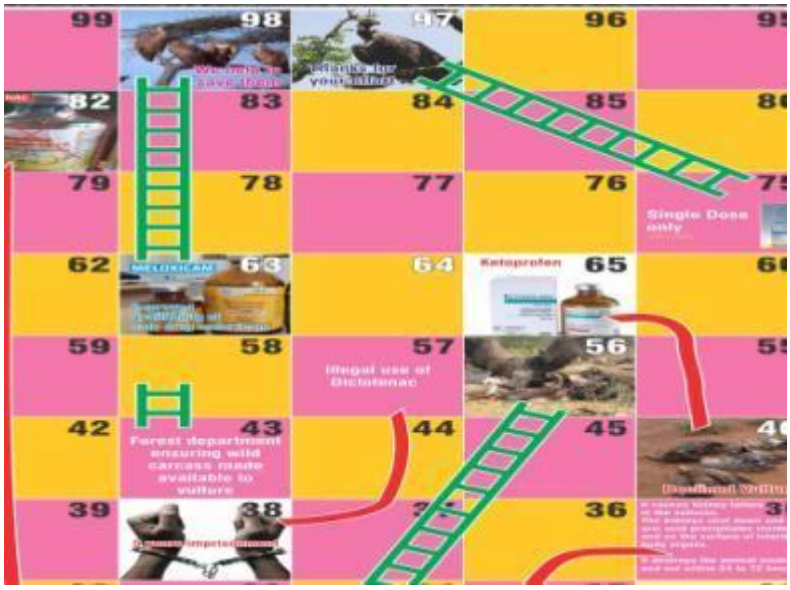
International Vulture Awareness Day, Nepal

Making vulture footage available to local TV channel

(Gujarat Central VSZ team, BNHS)

Vultures on TV programme in Central Gujarat

Appealing games with diclofenac and vulture messages, Tamil Nadu (Arulagam)



Snake and Ladder game as an innovative awareness raising work

Women & children engagement (UP VSZ team, BNHS)

Engagement with and sensitisation of women and children in various villages of UP VSZ

Publicised motorcycle rally, Kerala (GIST & Arulagam)

A motor cycle rally organised by Arulagam. A meeting of the participants was held at the Muthanga, Wayanad Wlildlife Sanctuary along with forest officials

Local handicrafts, (Assam VSZ team, BNHS)

Innovative ways to engage local community people (weavers and craftsmen), Assam

National TV (Bangladesh IUCN VSZ)

Vulture talk on Bangladesh National TV Vulture sensitisation programme. International Vulture Awareness Day involving local community people in Bangladesh

Publicity of DFZ work (BCN, Nepal VSZ team)

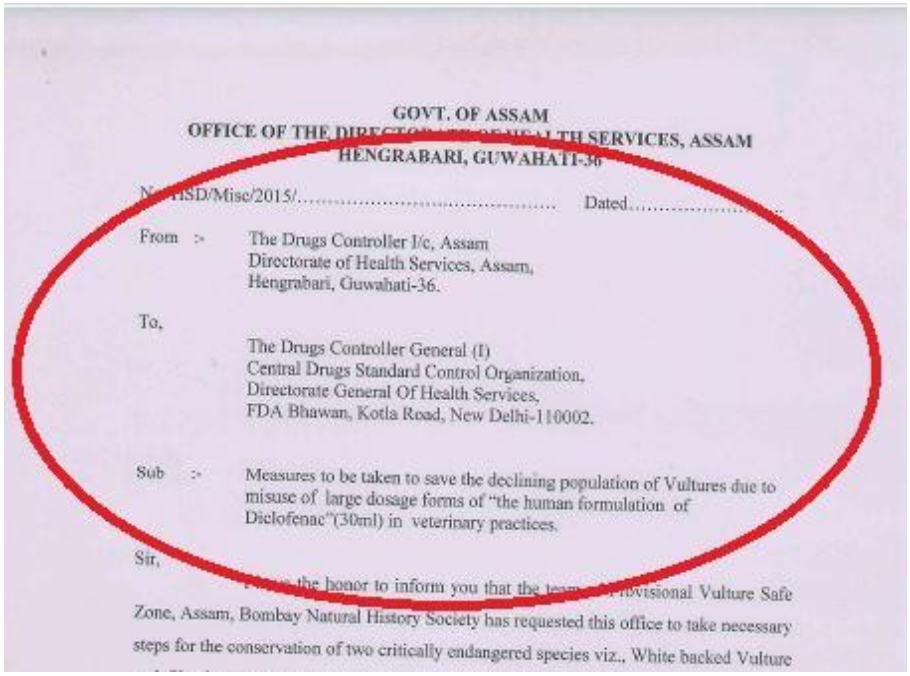
Unavailability of diclofenac in undercover pharmacy survey 2014

Vulture Safe Feeding Site Total no. of Diclofenac free districts =45
Diclofenac Free Zones (DFZs) Total area occupied =101,160

Veterinary prescription pads with diclofenac message, Tamil Nadu (Arulagam)

Veterinarian's Prescription pad with warning message (Arulagam)

Official letters highlighting ban (Assam VSZ team, BNHS)



GOVT. OF ASSAM
OFFICE OF THE DIRECTOR OF HEALTH SERVICES, ASSAM
HENGRABARI, GUWAHATI-36

No. HSD/Misc/2015/..... Dated.....

From :- The Drugs Controller I/c, Assam
Directorate of Health Services, Assam,
Hengrabari, Guwahati-36.

To,

The Drugs Controller General (I)
Central Drugs Standard Control Organization,
Directorate General Of Health Services,
FDA Bhawan, Kotla Road, New Delhi-110002.

Sub :- Measures to be taken to save the declining population of Vultures due to misuse of large dosage forms of "the human formulation of Diclofenac"(30ml) in veterinary practices.

Sir,

I have the honor to inform you that the team of Provisional Vulture Safe Zone, Assam, Bombay Natural History Society has requested this office to take necessary steps for the conservation of two critically endangered species viz., White backed Vulture

Prompting officials to issue letters to reinforce ban and facilitating process

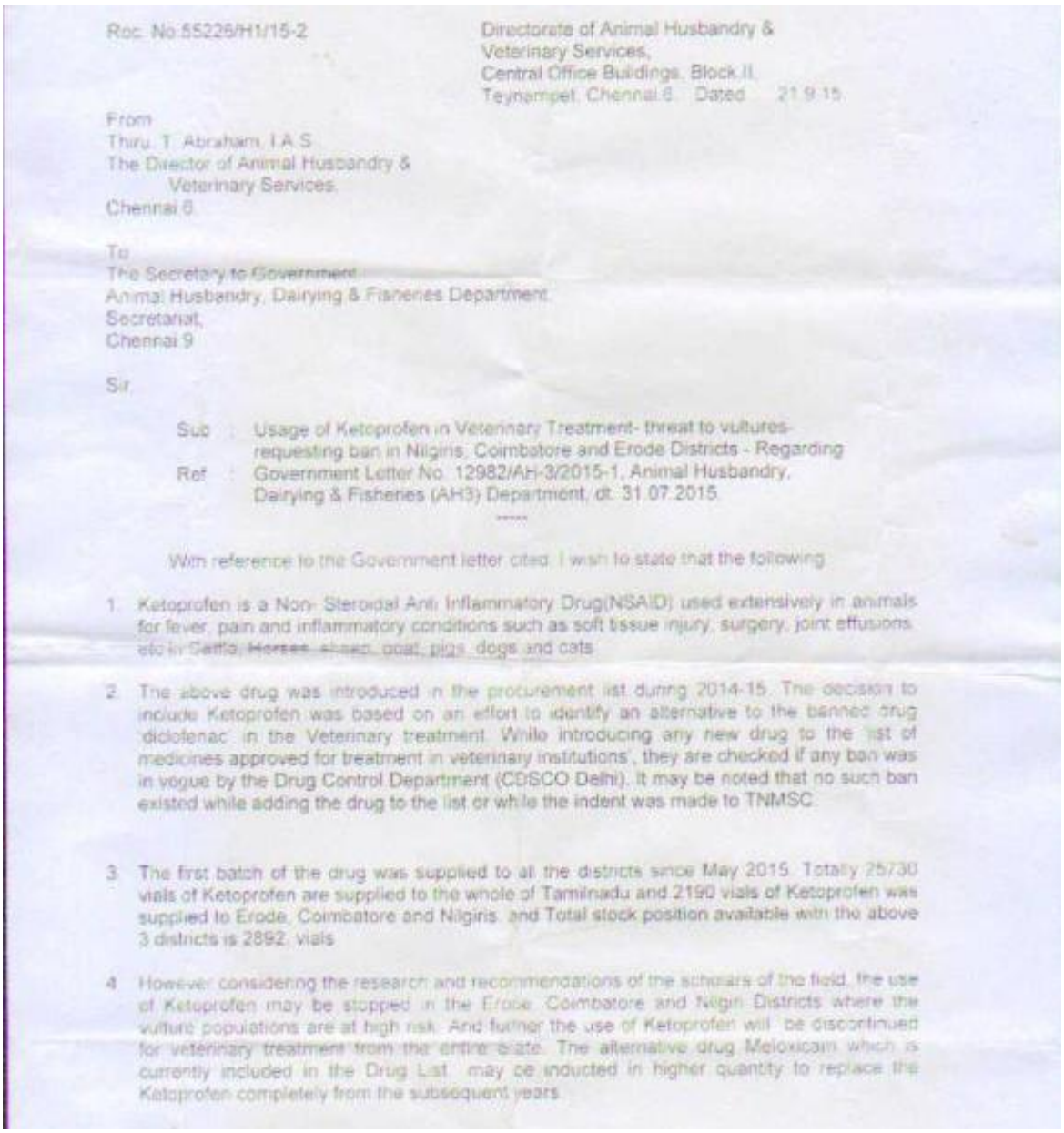
6. VSZ reaction protocol to MDV ban (India)

Following the recent multi-dose vials ban for human diclofenac, which is potentially the most important step for vulture conservation since 2006, there is an important role for VSZ teams to ensure the speedy and effective implementation. Here we outline how this has been very effectively followed up in UP and Gujarat VSZs, India and we hope this can give ideas for it to be replicated elsewhere by VSZ teams.

- UP VSZ- MDV ban followed by immediate communication with all key players and stakeholders. These include the Forest Department, Animal Husbandry and Livestock Department, Food and Drug Administration, State Health and Education Board.
- Communication was also spread to the All India Head of Druggists and Stockists who recently donated 3000 vials of meloxicam to UP. This was then used to lobby the Drug Commissioner UP who issued a license permit to BNHS to distribute meloxicam in UP.
- The multi-dose vial ban caused another significant milestone with the incident coinciding with International Vulture Awareness Day (IVAD). This year IVAD was celebrated for the first time in UP VSZ by distributing free meloxicam to the vets and paravets. What made the event significant is that it was endorsed by the State/Regional government. In other words, the event was organised by the District Magistrate who sponsored the programme along with the District level veterinary officials of Sitapur district, who came together with the Animal Livestock Department's CEO to distribute meloxicam to the paravet and vet community.
- Another positive outcome of the MDV ban is the pro-activeness of the State Drug Commissioner of UP who ordered immediate spot-checks on the rural areas of UP to confiscate illegal diclofenac stocks from the pharmacists and chemists.
- The 2nd Vulture Safe Zone workshop also gave a boost to the vulture work and the Drug Commissioner and Animal Husbandry Department of UP were informed about the other toxic drugs such as ketoprofen and aceclofenac which are equally harmful for the vultures.
- In Assam, similar notices were issued by the Animal Husbandry office to all the districts and veterinary community asking them to stop purchasing and administering large vials of diclofenac for veterinary purposes.
- In Gujarat, both Central and Saurashtra Gujarat circulated the news of the multi-dose vial ban amongst all the key players including the veterinary community. Specifically in Central Gujarat, a news story was published in the local daily stating the misuse of the multi-dose vial ban in March 2015. Following the news article, the Gujarat Drug Commissioner issued a letter to the Animal Husbandry department stating the illegal use of the banned diclofenac by livestock inspectors and veterinary doctors. He had further stated that action would be taken against those caught using these drugs and including the misusing of multi-dose vials.
- Following the MDV ban and the issuance of the gazette notification in August 2015, the Animal Husbandry department immediately issued a letter throughout Gujarat notifying livestock inspectors and paravets about the misuse of MDV and that that was now a punishable offence.

7. Procedure of Tamil Nadu ketoprofen withdrawal by Animal Husbandry Department

- Vulture Safe Zone (VSZ) workers of NGO and SAVE Associate 'Arulagam' in Tamil Nadu voiced its concerns over the use of ketoprofen in Government dispensaries, when it started noticing the same being supplied by the Animal husbandry department and used in place of the banned diclofenac, in June 2015.
- This was brought to the notice of the state department of animal husbandry, together with supplying photocopies of the key ketoprofen toxicity references from the SAVE website. The same set of documents (including a Tamil Nadu version of the SAVE Blueprint) was then supplied to the Animal Husbandry Dept, Drug Controller's office, Family Welfare, Forest Department, District administration and the Veterinary University. All department heads for these were met in person and had hand delivered documents with some dialogue on the urgency to eradicate the 'menace of diclofenac and ketoprofen'. Emphasis was placed on the three Tamil Nadu districts where vultures still occur in small numbers and meetings with state Secretary of Animal Husbandry and Director were received positively. An earlier 'Vets for Vultures' meeting at the veterinary college had apparently helped to prepare the ground on this.
- The state Animal Husbandry Director, recently issued a letter to all veterinary doctors to stop use of diclofenac stating that they would face departmental action should they continue to do so. As a follow up to the Vulture Awareness day and the media coverage of the events in late July, Arulagam sent written requests to the Secretary and the Director of Animal Husbandry Department to go further and ban the drug ketoprofen.
- A key letter (Roc.No55226H1/15-2, dated 21 Sep 2015) was then issued stipulating that all Tamil Nadu Government funded supply of the drug (ketoprofen) to the veterinarians will cease.
- This step has also been communicated from Tamil Nadu officials to central Govt in Delhi. Other VSZ initiatives were given the details of this in October at the VSZ review meeting in Lucknow and it is hoped that this initiative can now be repeated elsewhere to build pressure at a central level for ketoprofen, as well as for another known toxic drug, aceclofenac, so that state funded supplies can be stopped ahead of any wider legislation. Special thanks go to Tamil Nadu Government, Secretary and Director, Animal Husbandry Department in particular for taking this important initial step.



Roc. No 55226/H1/15-2

Directorate of Animal Husbandry &
Veterinary Services,
Central Office Buildings, Block II,
Teynampet, Chennai 6. Dated 21.9.15

From
Thiru. T. Abraham, I.A.S.
The Director of Animal Husbandry &
Veterinary Services,
Chennai 6

To
The Secretary to Government
Animal Husbandry, Dairying & Fisheries Department
Secretariat,
Chennai 9

Sir,

Sub : Usage of Ketoprofen in Veterinary Treatment- threat to vultures-requesting ban in Nilgiris, Coimbatore and Erode Districts - Regarding
Ref : Government Letter No. 12982/AH-3/2015-1, Animal Husbandry, Dairying & Fisheries (AH3) Department, dt. 31.07.2015.

With reference to the Government letter cited, I wish to state that the following

1. Ketoprofen is a Non- Steroidal Anti Inflammatory Drug(NSAID) used extensively in animals for fever, pain and inflammatory conditions such as soft tissue injury, surgery, joint effusions etc in Cattle, Horses, sheep, goat, pigs, dogs and cats.

2. The above drug was introduced in the procurement list during 2014-15. The decision to include Ketoprofen was based on an effort to identify an alternative to the banned drug diclofenac in the Veterinary treatment. While introducing any new drug to the list of medicines approved for treatment in veterinary institutions', they are checked if any ban was in vogue by the Drug Control Department (CDSCO Delhi). It may be noted that no such ban existed while adding the drug to the list or while the indent was made to TNMSC.

3. The first batch of the drug was supplied to all the districts since May 2015. Totally 25730 vials of Ketoprofen are supplied to the whole of Tamilnadu and 2190 vials of Ketoprofen was supplied to Erode, Coimbatore and Nilgiris and Total stock position available with the above 3 districts is 2892 vials.

4. However considering the research and recommendations of the scholars of the field, the use of Ketoprofen may be stopped in the Erode, Coimbatore and Nilgiri Districts where the vulture populations are at high risk. And further the use of Ketoprofen will be discontinued for veterinary treatment from the entire state. The alternative drug Meloxicam which is currently included in the Drug List may be inducted in higher quantity to replace the Ketoprofen completely from the subsequent years.

Central Gujarat VSZ initiative to remove ketoprofen from the districts of Anand, Kheda and Mahisagar

8. Procedure involved in getting the letter issued by the Amul dairy HoD to the districts of Anand and Mehsana, Gujarat

- A plan was made with the Central Gujarat VSZ team along with the VSZ Co-ordinator in meeting the HoD of Amul along with the lead local NGO member Dhaval Patel.
- The local field-assistant started communicating with the NGO lead.
- The other Central Gujarat team members started communicating with the NGO lead Dhaval Patel.
- Central Gujarat Team co-ordinator started communication with the NGO lead Dhaval Patel lobbying him to approach the Amul dairy HoD.
- The NGO (VNC) lead Dhaval Patel started lobbying with the Head of Veterinary department of Amul dairy.
- The NGO lead then facilitated a meeting with the Central Gujarat team and the Head of Veterinary department of Amul dairy. The outcome of the meeting was positive. However, the HoD communicated that that he could not issue the letter from his level because such letters needed to be passed after a board meeting after which an official statement has to be made. But he also mentioned that they had stopped drugs like Diclofenac, Chloramphenicol, Ketoprofen and Oxytetracyclin in the treatment for a few years now. The areas they cover are 200 villages in 3 districts, Anand, Kheda and Mahisagar with 1200 milk societies. Further information provided was that they have 170 veterinary doctors and 1000 A.I workers. They use only the medicine allotted to them which is prescribed by the Head of Department.
- A further follow-up meeting was made by the NGO lead (Dhaval Patel) after which the HoD agreed to issue the letter within a few days time.
- The letter was issued the following day by the Managing Director of Amul Dairy.
- Thereafter the Central Gujarat team organised a meeting with the Animal Husbandry Director, Hita Patel to lobby the veterinary community on the dangers of using ketuprofen and aceclofenac.
- A press note has been prepared thereafter to cover the major newspapers in the area to give coverage and publicity of the notice issued by Amul dairy.

Amul

KAIRA DISTRICT CO-OPERATIVE MILK PRODUCERS' UNION LTD.
ANAND 388 001

MANAGING DIRECTOR

TO WHOM IT MAY CONCERN

Sub: Discontinuation of use of Ketoprofen in Veterinary Treatment – Threat to Vultures of Gujarat

As a leader in milk production and its commitment towards social progress & welfare of its members and safeguarding India's Natural heritage, AMUL has always taken proactive steps towards it.

Vultures population is steadily declining throughout the geographic range in the Indian sub-continent due to the widespread veterinary use of various NSAIDs like Diclofenac and Ketoprofen. Decline in vulture population may lead to increase of several diseases like rabies, anthrax and plague in humans.

Considering the research, recommendation & suggestions from experts of the field and representatives from NGOs, local organisations like Vidyanagar Nature Club, use of Ketoprofen has been discontinued in the Districts of Anand, Kheda and Mahisagar where there is a significant vulture colony which faces risk. Taking the initiative, we have instructed all veterinarians under our management to refrain from using Ketoprofen and stopped purchase of Ketoprofen and advised them to to use safe and only alternate Meloxicam since March 2013.

Ketoprofen is a commonly used Non-Steroidal Anti-inflammatory Drug in animals, mainly for treating fever, pain and inflammatory problems like soft tissue injuries, joint effusions and surgery. Cattle, horses, sheep and goats are the main recipient of the treatment. It has an adverse effect on the main organs of the Vulture and results in visceral gout with depositions of uric acid on all the major organs and the death of the vulture when they eat the carcass.

Anand has a good population of Vultures and we would like to conserve them for the future generations as well. For the benefit of human and animal health & welfare, we hope that Ketoprofen be restricted in treatment of cattle among other districts and throughout Gujarat one day.

Save the vultures, help clean our environment.

Dr K Rathnam

9. Advocacy Training Session

Advocacy is a social marketing method whereby the attitude and behaviour of certain groups of people are shaped in accordance with the set objective of the programme. It is a simple way of planning and coordinating policy work. By taking time to think strategically about what you are trying to achieve, who you are targeting, and the tactics that you are deploying, you can ensure that your advocacy is best geared to achieving the policy outcomes that you are seeking.

An advocacy strategy should include the following:

Context – you need to consider the context that your advocacy strategy will be functioning in. Internally, think about how much the plan will be a priority for the organisation and what support you may be able to get from other departments. Externally, you should consider what is going on in the outside world and what risks and opportunities this will present to your advocacy plan. Politically, think long and hard about how achievable your plan is in the current political situation.

Aim and Objectives – your overall aim is the final outcome you are trying to achieve. Below this, your objectives are the individual actions or outputs that you need to complete to achieve your overall aim. Advocacy should be issue-led, not audience-led, so careful consideration of your message is absolutely vital. Ideally, your aim should be pragmatic and achievable within a definable period. For advocacy plans that last for a long period of time, you should always keep in mind what your overall, long-term aim is.

Plan: Planning your strategy and work is key to Vulture Advocacy work. More importantly, the factors that you need to consider are:

Geographical Remit –keep in mind where your advocacy plan can have effects: neighbouring countries or internationally.

Target audiences, Stakeholders, Partners - think about who it is that you are trying to influence, who will benefit from your plan, who can help you achieve your goals and who will be against your aim.

Tools and Tactics - your strengths lie in well-researched, fact-based policies. Consider what products you have at your disposal - this is your ammunition and the strategy should shape how best to fire this ammunition and who to aim it at.

Timing - set the timeframe within which you aim to achieve your policy goal. Ideally, this should be within a definable period (e.g. before the next Queen's Speech or by 2020). You should also consider the key external milestones that will affect the delivery of your aim

Target Audiences - we need to influence a range of different audiences in our conservation work. Advocacy is about a lot more than just talking to politicians - many other audiences can bring indirect pressure to bear on government policy and public opinion.

Examples of typical target audiences for a policy advocacy strategy include:

- **Politicians, advisers and researchers** - since access to politicians (be they Ministers or Parliamentarians) is limited, it is through the network of advisers and researchers surrounding them that you can build up real personal relationships and gain credibility.
- **Civil servants** - as a key part of the policy-making machinery, civil servants - whether in the Parliament, Government CEOs, Directorate and Department Heads, statutory agencies or Government Regional Offices - are obviously a core audience for the RSPB's policy advocacy.
- **Think-tanks** - think-tanks are performing an increasingly influential role in the policy-making process, both indirectly through their contribution to the policy debate but also directly as, in some cases, policy decisions are actually contracted out by Government Departments. Left-leaning think-tanks such as the Institute of Public Policy Research and Demos have been particularly active under this Government and occupy a niche created by a perceived lack of ideas in Whitehall.
- **Business** - the concept of corporate social and environmental responsibility is becoming increasingly prevalent. Business is both a heavy influence on policy and a key driver of environmental change in itself - it should therefore be regarded as one of our key policy audiences. (For example, our cork campaign.)
- **Trade associations** - these have the advantage of being both actively involved in influencing policy themselves and providing access to whole sectors of business. They are particularly important as an alternative source of opinion within the policy-making process (e.g. any advocacy strategy concerned with agriculture policy or the climate change levy could not ignore the NFU or CBI respectively).
- **Media** - indirect pressure through the media can act as a strong influence on government policy, particularly when a story becomes "politicised" (in the way that, for example, the outbreak of bird flu made headline news recently in India). Look for the opportunities to harness media pressure - taking care not to undermine any insider relationships that are critical to achieving your aim.

Tools and Tactics

- Letters
- Phone calls
- Meetings
- Events (seminars, conferences, receptions, press launches)
- Newsletters
- Site visits/ reserves
- Consultations
- Policy documents
- Media
- Colleagues
- Written briefings
- RSPB reputation
- Website
- Member letter-writing
- Membership campaigns
- Market research
- Petitions
- Lobbying

10. Problems, challenges experienced during VSZ work (+ solutions)

The following points were agreed by multiple participants at the workshop

- Most common issue highlighted is the **size and scale of the huge area of a VSZ** that needs attention for a VSZ team. Solution: focus work on higher levels where the impact can cascade down. Also **need mobility (transport)** and a **team of 5+ capable staff.**
- Problems to **get samples analysed and reports back on autopsies** (both for dead vultures and for cattle samples). Solution: request SAVE and Govt authorities to take this aspect more seriously.
- **Reshuffling of Govt officers** prevents continuity needed. Solution: requires regular visits, and make the most of positive officials when in post.
- Vulture **mortality events** due to carcass poisoning targeting or other large fauna cause animal-human conflict and **need additional messaging**/actions.
- **Inter-state (also international) co-operation is needed** for proper VSZ work which presents an extra layer of challenges, communication etc. Solution: utilise federal and international forums (eg SAARC) as well as SAVE to build links, and also aim to hold joint meetings that bridge these divisions.
- **Prevalent anti-vulture sentiment** and general misconceptions on the causes of vulture decline. solution: produce materials highlighting the ecosystems role of vultures, and constantly ensure that SAVE and other good scientific publications are readily available.
- **Diclofenac testing in cattle carcasses required** but difficult to organise and resource (costly and needs specialists).
- Long term monitoring of **vulture population is essential but a major time consuming** activity. Solution: ensure that awareness work has higher priority depending on capacity and expertise available to carry out surveys.
- Some form of **legal recognition of VSZs** from the government (as in Bangladesh) is required to give authority and recognition to VSZ teams in India.
- Government inertia in **poor enforcement the diclofenac ban** means main objective is to generate implementation.
- Insufficient **funds** for work.

Secondary List of Problems raised by VSZ teams

- **Lack of community incentives** to encourage and champion vultures.
- **New and untested NSAIDs currently available** in the market (note SAVE is attempting to address this at a higher level).
- General ignorance and **lack of awareness on the role played by vultures** within the ecosystem among rural communities.
- A **nation-wide coordinated census for vultures would facilitate** local scale surveys.
- Need for **more co-ordination between *ex-situ* and *in-situ*** conservation work.
- Lack of fenced or **designated areas for dumping of cattle** carcasses.
- Multiple carcass dumping places in one village can bring additional hazards.
- Need to establish **more formalised relationship with the Forest Department** .
- Eco-tourism work in some places can disturb feeding and potential nesting site of vultures if not adequately managed.

11. Summary and the way ahead

We hope the above examples and guidance in this report will encourage and enhance VSZ work across the region. Some key steps needed to initiate VSZ work in trans-boundary situations (either national or even between states or provinces):

- **Identifying key players, NGOs, international partners and facilitators.**
- **Preparing the relevant paperwork - aligning the trans-boundary work with the national and international vulture conservation working protocols.**
- **Initiating communication between relevant key players through emails and letter correspondence to the concerned government bodies.**
- **Inviting or visiting respective countries and partners for initiation of cross-border collaboration workshops and preparing activities to be held jointly.**
- **Preparing for cross-border activities in which key stakeholders are involved from the regional, local government to the grassroots level actors, NGOs, and civil society organisations.**
- **Active involvement of government on both sides of the border which would facilitate monitoring and progress of the work by the respective in-country partner NGOs.**

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