

Emergency relief for animals amidst natural disasters, especially floods in Assam, India

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When natural disasters strikes, most of the emergency services rush to care for the people on the ground often forgetting about the plight of helpless domestic and wild animals. Floods, cyclones, forest fires, tsunamis and earthquakes leave vast numbers of stranded, injured, sick and vulnerable animals at fatal risks. In India, International Fund for Animal Welfare (IFAW) in association with Wildlife Trust of India (WTI) maintains a team of highly trained professionals, under Emergency Relief Network (ERN) who rush into disaster zones to rescue animals and give them emergency medical care. Beyond emergency response, IFAW-WTI helps regions restore and strengthen their veterinary capacities, prepare for future disasters and educate the local community on proper animal care. A key element to IFAW-WTI's success is the partnerships we form with local governments, state veterinary departments, disaster management groups, animal protection groups and other stakeholders during and after an emergency to ensure long-term well-being of animals. Every year, during monsoon time (June-September), Kaziranga National Park (KNP) a World Heritage site in Assam faces annual floods caused by Brahmaputra River. Rise in water levels inside the park force the animals to cross the busy highway NH-37 and enter human settlements. This leads to man-animal conflict, making animals vulnerable to poaching and road accidents. IFAW-WTI run Centre for Wildlife Rehabilitation and Conservation (CWRC) in KNP and Mobile Veterinary Service (MVS) is set up specifically to handle the crisis of marooned wild animals in Assam and Arunachal Pradesh during natural disasters. This facility since 2002 has become a model in wildlife rescue and rehabilitation not only in India but across the world. Over the last 13 years, CWRC has handled a total of approx 4250 wild animals of 256 species. 60.02% of these rescued animals which included Asian Elephants, Hog deer, Swamp deer, Smooth coated Otters, One horned rhinoceros etc. were released back again to their natural habitat after successful interventions. Apart from Assam floods, IFAW-WTI undertook successful rescue and welfare initiatives for wild and domestic animals during Odisha, Bihar and Rajasthan floods, Cyclone *Hudhud* and *Phailin*, Nepal Earthquake among the prominent disaster.

INTRODUCTION:

Assam is a junction of two global biodiversity hotspots and considered one of the finest



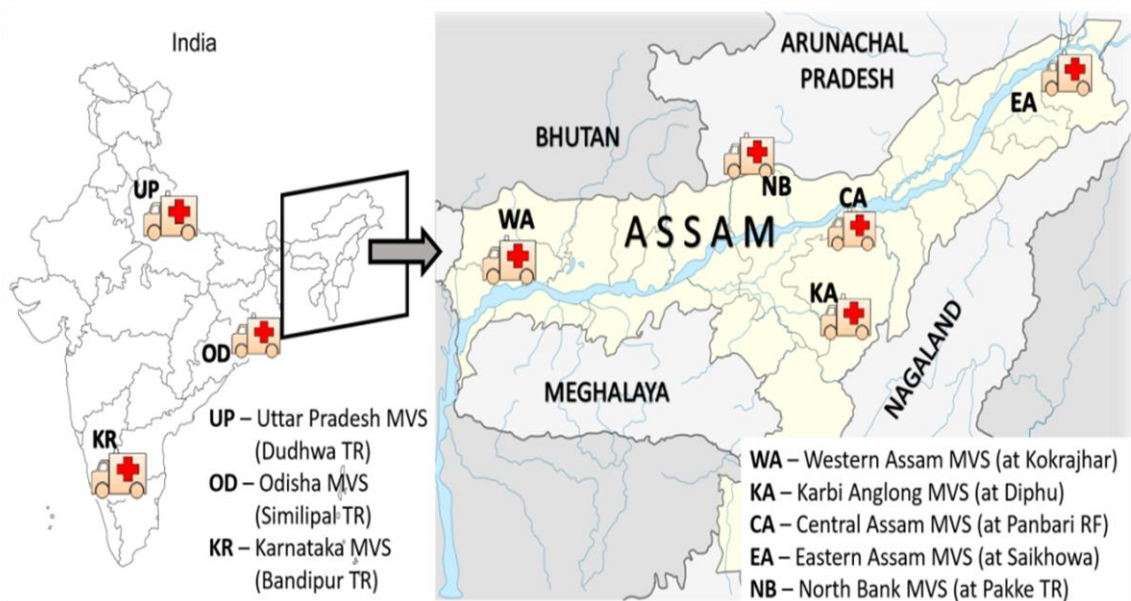
Orphaned elephant calf in CWRC, Assam

wildlife area in the world. Assam harbours some of the rarest wildlife species like the greater one horned Rhinoceros, Asian elephants, Bengal tiger, eastern swamp deer, white winged wood duck, pygmy hog etc . For some of these species Assam is their last stronghold. At only 2.4% of the total geographical area of India, Assam harbours about 20% of the Indian population of Asian elephants

(Sukumar, 1090) and 78% of the global Great Indian Rhinoceros population (Talukdar et al, 2008). A significant geographical aspect of Assam is that it contains three of the six physiographic divisions of India - The Northern Himalayas (Eastern Hills), The Northern Plains (Brahmaputra plain) and Deccan Plateau (Karbi Anglong) and hence creates a diversity of habitat for various fauna and floras. The Siang river from Arunachal Pradesh in the North flows for about 35 km (22 mi) and is joined by the Dibang River and the Lohit River at the head of the Assam Valley. Below the Lohit, the river is called Brahmaputra, enters the state of Assam, and becomes very wide—as wide as 10 km (6 mi) in parts of Assam. It is joined in Sonitpur by the Kameng River

Natural disasters in the form of flood and storm are very common in Assam due to the high humidity and high rainfall in the long monsoon season (Singh, 1993). Wildlife Trust of India (WTI) and International Fund for Animal Welfare (IFAW) have teamed up with the Assam Forest Department in Assam through a memorandum of understanding in 2001 to attend wildlife emergencies of marooned wildlife during natural and man induced disaster. The WTI-IFAW-Assam Forest Department association has established a chain of emergency response stations at various locations across the State to widen the reach of its service for the cause. In 2002, the Centre for Wildlife Rehabilitation and Conservation (CWRC) was established near the centrally located Kaziranga national Park, a World Heritage Site, to attend various wildlife emergency situations.

Flooding is an annual phenomena in Kaziranga during June-September each year and animals move out of the flooded park to higher reaches WTI-IFAW-Assam Forest Department team has been attending wildlife rescue situation during the floods and often facilitating the safe passage of the flood-hit animals towards the higher grounds of Karbi hills in the South of the



Map showing location of CWRC and associated MVS in Assam and Arunachal Pradesh to deal with wildlife related emergencies

national park. Over the years, to widen the reach of of the WTI-IFAW-Assam Forest Department emergency wildlife response team, four other satellite facilities were established across the State of Assam to cover the northern, southern, eastern and western region. This followed by Mobile emergency rescue units in the state of Uttar Pradesh, Odisha and Karnataka.

Since one centre, a few scattered mobile units cannot reach the needs of animals being distant; a national Emergency Response Network (ERN) was established in 2003. The Emergency Relief Network is an association of people across the country who have the skills to rehabilitate wildlife in distress. This team of trained rehabilitators, volunteers and organizations, can exchange, share and contribute their knowledge and professional skills to save wildlife in emergency situations as and when a need arises.

Currently with over 400 members across India, and with 50 members in Assam alone, the ERN Network has served as the backbone of the emergency wildlife response service of WTI-IFAW-Assam Forest Department.

The Aim of ERN-

- Share and exchange skills, knowledge and work ideas relating to husbandry, management and veterinary techniques in wildlife
- Equip and build the capacity of select ERN members on rehabilitation and disaster relief through hands-on training workshops.
- Allay any information anxiety that members may encounter in their day to day work through information exchange.
- Utilize the services of ERN members to mitigate wildlife disasters in India. Build contacts with peer group professionals and experts and facilitate the exchange of information flow to the members.

The ERN members are present in all the Indian states and are ready to help in any natural or man induced disaster. The ERN members need not have any professional qualification, but should demonstrate commitments in the field of animal welfare.

METHODOLOGY:

During annual flood season, the CWRC team prepares a flood emergency action plan in consultation with the Assam Forest Department and conducts various activities. As part of pre flood awareness activities in and around Kaziranga National Park, the team conducts several village meetings at different vulnerable areas to ensure proper management of wildlife which stray out of the park during the peak flood season. The team also conducts road patrolling specially during night at the all the known animal corridors alongoNH37 to facilitate the safe passage of animals towards the Karbi hills at the south of the national park.



Flood displaced and affected wildlife. Left: Rhino walking on NH 37, forced out of the natural habitat due to floods. Right: Hog deer swimming in flood water

A call for volunteers is given through the ER Network to help the emergency situations. Each year, in the post flood period, the team organises immunisation and vaccination camps for domestic cattle in the fringe villages of the wildlife areas. To prepare and train the ERN members, periodic training workshops are organised at strategic locations. In this workshop and training programme, experts delivers talks on the various dos and dons during wildlife emergency situation and experiences were shared through various cased studies from the field. So far approximately 400 ERN members have been trained over the years as part of these workshops and training programme across India. A considerable numbers of them have actually participated in the response work during natural disasters in Assam and other states.



IFAW-WTI ERN members undergoing training in Wildlife rescue in CWRC, Assam

RESULTS AND DISCUSSION:

The WTI-IFAW-Assam Forest Department as on October 2015 far attended 4249 numbers of cases across the State of Asasm since 2002. Out of these cases more than 60% animals attended in emergency situation could be saved and returned back their habitat again.

Outcome Report of Centre for Wildlife Rehabilitation and Conservation since 2002									
Outcome	MVS-Arun	MVS-CA	MVS-EA	MVS-KA	MVS-NB	MVS-WA	Other states	No. Of Cases	All Zone

Dead on arrival	1.09%	4.52%	2.87%	4.73%	8.59%	4.25%	0.00%	186	4.38%
Died in captivity	20.11%	36.24%	29.30%	48.73%	29.69%	20.72%	16.67%	1371	33.73%
Euthanized	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	2	0.05%
Released	64.67%	55.25%	55.74%	41.45%	55.47%	68.98%	83.33%	2440	60.02%
Transferred	6.52%	1.86%	8.20%	2.18%	1.56%	1.29%	0.00%	114	2.68%
Escaped	1.09%	1.02%	1.64%	0.73%	2.73%	2.32%	0.00%	60	1.41%
Captive/Pending	6.52%	1.02%	2.25%	2.18%	1.95%	2.45%	0.00%	76	1.79%
Total	184	2257	488	275	256	777	12	4249	100.00%

Table No. 1. Outcome report of emergency wildlife rescue operations of CWRC since 2002.

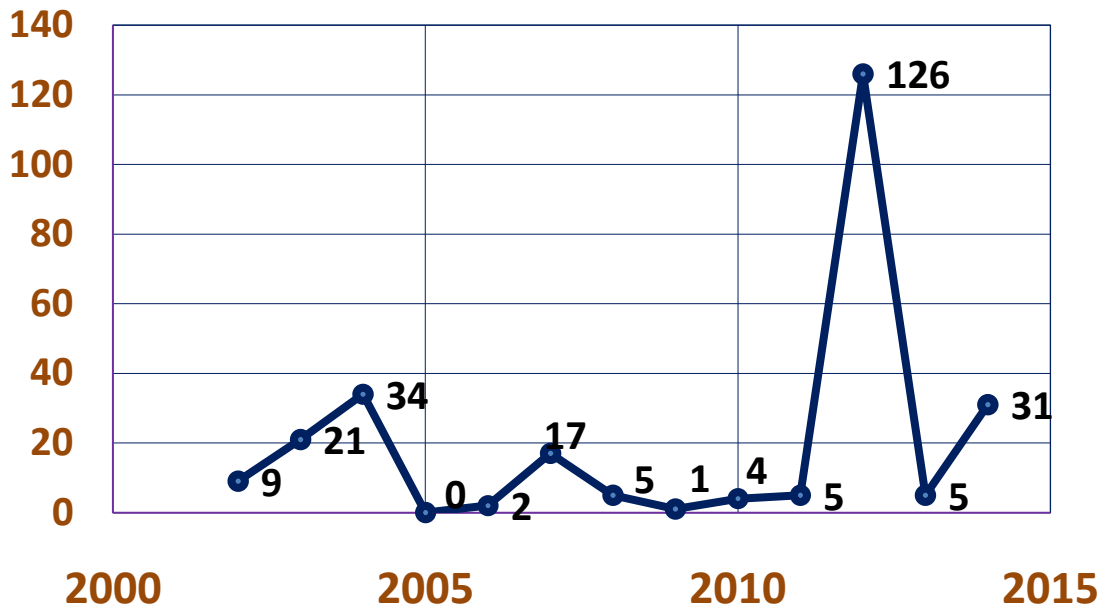
RESULTS (ASSAM)

During floods i.e. specifically in the months of June to September the impact of wildlife is pertinent. This is evident from the number of cases CWRC vets administer in comparison to other months. Since 2002, the Centre have rescued and treated approximate 700 individuals in the flood months of over 200 species. On an average the team at CWRC is managed to rehabilitate 48% of species back into their habitat.

Hog deer as indicator: The rise of water levels covers all the low lying grasslands in Kaziranga NP. The smaller mammals in response are forced to move to higher dry grounds and often during these times they come in contact with humans. This leads to man-animal conflict, making animals vulnerable to poaching, retaliatory killing and road accidents. Among all animals Hog deer (*Hyelaphus porcinus*) is considered to be the most impacted by floods and thus, acts as an indicator of flood status. IFAW WTI run CWRC administer many cases where the team had to rescue, provide veterinary care and rehabilitate the animal.



Hog deer sought shelter in a submerged roof top in Kaziranga fringe area



Graph showing Hog deer as an indicator of severity of floods in and around Kaziranga NP, Assam

Roads with high vehicular traffic are always a threat to wildlife while they pass through wildlife areas. The south boundary of the Park is a very busy National Highway No. 37 which connects several North East Indian States and parts of Assam with the rest of the country. This national highway bisects the ecological landscape and connectivity of the park with the Karbi Anglong hill range, which is again a very good habitat for several important wildlife viz. elephants and tigers. Animals cross this busy highway on a regular basis and often get killed by speeding vehicular traffics. As the numbers of vehicular traffics are increasing in the road, the incidents of accidents have also risen. During the flood period, animals migrate from the low grassland areas towards the southern side highlands (Karbi Anlong hill range). This has been a regular phenomenon for almost all animals during peak monsoon (June, July, August) period.



Wildlife impacted by floods are forced to use roads leading to road kills

To address the issue Assam Forest Department and IFAW-WTI along with other local NGO's have constructed speed breakers i.e., permanent and temporary. Staffs have been employed to monitor the animal movements especially at night. In peak flood period, at night, 10-15 minutes gaps are given every hour by restricting vehicular movements in the highway. Traffic speed restriction during peak monsoon period is another method to help animal movement through the landscape. Apart from that road patrolling parties are always on duty in a 24 hours basis on the national highway to monitor the animal movement as well as to enforce the vehicular traffic restrictions.



Barricades to mitigate road hits on NH-37, Assam

RESULTS (ERN)

IFAW WTI through its ERN team and state-wide partner organizations have been in the forefront in undertaking animal welfare initiatives in the past. The ERN model has proven successful as it brings together local experience and ground level support along with technical knowhow by IFAW-WTI, ERN where it is needed most quickly. Forming linkages with local NGOs, individual and govt department has been a successful model which is being practised by ERN over the years.

Some notable cases:

a) Floods: Bihar, Assam, Rajasthan, Odisha and Gujarat- Floods have become a regular phenomenon across various Indian states. Through ERN, IFAW-WTI has provided immediate veterinary relief to livestock in flood affected areas and worked to prevent the spread of infectious diseases. The team also provided fodder and emergency sheltering to livestock stranded in villages that were isolated due to the floods. Animals form a key part of the local community's livelihood and the ERN efforts also be benefit communities which are

regularly suffering from loss of livestock due to frequent floods. There are also strong emotional bonds between animal owners and their animals which are evident during these disasters and the losses are not only economic in nature.



Animal relief camps organized by IFAW WTI team treating livestock in Assam

b) Tsunami: East Coast of India- During the 2004 tsunami that killed over 10,000 people and several thousand livestock, the ERN team was actively involved in providing relief to animals all along the coast of Tamil Nadu and Andhra Pradesh.

c) Cyclone: Odisha and Andhra Pradesh (Cyclone *Phailin*)-During the 2013 Odisha Phailin cyclone, the IFAW-WTI ERN team provided veterinary and husbandry support to over 13000 animals spread across 82 villages. In the adjoining Andhra Pradesh, another team provided relief to hundreds of open-bill storks that were displaced due to the cyclone and subsequent flooding. The teams worked closely with local Animal husbandry and forest departments, ERN members and animal welfare organisations. Detailed needs assessments were conducted and areas of operations were identified based on these assessment reports. Resource allocation and manpower was determined carefully through assessment of available local and govt resources. This was a great model to showcase the ERN approach to disaster response.

d) Manmade disasters: During the Gujarat and Rajasthan's Kite-flying festival (Makar-sankranti), IFAW-WTI ERN vets helped in rescue, treatment and rehabilitation of birds

injured during the festival in Gujarat and Rajasthan in 2014. The injuries occur due to the glass and metal-coated threads used for flying kites. Affected birds included kites, egrets, storks, eagles, ducks, owls, parakeets, pigeons, doves and even crows.

As a means of disaster preparedness, a training and exchange workshop was organised for all individuals and organisations working for bird rescues in Gujarat, Rajasthan and Maharashtra. Effective communication and coordination between various local NGO was encouraged to streamline the rescue efforts and avoid duplication of efforts. Awareness generation amongst the general public on the impact of kite flying on birds was given an emphasis and a gradual decrease in number of rescue cases is being noted along with stricter laws being enforced by the government bodies against use of banned manjhas

WAY FORWARD

The IFAW-WTI disaster response (DR) experiences in India have showcased a new model for DR, which may be followed during any future disaster response mechanism. Regional DR teams may be formed through regular trainings conducted in association with the State disaster response authorities, thereby institutionalising DR for animals in India. In addition to individual members experienced local NGOs and CBOs could be roped in for such activities. Animal rescue training could be a part of the curriculum for the members of National Disaster Relief Force or similar agencies.

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Appendices:

Other Related Photographs:



ERN members are being trained for attending wildlife emergency situations at Guwahati in 2014

Country boats were distributed to attend wildlife emergencies during annual flood situation in Assam.



A rhino in search of safe area during flood times in Kaziranga.

During floods, apart from wildlife livestock are also severely impacted.



Photo credits: IFAW/WTI