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2018

# TURTLE RELEASE REPORT:

KACHUA PUNARWAS KENDRA TO TURTLE SANCTUARY, VARANASI,  
UTTAR PRADESH

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WII-NMCG Biodiversity Conservation and Ganga Rejuvenation Project  
Component IV- Rescue and Rehabilitation





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# 2018 TURTLE RELEASE REPORT

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Kachua Punarwas Kendra, Samath to Turtle Sanctuary, Varanasi, Uttar Pradesh  
(28<sup>th</sup> – 30<sup>th</sup> November 2018)

Part of the Component IV (Rescue & Rehabilitation) of the WII-NMCG  
Biodiversity Conservation and Ganga Rejuvenation Project

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## Background

The River Ganges supports a diverse faunal assemblage dependent upon the aquatic environment for their survival. Altered land use pattern resulting in shrinkage of available habitats, environmental contamination (discharge of industrial waste, agricultural pollutants, sewage and toxins), unregulated developmental activities, consumptive exploitation among other anthropogenic stressors lead to incidences of freshwater turtles being injured or threatened with injury warranting intervention.

Rehabilitation center like the Kachua Punarwas Kendra (Turtle Breeding and Rehabilitation Centre), Sarnath plays a vital role in conservation through providing sufficient systems for animals in distress. The centre is a prerequisite considering the impending threat to freshwater turtle numbers and the sizable number of displaced animals and confiscations.

The animals brought to the Kachua Punarvaas Kendra are often in need of intensive treatment and management. All activities are therefore directed towards providing optimal care and ensuring the biological, behavioural, physiological needs of the turtles are met. Appropriate husbandry practices including environmental and nutritional enrichment are stringently followed, until the release of the animals in their native habitat.



## Turtle Release Program

Kachua Punarwas Kendra, Samath, houses variety of fresh water turtles that are either rescued or confiscated by the forest officials. The animals are intensively managed till they are fit for release in their natural habitats. The stock of turtles at the facility during November 2018 is provided below-

Species	Date/ Month of entry	Type of animal	Numbers
<i>Batagur dhongoka</i> (Three Striped Roofed Turtle)	June, 2016	Hatched at Centre	57
<i>B. dhongoka</i>	June, 2017		417
<i>B. dhongoka</i>	June, 2018		52
<i>B. kachuga</i> (Red Crowned Roofed Turtle)	June, 2016 & 2017		28
<i>Lissemys punctata</i> (Indian Flap shell Turtle)	26th July, 2018	Confiscated	55
<i>L. punctata</i>	1st October, 2018		105
<i>L. punctata</i>	30th October, 2018		87
<i>Nilssononia gangetica</i>	30th October, 2018		11
		<b>Total</b>	<b>812</b>

The animals are held at the facility for variable period of time and provided environment and enrichment to support their well-being. As select animal had attained desired weight and were fit for release, a turtle release program was organized at Samath 28<sup>th</sup> and 30<sup>th</sup> November 2018.

The report documents the procedures carried out by the Project team in successful release of these turtles in identified release sites. The field operation was a collaborative initiative between the Uttar Pradesh Forest Department and Wildlife Institute of India under the aegis of the National Mission for Clean Ganga.

## Selection of release sites

A survey to identify release sites appropriate for different species of fresh water turtles was carried out during May to June 2018. Various aspects were considered prior to selecting the site. Direct sightings, indirect evidence for animal presence/absence (visual survey), presence of sandbanks and associated aquatic vegetation, width of the channel and anthropogenic pressures (fishing, riparian agricultural practices and boat traffic) formed the basis for site appraisal. Secondary information about the species noted from the area and also ecological information from Ganga Praharis in nearby vicinities of these sites was taken into account.

Three release sites were selected based on their specific attributes. A visual reconnaissance of the three sites was done to re-affirm suitability.

Release sites	GPS co-ordinates	Site Attributes
Kaccha Baba Pond, Jhalupur	25°23'4.26" N 83°06'59.02" E	Pond protected by the Village Panchayat and Temple authority. The pond has sand banks and good population of fish, the water in the pond is perennial.
Opposite of Assi Ghat	25°16'50.21" N 83°01'5.05" E	Located within the Turtle Sanctuary. Sand banks with shallow channels and aquatic vegetation which will provide food and cover and a good population of fish were noted.
Behind Forest Department nursery, Saresar, Mugalsarai	25°17'7.97" N 83°08'25.69" E	Pond protected by Forest Department having shallow channels and aquatic vegetation which provide the turtle a natural hide and food..

## Rehabilitation and Acclimatization

All confiscated animals were subjected to quarantine for at least 30 days post arrival at Kachua Punarwas Kendra, Samath for rehabilitation. Quarantine was additionally initiated for the *Batagur dhongoka* hatched at the facility when permission process for release was initiated.

The turtles were isolated with limited essential human intervention. Water aeration and circulation were additionally incorporated to simulate water flow and currents. Niches were created to encourage thermoregulation and acclimatize the animals to near natural conditions.

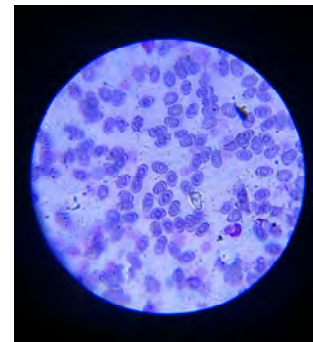
Live fish and aquatic macrophytes were introduced into the turtle ponds for acclimatization and to encourage animals to exhibit natural behavior.

## Pre- release Health Assessment

Morphometry, animal weights, feed intake and behaviour were recorded regularly and compared for weight gain, increment of sizes and activity.

The pre-release health assessment was done first by visual assessment for external injuries, lesions or any abnormalities.

Haematology for PCV, Hemoglobin, Differential White Blood Counts and Serum Analysis for Total Protein, Albumin Globulin, Urea, Creatinine, Uric acid, Calcium, Phosphorus, Sodium, SGOT, SGPT was done. Individuals with no prohibitive physical injury and no physiological anomaly were considered fit for release. Blood Reports. Faecal analysis was conducted by direct smear. No endo-parasites were found in the samples tested.



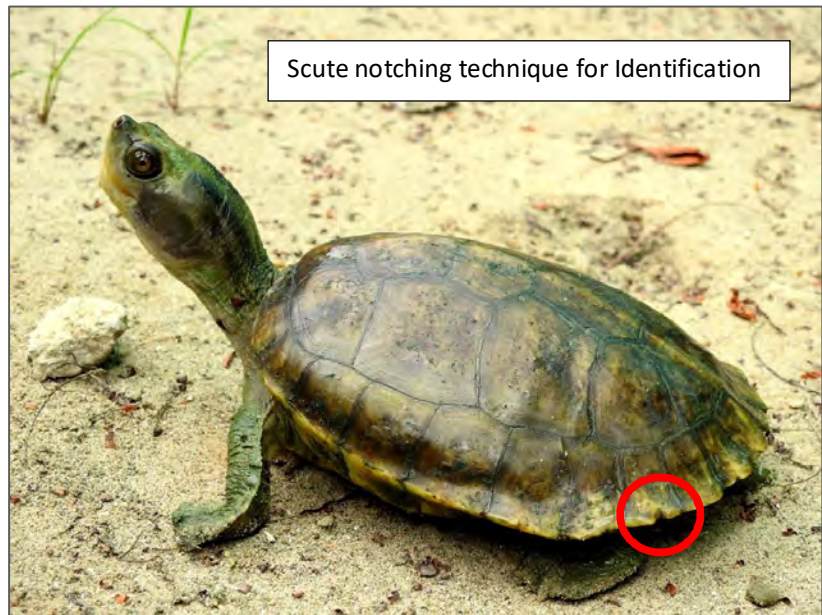
## Marking for identification

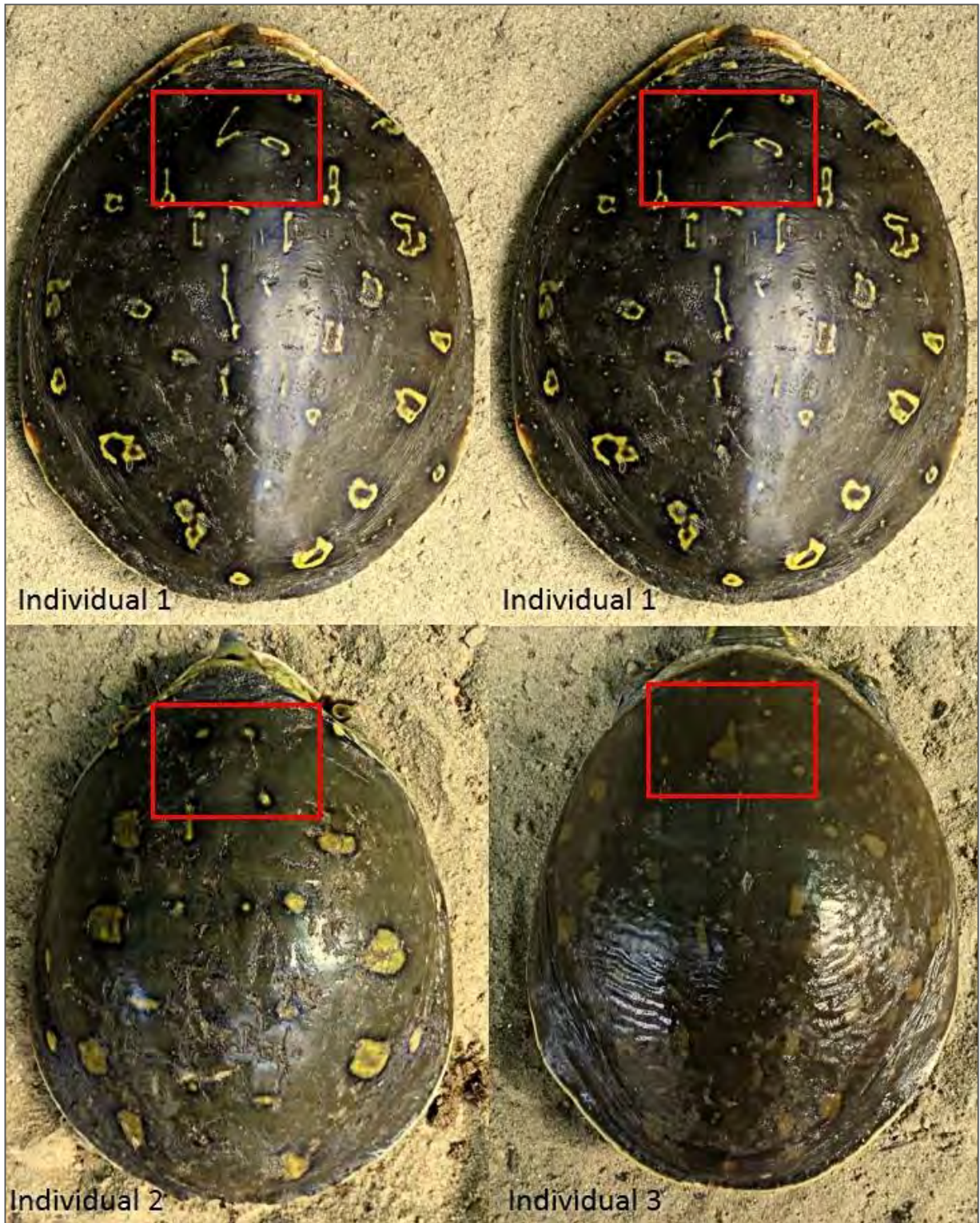
The hardshell turtles (*Batagur dhongoka*) were marked by scute notching.

The large softshells, *Nilssonina gangetica* were tag with semi-permanent external metal tags applied in the webbing of the hind limb.

A trial for the *Lissemys sp.* is been carried out to record the spot patterns on the carapace with photograph for identification where ever possible.

All the animals were marked with a temporary non-toxic red colour on the carapace that would help identification of the animals released from Kachua Punarvas Kendra, Samath should monitoring be possible





Photographic identification of individuals of *Lissemys* sp. The unique marks (as shown in the red box) are used to identify the individuals.

## Animal Transport

Transport crates, ensuring sufficient ventilation, were hired for transport of animals from the Kachua Punarwas Kendra to site of release. Each crate was checked, washed and disinfected. The crates were lined with hessian sacks so that the animals remain protected from injury and stay warm in transit. 5-7 animals were packed in crates depending on size.



## Details of Turtle Release

28<sup>th</sup> November 2018 (Batch I)

The Kachha Baba Pond is adjoining the shrine of a holy man at Jhalupur and protected by local community. On one of the reconnaissance trips a *Lissemys* sp. and a *Nilssonina gangetica* were observed at the pond. The ecological attributes of the pond and the presence of animals made this a suitable location

The following species were released at the Kachha Baba Pond at Jhalupur

S. NO.	SPECIES	NUMBER OF INDIVIDUAL
1.	<i>Lissemys</i> sp. (Indian Flapshell turtle)	50
2.	<i>Nilssonina gangetica</i> (Indian Softshell turtle)	3
TOTAL		53

29<sup>th</sup> November 2018 (Batch II)

The batch of 482 turtles was released opposite of Assi Ghat on 29<sup>th</sup> November 2018.

S. NO.	SPECIES	NUMBER OF INDIVIDUAL
1.	<i>Batagur dhongoka</i> (Three Striped Roofed turtle)	474
2.	<i>Nilssonina gangetica</i> (Indian Softshell turtle)	8
TOTAL		482

The crates were transported to Rajghat by a transport vehicle and then ferried by boat to the release site opposite Assi Gha. The turtles were released in the presence of Sh. Manoj Khare, DFO, Kashi Wildlife Division, Sh. M.N. Yadav, Ranger, Sarnath, Sh. Nishikant Sonkar, Forester, Sh. Rammurad Nishad, Forest Guard, Sh. Naresh Yadav, Forest Guard and the project team.



Fig 9. Release of *Lissemys* sp. at Kaccha baba pond



Animals for release at Opp. Assi Ghat

This release site (Opp. of Assi ghat) also had a drop from shallow to deep pools suitable for the release of *Nilssonia gangetica* as the species had also been recorded earlier nearby the site of release.



This release site (Opp. Of Assi ghat) was selected for the release of *Batagur dhongoka* as the site showed the presence of shallow channels with vegetation which would be suitable for the smaller animals to acclimate to the river ecosystem after hard release.



30<sup>th</sup> November 2018 (Batch III)


A total number of 197 turtles (*Lissemys* sp.) were released on 30<sup>th</sup> November 2018 at Saresar Pond, Mugalsarai

S. No.	Species	Number of Individual
1.	<i>Lissemys</i> sp. (Indian Flapshell turtle)	197
	Total	197



Fig 11. *Lissemys* sp. are marked with temporary paint

The pond is situated behind a Forest Department nursery and is monitored by the nursery staff. The Saresar pond has been identified as a protected wetland. This is a large perennial pond with 3 connected smaller ponds and channels in the large water body itself.

A photograph of a pond with water lilies and duckweed. The water lilies have large, round, green leaves and some are in bloom. The duckweed consists of small, round, green leaves floating on the water's surface. The background is a blurred view of the pond and its surroundings.

The pond has bank vegetation like hydrilla, water cabbage and duckweed. This has also spread into the channels. A smaller pond has a fairly dense growth of *Ipomea carnea*.

Though no turtles were recorded at the site, the pond seems to have a good number of fish. A good number of water birds were noted in the pond. The animals were released with the Forest Department staff from Sarnath and Mughalsarai.



WII-NMCG (Comp. IV) team with Forest department personnel at Saresar



Sh. M.N. Yadav, Ranger, Samath, releasing *Lissemys* sp. at Saresar pond

Details of the turtle species released and retained at the Kachua Punarvas Kendra, Sarnath, Varanasi, Uttar Pradesh.

Species	No. of Individuals released	Release Site	No. of individuals retained at the center
<i>Lissemys</i> sp.	247	Saresar pond, Mughalsarai	0
<i>Nilssonina gangetica</i>	11	Kaccha baba pond and Opposite Assi Ghat, Varanasi	0
<i>Batagur dhongoka</i>	474	Opposite Assi Ghat, Varanasi	52
<i>Batagur kachuga</i>	-	-	28
<b>Total</b>	<b>732</b>	-	<b>80</b>



Release of *N. gangetica* in River Ganga

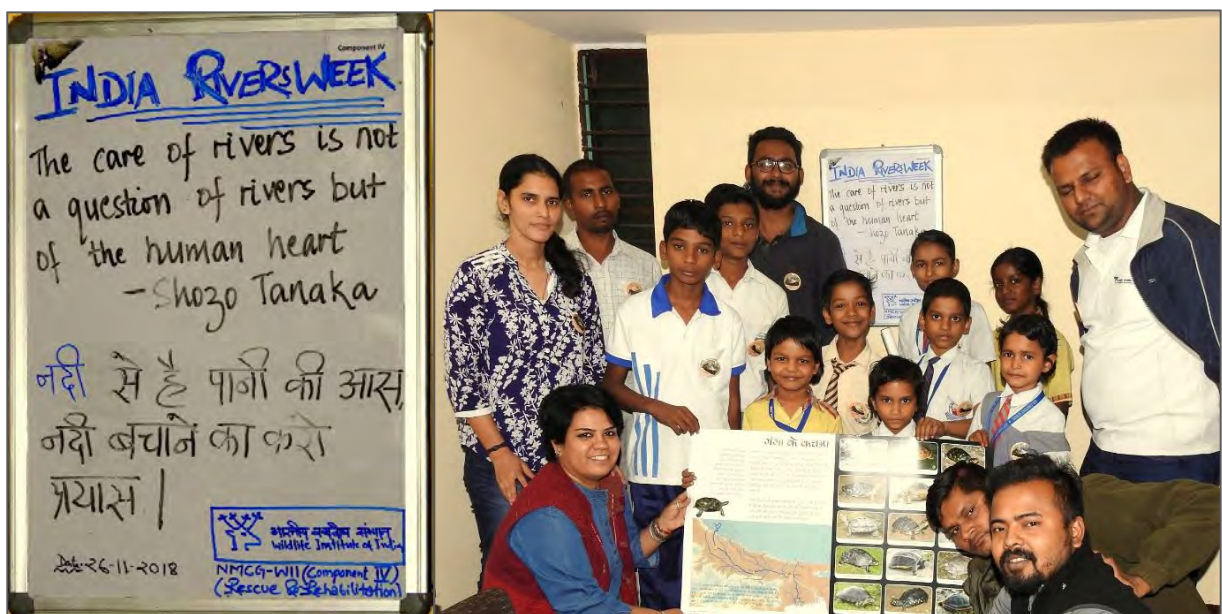
## Additional activities

### Indian Rivers Week-2018

It is prudent to spread awareness about the river and ecosystem function among all stakeholders. India River Week 2018, with singular focus on the Ganga Basin and the imminent release of turtles from the Kachua Punarvas Kendra, Samath presented an opportune time to conduct a half day program to familiarise local school children to the Riverine Ecosystem. Children are our future and they would be the best suited to promote the message of aquatic system and its species conservation. The children who attended the program live in the vicinity of the Kachua Punarvas Kendra, Samath and had frequently requested for a tour of the facility. Their parents and family are closely associated with the work at the facility as they run local businesses in the area. The program conducted at the Kachua Punarvas Kendra, Samath, Varanasi included interactive talks (in Hindi) as well as a demonstration. Programs of this nature aim to create local ambassadors who will spread the message far and wide amongst the communities.

The Main objectives were;

1. Awareness about India Rivers Week
2. Awareness about the role of WII-NMCG Biodiversity Conservation and Ganga Rejuvenation Project and Component IV Rescue and Rehabilitation
3. Awareness about the diverse Aquatic Fauna of the Ganges River Basin
4. Role of Turtles in the Ecosystem
5. Role of Rescue and Rehabilitation Centre
6. Role of citizens in the conservation paradigm.



### Activity with Ganga Praharis

On 28<sup>th</sup> November 2018, the release of turtles at the Kaccha Baba Pond at Jhalupur was planned along with a water-body clean-up. This initiative was planned with the participation of Ganga Praharis, a cadre of self-motivated volunteers from the local community working for biodiversity conservation and cleanliness of Aquatic Systems. Though the pond itself is protected there were a large amount of plastic waste around the water body. With assistance of 12 Ganga Praharis from the neighboring villages, the area around the pond was cleaned. Besides making the water body a better habitat for the faunal elements, it allowed to build support at the grass-root level and motivate the community to participate in monitoring the quality of the natural resources. This event thus served as an ideal outreach opportunity and the messages of keeping the surroundings clean and the importance of turtles in the ecosystem was conveyed to the people who came to witness the release. Sh. Ajay Yadav, Assisstant Village Pradhan was present during the entire operation and was supportive of the initiatives taken. It was heartening as Shri Yadav said that they were committed to protecting the pond and all the animals that live within it. Ganga Praharis involved are as followes- Rahul Yadav, Balindar Kumar, Narendra Kumar, Nima Kumari, Vikram, Narendra Prasad, Pramod, Pramod Nishad, Akhilesh, Abhishek, Akhilesh Kumar Gautam and Shiv Kumar.



Ganga Praharies cleaning the Kaccha baba pond



. WII-NMCG (Comp IV) team with Ganga Praharies

