



## Darwin Initiative/Darwin Plus Projects Half Year Report (due 31<sup>st</sup> October 2020)

<b>Project reference</b>	24-015
<b>Project title</b>	Community conservation of Chitwan National Park's freshwater ecosystems and gharials
<b>Country(ies)/territory(ies)</b>	Nepal
<b>Lead organisation</b>	Zoological Society of London
<b>Partner(s)</b>	Department of National Parks and Wildlife Conservation (DNPWC), National Trust for Nature Conservation (NTNC) and Himalayan Nature (HN)
<b>Project leader</b>	<i>Dr. Hem Sagar Baral</i>
<b>Report date and number (e.g. HYR3)</b>	<i>31 October 2020, HYR4</i>
<b>Project website/blog/social media</b>	<a href="https://www.zsl.org/community-conservation-of-chitwan-national-park%E2%80%99s-freshwater-ecosystems-and-gharials">https://www.zsl.org/community-conservation-of-chitwan-national-park%E2%80%99s-freshwater-ecosystems-and-gharials</a> <a href="https://www.zsl.org/blogs/asia-conservation-programme/community-crocodilian-coexistence">https://www.zsl.org/blogs/asia-conservation-programme/community-crocodilian-coexistence</a> <a href="https://www.himalayannature.org/project/freshwater-ecosystems-and-gharials">https://www.himalayannature.org/project/freshwater-ecosystems-and-gharials</a> <a href="https://ntnc.org.np/index.php/newsletter/strengthening-community-capacity-against-poaching">https://ntnc.org.np/index.php/newsletter/strengthening-community-capacity-against-poaching</a> <a href="https://ntnc.org.np/index.php/node/187">https://ntnc.org.np/index.php/node/187</a>

**1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).**

Gharials play an ecological role of top predators in the river ecosystem of Chitwan National Park (CNP) and are a key indicator species of a healthy freshwater ecosystem upon which the socio-economic wellbeing of local communities depend. The indigenous *Bote*, *Musahar* and *Tharu* communities along the Rapti and Narayani rivers rely heavily on these wetlands for food and income. This project remains instrumental to enhance the food security of these wetland dependent communities, provide new income streams through developing capacity in sustainable aquaculture livelihoods as well as strengthen local communities to safeguard the future of critically endangered gharials of Chitwan valley.

ZSL and its project partners maintain a close and participatory working relationship with the local communities, ensuring the sustainability of the project outcome. Monitoring, guidance and support of a central level Project Coordination Committee (PCC) chaired by Deputy Director General of Department of National Parks and Wildlife Conservation (DNPWC) and site level Project Management Unit (PMU) chaired by Chief Conservation Officer (CCO) of Chitwan National Park (CNP) during project implementation remains crucial throughout the reporting period. Likewise, representation is ensured in decision-making and project implementation -in consultation with community members, representatives of buffer zone user committees and local government and protection units. The project has involved the Fisheries Development Centre and other relevant government institutions to promote and develop sustainable fisheries within

the project area. This has also helped the local fishermen linking with government entities who are able to provide support on a longer-term basis.

This project aims to reverse the current rate of decline in the gharial population by restoring the ecosystem health of the Narayani and Rapti rivers as well as strengthening community based anti-poaching operations, the Gharial Guard Groups (3Gs)-community based gharial monitoring group, supporting local communities in alternative livelihoods approaches and encouraging them in gharial and river system conservation.

The project progress during this reporting period is presented below in brief under respective outputs.

**Output 1: Improved river ecosystem management delivered through improved management plans and environmental policy based on a robust Gharial and riverine ecosystem monitoring programme.**

Two articles have been submitted for publication in peer-reviewed journals (Act. 1.11) during this reporting period. The articles are: (i) "Population Status of Gharial Crocodiles in Chitwan National Park, Nepal" submitted to *Oryx* on 22 June 2020 (article reference: Oryx-20-A-0191) and (ii) "Evaluating local fishers' livelihood needs, impacts and support for gharial conservation in Chitwan Nepal" submitted to *Our Nature* on 19 May 2020. Both articles are under editorial review.

Besides this activity, PhD research embedded in this project is being carried out by Ms. Phoebe Camilla Griffith (ZSL's Institute of Zoology). As a part of her PhD the post-release gharial monitoring and regular tracking of the tagged gharial is ongoing. Preliminary finding suggests that the majority of tagged gharial (39%) have moved upstream and 17% have moved downstream up to India. A substantial proportion of the gharial (26%) remained sedentary, staying within a small area of river (within ~2km). This provides the opportunity for the management authority for long term conservation of gharial in the Rapti and Narayani river system. The findings of gharial monitoring are being shared with the DNPWC and relevant stakeholders on a regular basis. Similarly, ZSL has coordinated with DNPWC to support two EDGE Fellows, Ms. Ranjana Bhatta and Mr. Ashish Bashyal conducting research entitled "Understanding ecology of gharial (*Gavialis gangeticus*) to support in-situ conservation" in Chitwan and "Assessment of conservation status of critically endangered Gharials (*Gavialis gangeticus*)" in Bardia National Park, Nepal, which are nearing completion.

***Output 2: Threats to fish stocks and gharials are reduced through protection provided by 10 Community Based Anti-Poaching Units (CBAPUs) patrolling sensitive riverine zones in the Narayani and Rapti watersheds to protect the area from unsustainable fishing, poaching and other damaging and unsustainable uses of the river.***

Established 3G's members have continued regular monitoring and collaboration with park authorities to control illegal activities in the river (Act. 2.4) during this reporting period. During their monitoring and anti-poaching operations, 3G's members representing Lamichaur, Sishwar and Lothar groups, in collaboration with national park authorities, were able to rescue eight crocodiles (2 Gharials and 6 Muggers). They have rescued these crocodiles from paddy fields, community fishponds and from entanglement in fishing nets. Additionally, over 90 illegal intruders were arrested with unsustainable fishing gear (e.g. gill nets) through the information provided by 3G's members in this reporting period. Prior to all these rescue and anti-poaching operations, park authorities were informed about the situation to avoid any possible risks to crocodiles from mishandling. National park authorities have remained supportive of the groups and have oriented 3Gs members in minimising threats to Gharials and other animals. Additional field gear that enhances river patrolling will be provided for 3G's in next reporting period.

***Output 3: Increased post-release survival of Gharials from the Chitwan Gharial Conservation Breeding Centre (GCBC) delivered through implementing improved husbandry and release protocols, and post-release monitoring.***

Post-release monitoring of gharials (Act. 3.6 -ongoing) was continued throughout this reporting period. A total of 100 gharials were released in 2019, of which 20 GPS tagged gharials are being regularly monitored. Of these, 40% are being monitored and the rest are not under the tracking radar due to inaccessibility to cover the monitoring range by heavy monsoon in this reporting period. The tagged and released gharials are being regularly monitored in coordination with CNP, and with the technical support of the project PhD student. Likewise, 3Gs are actively patrolling

the river stretches as part of their routine monitoring and are providing information on post-release gharials to the park management. The preliminary results of monitoring have been shared to CCO of CNP. However, based on the monitoring results and findings, providing the recommendations to park managers and stakeholder in a wider forum (Act 3.7) has had to be delayed due to restrictions on large gatherings. A wider plan to share findings of post-release survival of gharials and recommendations has been discussed with the CCO of CNP holding interaction meeting to complete this activity in next reporting period.

***Output 4: Food security of local communities improved through implementing sustainable fishing and reducing the dependence of local communities on fishing through generating sustainable aquaculture livelihoods.***

The eight community-managed fishponds led by women are fully operational and technical support is still being provided in fishpond management, including on food ingredients for farmed fish and restocking time. Additionally, for the effective operation of community fishponds, monthly meetings were held with the representatives of women groups for understanding the status of fishponds and the income of fishpond members. Each community fishpond has earned £971 in average in this reporting period despite the Covid-19 situation. The groups are now expanding their businesses and some of them are also adopting pig farming and banana plantation to diversify their income streams. The economic benefit received by the members of the fishpond and their wellbeing are being regularly monitored and the updated information will be shared in next reporting period. Five community conservation engagement centres established in upstream settlements of the Narayani and Rapti rivers (Act 4.7) remain effective in disseminating information about gharial and river ecosystem conservation and have reached over 2,000 community members in this reporting period. The Socioeconomic Survey (Act 4.2) proposed in Q1/Y4 has now been planned for the next reporting period. The questionnaires for the survey have already been designed in a way to measure the overall impact of the project.

Five community workshops on sustainable fishing and gharial conservation (Act. 4.8) planned for this reporting period have been delayed due to the government-imposed travel restrictions on large gatherings and it will be completed in the next reporting period.

**2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months (for Covid-19 specific delays/problems, please use 2b). Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

No such notable problems were encountered during this reporting period. However, some of the project activities were rescheduled for next reporting period.

**2b. Please outline any specific issues which your project has encountered as a result of Covid-19. Where you have adapted your project activities in response to the pandemic, please briefly outline how you have done so here. Explain what residual impact there may be on your project and whether the changes will affect the budget and timetable of project activities.**

Due to the travel restrictions by Government of Nepal amid the pandemic since March, some of the planned activities that require travel and large gatherings have been delayed. During this reporting period, we have reviewed and discussed the project activities with project partners and beneficiaries both virtually and in-person (maintaining physical distance) to increase the role of project partners and community leaders in the project intervention sites. This arrangement has maintained the communication among the related stakeholders of the project including partners, beneficiary's community, project staff, buffer zone user committee, and national park authority for project implementation.

Pandemic induced travel restriction severely affected the restocking of the fish (e.g. fingerlings and diet) in community fishpond and access of communities to the veterinary services. Hence, we extent our on-site support to fishpond communities by liaising with related stakeholders, including NPs, BZUCs, and veterinary centre to minimize the loss of the farmers engaging in

community fishponds. Furthermore, limited livelihood options due to pandemic has resulted increased interest and expectations from our current livelihood interventions to additional families living in the same area. Thus, it has been realized that the livelihood interventions should increase its scope to diversify the current livelihood activities and coverage to mainstream additional HHs for gharial conservation.

**2c. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?**

Discussed with LTS: No

Formal change request submitted: No

Received confirmation of change acceptance No

**3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?**

Yes  No  Estimated underspend:

**3b. If yes, then you need to consider your project budget needs carefully.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

**If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.**

**4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?**

None to report.

**If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.**

**Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk). The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 25-001 Darwin Half Year Report**