

Project Update: February 2017

We have organized these activities.

- 1. Field Visit:** we visited all three sites, Jagdishpur, Lumbini and Chitwan, and conducted several activities. In these visits, we interacted with farmers, pesticide sellers and academicians, organised a household survey and pesticide shop survey, soil/water sample collection, and undertook school teaching. In addition of team members, we have also mobilised conservation-based students, local people/farmers, teachers etc. During the field visit, we observed death of two deer because of grazing in pesticide-sprayed agricultural crops/land. When chemical pesticides are used in farmland it can kill large animals such as deer so we understand that small organisms and farmland birds are being severely affected chemical pesticide.
- 2. Interaction:** We have conducted interaction with farmers, pesticide sellers and academicians.
 - a. Pesticide Seller:** We held meetings with pesticide sellers in order to know about locally demanded pesticides, their availability, use and preferences with respect to toxicity. We gave power point presentations concerned with the overall scenario of pesticide use in Nepal and future ways to reduce use. The pesticide sellers interacted openly with us and shared without any hesitation that neither farmers nor pesticide sellers are serious about the consequences of pesticide demand, sale and use. They indicated that farmers also demand red coloured (Level) pesticide but the selling of yellow coloured (level) pesticide is maximum which fall in second category of toxicity. In addition, sellers also indicated that only 5 % of farmers ask for a pesticide by name. This means farmers do not pay attention to the name and consequences of toxic pesticides, they only target effective and quick acting types. This has created immense pressure on living organism, birds, the environment and their own health too. Pesticide sellers suggested a large coverage/mass media based programme for creating awareness by targeting farmers along with regular monitoring of pesticide shops from authorised institutions.
 - b. Farmers:** We also organised a farmer interaction programme in all sites. We gathered farmers into a common forum and discussed their understanding about the using practices and the consequences of pesticides to birds and other living organisms. We also tried to explore trends of usage of chemical pesticides by farmers. We also shared presentation concerned with the consequences and alternatives to toxic chemicals. In response, they said that they hardly paid attention to pesticides' impact on health, environment, birds and other friendly living organism - very few farmers were aware of consequences of pesticide use. But they frankly responded that using the toxic pesticide is their obligation because they have to use cheap, quick and effective chemicals and whatever is available in the market.

They suggested that the use of toxic chemical pesticides will be reduced if concerned institutions monitored pesticide shops properly and educated farmers through a door-to-door visit programme. Many farmers are less aware about levels, their meaning and possible impacts, so a school teaching programme can play a vital role to disseminate the pros and cons of using chemicals at household level. Children can educate their parents about buying and using chemical pesticides.

- c. Academicians:** Teachers and academic institutions are the foremost important media to change society. So, we also made interactions with conservation-related teachers of Institute of Forestry and local schools. We requested teachers to highlight the issue of the impact of pesticides on aquatic ecosystems, the environment and human health while teaching biodiversity conservation, environment and health courses to students. Most of teachers told us that they have not emphasized this issue enough, so the issue of chemical pesticides is major threat to agro-biodiversity, environment and human health. They also made commitment to scale up the message broadly through a teaching programme in days to come.
- 3. Pesticides shop visits:** We visited more than 30 pesticide shops to know the most demanded pesticides, their availability and their toxicity. We listed pesticide, their level and selling trends. We photographed these pesticides. We observed all kinds (red, yellow, blue and green level) of pesticides. Among them, the intensity of yellow is higher with compare to others. We also observed a few red colour pesticides which are supposed to be banned. We also observed people asking for pesticides with the aim of using for fishing. We found that Indian pesticides are highly available in Lumbini and Jagdishpur sites. The main reason behind this is the proximity to the border.
- 4. School teaching:** We organised school teaching activities in 13 schools in the project sites. For school teaching, we have prepared the education material (power point presentation) and utilised this for educating students and teachers. The teaching focused on misuse and consequences of pesticides. It has highlighted how the pesticides are polluting the environment, threatening biodiversity and impacting on their own health. From this activity, more than 1500 students have got the chance to know about the impact of pesticides and possible measure to reduce their use. Students were urged to pay attention when their household members bring pesticides for use. After knowing the consequences of these chemicals and possible measures of control, students became more curious to our education. They showed a will to contribute to minimising use of pesticides for birds, the environment and health conservation.
- 5. Article preparation:** We have prepared the article in local language to publish in local paper.

6. **Soil/water sample collection:** To know the impact of pesticides, we have collected water and soil samples and sent laboratory for analysis of chemical/toxicity and their impact on birds, bird's prey, aquatic ecosystem and agro-biodiversity.
7. **Student involvement:** We are mobilising conservation-based students. While involving in project activities, a student named Mr Prashant Shrestha has showed interest to do his BSc thesis on the issue of pesticide and birds. We are supporting him also. Besides him, other many students are working with us. This has been an opportunity for students to strengthen themselves in conservation sectors in one hand developing competent human resources in concerned field on the other.
8. **Promotional material:** For the education and interaction purpose, we have developed educational and promotional materials for school teaching and interaction.
9. **T-shirt production:** As an advertisement and project identity, we produced t-shirts having the farmland bird conservation message with The Rufford Foundation logo. These t-shirts are distributed to those members who involve in project. Members use to wear these t-shirts during the project activities. This t-shirt has been beneficial to disseminate project objective and supporting agencies.
10. **Questionnaire Survey:** The questionnaire survey is our major part of the project so we developed questionnaire having the issue of chemical pesticides, farmers'/pesticide sellers' awareness level and survey the pesticide available in a locality.
 - a. **Social Survey:** So far, we have interviewed more than 200 farmers through household / farm visits.
 - b. **Pesticide survey:** In addition with 200 farmers' households, we conducted pesticide survey more than 30 pesticide shops.



Pesticide observation during household survey



Pesticide survey at shop



Interview with pesticide seller



School teaching



Interaction with farmers



T-shirt with conservation message



Presentation during interaction



Soil/water sample collection



Bird observation during field survey



Soil collection with sampler



Questionnaire survey

Farmland Bird Conservation



Banner for program activities



Death of deer due to grazing in pesticide sprayed agricultural land

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