

Project Update: October 2017

1. Wattled crane breeding biology: nesting and breeding

In different parts of its home ranges, wattled crane prefer to nest in extensive sedge and grass-dominated wetlands in the floodplains of rivers and smaller wetlands. Accordingly, in the project site, breeding pairs built nests in grass-dominated shallow wetlands which are probably unreachable to livestock and human, and less disturbed area (Figure 1).



Figure 1: The left side **nest** was built in June and the right side nest built at end of August.

The nest is built with different aquatic vegetation at centre of open shallow water (like Iceland, the nest is completely surrounded with water followed by grasses), the nest is a large mound on the open wetland. The first nest is built in June while the second in end of August, however the pair has abandon the first nest. In the last week of September, 2017 a breeding pair has laid one egg in the nest built at end of August (Figure 2); currently the egg is hatched and we are looking for chick. As nest is located in a safe area (not easily accessible to humans and livestock) the breeding process is expected to be successful and we will continue monitoring the breeding process until the chick fledged. Information on nest location from upland areas and vegetation:

- Nest distance to the nearest upland: 17 m.
- Nest distance to nearest tree/shrub: 17.5 m.
- Water depth 1m from the nearest edge in each key direction: at both directions nearest to the upland water depth after 1m between 20 - 32 cm.
- Number of clumps and shrubs stems (≥ 4 mm in diameter and 30 cm above nest level and within 1.5 m of the nest edge: within the radius we found open water.
- Number of trees (= 3 cm DBH within 5 m of the nest edge): only wetland vegetation is found within this distance from wetland



Figure 2: The breeding pair laid **egg** in its nest

2. Nesting site dominate grass identification

In the wetlands of the project site, many aquatic macrophytes species and birds are found. The aquatic macrophytes includes *Cyperus longus*, *Cyperus*, *Eleocharis*, *Scirpus*, *Echinochloa*, *Panicum*, *Alisma*, *Nymphaea*, *Typha*, *Paspalidium*, *Aeschynomene*, *Phragmites*, *Urochloa*, *Hydrocotyle*, *Polygonum* and *Kyllinga* (Figure 3). Some of these grasses are used as feed (grazing purpose) for livestock, and cut and curry for coffee ceremony, traditional house construction etc.



Figure 3: When field assistance work in wetland pot selected for grass identification

3. Crane and livestock population in the project site

The livestock and crane monitoring data reveal the numbers of livestock graze on the wetlands and cranes use the wetland for various activities declined during the heavy rainy season (Figure 4). As compared to the past months, in the current monitoring months (August, September and October) small numbers of livestock use the adjacent land and wetlands for grazing. This is due to the fact that, sufficient livestock food is available in the upland areas at rainy season, and most parts of the wetland are occupied with water, which makes it unsuitable for grazing. In the project site, most of the small wetlands are occupied by pairs of wattled cranes but all pairs are not build nest and start breeding except the two pairs. This could be due to the presence of over flooding in the wetland sites occupied by breeding pair limit the initiation of pairs to start nest building and breeding.

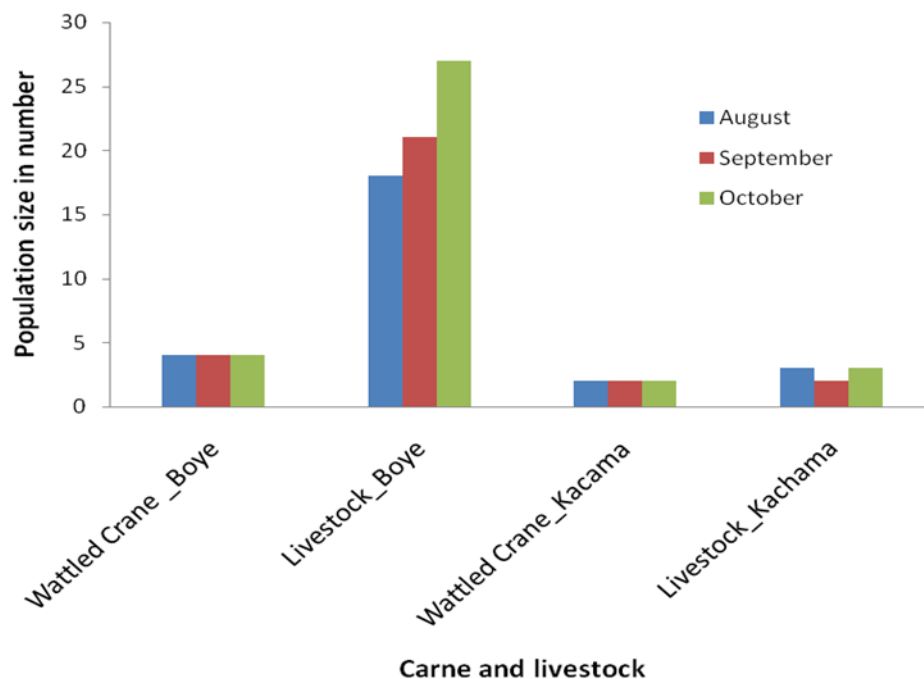


Figure 4: Crane and livestock monitoring result (August– October 2017)

4. Major threats in cranes

Overgrazing: the project area due limited in moisture soil uplands are not producing sufficient food for livestock during dry seasons. Due to this, most of the livestock in villages are gathered to wetland areas and/or around wetland for grazing and water in dry seasons. The data we have collected throughout the project period on livestock population revealed, the numbers of livestock gathered to wetland areas are very high during the dry seasons (Figure 5) while very low during the heavy rainy season. This implies, during prolonged dry season (due to climate change effect) the wetland is continue serving the livestock through providing grasses and water until the rainy season.

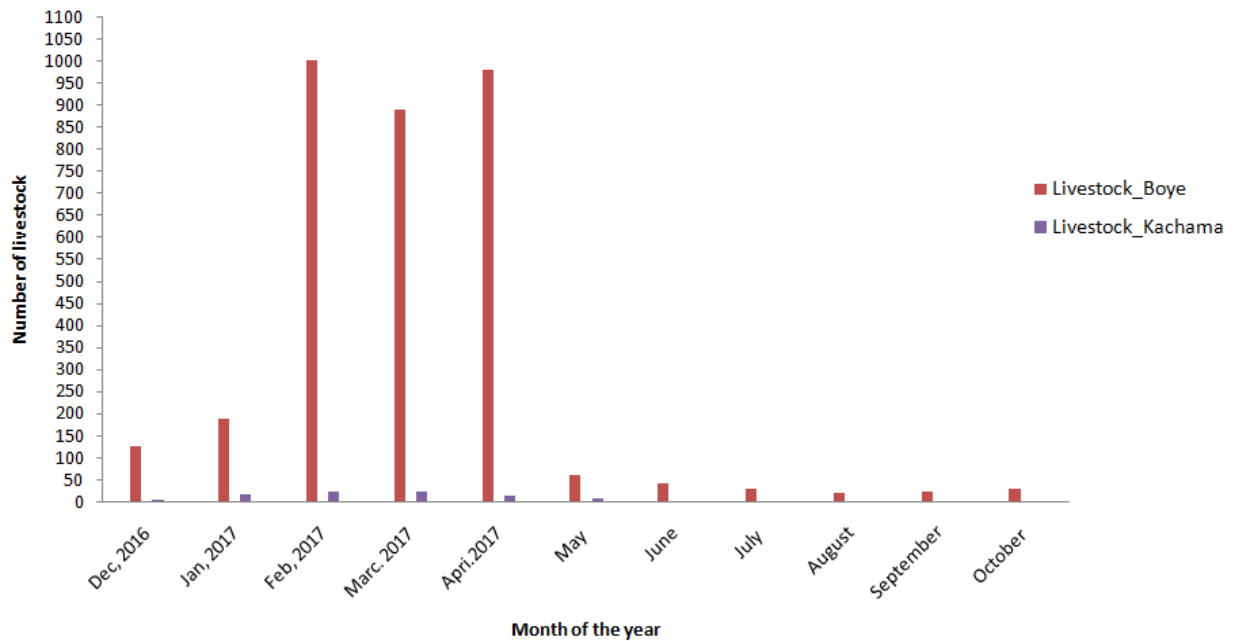


Figure 5: Average number of livestock uses the wetlands during the project period (December 2016 - October, 2017)

In the project site, because of large numbers of livestock grazing excessive pressure is exerted on the wetland habitats and adjacent lands (lands around wetland habitats), which will minimize the overall quality of wetlands, wetland degradation and reduce the suitability of wetland habitats for wetland crane and other water birds breeding (Figure 6).



Figure 6: Lands around wetland habitat affected with overgrazing practices in dry season **(degraded buffer area)**

This showed us that, there is a need to introduce an alternative livestock food source (nutrient rich, multipurpose, adopt on poor soil, better perform at dry season etc) that has to be planted in the upland to feed the livestock in dry season for better livestock productivity and minimise overgrazing induced environmental degradation. Some grass species (e.g., elephant grass, vetever grass, alfalfa etc.) are introduced in the project area through soil and water conservation extension as biological soil conservation measures. These grasses are not only contributing to reduce soil erosion but also potential food resources for livestock, sequester atmospheric carbon, and restore soil fertility. Being as livestock feed the grasses will have a potential to minimise pressure on wetland habitat through substituting feed obtained from wetlands in the dry season. Therefore, promoting these grasses and introducing other potential livestock food resource in the project area is among the alternatives to minimize livestock pressure on wetland in dry season.

Flooding: during field assessment and monitoring we found that, the problems of over flooding in and around wetlands is one of the major challenges for crane breeding in the project area (Figure 7 & 8). In the photograph presented below we can see the effects of over flooding in rainy season; the left side photo is taken during dry season while the right side is taken during heavy rain season of the same year. As the project site is situated in heavy rainfall area and degraded landscape, excessive surface runoff generated from upland areas (i.e., wetland catchment) are comes to the wetland habitats as over flooding and removes wattled crane nests. Perhaps, most of the breeding pairs of cranes in the project area become non-breeding due to lacks of suitable breeding grounds (habitats) and nest damage by flooding.



Figure 7: Conditions of the same wetlands at **dry season** (left side) and **rain season** (right side)



Figure 8: wetland affected with flooding in the project area

To minimise the effects flooding on crane and its habitat, society, and the overall ecosystem surface runoff generated in the catchment areas has to be reduced. This can be achieved through proper management of the watershed (wetland's catchment) that improves soil infiltration capacity, enhance ground recharge and the overall biophysical systems.

Expansion of cropland to wetlands: in the project area from April to June (before the heavy rain season) lands around wetlands are used to grow early mature crops for home consumption (Figure 9). These wetland areas are commonly used for crane feeding and roosting during non-breeding season. In order to improve wetland conditions for cranes and other socio-economic activities it's recommendable to leave buffer zone between wetland habitats and cultivation area.



Figure 9: Subsistence crop cultivation practices around wetland habitat used by cranes

Poem is used as one of the most important conservation awareness creation tool in this project. Thus, poems are prepared by school environment and nature conservation clubs and presented to the local community at the end of the academic calendar. To share local experiences to wider community, one of these poems is selected and translated English (from local language) and shared to International Crane Foundation (ICF). The ICF use the poem for outdoor banner exhibition in Baraboo (USA) on crane conservation efforts around the world.

Sound of cave cranes

We cranes are calling for help
Don't look for somebody to help us
Don't wait to say good bye
Please save us!
We are parts of your beauty

Please conserve my habitats,
The wetlands, grassland, and overall landscapes,
They are pillars of your health ecosystem,
Indicators of sustainable development,
Please stand together to protect my home/wetland,

My home is kidney of your environment,
Now days it is spoiled, degraded and lost,
In the north, east, south and west,
Who caused it?
Who can help us?
We expect call you for help

You humans are not created as destroyer,
Your ancestor (Adam and Eve) placed in the garden,
Not as destroyer of nature,
They were establisher and protector of the earth,
Who taught you to destroy the nature?
Please help me!
Teach the world to stop nature destruction.



Dear Poet,

Thank you for your submission to *Poetry in the Prairie*. Please read the following information carefully, add your name, title of work (if applicable) and the date to the appropriate portions of this document and return by email to poetry@savingcranes.org.

This form must be completed and e-mailed to the International Crane Foundation (ICF) for immediate use by June 5, 2017.

I, **Ababayehu Aticho** hereby submit the poem entitled: **Save cranes in nature** and give permission for this poem to be used as follows:

To be entered into the *Poetry in the Prairie* Competition; and

To be published/shared on the International Crane Foundation Facebook page for consideration in the People's Choice Award,

and, if my poem is chosen as a winning entry in the category of Haiku, Poet's Choice, or People's Choice: I give the International Crane Foundation permission to print my poem to be included in the *Poetry in the Prairie* exhibit on the Baraboo campus through December, 2017;

And to use my winning entry to promote *Poetry in the Prairie* through their social media, website, and print media through December, 2017;

I recognize that persons unknown may link to this site or may use my work without my permission. I shall hold the web page owner harmless from such activity.

I also give permission for ICF to include my poem in the *Poetry in the Prairie* Slamevent to be held at ICF's Member Appreciation Day on September 23, 2017 at the World Headquarters in Baraboo, Wisconsin. If able, I will attend the event and participate in the Poetry Slam. If I am unable to attend, I give permission to an ICF staff member, intern, or volunteer to perform my work.

I understand that I will retain all copyright in my work and may grant permission to any other publication or entity to use my work; and

I understand that there will be no monetary compensation for the publication and distribution of my poem as part of *Poetry in the Prairie*; and

I further certify that I am the sole creator of this work, and have not substantially based it upon the work of any other person. If others have contributed to this work, or if I have based this upon the work of any person, their names and addresses (or other contact information) are: _____

(please attach additional page if needed for contact information)

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