

Project Update: May 2017

1. Literature review and field trip planning (1st March, 2017 to 21st April, 2017)

During our literature review many relevant books, articles, field reports and grey literature were obtained from the Resource Centre, botany, zoology and cultural heritage departments of the National Museums of Kenya (NMK). The (2007-2012) management plan of Lake Bogoria National Reserve and research reports were also obtained from the reserve. These materials obtained were useful in formulating the questionnaires (Annex1). Dr Taita Terer (Head of Centre for Biodiversity Department) and Dr Patrick Maundu (Senior Research Scientist at Kenya Resource Centre for Indigenous knowledge) also offered critical insights and useful advices during the questionnaire formulation.

2. Inception Meeting (22nd April, 2017)

An Inception meeting was held on the 22nd April, 2017 from 10.00 to 12.30 at the Dryland Environmental Education Centre located at the Lobo gate of Lake Bogoria National Reserve. The aim of the meeting was to introduce the project, solicit for the participation of the local administrators and give them an opportunity to contribute to the project design, execution and output. Attendees (Annex 2) included the three project team members, the Senior Warden of Lake Bogoria National Reserve, Project coordinator of Endorois Welfare Council and Local Chiefs from Kaibos, Kapkuikui, Sandai and Lobo Location.

Table1: Summary of the inception meeting's programme

Time	Session	Notes	Who
10:00	Arrival & registration	-Form filling	Ms Prisca Seurei
10:10	Introduction – welcome	~ Robert introduce himself and say a welcome message ~ Invite Prisca to Pray ~ Self-introduction of the attendees	Mr Robert Kipkemoi
10:30	Introduce and explain the project	Biodiversity, indigenous knowledge, Management of Lake Bogoria	Ms Joylene Kanyaris
11:30	Solicit participation	Chiefs to give the names of the villages and the Community Based Organizations (CBOs) in their locations	Ms Prisca Seurei
12:00	Any Other Business' AOBs)		Mr Robert Kipkemoi
12:10	Wrap up-refreshments		All
12:30	Transport token		Ms Prisca Seurei
12:30	Group photo		Mr. Robert Kipkemoi



Fig1: Introducing the project Top left: Principal investigator defining the project key words, Top right: Mr Sibilo studying the laminated images of species of conservation concern found in Lake Bogoria National Reserve, Bottom left: Principal investigator showing a video on a conflict between the Tanzania Maasai and government-backed wealthy commercial Arab hunters (as one of the challenges facing communities living near protected areas). Bottom right: Participants enjoying refreshments after the meeting.

Output of the inception meeting

During the inception meeting the principal investigator started by defining the three key words of the project i.e. biodiversity, indigenous knowledge and conservation, she then explained the unique conservation values of Lake Bogoria National Reserve as she issued pictures of species of conservation concern found in Bogoria (Annex 4), she then present the challenges facing local communities living around protected areas in Africa, She then pose a question to the local administrators to state the challenges facing the Endorois community living around Lake Bogoria, after that she explained the objectives and the design of the project and solicit their support, participation and contribution.

The local administrators started by thanking us for bringing such a project to the Endorois community and they assure us of their support throughout the project. They stated the challenges facing the Endorois community. The challenges included, cattle rustling among the communities living in Baringo County which has affected tourism activities, Increased human wildlife conflicts during the dry season, Lack of recognition of community managed wildlife habitats and poor leadership in the community (Most political leaders are selfish).They attributed all this challenges to cultural erosion. They also listed a number of

plants and animal species that were locally threatened and requested us to include them as species of conservation concern. The two major threats presented by the local administrators were animal poisoning and high human pressure on natural resources. They further highlighted that animal poisoning had reduced because there was no more selling of poison in the local shops. The local chief later listed an average of 12 villages per location and an average of 10 Community Based Organisations (CBOs) operating in their locations. Most of the CBOs were not officially registered and were involved in agricultural and business activities; few of them were involved in biodiversity conservation activities.



Fig2: Inception meeting group photo; from left Mr Sibilo, Mr Kiptisha, Mr Kiprop, Mr Chepkuto, Mr Keitany and Mr Chepsoi (representing the senior Warden).The two ladies in front from left Ms Seurei and Ms Kanyaris.

Questionnaire administration (26th April to 5th May 2017)

Two field assistants (a lady and a man) were required from each location. We therefore recruited a total of eight field assistants (annex 3) through an interview panel. Gender balancing was important because cultural issues in Endorois community are sensitive and mostly required a man to interview a fellow man and vice versa.

On the 25th April, field assistants training was held from 10.00 to 13.00 at the Dryland Environmental Education Centre located at the Lobo gate of Lake Bogoria National Reserve. We started the training by educating our field assistants on the unique conservation values of Lake Bogoria National Reserve and on challenges and opportunities facing local communities living around protected areas in Africa, after that we explained the objectives and the design of our project and solicit their participation. After they assured us of their participation, we then went through the questionnaire questions one by one explaining to

them in depth and teaching them how to approach sensitive questions. We also described to them the methodology.



Fig4: Field assistants training; Left: Introducing and explaining the questionnaire to the field assistants, Right: Enjoying the refreshments after the training.



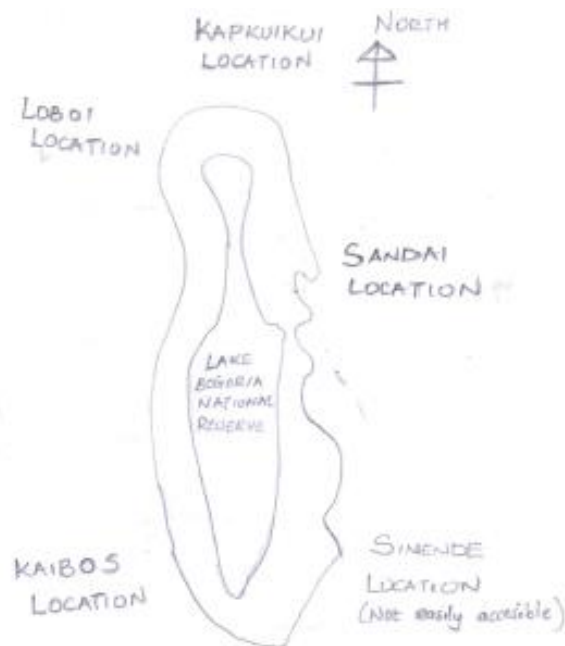
Fig5: Group photos with the field assistants; from left Mr Kangor, Mr Kipsoi, Ms Kanyaris, Mr Chepkuto, Ms Kurere, Ms Kiprop, Ms Kirwa, Ms Chelimo, Mr Totolwo and Mr Kipkemoi.



Fig6: Left: the principal investigator interviewing Mr Barturo, Right: Mrs Kiprono providing fodder to her young goats just before the interview.

Methodology

Study area



Data collection

Semi structured questionnaires (Annex 1) and personal field observations were used to obtain qualitative and quantitative information on traditional ecological knowledge important for biodiversity conservation and management of the reserve.

Sampling design

Forty eight villages in the four selected locations were divided among the eight field assistants for questionnaire administration. Each field assistant administered the questionnaire to six villages (three to four households per village). The households were located at least 500 m apart. The targeted respondents were the young (>18years) and the old persons (based on age-sets) belonging to Endorois community. The project team

members also administered the questionnaires giving priority to Endorois elders in each location whose memories of cultural practices/activities and natural resource utilization provides a precious and endangered source of information important for biodiversity conservation. They also supervised the questionnaire administration in the four locations. In the end a total of 200 questionnaires were administered.

Challenges faced during questionnaire administration

1. Some interviewees thought that questionnaire administrators were people sent by the government to investigate them and perhaps arrest culprits. Some therefore chose to answer questions wrongly just to please us. The ones who trusted us promised to tell us the truth on condition that we don't write them on papers. To curb this challenge we visited most of the old people without the questionnaires for story telling on the same topic.
2. According to Endorois culture you only learn cultural practices or activities when you participate in it and it is in our taboo not to give information to a person who has not yet participated in the cultural practice. To curb this challenge we selected field assistants that had participated in some cultural practices. The project team members had also read books on linguistics and anthropology in the museum; this helped in giving the local people examples of the answers that we expected and this made them think that we had already participated in the cultural practices.
3. Some interviewees hardly had time for the questionnaires (spent most of their time in grazing fields and water points looking for water and fodder for their livestock). These people were therefore visited in grazing fields, farms and water points for questionnaire administration.

Landscapes and wildlife encountered during fieldwork



Beautiful landscapes



Left: Wild mushrooms. Right: African Harrier Hawk



Left Leopard Tortoise. Right: Zebras & Maasai Ostrich



Left: Grey-crowned crane.



Left: Red & Yellow Barbet. Right: Hermerkop nest.



Left: Livestock salt licking place. Right: Communal grazing field.

Opportunities identified

***Prosopis juliflora* (Pestus)**

Prosopis juliflora (an invasive species) is a blessing in disguise, mature stems of *P. juliflora* produce charcoal, its pods serve as livestock fodder during the dry season and it also makes the invaded areas cool for bees hence increasing honey production. This plant should therefore be managed sustainably to maximize the benefits and minimise its negative impacts (by exploring more uses of its pods to reduce its spread).





Integrated farming and agroforestry

We also came across one farmer who practiced integrated farming method and agroforestry as oppose to the many farmers who only kept livestock or practice seasonal mono-cropping farming method. Bogoria region has quite a number of irrigation schemes that can sustain integrated farming methods and agroforestry which is important for food security and biodiversity conservation (reduce pressure on natural resources). Endorois people should therefore adopt this kind of farming.





Future plan

The next activity will be questionnaire data entry and analysis; this will be followed by key informant's interview, engagement of wildlife clubs from four primary schools (one from each location) and four community groups from the four locations. Focused group discussion will then be organized and lastly the traditional exhibition and filming day will be organised.

Annex 1



Project title: Harnessing indigenous knowledge for biodiversity conservation and management of Lake Bogoria National Reserve.

Prior informed consent note

Date of the interview: _____
Interviewer's Name: _____
Location: _____
Sub-location: _____
Village: _____

I invite you to participate in the above named project. The purpose of the project is to document and promote indigenous knowledge useful for biodiversity conservation and natural resource management in Bogoria region. Your participation is voluntary and has no financial benefits. The information provided by you in this questionnaire will be used for research and the findings could lead to greater public understanding of the role of indigenous people in biodiversity conservation. The outcomes of this study will also be shared with the community through the leaders. If you wish, all your information will be kept confidential. Please let us know your preferred choice (Y) (N).

By signing this form you are consenting to be part of the study. Should you need more information, you can contact [Joylene Kanyaris Tel: 0728933096]. If you change your mind about taking part in the study, you are free to do so but we encourage you to participate.

I voluntarily consent to participate in the study and provide information.

Name of the person giving consent	Signature	Date
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Thank you very much for agreeing to participate in this study.

Sincerely,
Joylene Kanyaris

PART A: Local Ecological Knowledge on Biodiversity of Lake Bogoria National Reserve

1. What is the meaning of the name Bogoria?

.....
.....

2. (a) How many wild animals do you know?

.....

.....
.....
.....

(b) Which animal do you like the most and why?

3. (a) Do you know any **wild animal(s)** or wild animal parts (*e.g. ostrich feathers, leopard skin*) that have cultural functions?YES/NO

(b) If YES, give the name(s) of the animal(s) and it's (their) cultural function
.....
.....
.....
.....

4. Do you know any **wild plant(s)** that has (have) cultural functions (*e.g. Korosiot, Sinendet, rotik, Lobotik, sositionte*)?YES/NO

5. If YES, list the name(s) of the plant(s) and it's (their) cultural function
.....
.....
.....
.....
.....

6. What is your totem (Tiondo)? (*Elephant/Hyena/Frog/Honey bee/underground/others specify*)
.....

7. What is the current status of your totem animal? (*Extinct/Few/Many*)
.....

8. What is the importance of having a totem?

9. If the population of your totem is threatened by humans or are nearly getting extinct due to habitat destruction, do you think your clan will protect your totem?(YES/NO)

10. If YES, how

11. Do you know any traditional cultural practices that used to or still happen:

a. In Rivers/Springs?
.....
.....

b. In Swamps (Sawaitii)?
.....
.....

.....
c. Inside Lake Bogoria?
.....

12. (a) Are there specific cultural practices (with environmental skills) that only men can learn? (e.g. instructions not to kill or hunt pregnant animals)YES/NO

(b) If YES, which kind of practices are these?

13. (a) Are there specific cultural practices (with environmental skills) that only women can learn? (e.g. keretab beek)YES/NO

(b) If YES, Which kind of practices are these?

14. (a) Are the Endorois cultural practices mentioned in question 10, 11 & 12 still happening today? YES/NO

15. (b) If No why? (seen as a sign of being uncivilized/ old fashion/Uneducated/others: specify

16. (a) Do you think the abandonment of Endorois cultural practices is the root cause of destruction of biodiversity?YES/NO

(b) If yes how?

17. In your opinion should we encourage Endorois people to adhere to their culture?YES/NO

18. If your children were given the opportunity to learn about traditional knowledge in school, would that be something you would support?

a) YES.....why?

b) NO..... Why?

19. Fill in the following table

Common Name	Local Name	Habitat (home)	Food/prey	Status	Cultural use	Threats
a). Lesser Flamingo						
b). Martial Eagle						
c). Grey-crowned Crane						
d). Pallid Harrier						
e). Maccoa Duck						
f). Egyptian Vulture						
g). White-headed vulture						
h). Lesser Kestrel						
i). Black necked Grebe						
j). Greater Kudu						
k). Leopard						
l). Cheetah						

NB/1. Bogoria **species of conservation concern** (Laminated pictures of these species of conservation concern in Lake Bogoria will be provided during the interviews)

NB/2. **Status:** indicate if their number have: *increased/decreased/ not changed/do not know*)

PART B: Management of Lake Bogoria National Reserve

20. Do you think Lake Bogoria National Reserve is beneficial to Endorois community?
..... YES/NO

(a) If YES, how?

(b) If NO, why do you think it is not beneficial?
.....

21. (a) Comparing the earlier management (the national government) with the current management (Baringo county government) of Lake Bogoria National Reserve, what are the changes that have come with the current management?
.....
.....
.....

22. (a) Does the current management consult with Endorois community in caring for Lake Bogoria or in other words is there a transparent Involvement of the Endorois community in the decision making process?YES/NO

(b) Explain your answer to question 22(a)
.....
.....
.....
.....

23. (a) How often does the Endorois community meet with the staff of Lake Bogoria National Reserve to discuss matters on the management of the reserve? (Monthly/after every 3months/yearly/ others (specify.....))

(b) Who is involved in such meetings?
.....
.....
.....

24. Tick if you agree with either (a) or (b)

(a) The 'negotiators' of development and research project in Lake Bogoria National reserve treat the community as a whole

(b) The 'negotiators' of development and research project in Lake Bogoria National reserve favour the powerful and articulated individuals than the rest of the community member

25. If your agree to question 24 (b) what do you think it should be done to ensure the community is treated as a whole?
.....
.....
.....

26. (a) Have you ever lost your **livestock** or **poultry** to wild animals?YES/NO

(b) If YES, which livestock or poultry versus which wild animal?

E.g. **cow to Lion**

.....
.....
.....
.....
.....
(c) Which way(s) have you developed to deter the animal/bird from attacking your **livestock or poultry** (*Guarding your livestock/using guard dogs/ trapping & killing/Poisoning others: specify*

.....
.....
.....
.....
.....
27. (a) Have you ever lost your **crops** to wild animals?YES/NO
(b) If YES, which crop(s) to which wild animal (s)?
E.g. **Maize to Zebras**

.....
.....
.....
.....
.....
(c) Which way(s) have you developed to deter the wild animal/bird from destroying your crops? (*Guarding your shamba/using guard dogs/ trapping & killing the wild animal/Poisoning the animal*)

.....
.....
.....
.....
.....
28. (a) In the past (before colonial times) Did Endorois culture allow someone to trap or kill a wild animal that are found in the shamba damaging the crops or attacking livestock in their grazing area?YES/NO/I don't know
(a) If NO, then who prohibits you from hunting?

.....
.....
.....
.....
.....
29. (a) Do you think that the only solution to stop the wild animals from destroying your livestock and crops today is to trap and kill all the destructive wild animals?YES/NO
(b) If NO, Which action could the management of Lake Bogoria National reserve do to help you reduce losing your property (livestock or crops) to wildlife?

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.....
.....
.....
.....
30. Have you ever been compensated by KWS for death, injury or loss of property due to wildlife? YES/ NO
If NO, why.....

.....
.....
.....
.....
.....
31. There was an agreement to share Lake Bogoria National Reserve revenue with the local community. Have you or your children benefited from this money? YES/NO
If yes how?

32. Do you think this revenue is fairly distributed to Endorois community? YES/NO
 a) If NO, how do you think the money should be utilized to benefit the community as a whole? (e.g. used to support the activities of community groups involved in environmentally friendly activities, used as bursaries for Endorois students, others: specify

.....

33. If funding resources (e.g. grants) were available to improve a cultural activity that can bring monetary gains to majority of the community members (from tourist) what do you think is the most important activity to venture in?

.....

PART C: Respondent Information

34. Name of the household head.....
 35. Name of the respondent.....

Variable	Response
(a). Sex of Household head	Female _____ Male _____
(b). Sex of the respondent	Female _____ Male _____
(c). Age of respondent in years	
(d). Marital status of the respondent	Single/Monogamously married/Polygamously married /surrogately married/Widowed/Separated/Divorced/ Other (Specify) _____
(e). If married, age of spouse	
(f). Education level of respondent	some primary/completed primary/some secondary /completed secondary/vocational training / college /University/Informal education/none/ Other (Specify) _____
(g). Education level of Spouse	some primary/completed primary/some secondary /completed secondary/vocational training /college /University/Informal education/none/ Other (Specify) _____
(h). Main source of income for the household or family	Livestock keeper/Cultivator/casual /labour /business /employment/Student /Other (Specify) _____
(i). Household size (number of people in a family)	A household includes all members of a family that normally share the same pot or cook together _____

(j). Alternative source of income to the family	Livestock keeper/Cultivator/casual labour /business /employment/Student /Other (Specify)_____
(k). Roofing material of household's main residence	Grass/iron sheets/tiles/tin/other (Specify)_____
(l). Type of floor of household's main residence	Tiles/wooden/cemented/earth floor
(m). Type of wall of household's main residence	Stone/ wood/mud/bricks/iron sheets/ Others (Specify)_____
(n). Clan (ore) of the respondent	Kimoi/Toyoi/Sote/Kabon/Kobilo/Others (Specify)_____
(o). Clan (ore) of the spouse	Kimoi/Toyoi/Sote/Kabon/Kobilo/Others (Specify)_____
(p).Totem (Tiondo) of the spouse	Elephant/Hyena/Porcupine/Monkey/sun/crested crane/bees/ground bees/frog/owl/Lizard/ (Specify) _____
(u). Age-set (Ependo) of the respondent	Men: Kipkoimet/Kipnyigeu/Korongoro/ (Specify) _____
(v). Age-set (Ependo) of the spouse	Women:chelemei/Tebesit/Charkina/Kaptura/ Chelyong (Specify) _____

36. Were you born in this village?.....YES/NO

37. If NO why did you move

.....
.....
.....

38. How many years have you been living in this village?

.....

39. Does your family have the following assets?

Assets	YES/NO	If YES how many? Or how many acres?
Arable land for crops		
Non-arable land		
Traditional beehives		
Modern beehives		

Cows		
Goats		
Sheep		
Donkey		
Motorcycle		

40. Do you belong to any community group (e.g. women group, beekeeping group)?
.....YES/NO

If YES, give the name and the activities of the group

Name.....

Activity/activities.....

.....
.....

Thank you very much!!!

Annex 2: Inception Meeting Attendees

Name	Title
Ms. Joylene Kanyaris	Principle investigator
Mr. Robert Kipkemoi	Project team member
Ms. Prisca Seurei	Project team member
Mr. Nachuru P.	Senior Warden, Lake Bogoria National Reserve
Mr. Vincent Sibilo	Project coordinator, Endorois Welfare Council
Mr. Joab Kiprop	Kaibos Location
Mr. Samwel Keitany	Kapkuikui Location
Mr. Michael Chepkuto	Sandai Location
Mr. Festus Kiptisha	Loboi Location

Annex 3: Field Assistants

Name	Location
Mr. Francis Totolwo	Kaibos
Ms. Brilliant Kiprop	Kaibos
Mr. Kipsoi Lennie	Sandai
Ms. Lucy Kirwa	Sandai
Mr. Brimin Chepkuto	Loboi
Ms. Silvia Kurere	Loboi
Mr. Solomon Kangor	Kapkuikui
Ms. Joyline Chelimo	Kapkuikui

Annex 4: Species of Conservation concern found in Bogoria (downloaded from internet)



Greater Kudu



Lesser Flamingo



Maccoa Duck



Grey-crowned crane



Martial Eagle



Egyptian Vulture



Lesser Kestrel



Pallid Harrier



White-headed Vulture



Black necked Grebe



Leopard

Cheetah