Enclosure I, questionnaire

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Research in Lake Victoria area
This research is undertaken in collaboration with the School of Environmental Studies, Moi University, and the Faculty of Environmental Sciences of the University of Amsterdam. The goal of the research is to determine in which way human behaviour interferes with the habitats of hippopotamuses. Therefore it is important to find out how local people perceive the hippo and if there are any traditions linked with hippos. How do people cope with the hippos in their area? The nature of the damage that hippos can cause will be investigated, as well as reactions of the local people to the confrontation with hippos. The locations of the hippos will be indicated on a map, as well as the homesteads of the respondents. In this way a clear picture will be presented of areas where problems between hippos and people occur. Of course we will preserve the anonymity of those assisting us.

I Introduction
1 Sample number: ______________________
2 Date of interview: ______________________
3 District: __________________________________________
4 Division: __________________________________________
5 Location: __________________________________________
6 Sub-location: ________________________________________

II Personal characteristics
4 Type of household:
   o Male-headed    o Female-headed
   o Male-headed, Female-run (=> migrant husband. Pay attention to question 29)
   o Other, namely: _________________________________________________________
5 What is the size of your household?: ________ persons
6 Sex of the respondent: M / F
7 Age of the respondent: _________ years (born in: _____________)
8 For how long have you lived in this sub-location?: ______________ years / months

III Numbers and distribution (pattern) of hippos
9 Can you show us the breeding sites of the hippos on the map? (draw map of the area)
   o Yes, see map
   o No
   o There have never been any hippos (verify, if the respondent is certain just stop the interview)
10 Have you (ever) seen any hippos in these breeding sites? If so, where?
   o Yes, in/near ____________________________________________________________________
   o No
11 How many hippos have you seen there at the same time? _______________________________
12 What is the last time you have seen hippos in these breeding sites?______________________
13 Have you seen any young hippos in the breeding sites? If so, how many?
   o Yes, approx.: ____________ young
   o No
   o I don’t know
14 How often do you see hippos in your area? (either in the water or ashore)
   o Every day / every night
   o Once a week
   o Once a month
   o Other option, namely: ____________________________________________________________
15 What is, according to you, the number of hippos in your sub-location?
   o Approx. number : ________________
   o I don’t know
16 Are the hippos in the same place throughout the year?
   o Yes
   o No, the hippos occur there seasonally in ________________(months)
   o I don’t know → go to question 19
17 Do you know to where the hippos move / have gone? (Indicate movement on map, via arrows)
   o Yes, they go / went to: ____________________________________________________________
   o No
18 Do you know why the hippos migrate / have migrated? (Do not mention the alternatives, just tick and indicate priority numbers)
   o Protection measures of the local population against the hippos (habitat too limited)
   o Protection measures of the Government or environmental institutions
   o Interference of the water-hyacinth with the breeding sites of the hippos
   o Pollution of the hippo sites (water-pollution)
   o Lack of pastures
   o Changes in the water level / floods
   o Hunting (the hippos are looking for safety)
   o Urbanization
   o Other reason(s), namely: ____________________________________________________________
   o I don’t know
19 For how many years have the hippos been in your sub-location? (reference to harvest periods?)
   o 0-1 year
   o 1-2 years
   o 2-5 years
   o 5-10 years
   o more than 10 years
   o I don’t know
20 What is the general trend in the number of hippos in your (sub-)location? (e.g. compared to 20 years ago)
   o Increasing
   o Static (go to question 22)
   o Decreasing
   o Unknown (go to question 22)
21 What are the main causes for the change in the number of hippos? (Do not mention the alternatives, just tick and indicate priority numbers)
   o Change in the availability of pastures/food
   o Change in the availability of water
   o Natural increase (breeding of the hippos)
   o Migration of the hippos
   o Hunting
   o Protection by the Government or environmental organizations
   o Population growth in the (sub-)location, encroaching human settlements
   o Other causes, namely: ____________________________________________________________
   o I don’t know
Ask after Q21: (for period of 15-20 years)
• Are there any changes in the number of conflicts on the side of fishing, farming or keeping livestock? If so, what kind of changes?
• Is there a change in the number of cultivated plots along the lakeshore?
• Is there a change in the human population?
• Combine the answers with the trend.

IV Possible conflicts between humans and hippos
22 Is the hippo a problem to the people in this (sub-)location?
   • Yes (go to question 23)
   • No, because there are natural barriers to restrict the movement of the hippos   (go to question 24)
   • No, because there are no hippos in the immediate surroundings   (go to question 24)
   • I don’t know

23 In case the hippo is a problem, how does it interfere with human activities?
   (do not mention the alternatives, just tick the answers, indicate priority numbers)
   • Crop destruction or trampling
   • Competition for space, pasture and water
   • Human deaths or injuries
   • Interference with fishing points / landing beaches, fishing nets or boats
   • Recreational (swimming, bathing)
   • Transmitting diseases or pests to livestock
   • Fetching of water, washing
   • Interference with transport / boats
   • In another way, namely:

24 Do you know anybody who has been in a direct encounter with hippos? (ask for name + location)
   • Injured or killed,
   • Hunting/killing,
   • Conservation,
   • Utilization,
   • Other encounters:

25 Have you personally suffered a loss due to the presence of hippos?
   • Yes, namely: time(s)
   • No

26 If you asked for compensation fees for damage / loss(es) as a result of hippo-behaviour, did you get any?
   (Ask for what and the amount received. Indicate the year as well).
   • Yes, for:
     (year): (amount) Ksh.
   • No, I have never been compensated for losses, although I asked for compensation
   • I have never asked for compensation fees, because:

27 Who is responsible for the payment of compensation fees in case of losses due to hippo-behaviour?
   • Kenya Wildlife Service
   • The Government of Kenya / the Treasury
   • Others, namely:
   • I don’t know

V Economic activities
29 What is your main economic activity or the main household activity?
   • Agriculture (growing crops only)   (go to questions 30/31, skip questions 45-64)
   • Cattle-breeding   (go to questions 30/31, then to 45, skip questions 56-64)
   • Mixed farming (keeping livestock and growing crops)   (go to question 30/31, skip questions 56-64)
   • Fishery   (go to questions 30/31, then to 36)
   • Fishery and agriculture   (go to questions 30/31, skip questions 45-55)
   • Fishery, agriculture and cattle-breeding   answer all questions
   • Other activity, namely:

30 Have there been major changes in your main economic activity in the past five years? (Other activities)
   • Yes, namely:
   • No

31 What was the reason for the change of economic activity?

Agriculture:
32 What is the total size of your farm at present?: hectares / acres
   (Indicate farmland and homestead on the map of the sub-location)
   • Land near lakeshore: ; distance to lakeshore: metres
   • Land away from lakeshore: ; distance to lakeshore: metres
   • Land left idle, near / away from lakeshore:
   • Land rented, near / away from lakeshore:
   • Distance from homestead to lakeshore is approx: 

33 Do you have a land title deed for your farm?
   • Yes  o No  o Under process, landregistration is there

34 Which crops do you cultivate?
   • Maize  o Cotton  o Sorghum  o Groundnuts  o Beans  o Sweet Pat.  o Arrow roots
   • Other crops, like:

35 Do you grow crops in areas which are frequently visited by hippos? If so, indicate location.
   • Yes, namely in:
   • No

36 How often have the hippos interfered with your agricultural activities? Indicate regularly / irregularly.
   • It happens (ir) regularly, in total approximately: time(s) a year
   • Never   go to question 40
The Hippopotamus: nothing but a nuisance?  Aenne Post, University of Amsterdam.

37 What kind of loss did you experience? (What was the nature of the loss?)
  o My crop(s) was/were destroyed
  o Personal injuries (injuries within the household)
  o Destruction of fences / destruction of huts
  o Other loss, namely:
    o Only to be answered if the respondent experienced different losses:
      Most recent loss:
      Previous loss:
      Previous loss:

38 When did this/these loss(es) take place? (ask for year + month)
  o Most recent loss:
  o Previous loss:
  o Previous loss:

39 Can you give an estimation of the damage caused by hippos?
  (Ask for the most recent loss. Figures for previous losses can be indicated on the back)
  o Damage to crops, affected area:
  o Damage to crops, mention crop, number of bags and price per bag:
  o Other damage, namely:
    costs approx.

40 Did you report this loss / these losses? If so, to whom? (Indicate nature of loss and date as well)
  o Report to:
  o I did not report any loss, because:

41 Was any action taken as a result of your report? If so, by whom?
  o Yes, by:
  o No, because:

42 Do you think that hippos prefer certain crops?
  o Yes, they like especially:
  o No, they just trample all crops
  o I don’t know

43 How do you protect your crops against hippos?
  o Through electric fences
  o Through wooden fences
  o Through shrub fences
  o Watchhouse
  o Traps on the hippo trails
  o Poaching
  o Fires or torches during the night
  o Noise during the night
  o Through the digging of trenches / moats, depth:
  o Other way of protection, namely:
    o I don’t protect my crops, because:
      → skip question 44

44 Is this way of protection effective?
  o Yes, because:
  o Sometimes:
  o No, because:

45 Livestock (in numbers):
  o Cattle:
  o Sheep:
  o Goats:
  o Poultry:
  o Other:
  o Donkeys:

46 What method(s) do you use for feeding your cattle?
  o Zero-grazing (stall-feeding)
  o Open grazing
  o Both open grazing and zero-grazing

47 Do you think that hippos can transfer diseases to livestock?
  o Yes
  o No, they don’t
  o I don’t know

48 What is the distance between the most frequently used grazing place of your cattle and hippo-sites?
  o Distance:

49 Have the hippos interfered with your livestock?
  o Yes, especially with:
    because:
  o No (go to question 54)

50 When did this/these conflict(s) occur? (Ask for month + year)
  o Most recent conflict:
  o Previous conflict:

51 Can you give an estimation of the damage caused by hippos?
  (Ask for the most recent loss. Figures for previous losses can be indicated on the back)
  o Loss of livestock, approximately:
  o Other damage, namely:
    amount Ksh.
  o I don’t know

52 Did you report this loss / these losses? If so, to whom? (Indicate nature of loss and date as well)
  o Report to:
  o I did not report any loss, because:

53 Was any action taken as a result of your report? If so, by whom?
  o Yes, by:
  o No, because:

54 How do you protect your livestock from interference with hippos?
  o Protection via:
    o I don’t protect them, because:
      → skip question 55

55 Is this way of protection effective?
  o Yes, because:
  o No, because:

56 What is the distance from your landing beach to the hippo-sites?
  o Distance:

Cattle-breeding:

Fisheries:
57 Have you used the same landing beach in the past five years?
  o Yes, because: _________________________________________________________________
  o No, because: _________________________________________________________________
  _________________________________________________________________

58 How often have you personally suffered a loss due to the presence of hippos?
  o It happens (ir)regularly, in total approximately: __________________ time(s) / a year
  o Never \(\rightarrow\) go to question 64

59 What kind of loss have you experienced?
  o Personal human injury (injuries within the household)
  o Human deaths within the household
  o Boat(s) / canoe(s) destroyed
  o Net(s) destroyed
  o Other loss, namely: ____________________________________________________________
  o Only to be answered if the respondent experienced different losses:
    Most recent loss: ______________________________________________________________
    Previous loss: ________________________________________________________________

60 When did this loss / these losses occur? (Indicate month + year):
  o Most recent loss: _____________________________________________________________
  o Previous loss: _______________________________________________________________

61 Can you give an estimation of the damage caused by hippos?
  (Ask for the most recent loss. Figures for previous losses can be indicated on the back)
  o Boat(s) / canoe(s), number: ___________; price _________________________________ Ksh.
  o Net(s), number: ___________________; price _________________________________ Ksh.
  o Loss of catch, approximately: ________________________________________________ Ksh.
  o No

62 Did you report this loss / these losses? If so, to whom? (Indicate nature of loss and date as well)
  o Report to: _________________________________________________________________
  o I did not report any loss, because: ____________________________________________

63 Was any action taken as a result of your report? If so, by whom?
  o Yes, by: _________________________________________________________________
  o No, because: ______________________________________________________________

64 Is there a relationship between hippo breeding sites and fish abundance on the same spot? If so, why?
  o Yes, namely: _______________________________________________________________
  o No

65 Are the hippos in this sub-location tolerated by the local people in general?
  o Yes, because: _______________________________________________________________
  o No, because: _______________________________________________________________
  o I don’t know

66 Are there any traditional beliefs associated with hippos? (continue on back, if necessary)
  o Yes, namely: _______________________________________________________________
  o Name one person / people who can tell about traditional beliefs: (name and location of homestead)
  o No
  o I don’t know

67 Are there any particular clans/communities with a special value/interest on hippos?
  o Yes, namely: _______________________________________________________________
  o No
  o I don’t know

68 Do you know anyone who has been named after a hippo? If so, which names are used and why?
  o ______________________________________________________________

69 What, do you think, is / was the value of a hippo in the past and at present?
  Value in the past: \(\frac{\text{Positive}}{\text{Negative}}\)
  Value at present: \(\frac{\text{Positive}}{\text{Negative}}\) \(\rightarrow\) go to question 72
  o Positive
  o Negative
  o Indifferent
  o It has no value \(\rightarrow\) go to question 72

70 What is, according to you, the value of the hippo? (Indicate priority numbers for past and present)
  o Meat
  o Ivory / teeth
  o Fat
  o Use for (traditional) medicine
  o Skin / hide
  o Other value, namely: __________________________________________________________

71 If the hippo is used for traditional medicine, which parts of it are used and in what quantities?
  o Use of: _______________; quantity: ______________________
  o I don’t know
72 If there is a problem with one or more hippo(s) on your land, what will you do about it?
   o Shoot/cull/trap/spear the hippo myself (or ask a member of the community to do so)
   o Contact the KWS / Game Department / (local) Authority
   o I will run away
   o I will try to chase the hippo away, through:
   o Other, namely: ________________________________________________________________

73 If the KWS / Game Department is contacted, how long does it take before they come?
   o Time: _______________________ days / weeks / months
   o They don’t come  \(\rightarrow\) go to question 76
   o I don’t know

74 How do they solve the problem?
   o The hippo is killed
   o The hippo is transferred to another place
   o Other solution: ________________________________________________________________
   o The problem is not solved, because: ____________________________________________
   o I don’t know

75 Does the KWS / Game Department respond to each demand for assistance in dealing with hippos?
   o Yes
   o No (they need at least ……… requests)
   o I don’t know

76 Have any hippos been killed during the past five years? \(\text{legal and illegal killings}\) If so, how many?
   o Yes, approx.: ____________________________ hippo(s) were killed in: ____________________________ (year).
     Legal killings: ____________________________; illegal killings: ____________________________
     The last time (a) hippo(s) was/were killed was in: ____________________________ (year) ____________________________ (number)
   o I don’t know

77 Why were they killed? \(\text{Indicate priority number, if more options are mentioned}\)
   o Because they were a threat to local people (safety, destruction)
   o For economic reasons / benefits
   o Because: ________________________________________________________________
   o I don’t know

78 Who gets a part of the revenue (e.g. meat, ivory) when a hippo is killed? \(\text{what happens to the carcass?}\)
   o Local people only
   o Non-locals (e.g. the KWS) only
   o Locals and non-locals share the revenue:
     non-locals get: ____________________________; locals get: ____________________________
   o Others, namely: ____________________________
   o I don’t know

79 Are there any benefits coming from the presence of the hippos?
   o None
   o Yes, namely: ________________________________________________________________
   o I don’t know

After Q 79
If the respondent considers the hippo as a problem in Lake Victoria area, what can or should be done according to him/her to solve this problem? Note ideas and/or suggestions on conflict resolution or mitigation.

80 Do you think it is feasible to have a hippo-farm (exploitation, culling) in your area? If so, who will benefit mostly from a hippo-farm and why?
   o Yes, because: ________________________________________________________________
   o No, because:
   o I don’t know

81 If there’s a hippo-farm, whose responsibility should it be and why?

82 If the hippos would disappear from your area, would you mind?
   o Yes, very much, because: _______________________________________________________
   o Maybe a little bit, because: ______________________________________________________
   o No, not at all, because: _______________________________________________________
   o I don’t know

83 Do you think the hippo is protected by law?
   o Yes
   o No
   o I don’t know

84 Do you know what the 30-metres zone (100 ft.) means?
   o Yes, it means that: ______________________________________________________________
   o No

85 Who should be responsible for the conservation of hippos?
   o The local people (community, clan)
   o The Government of Kenya
   o Non-governmental organizations
   o The Game Department / KWS
   o Others, namely:
   o There is no need to conserve the hippos
   o I don’t know

After Q 85:
Ask for opinion on conservation in general. “Is it necessary to conserve the hippo within Kenya?”

86 Is there anything that you would like to add to this questionnaire?
   o No
   o Yes, namely: ________________________________________________________________

Thank you very much for your time and co-operation!!!