KWS Biodiversity Information Database Systems Data Mobilization and Organization Workshop held at the Yellow Green Hotel, Naivasha

From 6th to 11th May 2018







Prayer was led by Grace Waiguchu and Participants registration by Faith Muchiri

Members took some time to introduce themselves. The workshop was attended by KWS Staff and Nature Kenya Staff and the database developer, Mr. Ken

Introduction of the program of activities by Peter Hongo

Mr. Hongo presented the workshop proceedings and the expected outputs at the end of the 7 day workshop.

Objectives of the workshop

- 1. Data mobilization and Organization
- 2. Cleaning biodiversity database
- 3. Database development
- 4. Generation of coordinates for ground census data from the block maps
- 5. Report Writing

Presentation by Peter Hongo

Data Mobilization and Organization, Biodiversity Data Standards, Data Cleaning and the status of the existing datasets

Peter Hongo explained what the GBIF represented and the GBIF aim. He also explained the What KWS stood for, its vision and mission. Hongo explained the relationship of GBIF and KWS. He said that the data are categorized as follows;

- 1. Occurrence data describes the location in time and space
- 2. Checklist
- 3. Sampling events data eg. birds inventories

Hongo presented on data standards and he said that datasets are key component of biodiversity informatics

He said that datasets from different origins must adapt a common schema. This involves datasets from different origins adapting a similar schema. Schemas are agreed internationally to make global initiatives such as GBIF possible.

Hongo presented more on the data standards using the Darwin Core standard (<u>http://rs.tdwg.org/dwc/terms/index.htm</u>)

He said that data quality involved data management, data modelling and analysis quality control, quality assurance, data storage, data presentation

He also said that data cleaning and validation involved cleaning the data and it was a delicate process that required some effort in terms of attentiveness and keenness when being carried out. He said that d data cleaning also involved fixing the errors.





He showed the following table that contained all the datasets required by the GBIF project including the number of records needed. He mentioned that the project aimed at assisting KWS to organize its geo-spatial data and information.

Dataset	Data type	Estimated records	Institution
Aerial Census	Occurrence	10000	KWS
Ground Census	Occurrence	2000	KWS
Marsabit Forest Ecosystem Plants 298	Checklist	718 of which	NMK/KWS
		Plants – 298	
		Large Mammals – 4	
		Small Mammals – 20	
		Invertebrates – 199	
		Reptiles/Amphibians – 20	
		Birds – 172	
		Aquatic Fauna - 5	
Mt. Kenya Forest	Check list	637 of which	NMK/KWS
Ecosystem		Avifauna – 138	
		Herpetofauna – 17	
		Invertebrates - 382	
Zoology collection data	Checklist/ occurrence	5000	NMK
Botany collection data	Checklist/ occurrence	7000	NMK
Kenya Bird Map	Occurrence	66,700	NK
Important Bird Areas	Occurrence	40,000	NK





During the workshop, roles were divided into the following themes and assigned to the participants as follows;

- 1. Data cleaning
 - Aerial census Tsavo-Mkomazi, Laikipia-Samburu and Amboseli-West Kilimanjaro ecosystems (**Peter Hongo and Grace**)
 - Ground census NNP and LNNP (Peter Maina and Zachary)
 - Inventories Marsabit (Grace) and Mt. Kenya (Faith)
- 2. Data mobilization and Organization (Fred and Gacheru Nature Kenya)
- 3. Database development (Ken)
- 4. Generation of coordinates for ground census data from the block maps (Zachary)
- 5. Report writing (**Peter Hongo, Grace**)

Presentation by Ken Otieno



Mr. Ken presenting the biodiversity database system





Database system – includes the users, the hardware, the software, the data. It defines and regulates the data and the users

The database will function to:

- 1. Store information
- 2. Avoid redundancy and ensure data integrity
- 3. Hide the complexity involved
- 4. Implement data security with the different access levels in the system

Mr. Ken did a presentation on the current progress of the database. He said that the database was complete and awaiting uploading of cleaned datasets.



Part of the data cleaning team

At the end of every day, members presented the progress of the data cleaning exercises. At the beginning of every day, a recap was done by Grace Waiguchu.

Achievements

- Nature Kenya managed to mobilize 22000 records on Kenya birds
- The aerial census data was completely cleaned and ready for publishing





- The ground census data was completely cleaned and ready for publishing
- Marsabit checklist data was cleaned and ready for publishing
- Mt. Kenya checklist data was cleaned and ready for publishing
- Generation of coordinates for the LNNP and NNP ground census data
- The above are ready to be uploaded into the Biodiversity Information System database.

Way Forward

- 1. Field Scientist should be urged to use new data format forms for future data collection for both ground and aerial census
- 2. GBIF should be reminded to permit KWS to publish in the GBIF website.
- 3. There was need to contact NMK with reference to GBIF project.





Biodiversity Mobilization and Organization Workshop

Date: 5-12 May 2018

Venue: Yellow Green, Naivasha

Tentative Workshop Programme

Day	Time	Item	Responsibility
Saturday, 5/05/2018	4.00pm - 5.00 pm	pm Arrival and Registration	
Sunday, 06/05/2018	8.00 am - 8.30 am	Introduction of participants, workshop objectives and opening remarks	Peter Hongo
	8.30 am -9.00 am	Data required by GBIF and status of the	Peter Hongo
	9.00 am – 10.00 am	Data standards - Darwin Core standard (http://rs.tdwg.org/dwc/terms/index.htm)	Peter Hongo
	10.00am- 10.30 am	Tea Break	All
	10.30 am - 1.00 pm	 Data Mobilization, Organization and cleaning 6. Data cleaning –Roles divided into the following themes; Aerial census Tsavo-Mkomazi, Laikipia-Samburu and Amboseli-West Kilimanjaro ecosystems (Peter Hongo and Grace) Ground census – NNP and LNNP (Peter Maina and Zachary) Inventories - Marsabit (Grace) and Mt. Kenya (Faith) 7. Data mobilization and Organization (Fred, Gacheru) 8. Database development (Ken) 9. Generation of coordinates for ground census data from the block maps 10. Report writing 	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 pm – 4.00 pm	Data Mobilization , organization and cleaning continues	All
	4.00 pm-4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of status of different themes	All
	5.00 pm	Day 1 Ends	
Monday 07/05/2018	8.30 am – 9.00 am	Recap of day 1	Grace





		Data Mobilization , organization and cleaning continues	All
	10.00am– 10.30 am	Tea Break	All
		Data Mobilization , organization and cleaning continues	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 Pm – 4.00 pm	Data Mobilization , organization and cleaning continues	All
	4.00 pm–4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of status of different themes	All
	5.00 pm	Day 2 Ends	
Tuesday 07/05/2018	8.30 am – 9.00 am	Recap of day2	Grace
	9.00 am – 10.00 am	Data Mobilization , organization and cleaning continues	All
	10.00am– 10.30 am	Tea Break	All
	1030am – 1.00 pm	Data Mobilization , organization and cleaning continues	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 Pm – 4.00 pm	Data Mobilization , organization and cleaning continues	All
	4.00 pm–4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of status of different themes	All
	5.00 pm	Day 3 Ends	
Wednesday 09/05/2018	8.30 am – 9.00 am	Recap of day3	Grace
	9.00 am – 10.00 am	Data Mobilization , organization and cleaning continues	All
	10.00am– 10.30 am	Tea Break	All
	1030am – 1.00 pm	Data Mobilization , organization and cleaning continues	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 Pm – 4.00 pm	Data Mobilization , organization and cleaning continues	All





	4.00 pm–4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of status of different themes	All
	5.00 pm	Day 4 Ends	
Thursday 10/05/2018	8.30 am – 9.00 am	Recap of day4	Grace
	9.00 am – 10.00 am	Data Mobilization , organization and cleaning continues	All
	10.00am– 10.30 am	Tea Break	All
	1030am – 1.00 pm	Data Mobilization , organization and cleaning continues	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 Pm – 4.00 pm	Data Mobilization , organization and cleaning continues, Report writing	All
	4.00 pm-4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of status of different themes	All
	5.00 pm	Day 5 Ends	
Friday 11/05/2018	8.30 am – 9.00 am	Recap of day 5	Grace
	9.00 am – 10.00 am	Data Mobilization , organization and cleaning, Report writing continues	All
	10.00am– 10.30 am	Tea Break	All
	1030am – 1.00 pm	Data Mobilization , organization and cleaning, Report writing continues	All
	1.00pm – 2.00 pm	Lunch	All
	2.00 Pm – 4.00 pm	Data Mobilization , organization and cleaning, Report writing continues	
	4.00 pm–4.30 pm	Tea Break	All
	4.30 pm – 5.00 pm	Presentations of final status of different themes	All
	5.00 pm	Day 6 Ends	
Saturday 12/05/2018	9.00 am – 10 am	Participants leave for Nairobi	All



