Workshop on Apps for Beached Animals: Monday 05 July 2021
Note of Meeting

(1) Attendees

Darrell Abernethy (DA)	Aberystwyth University
Simon Elwen (SE)	Sea Search Africa
Greg Hofmeyr (GH)	Port Elizabeth Museum
Takdeera Lewis (TL)	University of Pretoria
Katta Ludynia (KL)	SANCCOB
Azwianewi Makhado (AM)	Department of Forestry, Fisheries and the Environment
Charles Malherbe (CM)	West Coast District Municipality
Makhudu Masotla (MM)	Department of Forestry, Fisheries and the Environment
Alexis Olds (AO)	Cape Nature
David Gordon Roberts (DR)	SANCCOB
Laura Roberts (LR)	Western Cape Government; University of Pretoria
Mduduzi (Mdu) Seakamela (MS)	Department of Forestry, Fisheries and the Environment
Ralph Vanstreels (RV)	Institute of Research and Rehabilitation of Marine Animals (IPRAM), Brazil
Lauren Waller (LWa)	SANCCOB
Lauren Williams (LWi)	Department of Forestry, Fisheries and the Environment

(2) Objectives

1. To determine what apps and citizen-science utilities are in current use for reporting beached animals.
2. To describe the purpose of the proposed seabird monitoring app and its value in collecting baseline data, providing information and allowing real-time reporting.
3. To obtain feedback from stakeholders and determine the feasibility of having a composite, multi-species app.
4. To determine the steps required to develop a proof-of-concept project for either a composite or seabird-specific app

(3) Agenda: Please see Appendix

(4) Meeting Outline, Key Points and Actions

Important: Please note that slides and images from the presentations linked to this report should not be used without the owner's permission.

4.1. DA welcomed the attendees and each person introduced themselves.

4.2. LR gave a brief introduction to the proposed project, why a beached app was necessary and an overview of what other apps were in use. Key reasons for an app was to establish baseline values, detect abormalities in respect of species, spatial, temporal, or numerical distribution and thereby provide a better opportunity for determining the possible cause. A copy of the presentation is available here.

4.3. Four presentations on monitoring systems were then given:

- KL described SANCCOB's experience and role in avian surveillance: SANCCOB receives approx. 1000 African penguins (about 50% chicks and mostly from colonies; >1.5% of the extant population) and 1000 other seabirds (>30 species) per annum. An app would allow rapid reporting of adverse events e.g., oil spills and improve reporting coverage as well as rescue. A copy of the presentation is available here.

- SE presented on his cetacean experience: surveys by boat provided valuable, high-quality information but data were limited and costs were high. There is a great need in any system for standardising reporting systems. Using others' data significantly increased the number of reports but most value was seen when using skilled people already on boats. Papers published so far have factored in the observation effort, which is important. An app has been developed (Seafari, funded and designed by Alex Vogel) but the public's response was poor – people prefer to report via WhatsApp. For an app, it will be important to provide immediate feedback and create a "community" feel among participants. The NSRI app is another worth investigating. SE advised that it may be better to build onto an existing app.

- GH (copy of presentation available here) described two systems of stranding surveillance on the south-east coast – one using local volunteers ("agents") who are known in their areas and respond to reports, and via a hotline number, and two monthly beach surveys (both in uninhabited areas where likelihood of human interference is low). Later, during discussion, GH stressed the importance of obtaining specimens for long-term storage and future research. Perishable samples are stored in formalin for future pathological study but a whole suite of other samples is also collected. There is a need for someone to receive and filter calls for all marine wildlife ashore (alive or dead), or in trouble, for the various responding organisations, as well as additional capacity to respond to such calls.

- RV presented on the SIMBA database (simba.petrobras.com.br), a comprehensive reporting system in Brazil employing over 400 people who monitor approximately a third of the coastline and respond to reports of strandings (birds, mammals, reptiles). All follow-

up data, including clinical records from rehabilitation centres are recorded in the database with some access to the public and wider access to authorised individuals. System funded by petroleum companies as condition of their licence to operate. Valuable advice included automatic digital time, date and location stamping of photographs.

4.4. Discussion followed these presentations, with the following key points being made:

- For any reporting system, there must be feedback to the person providing the information e.g., acknowledging receipt of the data or visual data (mark on map etc)

- Resources are critical to a reporting system – there needs to be a dedicated person who can coordinate efforts and follow-up reports.

- LWi described the DFFE system for whale sightings being developed using Survey123 (A tool in the ArcGIS suite). Field personnel are obliged to report and the previously paper-based log book will be replaced by an app that provides a web-based form. Reporters receive an automated email acknowledging their data have been uploaded. This has the advantage of enforced standardisation of entered data and traceability. There has so far been a positive response from users. Extension to strandings is currently being investigated.

- Active surveillance (e.g., regular patrols) more valuable than passive surveillance (awaiting reports from the public) but is limited in scope and more resource intensive; it cannot replace the network of interested people who can potentially participate. There is some active surveillance in addition to that reported by GH but such activities are limited and multi-purpose i.e. not dedicated to strandings e.g. DFFE have coastal monitors (>10?); Cape Nature patrol near colonies.

- LWa listed current networks monitoring beaches such as WWF coastal monitors in the Overstrand (local municipality) area and a (district?) municipal employee who monitors a large stretch of coastline over each month.

- AO mentioned the regular patrols made by CapeNature staff.

- GH mentioned Dr Lorien Pichegru (NMU) has been monitoring the seabird strandings in the Gqeberha area and ay be an additional person worth consulting.

4.5. TL gave a short presentation on the stakeholder survey (copy of presentation available) and provided a link for participants to access the survey (https://aber.onlinesurveys.ac.uk/stakeholder-assessment-_-researchers)

4.6. LR presented on the proposed beach app (copy of presentation available here), the aim of which is to develop a smart phone app that uses citizen science to monitor coastal animal morbidity and mortality. Such a system would require accurate, up-to-date input, clean data

that can be stored securely and outputs that will be accessible. She described the data that would need to be captured and different systems currently in use.

4.7. This was followed by discussion among participants, with the following key points captured:

- DA reported on two written submissions by some who could not attend: Alex Vogel described his Seafari app, stressing the value of the app, the difficulty of ensuring participation and offering to have the app expanded. Les Underhill reported on his experience on Robben Island and his view that an app to report stranded penguins would not work due to the scarcity of stranded animals. He indicated that people reporting for the first (and maybe only) time do not want to download an app, but want to do a web search to access a phone number and he stated that coordination of citizen science projects is not easy

- There was widespread support for an app to report seabird strandings; this could be expanded for other species or parameters (e.g., pollution) but would require dedicated and sufficient resources e.g., personnel and funding.

- There are a range of apps already in place although only two currently offer a facility to report negative findings i.e., no sightings. Joining with another app should be actively explored, even on a trial basis. However, it was recognised that integrating different apps could be problematic.

- Having two data gathering systems was strongly supported: an app for regular, repeated reporting by a network of interested/trained volunteers and a web-based system for occasional reporting by people who might wish to report but who do not wish to download the app.

- Ensuring ongoing interest by those reporting will be essential, otherwise they will cease participating. This includes rapid feedback, the ability for them to see the results of their input (e.g. updated map) and providing encouragement and possibly competition. The data entry must also be made as easy as possible.

- Issues of standardisation, quality assurance, central storage, data sharing/ ownership and dissemination of results must all be considered in any system. Providing a photograph with data and GPS coordinates are essential for reporting purposes.

- The question of collaborating with DFFE in their reporting systems was discussed; it is possible but might be difficult due to governmental data access/ security restrictions. However, the potential of such collaboration should be further explored.

The meeting concluded at 1410.

D. Abernethy
06 July 2021

Appendix: Programme

Time	Activity	Lead
0900 - 0910	Welcome and Introductions	Darrell Abernethy
0910 - 0920	Project Context	Laura Roberts
0920- 1020	Reports on current monitoring systems in use	
	0920 – 0935: SANCCOB	Katta Ludynia
	0935 – 0950: Seasearch	Simon Elwin
	0950 – 1005: Mammal strandings (PE Museum)	Greg Hofmeyer
	1005 – 1020: SIMBA (Brazil)	Ralph Vanstreels
1020– 1030	Stakeholder Survey	Takdeera Lewis
1030 - 1045	*Comfort Break*	
	1045 – 1115: Written responses & Discussion	(Darrell Abernethy)
1115 - 1145	Meerwissen Proof-of-Concept Project	Laura Roberts
1145 - 1300	Feedback and Discussion:	
	(a) Is there a need for, or value in, a universal beached animal reporting app?	
	(b) Subject to (a), is there a need for, or value in a beached seabird-reporting app?	
	(c) Subject to (a) and (b), what are the next steps?	
1300	Close	