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The event book system: community-based monitoring in Namibia

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Introduction

The event book system is a grassroots natural resource monitoring programme. It differs from traditional monitoring in that the community dictates what needs to be monitored, collects the data itself and undertakes all the analysis. In this devolved monitoring system, scientists only facilitate the design process and act as advisers. The analytical tools facilitate information sharing amongst members. An important and unplanned impact has been the empowerment that the system has given communities to communicate on an equal footing with donors, investors and government officials. A spin-off is that scientists can also use the data.

The event book system started in a few conservancies in late 2000[1]. Now more than 33 communal area conservancies in Namibia have adopted the system, covering almost seven million hectares. A sense of ownership, confidence, pride and commitment has developed. The process of monitoring has been as important as the results it has produced.

The success of the system prompted the Namibian

[1] Conservancies are local-level common property resource management institutions which receive rights over wildlife and tourism under Namibian legislation. Their members manage wildlife and tourism activities whilst continuing with their existing land uses such as livestock and crop farming.

"The process of monitoring has been as important as the results it has produced"

Ministry of Environment and Tourism to use the same principles in their national parks. Exchange visits to Namibia have resulted in similar systems being developed in Mozambique (including marine parks), Zambia, Botswana and, most recently, Cambodia.

This paper describes the event book system, provides guidelines and lessons from the implementation process, and discusses its impact.

Background

Namibia currently has 44 registered communal conservancies. Legislation allows communities to benefit from wildlife but in return requires that they become active in resource management. Management requires an understanding of what is going on with key resources and associated activities. Conservancies need to monitor to get this information, as this is the basis of adaptive management.

Initial community-based natural resource management

Figure 1: Event book system data collection and reporting tools used by community rangers to monitor poaching

(CBNRM) monitoring systems in Namibia were conventional in that external scientists designed them, conservancy-employed staff collected the data and the scientists then analysed them. Communities rarely received feedback, or there were lengthy delays, or community members were not able to understand the results. This led to a lack of ownership of the monitoring process and the results and these early systems struggled to survive.

In 2000, a more effective monitoring system emerged. Known as the event book system, it is designed around meeting the needs of the local community. Its name derives from monitoring events that occur randomly, e.g. fire, poaching, human-wildlife conflict, mortalities, etc. It also makes provision for systematic monitoring activities such as vegetation or wildlife censuses. A more accurate term is probably Management-Orientated Monitoring System (MOMS).

The event book system differs from traditional monitoring systems in that:
- communities decide what they need to monitor;
- data collection, analysis and archiving are undertaken locally; and
- technicians only facilitate and support the process.

The event book system

The event book

The event book is a personalised A5 ring file maintained by a community ranger. The file contains a set of yellow cards, one card for each monitoring theme or topic, e.g. there is a card for poaching, one for human-wildlife conflict, one for rainfall, and so on. As events occur, rangers select the appropriate card and record the event. At the end of each month

Figure 2: Job description poster for a community game guard in North-West Namibia

a line is left and then data is recorded for the following month. At the end of the year, all of the old cards are removed and archived, and a fresh set of cards is inserted into the book.

The community rangers collect, analyse and then report on the data for different time periods. Colour coding is used to avoid confusion between the data-flow levels (yellow being for data collection; blue for reporting within a year; and red for tracking long-term trends). Figure 1 shows the tools used to monitor poaching.

Some conservancies generate sufficient income from tourism and wildlife utilisation to employ a community ranger to undertake the monitoring. Others use donor grants to employ staff or make use of community volunteers.

Deciding what to monitor

The community decides what they would like to monitor, although conservancies are legally obliged to report on levels of wildlife utilisation so this is automatically included. Agreement on what to monitor is reached through a workshop involving community leaders and rangers. This starts with brainstorming all issues of importance and ends with a list of topics that should be monitored. Normally this includes resources critical for livelihoods, those that the community is concerned about, threats to the conservancy and indicators of achievement. The final selection of topics is presented as a 'job description poster' which shows what the community would like the community ranger(s) to do (Figure. 2). The poster contains pictures and icons to assist less literate community members.

To support local design, yet provide a standardised and rigorous methodology, monitoring has been modularised by topic (Box 1). Twenty-one modules have been developed so far, each containing the colour coded 'tools' necessary for data collection and reporting monthly/quarterly and long-term trends.

Once the conservancy selects what it wants to monitor, the technical support team develops a kit for any areas not already covered. Over time, as needs and skills develop, communities add more modules, eventually covering a wide spectrum of issues – all at their own pace.

Data analysis

Data analysis is extremely simple. Community rangers record the location of incidents onto maps and calculate monthly totals or averages and present these on charts. There are three categories of reporting: monthly incident reports; annual reporting maps; and long-term incident reports.

Box 1: Modules developed

Problem animal incidents	Trophy hunting
Poaching	Wildlife harvesting
Predator encounters	Livestock mortality
Rare and endangered animals	Livestock theft
Fence monitoring	Livestock condition
Water point monitoring	Fishing effort
Flooding and river levels	Fish catch trend
Rainfall	Long-term vegetation change
Wildlife sighting during fixed foot patrols	Seasonal grass grazing assessment
	Craft resources
Wildlife mortalities	Wildlife re-introductions

Every month the rangers complete the monthly (blue) reporting charts (see Figure 3a). These charts are pre-prepared A3 templates that are housed in a large format 'flip-file' so results can be displayed at community meetings. One 'block' on the chart refers to one 'event'. For example, to report on poaching, one block is coloured for each poaching incident. Two incidents are represented by two blocks, and so on. In some instances, one block may represent standard values, e.g. 5mm of rainfall or 10 animals seen whilst on patrol. More advanced conservancies also complete reporting maps using symbols to differentiate between different types of incidents. One map is used for each monitoring topic and lasts a year (Figure 3b).

At the end of each year, the totals for the year are transferred onto long-term trend red reporting charts. These are similar to the monthly reporting charts and use the same method of colouring in blocks to represent number of incidents or quantities (Figure 4). However, on the blue monthly charts the x axis shows months, and on the red trend charts it shows years. Colour coding the different reporting timescales has proved to be critical in avoiding confusion.

The reporting materials are presented at monthly community management meetings (and at annual general community meetings). Community members evaluate the spatial impacts of different events (using the reporting maps) and compare differences between months (blue charts) and/or years (red charts) and reach management decisions through consensus.

Year end auditing, reporting and archiving

At the end of each year there is an annual audit of the system. Attended by external stakeholders (government, donors, NGOs and neighbours), the audit is based on a yes/no activity questionnaire. If the answer is 'yes, it was done', then a summary of results is recorded. The completed

Figure 3a: Example of a monthly reporting chart for problem animals
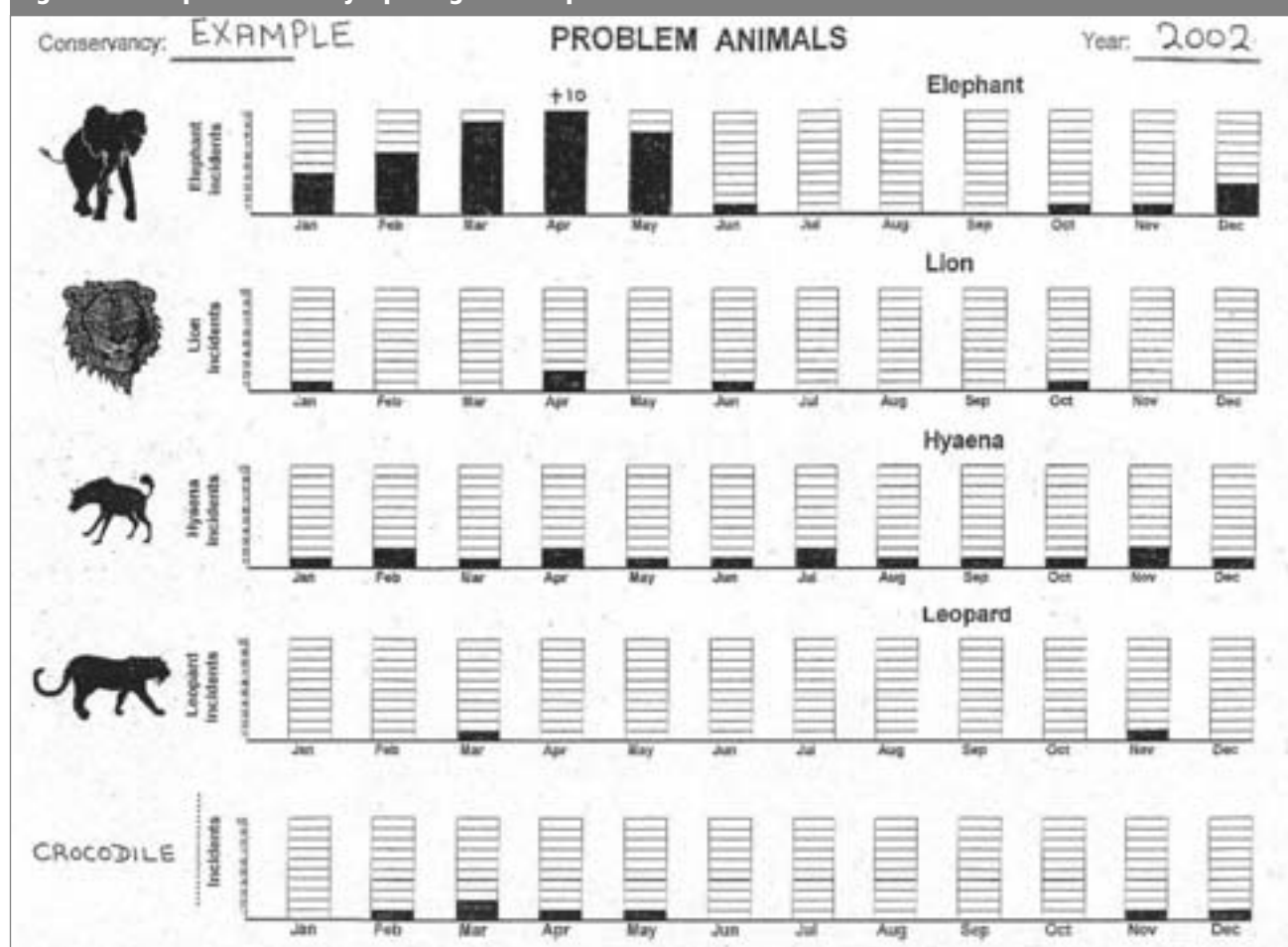
questionnaire constitutes the conservancy's annual monitoring report and copies are circulated as required. The annual audit takes approximately two hours, including archiving the previous year's data, updating the red long-term charts and issuing fresh cards for the event book for the new year. Conservancies are happy to share their results and take great pride in their annual reports. There is considerable competition between conservancies, which creates an incentive to improve performance.

Pen and paper versus computers

The entire system is paper-based, which is appropriate for remote communities and avoids the sustainability problems of ever-changing computer technology. All papers are filed in a customised filing box (Figure 5). This is important in an environment where there are often no offices. The data are owned by the conservancy and if a researcher or government official wants data, only a copy may be taken away. Original raw data never leaves the community! Researchers can easily capture event book data in a digital format for further analy-

Box 2: Elements of the event book system

1. A visual description of the monitoring work to be done:
   • the monitoring poster for the area as a whole
   • job description posters for key people
2. Data-flow posters
3. A data capture system: yellow data cards (e.g. event books, incident books, pocket books; office registers)
4. A monthly/annual reporting system
   • Blue reporting charts
   • Reporting maps
5. Long-term 'red reporting charts' (for trend)
6. An annual audit report
7. An archiving and filing system

Figure 3b: Example of a community reporting map for problem animals
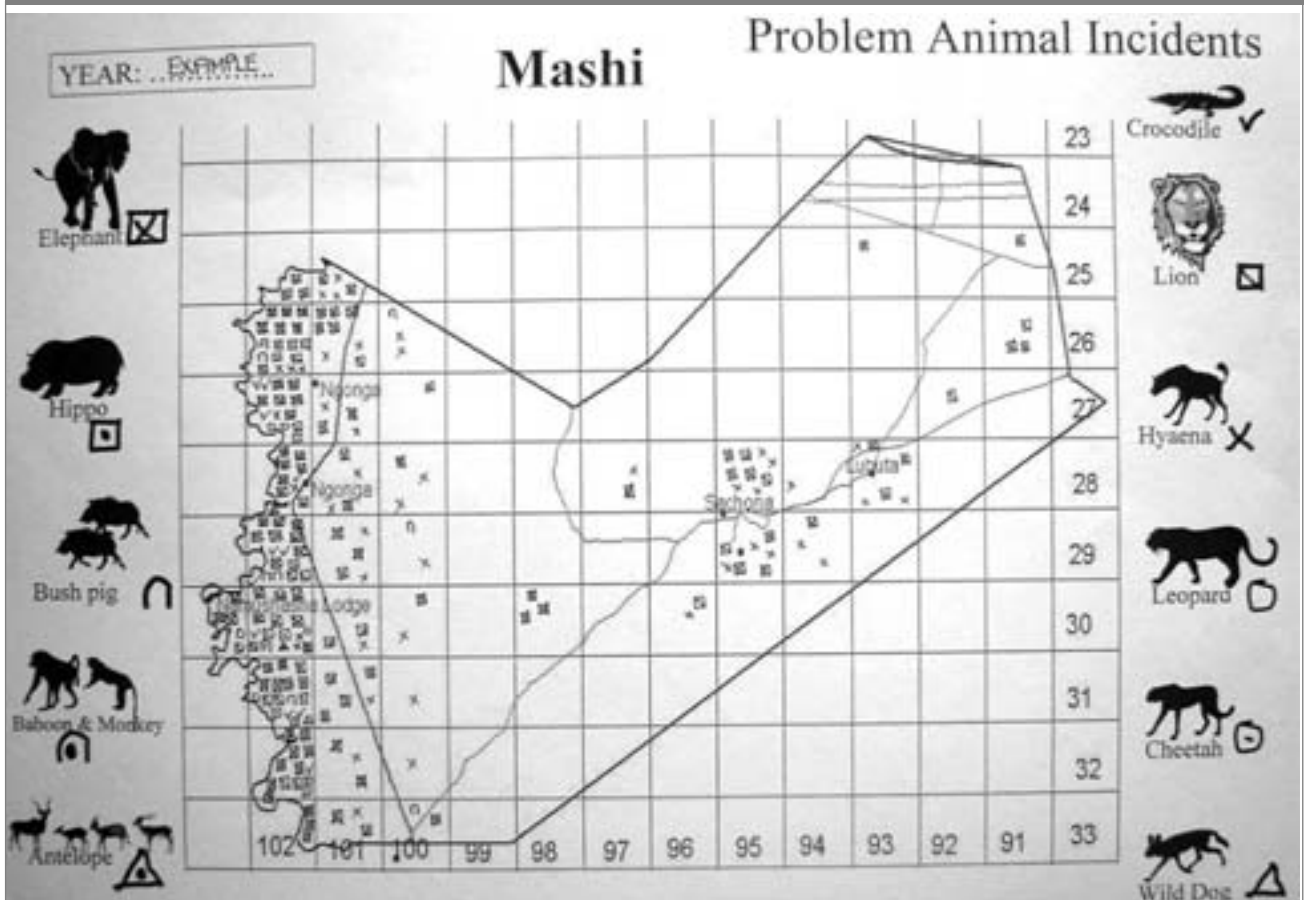
sis and all the data have a spatial element so they are compatible with GIS. In Namibia, data from all annual conservancy reports are captured into a national database. This aggregates results from many different conservancies and creates a national view of the performance of the CBNRM programme in Namibia.

Box 2 summarises the key elements of the event book system

The implementation process

The role of technical experts
The role of technical experts is to provide advice on how a community can gather, process and report data for each monitoring topic it selects. If a module has already been developed with another conservancy, it is made available to new conservancies. It is not compulsory that communities use the modules, but because the tools are standardised across the country, it simplifies the job of supporting community monitoring in a sustainable way.

How much detail to collect?
Land managers want 'balanced' monitoring systems, i.e., a bit of information about a lot of things rather than lots of details about one or two components of the system. They want basic facts – are species declining, is the vegetation degrading, is poaching increasing? Scientists tend to get tangled up in detail and encourage data collection based on 'what if …' scenarios. The basic rule on data collection should be: if in doubt, leave it out!

Need for visual representation of results
Simple reporting charts and maps are critical for success. Primarily for information sharing with community members,

Figure 4: Example of a red trend data reporting chart for problem animals
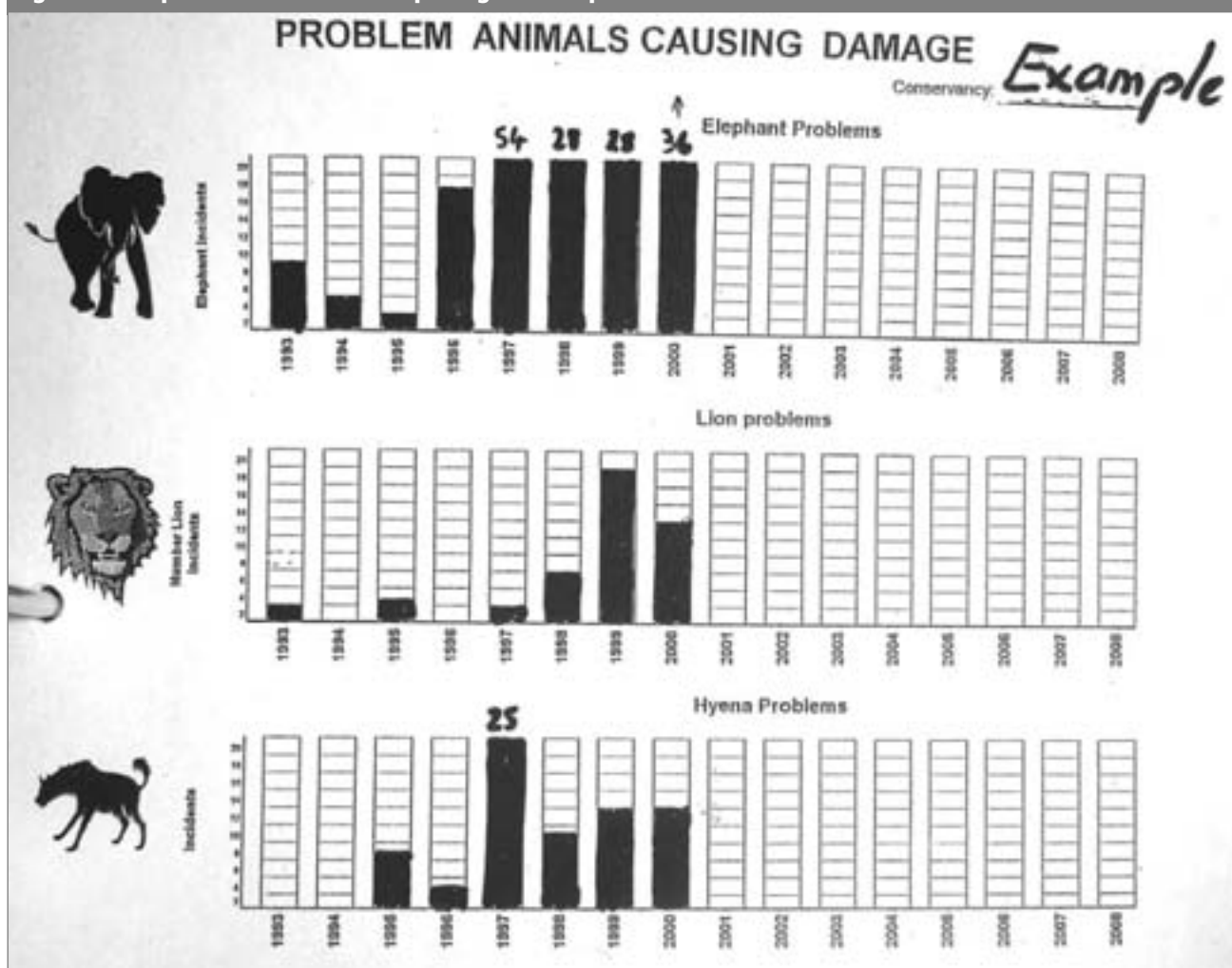
they just as importantly serve to motivate the people collecting the data. The charts incidentally also allow managers to track work performance of conservancy employees.

Box 3: The Ten Commandments

1. Always with its master
2. Never sleeps
3. Always neat
4. Never lies
5. Always reports monthly
6. Never works in another conservancy
7. Always changes its forms once a year
8. Never shares incidents (to avoid double reporting)
9. Always lives in its bag
10. Never works without a smile

The Ten Commandments

A number of technical problems were of course encountered. These resulted in a set of rules which the rangers termed their 'Ten Commandments' (Box 3).

Implementation schedule

Full implementation of the event book system takes a number of years because it is implemented incrementally, building on small successes. It is important to be patient and pay attention to building sustainable monitoring systems rather than being obsessed with data quality. The community needs at least two years of reporting to experience all levels of the system. Participants need to develop basic skills in map reading, filling in data forms and knowledge of the

Figure 5: Event book system filing box

issues being monitored. Depending on the skills in a given conservancy, average follow-up interventions are every quarter during the first 12 months and every six months thereafter for at least two years. Each intervention is kept short (maximum one day) to maintain interest. Box 4 shows how implementation can be phased.

Overcoming difficulties
• Decision makers in conservancies are elected representatives. They change every few years and many have little knowledge about natural resource management. Ongoing training and support on the interpretation and use of monitoring results is necessary.
• Establishing the system requires limited technical support, but it is critical that the support be sustained over a period of at least three years. Don't start such systems unless you are prepared to continue to provide this period of support.
• Success depends on the motivation of the local participants. Individuals who are not managed can drift away from their key responsibilities. The job description posters make it clear which persons are responsible for what.
• Where individuals within a conservancy live large distances from one another, aggregating data into the monthly (blue)

Box 4: Implementation schedule

Phase 1 (>18 months):
• Design the system
• Develop materials for the field
• Start yellow data collection
• Begin blue-level analysis (i.e. monthly reporting systems).

This phase can only be completed once a full year/season of data gathering and field analysis has been completed.

Phase 2 (approx 2 years):
• Continue providing support for the systems established during phase 1
• Design and implement red long-term trend reporting tools
• Refine the system as required

Phase 3 (Optional):
• Design systems for reporting to external stakeholders (e.g. annual reports)
• Design systems to aggregate data from many different conservancies

Produce reporting templates, develop a computerised information system for data input, processing and reporting. Timing for this phase varies because the databases get increasingly more complex depending on the level from which data are inputted (red, blue or yellow level).

reporting charts and maps can be problematic. In these instances blue charts can be compiled on a quarterly basis.

- Basic monitoring materials (event book cards, reporting charts, etc.) must be produced and distributed on an annual basis. This is best achieved through an external technical support provider. Printing large volumes generates economies of scale and the costs are small relative to the benefits of being able to aggregate local-level monitoring data to give national level data.

- Communities often do not have resources to employ staff for monitoring. Sometimes, individual farmers volunteer to maintain event books. School groups could also take this on as a project providing learning opportunities.

- Literacy can present challenges but the use of icons on data cards, reporting charts and job description posters greatly helps. Support from literate colleagues or family members has enabled non-literate rangers to maintain their event books. Because analysis and reporting involves simple addition and colouring in blocks, everybody is able to participate in this.

- Some individuals invent data. This can quickly be exposed during the collective reporting process. The concept of 'no data' being valuable should be addressed and it helps if the technical support persons display a nonchalant attitude, whilst emphasising that the data belongs to the community.

Impacts of the system

The initial objective of the system was for local communities to improve their decision-making. Communities do use the results for technical decisions (e.g. reducing human-wildlife conflict, improving harvest quotas, reducing poaching, etc.)

but the greatest benefit seems to be the empowerment that has emerged through the community having a better sense of what is going on in their area. This puts them in a stronger position when engaging with stakeholders, and the information provides a common currency for these interactions. The increase in conservancy pride has been remarkable. The indirect benefit of Government, NGOs and investors treating the conservancies more seriously has probably greatly outweighed the improved data-linked decision making one normally associates with monitoring. Quotas have increased in the face of a lack of alternative data from Government. Communities are more confident in negotiations partly because of the pride they have in knowing that they have better information than neighbouring National Parks. They also have data to counter dissenting views regarding the sustainability of their game harvesting programmes.

Another impact has been the evolution of organisational management systems which are now being used to formalise other conservancy management systems such as financial and enterprise management. The system is also being used to identify weak and strong community office bearers and has contributed to the institutional strengthening of a number of conservancies. Over time we noted that the literacy and numeracy skills of community rangers has improved

Finally, whilst never an initial design intention, a spin-off is the collection of a considerable amount of data in an extremely cost-effective manner. The data are aggregated and used at a national level for compiling an annual state of conservancy programme report, and for improved support and more equitable treatment of conservancies with regard to human-wildlife conflict and quota setting.

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