

REGIONAL PERSPECTIVES

**NATURAL CAPITAL ACCOUNTING
WORKSHOP REPORT AND NEXT STEPS
DECEMBER 2016**



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WAVES

Wealth Accounting and the
Valuation of Ecosystem Services

WORKSHOP ON REGIONAL PERSPECTIVES ON NATURAL CAPITAL ACCOUNTING

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EXECUTIVE SUMMARY

The Workshop on Regional Perspectives on Natural Capital Accounting held in Nairobi, Kenya in June 2016 brought together delegations from twelve countries and many agencies working on Natural Capital Accounting (NCA). The workshop was undertaken in the context of the Gabarone Declaration for Sustainability in Africa (GDSA) which commits signatory countries to incorporating the value of natural capital in public and private policies and decision-making.

The workshop provided a platform to build additional momentum for NCA in both GDSA and non-GDSA countries in the region, recognising that there is increasing impetus for this work as governments understand the importance of incorporating nature-based solutions in their pursuit of sustainable economic development.

Numerous NCA achievements in the region were described including the production of different accounts in a number of countries. Examples included water accounts in Botswana, ecosystem accounts in South Africa, energy accounts in Namibia, mineral accounts in Madagascar, biodiversity accounts in Mauritius, and emissions accounts in Ghana.

The workshop demonstrated the willingness of countries and agencies to share their expertise and experience. High levels of enthusiasm and personal commitment to NCA were displayed by participants. The workshop also identified potential data sources and methods for account production as well as policy issues to which accounting can be applied including: the sustainable development goals, poverty reduction, climate change, Aichi Targets for biodiversity, and natural resource management.

While NCA is advancing in the region and work can clearly be progressed, there are challenges to be overcome. Pre-workshop scoping assessments with seven countries and subsequent discussion at the workshop identified the need for:

- Increasing coordination among agencies at country level;
- Increasing technical expertise in NCA;
- Understanding and demonstrating policy applications of NCA; and
- Improving the sharing of existing data and resources to fill data gaps.

One of the outputs of the workshop was the issuance of the GDSA NCA Statement, agreed to by the delegates of the workshop. This statement called upon the GDSA and partners to “strengthen and expedite the NCA initiatives within member countries and establish a Community of Practice (COP) on Natural Capital Accounting” and for participating countries to “develop an NCA roadmap in order to mainstream NCA nationally and in support of the COP.” The establishment of the COP was a workshop objective included in the workshop agenda and was therefore discussed throughout the three-day meeting. During the workshop, it was suggested via discussion sessions that the NCA COP would function as a platform to build capacity in NCA in Africa, to facilitate the exchange of experiences between countries, to develop common templates and methods for application at country level, to provide a mechanism for efficient delivery of training and development, and to establish a clear reference point for NCA in the region.

In closing, the workshop was an important first meeting of a wide range of African stakeholders in the NCA community, including technical account producers, users, and donors. The GDSA NCA statement and other post-workshop follow-up aim to keep momentum going in the region on this topic, particularly in the form of a Community of Practice and in promoting country-level planning around the subject.

INTRODUCTION

Nature is foundational to the prosperity and security of people and economies. Natural capital, which includes all of nature's assets — geology, soil, air, water, and all living things — provides a wide range of services to people and is estimated to contribute to 36% of the total wealth of developing countries worldwide.¹

Yet, many of the benefits we receive from nature and the impacts we have on nature remain hidden and are often not taken into consideration when making decisions. As a result, nature is being eroded at an alarming rate; the loss of forest alone is costing the global economy between \$2 and \$5 trillion per year, or nearly one-third of the U.S. economy.² Neither the value of natural capital nor the impacts of its loss are captured in the System of National Accounts, which is used by nations to measure economic activity and by decision makers to assess performance, set policy, and report on progress.

Natural Capital Accounting (NCA) is commonly defined as the measurement of stocks of natural resources (both renewable and non-renewable) and the flows of benefits they provide. NCA seeks to capture and integrate the contribution of nature into the systems that the private and public sectors use to make decisions. NCA efforts in the public sector, typically referred to as environmental-economic accounting, are the domain of the United Nation's System of Environmental-Economic Accounts (SEEA).

As detailed, **NCA is not contained in a single account.** For example, there are mineral, water, and energy accounts, to name just a few. The NCA framework places all of the different accounts in context to provide an integrated perspective. **As such, users can select the pieces of information that are relevant to the current policy or analytical question, confident that these distinct pieces of information, often presented as indicators, have been appropriately confronted and reconciled.**

1 World Bank. 2011. The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium. Washington, DC

2 The Economics of Ecosystems and Biodiversity (TEEB). 2010. Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB

GLOBAL IMPLEMENTATION OF NATURAL CAPITAL ACCOUNTING

Natural Capital Accounting (NCA) has been recognized as an important tool for evidence-based policy making about the role of nature within sound economic planning and development activity. At a global level, NCA has been identified as one of the useful frameworks for the purpose of monitoring and reporting on the United Nations Agenda 2030 and sustainable development goals (SDGs).³ Connections to NCA have also been established with various natural capital initiatives such as the Convention on Biological Diversity (CBD) Aichi targets, the TEEB (The Economics of Ecosystems and Biodiversity), and the Natural Capital Protocol,⁴ where NCA can provide a common measurement framework and data for monitoring and analysis.

Implementation of the SEEA NCA standards through various programs, such as the World Bank WAVES led partnership,⁵ is now widespread with a 2014 UN Statistics Division survey reporting that more than 70 countries either have NCA programs in place or planned to commence.⁶

The methodologies for undertaking NCA have been in development for over 20 years. Based on research and testing, international statistical standards for the following accounts were adopted by the United Nations Statistical Commission in 2012 in the form of the System of Environmental-Economic Accounting (SEEA) Central Framework. The SEEA Central Framework, includes methodologies on:⁷

- Natural resource accounts for **minerals and energy resources, timber resources, and fish resources**. These accounts provide measures of the stock of these resources, their economic value and estimates of depletion.
- Physical flow accounts for flows such as **water, energy, greenhouse gas (GHG) emissions and solid waste**. These accounts articulate the balance of these flows between the economy and the environment and underpin measurement of resource efficiency and environmental footprints.
- **Land accounts** that track changes in the composition of land use and land cover within a country or region. These accounts are important in monitoring rates of deforestation, land degradation and desertification, and urban expansion. Land accounts provide the broad context for NCA and underpin the measurement of important indicators such as carbon stocks and flows.

In addition, recent and ongoing research has developed complementary accounting guidelines, the SEEA Experimental **Ecosystem Accounting**, that describe the integration of measures of ecosystem services and ecosystem condition or health with standard economic measures.⁸ The number of applications of ecosystem accounting is rising rapidly and, in a short space of time, ecosystem accounting has become leading practice in NCA work.⁹ The logic of ecosystem accounting is also present in the measurement of natural capital in the UNEP UNU-IHDP Inclusive Wealth Accounting reports.¹⁰

Expansion of the SEEA methodologies and guidelines is an ongoing process. The SEEA Agricultural, Forestry, and Fisheries (SEEA AFF) methodology is one of the most recent developments; the SEEA AFF accounting framework allows for the “description and analysis of the relationship and the environment and the economic activities of agriculture, forestry, and fisheries.”¹¹

3 See, for example, <https://sustainabledevelopment.un.org/post2015/transformingourworld>

4 See TEEB (<http://www.teebweb.org>); CBD Aichi targets (<https://www.cbd.int/sp/>); Natural Capital Protocol (<http://naturalcapitalcoalition.org/protocol/>).

5 For example see World Bank WAVES led partnership (<https://www.wavespartnership.org/en>) and the UNSD/UNEP/CBD project Advancing Natural Capital Accounting (<http://www.teebweb.org/areas-of-work/advancing-natural-capital-accounting/>).

6 See <http://unstats.un.org/unsd/statcom/doc15/BG-UNCREEA.pdf>

7 UN et al (2014) System of Environmental-Economic Accounting 2012 Central Framework. Available online: http://unstats.un.org/unsd/envaccounting/seeaRev/SEEA_CF_Final_en.pdf

8 UN et al (2014) System of Environmental-Economic Accounting 2012 Experimental Ecosystem Accounting. Available online: http://unstats.un.org/unsd/envaccounting/seeaRev/eea_final_en.pdf
UNSD (2015) SEEA EEA Technical Recommendations, Consultation draft.

9 See, for example, discussions at the 2016 WAVES PTEC meeting (<https://www.wavespartnership.org/en/testing-new-ways-construct-ecosystem-accounts>); the 2015 London Group meeting (<http://unstats.un.org/unsd/envaccounting/londongroup/meeting21.asp>); and the 2015 Forum of experts on ecosystem accounting (http://unstats.un.org/unsd/envaccounting/workshops/eea_forum_2015/lod.asp).

10 UNEP, UNU-IHDP (2014) Inclusive Wealth Report.

11 FAO & UNSD (2014) System of Environmental-Economic Accounting for Agricultural, Forestry, and Fisheries (SEEA AFF). Available online: http://unstats.un.org/unsd/envaccounting/aff/GC_Draft.pdf

NATURAL CAPITAL ACCOUNTING IN AFRICA

In Africa, the development of natural capital accounts has been ongoing since the late 1980s, with dozens of pilot accounts developed by numerous countries across the region. A 2016 summary report by Conservation International (CI) and the GDSA¹² highlighted the substantial progress in NCA by GDSA countries¹³. In many cases, these initiatives have been supported by external donors and partners, including the Forest Investment Program (FIP), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the World Bank led Wealth Accounting and Valuation of Ecosystem Services (WAVES) program, the United Nations Environment Programme (UNEP), and the United Nations Statistical Division (UNSD). **It is clear that with NCA now gaining global momentum, countries are exploring more comprehensive solutions to mainstream the results of accounting into decision making.**

At the continental level, NCA has been increasingly recognized as an important vehicle for sustainable development. For example, natural capital valuation, accounting and analyses are supported in operative decisions, resolutions and declarations by:

- The sixth special session of the African Ministerial Conference on the Environment (AMCEN) in Cairo, Egypt in April 2016;
- The second United Nations Environment Assembly in Nairobi, Kenya in May 2016; and
- The eighth Summit of the Heads of State and Government of the Africa Caribbean and Pacific (ACP) Group in Port Moresby, Papua New Guinea in June 2016.



FIGURE 1.1: Map of GDSA countries, including member countries and associated countries (in dark and light green, respectively).

¹² Reuter, K.E., Juhn, D., Portela, R., and Venter, J. 2016. Natural Capital Accounting across the Gaborone Declaration for Sustainability in Africa: A Desktop Scoping. Report Prepared for the Gaborone Declaration for Sustainability in Africa: Gaborone, Botswana. Pp. 188

¹³ See: <http://www.gaboronedeclaration.com>

In regards to the GDSA, the GDSA is a leading regional action platform which prioritises the relevance and implementation of NCA for sustainable natural resource management.

The GDSA was agreed to by ten African Heads of State in 2012¹⁴ in the context of the Rio +20 Summit as a collective commitment to sustainable development in the region (Figure 1.1). The objective of the Declaration is, “to ensure that the contributions of natural capital to sustainable economic growth, maintenance and improvement of social capital and human well-being are quantified and integrated into development and business practice.”

Specifically, the GDSA signatory countries have committed to:

- Incorporate the value of natural capital in public and private policies and decision-making;
- Pursue sustainable production in such sectors as agriculture, fisheries, and extractive industries while maintaining natural capital, building social capital and reducing poverty; and
- Generate data and build capacity to support policy networks for sustainable development.

The importance of the GDSA has been noted by various African-level entities. For example, the GDSA was endorsed as a vehicle for green development by the African Ministerial Conference on the Environment (AMCEN) in March 2015, thereby earmarking the GDSA for inclusion in the African Union (AU) structure of programs. AMCEN 2016 reinforced this position by appreciating the role of the GDSA in harnessing the full potential of Africa’s natural resource endowments and inviting member states to join the GDSA. Conservation International (CI)¹⁵ has been delegated the functions of the GDSA Secretariat by the Government of Botswana until 2018. CI has substantial experience in NCA both in Africa and globally.¹⁶

In Africa, one of the important entities moving forward NCA is the Wealth Accounting and the Valuation of Ecosystem Services (WAVES) partnership,¹⁷ a World Bank-led global initiative, which aims to promote sustainable development by ensuring that natural resources are mainstreamed in development planning and decision making and incorporated in national economic accounts. Active in Botswana, Madagascar, and Rwanda – along with countries in other areas of the world – the partnership was a co-organizer of the workshop being reported here.

Recognizing the importance of NCA in measuring progress towards the Sustainable Development Goals, the Secretariat of the Gaborone Declaration for Sustainability in Africa (GDSA) and Conservation International (CI), in partnership with WAVES, conducted a Natural Capital Accounting (NCA) workshop on the 21-23 June 2016 in Nairobi, Kenya. This workshop provided an opportunity to discuss potential avenues of knowledge sharing on NCA across the Gaborone Declaration.

OBJECTIVES OF THE WORKSHOP

The purpose of the Natural Capital Accounting (NCA) Workshop was to share experiences on NCA implementation and its use in policy making, to learn from those experiences, and to discuss opportunities for mainstreaming NCA in GDSA countries. Specifically, the objectives of the workshop were to:

- Provide country delegations with tailored feedback as it related to their specific NCA needs. The key messages from these discussions are summarised in section three.
- Offer opportunities for learning exchanges and interactive activities to enhance knowledge and to build a common understanding and language around NCA.
- Establish avenues for country delegations so that they can continue to build and enhance their respective programs in NCA and find areas of collaboration moving forward, potentially in the form of an African-led Community of Practice on NCA.

¹⁴ The ten GDSA Signatory countries are: Botswana, Gabon, Ghana, Kenya, Liberia, Mozambique, Namibia, Rwanda, South Africa, and Tanzania. The two GDSA associated countries are Madagascar and Uganda (countries in which the respective Head of State has expressed interest in joining the GDSA).

¹⁵ See: <http://www.conservation.org>

¹⁶ CI has conducted innovative research and development of NCA, working together with the Government of Peru on the piloting of ecosystem accounting. Information available online: <https://www.wavespartnership.org/es/knowledge-center/las-cuentas-experimentales-de-los-ecosistemas-en-san-martin-peru>

¹⁷ See: <http://www.wavespartnership.org>

EXPECTED OUTPUTS

An important outcome from the workshop was the establishment of personal relationships among those experts across the GDSA countries with a strong interest in NCA. The participants were actively engaged in the discussion, willing to share their experiences and showed a high level of personal commitment. Harnessing this personal commitment will be an important aspect in the further development of NCA in the region.

The outputs of the workshop included:

1. **A GDSA Natural Capital Accounting Statement concerning a Community of Practice (COP) and the preparation of country-specific NCA roadmaps. This statement was drafted together with workshop attendees to capture the outcomes of the workshop as well as identify key next steps agreed to by workshop participants.**
2. **This report, which summarizes the outcomes of the workshop as well as existing NCA work across the GDSA and an articulation of country-specific opportunities for NCA.**

To fulfil the second output of the workshop, this report is structured in a series of sections. In Section 2, the GDSA statement, which was agreed to by country delegates discusses the proposal on establishing and operating a GDSA COP on NCA. Section 3 summarises the information collected via pre-workshop NCA readiness assessments, which were completed by the seven of the country delegations in advance of the workshop. In Section 4, the main steps to be undertaken in the implementation of NCA at country level are outlined. Section 5 concludes the report and provides motivation for moving forward.

Ahead of the workshop, countries were invited to participate in scoping assessments in which their experience, prospects and plans for NCA were discussed in a conversation between each country and the invited experts. Seven countries accepted this invitation and completed an NCA readiness scoping questionnaire (see Annex 4 and summarized in Section 4).

Annexes to this report provide details on the workshop agenda (Annex 1); the participant list (Annex 2); the full GDSA statement (Annex 3); the questions used in the pre-workshop NCA readiness scoping (Annex 4); summaries of each participating countries' responses to the readiness scoping (Annex 5); and a summary of developing and implementing NCA in practice (Annex 6).



THE GDSA NCA STATEMENT

ACTIVITIES UNDER THE GDSA NCA STATEMENT

One of the key achievements from the workshop, in addition to lessons sharing and dialogue among and between participants, was a statement by participating delegates calling on the following post-workshop actions:

- The development of NCA roadmaps by participating countries in order to mainstream NCA nationally and in support of the COP as aligned to existing international commitments such as the Aichi targets, the sustainable development goals, and other respective national priorities;
- Establishment of a Community of Practice (COP) on NCA for the specific purpose of learning and sharing of approaches, experiences, and best practices in NCA among the GDSA countries via south-south exchanges, dialogue by both practitioners and decision-makers on NCA, and training opportunities as appropriate including both technical practitioners and decision-makers;
- The identification of an NCA Contact Point within countries interested in participating in the NCA COP to foster communication and information exchange in relation to the NCA-COP.

The formulation of this statement is an important step in advancing the development of NCA within the region. The full statement is presented in Annex 3.

These outcomes are discussed, below. In addition, and where appropriate, additional information regarding the implementation of these outcomes (particularly with respect to the NCA COP) are discussed, noting that these details on implementation are suggestions for further discussion at the next regional workshop.

DEVELOPMENT OF COUNTRY-SPECIFIC NCA ROADMAPS

As noted, it was agreed in the GDSA NCA Statement that successful progression of NCA requires clear country-level roadmaps to be developed that are understood and endorsed by all stakeholders within a country. During the workshop, there were various understandings of what a roadmap would entail. These ranged from action plans for NCA to detailed, in-depth scoping processes within countries to understand the link between NCA and various national programs.

It should be noted that several countries in the GDSA already have partial or complete NCA roadmaps, these roadmaps were cited in some of the presentations given by delegates during the course of the workshop. These existing roadmaps could be shared with other NCA COP members to promote best practice and learning. While the development and endorsement of NCA roadmaps is a task to be completed within each country, it was suggested that countries should be encouraged to involve the NCA COP network in developing the roadmaps.

Generally speaking, NCA roadmaps have often been used by countries to provide a forward looking perspective on the direction and steps required for the implementation and maintenance of NCA at the country level. As such they can provide an overarching picture for the management of NCA within that country. It was mentioned by some workshop delegates that the development of NCA roadmaps would likely require the investment of resources by NCA COP members. Therefore, pending funding, some resources could be provided on a competitive basis to members in order to promote progress on this. Alternatively, roadmaps might be articulated based on different resourcing levels. In all cases, the development of roadmaps is likely to be well informed through discussion within the NCA COP particularly in terms of understanding the detailed 'tips and tricks' in moving forward.



ESTABLISHING A GDSA NCA COMMUNITY OF PRACTICE

One of the objectives of the workshop was the discussion of a potential Community of Practice (COP) on NCA under the GDSA.

The issues concerning a COP were discussed on all three days of the workshop and participants recognised the potential benefits from establishing a mechanism to share experiences in NCA and work collaboratively to implement and apply accounting principles in support of natural capital outcomes. **It should be noted that no such regional collaboration network currently exists in Africa for NCA, though the World Bank WAVES led partnership has recently made progress on developing similar networks in other areas of the world. As noted in the GDSA NCA Statement, there was general support for the development of an NCA regional collaboration initiative.**

A COP is generally established for the specific purpose of learning and sharing of approaches, experiences, and best practices; it is driven by the requirements of the participants and has a degree of overarching coordination and support. In this case, the NCA COP envisaged in the text of the GDSA NCA Statement would follow this logic among the GDSA countries via south-south exchanges, dialogue among both practitioners and decision-makers on NCA, and affiliated training opportunities as appropriate including both technical practitioners (account producers and analysts) and decision-makers (account users). Pending funding, there would also be space to organize working groups and other opportunities as affiliated projects under the umbrella of the NCA COP (projects or activities which would naturally benefit the members of the NCA COP), although some of these aspects were not explicitly discussed in the workshop itself.

The discussions at the workshop regarding the NCA COP revealed some issues that will need to be addressed. **For example, it was recognised that the roles of the NCA Contact Points that are nominated by each country will need to be clearly specified to facilitate the participation of countries in the COP.** Fundamentally, the NCA Contact Point role (as noted in the GDSA NCA Statement) is to ensure open and transparent lines of communication within and between countries. This is no small task in view of the range of different stakeholders and institutions, and it was therefore acknowledged that the selection of a Contact Point by the member countries of the NCA COP would likely be specific to each country context. For example, in some countries, the GDSA Focal Point may also be the appropriate person to whom communication regarding the NCA COP should go. In other instances, there may be merit in identifying another person or persons who could share this responsibility.

PROPOSALS FOR THE OPERATION OF THE COMMUNITY OF PRACTICE (COP)

In line with the NCA COP Statement, at the workshop, some proposals were discussed for the implementation and operation of the NCA COP. In addition, following the workshop, the GDSA has continued to scope how an NCA COP could be implemented. The following section summarizes these discussions as well as post-workshop scoping. The proposals, below, are intended to provide a starting point for further discussion and to provide direction for appropriate planning and coordination. **In line with the general principles in establishing an NCA COP, the direction and operating model of a COP is determined by the participants.**

At the broadest level, the COP will support best practices in NCA. The proposed goals of the COP are to build capacity and momentum on NCA across the GDSA and the African continent, for interested countries. It is critical that the NCA COP be targeted such that it facilitates progress towards the countries' NCA roadmaps by facilitating learning at the regional level. The NCA COP would not directly implement national-level programming though this programming is of course informed by the NCA COP and also provides impetus for the existence of the NCA COP.

It is proposed that the COP is facilitated using regular meetings of both producers and users of accounts (technical staff and decision-makers, respectively), as well as through south-south exchanges, practitioner-level dialogue of NCA across the GDSA, and the coordination of training and development activities among the GDSA countries.

Based on the discussions held at the workshop, there was general agreement that the NCA COP will initially launch with GDSA member countries, though it is open to interested non-member countries as well. A public partnership agreement, outlining the baseline principles of the NCA COP, would be a prerequisite for joining. It is anticipated that a range of experts from countries will participate in the NCA COP, including individuals in government, parastatal, academic, and other entities, as desired by the member country. In addition, the structure of the NCA COP could provide opportunities for the involvement of, and coordination with, non-state actors as partners. For example, partners, such as CI and World Bank, could support one aspect of the COP (e.g., provision of technical experts for the workshops; online outreach) or they could support the involvement of key individuals from core or affiliated countries. These non-state actors could include NGOs, multilateral and bilateral entities, academic and research institutions and other actors. Finally, and as the NCA COP grows, it is anticipated that individuals – such as external experts – would be able to participate in the NCA COP once it is established, perhaps through attendance of annual meetings.

Other proposals raised at the workshop concerned the operation of the COP in regards to the potential structure, methods and implementation timelines; many are reviewed, below. One model presented to the participants for consideration was a three-year model whereby the NCA COP would articulate goals and targets for its members on a three-year basis, supported by annual meetings. This three-year model would allow for members and partners to plan their participation in a way that fit both their individual and country-level short- and long-term goals. It was noted during the workshop discussions that the structure of the NCA COP would likely evolve following its initial launch and would naturally be open for further consideration and discussion among member countries and partners.

Structure: During the workshop, it was proposed to structure the NCA COP such that all GDSA member countries would be involved and that other countries in the region could participate if desired. As per the workshop discussions, it was generally envisioned by delegates that countries participating in the NCA COP would:

- Nominate a national NCA Contact Point to serve as the primary contact point for this COP (as noted in the GDSA NCA Statement).
- Nominate other individual experts to participate in the NCA COP. Since it is proposed that the COP focus on discussion of issues related to the production and management of NCA, it would be expected that nominated individuals would be producers of the accounts (e.g., technical experts). At the same time, an active connection to users of the accounts (e.g., decision-makers and analysts) will need to be maintained.
- Promote the NCA COP and hosting, as needed, workshops and events related to the COP. There were explicit requests by countries for NCA COP events to rotate among the participating countries on a regular basis.

It was proposed by the GDSA during the workshop, that – if feasible – the same individuals remained involved over the course of a three-year COP work plan so that their capacity could increase over time, and so that progress in NCA could be achieved in their respective countries.

To support engagement with users and as part of the promotion of NCA in their countries, it was proposed by the GDSA during the workshop that COP countries also identify champions of NCA in their countries who would play key roles in main-streaming NCA into decision-making processes.

NCA COP methods: It was suggested by workshop delegates (as noted in the GDSA NCA Statement) that the COP facilitate learning exchanges, collaboration and NCA activity among countries through:

- *Meetings:* The purpose of these meetings would be to allow NCA COP participants to gain critical expertise to help them work through hurdles they are facing in their NCA initiatives. These meetings could also provide participants with training opportunities as needed or be otherwise themed, potentially on certain topics (e.g., land accounts).
- *South-South exchanges:* Pending funding, targeted learning exchanges between countries could be organized. The purpose of such South-South exchanges would allow COP participants the ability to see how NCA is being implemented and main-streamed elsewhere. Alternatively, South-South exchanges might be structured to allow countries to be paired to undertake long-term training and knowledge exchange.
- *Coordination through NCA Contact Points:* NCA Contact Points were considered a core feature of the COP. It was proposed that there would be communication with these individuals on a monthly basis with updates on NCA initiatives in Africa. In addition, NCA Contact Points would play a key role in ensuring the success of ongoing, on-line, technical discussions among the participating countries including following up on agreed deliverables and coordination of meeting agendas.

As part of the operation of the NCA COP, and in post-workshop scoping, the GDSA suggests that it might be appropriate to establish targeted sub-groups of experts with a focus on a particular NCA topic or theme. If established, these groups could be formed with a mandate to report back to the broader COP, perhaps via the preparation of relevant working papers with recommendations and proposed next steps. These sub-groups could convene on their topics of interest in a way that would elevate the thinking on NCA-related topics in Africa and could result in outputs including working papers.

Timelines: It was proposed by the GDSA during the workshop that the NCA COP be established through a six-month start-up phase and a subsequent, three-year implementation phase. Table 2.1 proposes for discussion, an initial timeline for the establishment of the NCA COP noting key steps and possible timings to the end of December 2018; this timeline was not presented to workshop delegates but has been developed in post-workshop scoping. The proposals in Table 2.1 have been framed with the following considerations in mind:

- Obtaining formal agreement and sign-off is required beyond the agreement in principle determined at the June 2016 workshop. Agreement is required from countries and relevant funding and resourcing agencies including CI and World Bank.
- Selecting and nominating high quality country level NCA Contact Points is considered essential to the success of the NCA COP. Appropriate discussion and agreement on the precise role for Contact Points, the required skill set of the selected individuals, and arrangements for the resourcing of these positions would be required relatively soon.

- An initial focus of the NCA COP should be on ensuring that all countries involved have completed similarly structured NCA feasibility assessments and developed appropriate roadmaps. This could therefore be one focus of the first NCA COP meeting and it is proposed that, over time, all countries' roadmaps be discussed within the NCA COP as a form of peer review.
- The initial NCA COP meeting could also ensure substantive discussion and exchange on a selected technical topic (Table 2.1 uses land accounting as an example, but there are many other topics that could be explored in depth by the NCA COP). It is proposed that specific technical questions on a topic, for example the choice of classifications in land accounting, should be posed ahead of meetings to a limited number of countries and then the meeting should discuss the results of their investigations. Initially, the current leading countries may be more active, but over time all countries should be encouraged to contribute to these exchanges.
- It is important that the momentum initiated at the Workshop in Nairobi be maintained in the coming 12-18 months. While substantive content may take some time for countries to exchange, establishing a highly-effective network of NCA Contact Points in the short term is likely to stimulate awareness and growth in the NCA COP.

Frequency of COP meetings: Depending on funding, the NCA COP will be organized so that there are two meetings per year; workshop participants specifically requested at least one meeting per year. While engagement with users should be a regular (at least annual) component of COP meetings, additional meetings focusing more specifically on the use and application of NCA could also be scheduled. The proposed timing in Table 2.1 for meetings every six months is to ensure ongoing momentum is maintained.

At the same time, it is important that there is sufficient contribution from countries and other partner organizations in each meeting and, to this end, it may be appropriate to informally set expectations of outputs/contributions from countries well ahead of time. These contributions should be incorporated into relevant roadmaps at the country level.

TABLE 2.1: An example NCA COP timeline – June 2016 to December 2018

Year	Month	Activity / Outcome
2016	June	Agreement in principle to establish NCA COP
	September	Partnership Agreement for NCA COP drafted for both State and non-State Actors
		Terms of Reference for NCA Contact Points drafted
	October	Formal agreement from countries and partner organizations to join the NCA COP
	November	Announcement of the NCA COP to the public, pending funding.
	December	Nomination of NCA Contact Points for each member country, if not already completed.
2017	February	Introductory meeting for contact points, pending funding.
		Draft templates for feasibility assessments and roadmaps
		Establish agenda and arrangements for first NCA COP meeting
	March	Finalise first meeting agenda and country contributions
	June/July	First NCA COP meeting - proposed agenda to cover <ul style="list-style-type: none"> • formal endorsement of the COP; • sign-off of templates for feasibility assessments and roadmaps; • exchanges on four countries' assessments and roadmaps; • two days detailed discussion on land accounting, or another technical issue, as desired by participants.
	November	Second NCA COP meeting – proposed agenda to cover <ul style="list-style-type: none"> • exchanges on four countries assessments and roadmaps • engagement with users on policy uses and applications • review of land accounting • two days detailed discussion on water accounting issues.
2018	May	Third NCA COP meeting
	November	Fourth NCA COP meeting

Ongoing communication and coordination through Contact Points

THE STATUS OF NATURAL CAPITAL ACCOUNTING IN GDSA COUNTRIES



As part of the preparation for the workshop, country delegations were asked to complete a questionnaire concerning natural capital accounting in their countries. These questionnaires were designed to supplement the desktop scoping already completed by CI and the GDSA in 2015. **The purpose of this questionnaire was to better understand the status of NCA across the GDSA to inform the next steps forward, particularly with an NCA COP.** The questionnaire is presented in Annex 4. It covers a range of topics including:

- State of natural capital knowledge within the country
- Creation and content of natural capital accounts
- Institutional arrangements for natural capital accounting
- Data environment to support natural capital accounting
- Use of natural capital accounts in decision-making
- Legal and policy development concerning natural capital
- Success stories, challenges and lessons learned

This section summarises the findings from the submissions provided by Botswana, Ghana, Madagascar, Mauritius, Namibia, South Africa and Uganda. **It should be noted that Botswana, Namibia, South Africa, and Rwanda also presented during the workshop on their ongoing NCA work.** Summaries of their presentations are included in this section as Case Studies and, in the case, of Botswana, Namibia, and South Africa, much of the content of their presentations was also captured in their completed questionnaires. Five other countries nominated delegations to attend the workshop, but did not complete a readiness scoping. Short summaries of the seven completed readiness assessments can be found in Annex 5.

As noted above, and in September 2015, Conservation International completed a primarily desktop natural capital accounting scoping study that covered many similar aspects of natural capital accounting implementation for all GDSA member and associate countries.

Key findings from that study were that:

- Most GDSA countries have undertaken national or sub-national NCA initiatives.
- Most countries faced several complex and overlapping hurdles.
- There are commonly non-NCA based initiatives concerning the measuring and monitoring of environmental assets that could be used to build a foundation for NCA implementation.
- There are opportunities to increase the capacity in NCA work by supporting practitioners and facilitating the governance and institutionalisation of NCA.

CASE STUDY: RESOURCE MOBILIZATION FOR BIODIVERSITY CONSERVATION IN NAMIBIA

Namibia – one of the countries with the longest running NCA efforts in the GDSA – has recently kick-started efforts to undertake water accounting initiatives, as part of a larger initiative on resource mobilization (with assistance from GIZ). During the workshop, attendees were given a high-level overview of Namibia's approach to NCA which included: 1) Namibia's approach to NCA; 2) Namibia's fast-track compilation of water accounts; 3) high-level linkages between NCA and various policy and decision-making implications; and 4) recommendations for moving forward and Namibia's three-year roadmap on NCA. Namibia. Based on recent experiences in their NCA work, the presentation suggested the following recommendations and ways forward: 1) the establishment of inter-institutional cooperation; 2) the development of both water and non-water accounts; and 3) expansion/growth in expert positions, capacity building, and financing.

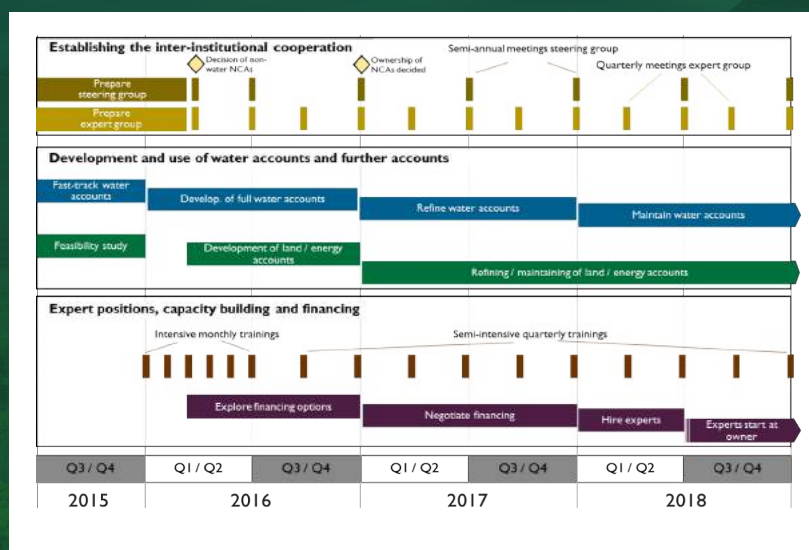


Figure (above): A high-level overview of Namibia's roadmap for NCA implementation, as presented at the NCA workshop (courtesy of Namibia's ResMob program).

The workshop was conducted to take these findings forward and the assessments summarised here contribute to building the understanding of NCA implementation in GDSA and other countries interested in NCA on the African continent.

OVERALL FINDINGS FROM THE NATURAL CAPITAL ACCOUNTING (NCA) ASSESSMENT

The feedback from the seven countries was very valuable in understanding the current situation with respect to NCA in both GDSA and non-GDSA member countries and also in providing a shared information resource for future discussion and progressing NCA implementation.

Concerning implementation, the readiness scoping assessments highlighted that it is certainly possible to undertake NCA in Africa, but that there is no single, 'silver bullet' solution to ensure easy implementation. It is clear too, that different challenges will emerge in different countries and the chosen solutions will vary from country to country due to, for example, differences in institutional settings, data availability, technical expertise and environmental and economic situation.

Nonetheless, there is ample scope for an exchange of experiences given the quite similar situations in which GDSA countries, and other countries on the African continent, find themselves with respect to the composition and use of their natural capital. For example, the relatively common interest in issues of mineral and energy resources, agriculture, water and protected areas to support tourism.

The findings from the NCA assessments are grouped under five themes: (i) self-assessment of state of information on natural capital; (ii) progress on implementation; (iii) policy linkages; and (iv) barriers and lessons learned.

CASE STUDY: WATER ACCOUNTING IN BOTSWANA

Botswana, the host of the GDSA Secretariat, has been developing natural capital accounts with assistance from the World Bank WAVES led partnership. At the workshop, delegates from Botswana provided an overview of Botswana's NCA policy priorities, institutional arrangements, progress on NCA, roadmap on prioritizing water accounts, and some early findings from the water accounts. The presentation noted that Botswana's policy priorities include water accounts, tourism (as part of land and ecosystem accounts), mineral accounts, energy accounts, and macroeconomic indicators of sustainable development (e.g., adjusted net national income, adjusted savings, and national wealth accounts). In regards to institutional arrangements, NCA activities are carried out at the sectoral level by NCA units embedded in line ministries. It was noted – as part of the NCA roadmap – that water accounts were in the process of being institutionalized and expanded with the hope of integrating the results into the National Development Plan (NDP11).



Promisingly, the presenters detailed several benefits that have resulted from the water accounts, noting that the outputs have been used to inform several national strategies and planning processes. It was also stated that this process has increased communication and clarity among various stakeholders in Botswana. Via this process, the presenters described the following lessons learned: that systematic submission of data can be a challenge; sharing initial results with stakeholders increases buy-in; common data coding across systems can help with data sorting; more training and capacity building would be useful; and closer collaboration between different accounts would be a priority for the future.

Self-assessment of state of information on natural capital

Given that NCA is aimed at increasing understanding of a country's natural capital, in the questionnaire, countries were asked to describe the general state of knowledge of natural capital in their country – from very poor, through to poor, moderate, good and very good. Six countries rated their knowledge as either Moderate or Good with one providing a rating of Poor. Interestingly, there was a general flavour in the associated comments that the respondents felt they had a reasonable idea of the situation for individual components of natural capital through their knowledge of particular information sources. However, there was a general lack of data coordination of information which became a problem for communicating messages about natural capital to decision makers and the public. The lack of coordination was also problematic in trying to assess questions of sustainability and environmental capacity which require a degree of data integration. It was also the case in some countries, that public data and information on natural capital were primarily qualitative. For example, the Ugandan delegation indicated that roughly 90% of the information in its State of the Environment report was qualitative rather than quantitative. While qualitative data are extremely important to natural capital management, quantitative data are necessary for the development of natural capital accounts.

Progress on implementation of NCA

The responding countries are at different stages in the implementation of natural capital accounting. For Botswana and South Africa, implementation is relatively more established as reflected in the number of accounts that have been compiled in recent years; in Madagascar, Mauritius and Namibia the compilation of accounts is now underway, and in Ghana and Uganda the NCA process is just commencing. This range of experiences provides a useful coverage in the results that are summarised here.

Table 3.1 provides a summary of the types of accounts that are desired, demonstrated or established in each of the seven countries. This information should be useful in establishing common areas of interest across the GDSA countries during discussion in the NCA COP.

TABLE 3.1: Summary of desired, demonstrated and established natural capital account

Country		Agriculture	Biodiversity	Carbon	Ecosystem	Emission	Energy	Fisheries	Forest/Timber	Freshwater/ Aquatic/Lake	Land	Minerals	Soil	Waste	Water	TOTAL
South Africa	Desired		X	X	X						X		X	X		6
	Demonstrated				X	X	X	X		X	X	X		X		8
	Established						X	X				X				3
Botswana	Desired				X	X					X					3
	Demonstrated						X					X			X	3
	Established											X			X	2
Madagascar	Desired		X	X	X	X	X			X	X		X	X		9
	Demonstrated								X			X			X	3
	Established															0
Uganda	Desired	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Demonstrated															0
	Established															0
Mauritius	Desired	X	X	X	X	X	X	X	X	X	X		X	X	X	13
	Demonstrated		X	X	X	X	X		X	X	X		X		X	10
	Established															0
Ghana	Desired	X	X		X		X	X	X	X	X	X	X	X	X	12
	Demonstrated			X		X										2
	Established			X		X										2
Namibia*	Desired		X		X	X					X		X	X		6
	Demonstrated	X		X			X	X	X			X			X	7
	Established							X							X	2
TOTAL	Desired	3	6	4	7	5	4	3	3	4	7	2	6	6	3	63
	Demonstrated	1	1	3	2	3	4	2	3	2	2	4	1	2	3	33
	Established	0	0	1	0	1	1	2	0	0	0	2	0	1	1	9

* Namibia noted the demonstration of wildlife/game accounts (2004), and tourism satellite accounts (2006).

Institutional coordination for NCA

For all countries that completed the assessment, steering committees and governance arrangements were in place to facilitate coordination of NCA activities, generally taking 2-3 months to establish. The lead agencies for NCA varied across the countries although usually it was either a statistical office or environmental agency. In some cases, the lead agency varied by type of account. In all cases, there was a combination of government agencies involved, although no standard pattern emerged, thus highlighting the importance of establishing effective institutional arrangements. The mix of agencies included ministries for environment, finance, economy, planning, statistics and various industry sectors (e.g., agriculture, forestry, water and tourism).

The legislative situation with respect to information and data differed in each country. Some had data sharing legislation and some had more general statistical legislation that might be of relevance in institutionalising NCA in the future.

The responses concerning the general resourcing of NCA work suggested that in most countries, there has been a strong connection to international support from the World Bank, Conservation International, GIZ, the UN Statistics Division, and other donors. Support from national governments was evident in most, but not all countries. In general, however, as described further below, financing and resources was not identified as a key barrier for implementation.

Policy linkages to NCA efforts

Throughout the questionnaire there were various places in which countries were asked to provide information on the linkages between natural capital, natural capital accounting, and policy. All countries provided examples of links between natural capital and policy — for example in terms of establishing protected areas — but there were far fewer examples showing a direct connection between natural capital accounting and policy.

In part, this reflects that NCA is relatively new but there also seems to be a challenge in engagement with decision makers and creating high-level awareness and understanding. Nonetheless, all respondents saw many opportunities for potential use of NCA either in terms of the development of national level development plans and strategies or in terms of theme specific policies and legislation. South Africa noted that, in fact, their policies and legislation around natural capital management are relatively robust so the challenge for them rests in coordination and implementation, an area where NCA can also play a role.

Several countries noted that NCA could be drawn in to support reporting requirements at national level (e.g., via state of environment reporting) and at international level (e.g., for coordination of reporting to UNFCCC, CBD and the SDGs). The option of legislated reporting of natural capital related indicators is also being considered in some countries, for example as part of annual budgetary statements.

During the workshop discussions, much of the discussion focused on the links between NCA and policy (please see the various Case Studies presented in this section of the report). **A consistent theme throughout the workshop was the need to apply NCA to policy and decision making thus going beyond the common focus of such workshops on technical and data requirements for implementing NCA.**

In discussions and presentations, workshop participants identified the following as important entry points for NCA in policy at the regional and national level:

- There is high-level support for NCA, internationally, as illustrated during the second session of the United Nations Environment Assembly (UNEA-2). This high-level support is also a recognition of the opportunity for NCA to inform progress towards the SDGs.
- NCA as a way to communicate environmental information to high-level decision-makers (such as Ministers) in a language that they understand.
- The use of natural capital accounting measures, such as extended measures of national wealth, measures of ecosystem condition and resource use, within the regular policy and reporting frameworks of government for example through annual budgetary processes.
- The use of the natural capital accounting framework to support national level discussions about resource allocations across sectors and industries, in addition to the application of the framework in local and resource specific contexts.
- The use of natural capital accounting based information to support the formulation of national development plans and define and measure associated targets and indicators.

Many workshop participants, though, also expressed the need for assistance and learning on how to best link NCA activities to their national policy and decision-makers in practice, and it was noted that this subject would be a priority for exploration under the NCA COP.

CASE STUDY: NATURAL CAPITAL ACCOUNTING IN RWANDA

Rwanda, a WAVES core implementing country, provided an overview of the country's NCA efforts to workshop participants. The presentation provided insight into: Rwanda's progress and achievements; the country's land, water, mineral, and ecosystem accounts; and lessons learned. Rwanda has been implementing NCA since 2015 and has not only been able to produce a variety of NCA products thus far but has also put together a steering committee to lead the work as well. Notably, the presentation highlighted in depth how Rwanda has invested efforts in communications, including online outreach. In total, the NCA communications efforts include online news articles, monthly newsletters, country briefs, training programs, and stakeholder consultations. The presentation closed in considering various lessons learned, including:

- The value in having senior policy makers become champions for NCA. As noted in the presentation, well-packaged information can frame policy findings in a way that directly answers the questions of policy makers.
- Ensuring that NCA can effectively inform policy. It is important to understand what policy questions the accounts are designed to answer and, more importantly, what decision makers think about the policy questions that need to be addressed. It is important to understand the implications of the information included in accounts, and to understand the limitations of the accounts.
- NCA can serve as tool to monitor progress to international commitments, such as the SDGs.



CASE STUDY: LINKING ECOSYSTEM ACCOUNTS TO POLICY IN SOUTH AFRICA

South Africa — one of the leaders in NCA in sub-Saharan Africa — has a long history of undertaking NCA initiatives. At the workshop, a representative from the South African National Biodiversity Institute (SANBI) provided an overview of the country's ecosystem accounting efforts (developed together with a range of agencies and partners, including the UNSD, UNEP, and the CBD), the key results of the pilot ecosystem accounts, and lessons learned. During the presentation, it was noted that South Africa has now developed pilot, sub-national land and ecosystem accounts as well as national river ecosystem accounts. In an effort to make the outputs of the accounts more understandable to decision-makers, the changes in ecosystem extent were described in relation to known ecological function and extinction thresholds (see graph, below). In regards to their national river ecosystem accounts, these evidence a 10% decline in the ecological condition of river from 1999 to 2011. The presentation closed with an overview of six lessons learned from the ecosystem accounting process, which included: 1) initial work is often supply-driven (and not requested by decision-makers); 2) physical accounts are powerful in their own right and not just as a precursor to monetary accounts; 3) accounting frameworks help to translate ecosystem science into a form that speaks to decision-makers; 4) ecologists need to be centrally involved in producing ecosystem accounts as the ecological perspective is different from the resource economics perspective; 5) 'good enough' science is sufficient and is better than waiting for perfect data; and 6) there is a benefit in involving stakeholders strategically in some aspects of the accounting work at different times of the process.

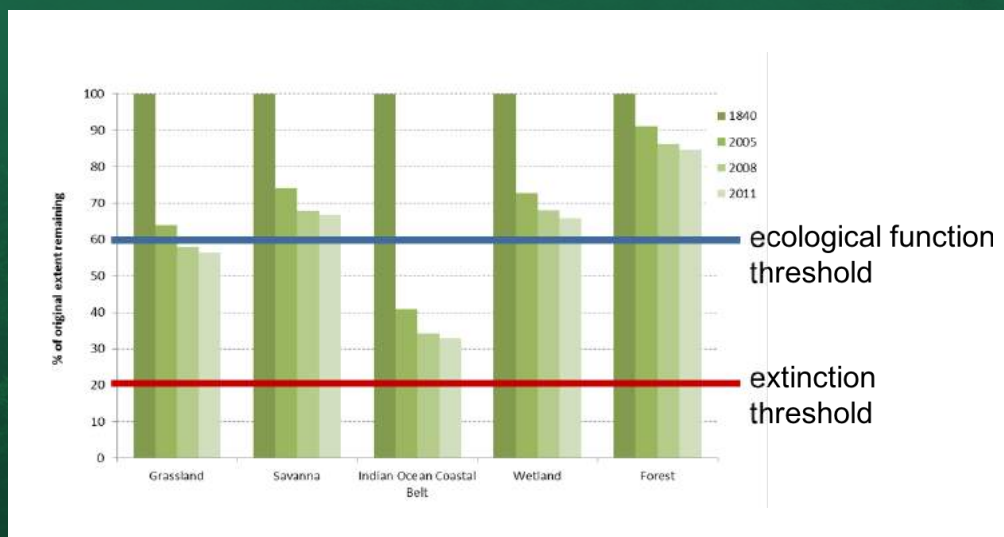


Figure (above): Graph showing some of the sub-national ecosystem extent results together with known ecological function and extinction thresholds (courtesy of SANBI).

Barriers and lessons

The final area summarised here concerns the barriers to implementation identified by countries and the lessons learned. Table 3.2 summarises the six barriers to implementation that countries were asked to rate in importance. What stands out, based on a simple aggregation of scores,¹⁸ is that the lack of data and the lack of technical expertise are clearly the primary concerns. The other four concerns scored roughly the same rating. This table could provide a good starting point for discussion within the NCA COP to better understand the precise nature of the barriers to NCA, and in turn help to identify common areas for discussion and targeting of capacity building.

In terms of lessons learned, the well-considered responses of the country delegations to the scoping assessments provide useful guidance on issues to consider further within the NCA COP. Five main areas can be identified, although there are clear connections among the areas:

- The importance of engagement, coordination and establishing roadmaps and pathways towards implementation.
- The need to establish clear institutional arrangements including having a clear lead agency or convening agencies.
- The importance of the link to policy and a general rationale for NCA work, for example being able to describe the link to progress on sustainable development. Interest at higher level of government departments and ministries was very relevant here.
- There are significant challenges in data management and coordination and in the development of statistical infrastructure that need to be confronted in advancing NCA. Thus while tools exist there is a need for demonstration accounts to understanding the specific issues and also to foster demand from decision makers.
- There is a need for capacity building to develop staff expertise and this is needed across multiple fields including accounting, statistics, data management, and ecology.

TABLE 3.2: Barriers to NCA implementation

Country	Lack of statistics/ data	Inter-institutional coordination	Lack of technical expertise	Absence of demand for NCA	Financial resource availability	Disarticulation between statistical registries and NCA
	Ratings (1 = largest barrier)					
South Africa	3	5	1	4	2	6
Botswana	4	3	1	2	6	5
Madagascar	1	1	1	2	3	1
Uganda	1	4	5	6	3	2
Ghana	1	6	2	5	4	3
Namibia	1	2	1	1	2	3
Mauritius	3	1	2	5	4	6
TOTAL*	14	22	13	25	24	26

* The total is the simple sum of the country entries.

¹⁸ Since not all countries used a pure 1-6 ranking the simple sums are not directly comparable but the scores are nevertheless informative.

OVERALL FINDINGS FROM THE COUNTRY PRESENTATIONS & READINESS SCOPING ASSESSMENTS

The country presentations and scoping studies illustrate that many of the countries have made substantial progress in mapping out their near-term (e.g., within 5 years) plans for the development and implementation of NCA. In addition, there was specific and repeated reference to the need for targeting quick, policy-relevant accounts (to build traction for additional accounting efforts) that would help answer important policy questions and build high-level support. All of the presenting countries concluded their presentations with 'lessons learned' sections and each country came to the workshop with a slightly different perspective on how to approach in-country accounting efforts. Many countries that completed the scoping questionnaire expressed interest in expanding their accounting efforts to new accounts.

There was a clear consensus on the importance of NCA as well as an impressive range of experiences across the participating countries in regards to these efforts. However, there were some noted challenges and hurdles that were faced by all of the countries to varying degrees which included a disarticulation between statistical registries and NCA, an absence of demand for NCA, and financial resource availability.

Some of these hurdles can be overcome by enhanced national planning (e.g., more in-depth action planning and roadmaps) and continued learning at the regional scale (to share best practices in how to communicate the benefits of NCA or to structure institutional arrangements that favor ongoing NCA activities). Both of these action items were broadly supported and discussed by the workshop participants and are reflected in the GDSA NCA Statement. It was clear that many of the workshop participants valued being able to understand how their peers in different countries had approached problems and hurdles, and there was a desire to continue conversation at the regional level, about both technical and non-technical issues.



CONCLUSIONS AND NEXT STEPS

At the conclusion of the workshop, and as noted in the prior sections of this report, a range of key themes were brought together on the potential for natural capital accounting in the GDSA countries.

Workshop participants clearly recognised the increasing need for integrated policy analysis to support progress towards sustainable development. In the GDSA countries and across the world, sustainable development objectives, as reflected in the UN SDGs, are an important feature of national development plans.

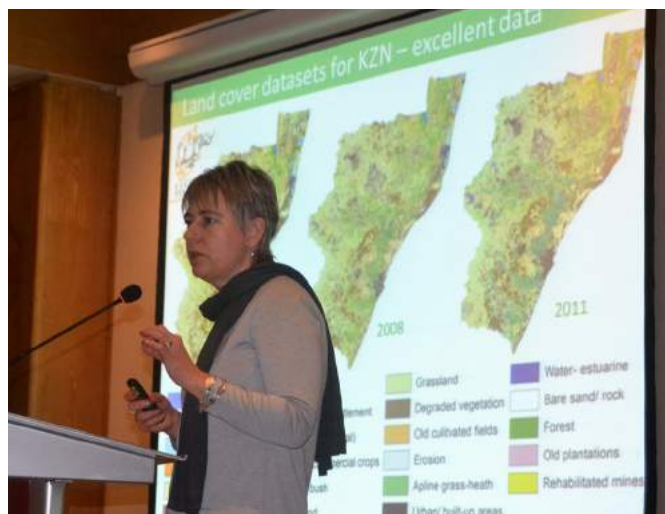
Significantly, as discussed in Section Three, **there is clear evidence that there has been substantial progress towards the development of NCA in the GDSA region.** While some countries are relatively more advanced, a range of different accounts have been compiled, countries have put in place mechanisms to support the development of NCA, and there is a strong interest in working collaboratively to take this area of work forward.

However, **it is also clear that countries could benefit from additional capacity to undertake the required integrated policy analysis.** This reflects two current limitations. First, most policy research, development, and implementation is undertaken in silos across government, universities, and the corporate sector. As a result there is not as much engagement across disciplines and areas of expertise as required. Second, the data available to support analysis across different dimensions is often fragmented and collected in an ad hoc manner.

In this context, **there is a clear potential for NCA to be a tool that (i) provides an organising framework for information in the environmental and economic dimensions; and (ii) provides a common language and measurement definitions to support cross-disciplinary discussion and policy development.**

To realise this potential, workshop participants identified the following as important entry points for NCA at country level:

- The use of NCA measures, such as extended measures of national wealth, measures of ecosystem condition and resource use, within the regular policy and reporting frameworks of government for example through annual budgetary processes.
- The use of the NCA framework to support national level discussions in resource allocations across sectors and industries, in addition to application of the framework in local and resource specific contexts.
- The use of NCA-based information to support the formulation of national development plans and define and measure associated targets and indicators.



In the implementation of NCA it was recognised that the timing of discussions, in contexts such as those just listed, is crucial. The current dynamic in establishing and implementing the global SDGs and Agenda 2030 must be leveraged, as well as related but distinct integrated policy challenges that exist around poverty and climate. The discussion about NCA must focus not only on the potential for integrated information but also on how the NCA framework that encompasses a broader range of assets can provide a basis for the discussion of traditionally different policy areas in a common way.

An important opportunity exists within the framework of the GDSA to advance NCA. The three key commitments of the signatory countries are to:

- Incorporate the value of natural capital in public and private policies and decision-making;
- Pursue sustainable production in agriculture, fisheries, and extractive industries while maintaining natural capital; and
- Generate data and build capacity to support policy networks.

Advances in all three areas can be supported through advancing NCA. NCA provides a framework for recognising the importance and value of natural capital at national scales; it provides a framework for organising data and building analytical capacity; and finally provides a platform for considering trade-offs and synergies between economic activity and sustainable use of the environment. Recognising the connections that NCA has across these three commitments will be important in raising awareness and seeking resources for implementation.

As a practical means to drive adoption and implementation of NCA, the workshop supported the establishment of a GDSA Community of Practice (COP). It was considered that such a mechanism would have a range of benefits, in particular providing clear support for NCA leaders in each country, the opportunity to establish a common understanding of implementation approaches and requirements for GDSA countries, and an opportunity for the engagement and sharing of expertise. Based on feedback from GDSA countries, the largest barrier to implementation of NCA is considered to be a lack of expertise. The NCA COP can directly reduce this barrier as well as provide a means to exchange plans and ideas to reduce other barriers such as a lack of data, poor institutional mechanisms and a lack of demand for NCA.

Beyond engagement among NCA leaders and experts via an NCA COP, it is essential that there is engagement with a range of other communities. Two in particular were highlighted at the workshop. First, engagement with senior policy officials and ministers perhaps via key note addresses or the launching of new programs. Developing regular engagement points, timed with regular or emerging government policy activity should be seen as an important output for NCA work programs. Second, engagement with universities is critical. Academics should be able to directly support NCA measurement activity through their personal experience and expertise. Also, through the development of cross-disciplinary NCA teaching and research programs there is the opportunity to train the next generation of analysts, policy experts and statisticians in the framework and measurement of natural capital.

A final, yet fundamental, message is to ensure that programs to advance NCA involve ongoing discussion between the technical and measurement aspects and the policy and application aspects. Too often, even where initial engagement between producers and users of NCA takes place, the ongoing dialogue ceases. Subsequently, accounts are developed that cannot find a well developed entry point in policy agencies, and NCA programs falter. Establishing suitable governance and institutional arrangements is one part of the solution, but more importantly, NCA program, must allocate resources to engagement and outreach. Establishing mechanisms, such as the NCA COP, is an excellent example of the type of investment that is required.

In bringing together relevant expertise and experience from GDSA countries and around the world, the Workshop on Regional Perspectives on Natural Capital Accounting held in Nairobi in June 2016 provided a strong platform to further advance NCA in the region. There is important experience in NCA within GDSA countries on which to build and a clear policy demand for integrated information to support sustainable development policy and analysis. Establishing a Community of Practice on NCA within the GDSA is a real and practical step towards meeting the commitments of the GDSA countries and it should be put in place as soon as feasible.

ANNEX 1: WORKSHOP AGENDA

Structure of the Workshop

In preparation for the workshop, participants were asked to complete a Scoping Assessment and return those to conference organizers by June 17 (the Friday prior to the workshop). This Assessment was designed to help the workshop facilitators and the GDSA Secretariat understand the status of NCA initiatives within each country and will inform both the Workshop and any follow-up activities.

The workshop was organized into three connected sections:

1. **Pre-Workshop Country Consultations (June 20):** Voluntary, one-on-one sessions between government representatives and technical experts. These sessions were designed to provide tailored feedback to workshop attendees as it related to their specific NCA needs.
2. **Days One and Two (June 21 and 22):** Learning exchanges and interactive activities to enhance knowledge and ensure a common language around NCA.
3. **Day Three (June 23):** Interactive session for government representatives to focus discussions on avenues for building or enhancing their own country programs in NCA and areas of collaboration moving forward, potentially in the form of an African-led Community of Practice on NCA.

Pre-Workshop Country Consultations: June 20 2016

Voluntary meetings between Technical Experts and Government Representatives

Time	Country	
08:30 – 09:00	Welcome coffee	
09:00 – 10:30	Botswana Country Delegation	Michael Vardon (WAVES), Mark Eigenraam, CI Staff
10:30 – 12:00	Simultaneous Consultations: 1) Namibian Country Delegation 2) Tanzania Country Delegation	Michael Vardon (WAVES), Mark Eigenraam, CI Staff
12:00 – 13:30	Lunch	
13:30 – 15:00	South Africa Country Delegation	Michael Vardon (WAVES), Mark Eigenraam, CI Staff
15:00 – 16:30	Simultaneous Consultations: 3) Madagascar Country Delegation 4) Mauritius Country Delegation	Michael Vardon (WAVES), Mark Eigenraam, CI Staff
16:30-17:30	Wrap up of Pre-Workshop Country Consultations	Michael Vardon (WAVES), Mark Eigenraam, CI Staff

Day 1 June 21 2016**Mara North Conference Room (Ground Floor, Intercontinental Hotel)**

Time	Opening session	Institution
08:30 – 09:00	Registration and welcome coffee	GDSA Secretariat
09:00 – 09:10	Welcome remarks	GDSA Secretariat
09:10 – 09:30	Introduction of the Participants	GDSA Secretariat
09:30 – 09:45	Statement by the Government of Botswana	Hon. John Moreti (Botswana High Commission)
09:45 – 10:00	Statement by the Government of Kenya	Richard Mwendandu (Kenya GDSA Focal Point)
10:00 – 10:15	Keynote: GDSA + NCA	Carlos Manuel Rodriguez (Vice President, CI)
10:15 – 10:30	World Bank WAVES Program – Overview and future steps	Dr. Stig Johansson (WAVES Program Manager, World Bank)
10:30 – 10:45	The Global Impact of Natural Capital Accounting	United Nations Statistical Division (video)
10:45 – 11:00	Discussion	Facilitated by Mark Eigenraam
11:00 – 11:05	Group Photo with guest speakers	All
11:05 – 11:20	Coffee break	All
Time	What is Natural Capital Accounting?	Institution
11:20 – 12:00	Overview of Natural Capital Accounting	Mark Eigenraam
12:00 – 12:30	Case Study from Namibia: Using NCA in practice	Ferdinand Mwapopi (Project Coordinator, Ministry of Environment and Tourism, Namibia)
12:30 – 13:00	Discussion: Issues for the Community of Practice	Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
13:00 – 14:00	Lunch	All
Time	The SEEA Central Framework	Institution
14:00 – 14:45	The SEEA Central Framework – Introduction	Mark Eigenraam
14:45 – 15:15	Case Study from Botswana: Priority setting to pick and develop Water Accounts	Government of Botswana (TBD)
15:15 – 15:45	Interactive activity: linking the Central Framework to decision making	Dr. Michael Vardon (WAVES, World Bank)
15:45 – 16:00	Discussion: Issues for the Community of Practice	Dr. Kim Reuter (Natural Capital Accounting Director, CI) Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
16:00 – 16:15	Tea	All
16:15 – 17:00	The Sustainable Development Goals and Natural Capital Accounting	Carlos Manuel Rodriguez (Vice President, CI) Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
17:00 – 17:15	Wrap up of Day 1	Ruud Jansen (Executive Secretary, GDSA)
17:15 – 19:00	Cocktail Event <i>Le Chateau (roof top venue; Intercontinental Hotel)</i>	All

Day 2 June 22 2016**Mara North Conference Room (Ground Floor, Intercontinental Hotel)**

Time	Opening Session	Institution
08:30 – 08:45	Welcome coffee	GDSA Secretariat
08:45 – 09:00	Review of Day 1; Overview of Day 2	Dr. Kim Reuter (Natural Capital Accounting Director, CI)
Time	Environmental Ecosystem Accounting	Institution
09:00 – 09:45	Introduction to Ecosystem Accounting: What is it? What can be measured? How does it relate to the Central Framework?	Daniel Juhn (Senior Director, CI); Dr. Rosimeiry Portela (Senior Director, CI)
09:45 – 10:00	Introduction to Biodiversity Accounting	Steven King (Environmental Economist, UNEP-WCMC)
10:00 – 10:30	Case Study: Linking accounts to policy in South Africa	Amanda Driver (Senior Biodiversity Policy Advisor, SANBI)
10:30 – 11:15	Interactive Activity: Policy driven Ecosystem Accounting	Facilitated by Mark Eigenraam
11:15 – 11:30	Coffee break	All
Time	Linking to Decision-Makers	Institution
11:30 – 12:15	Forest Accounts - Lessons in linking accounts to policy and decision-makers	Juan-Pablo Castañeda (Sr. Environmental Economist, WAVES, World Bank); Dr. Michael Vardon (WAVES, World Bank)
12:15 – 12:45	Case Study from Rwanda: Accounting in Practice	Government of Rwanda (TBD)
12:45 – 13:00	Discussion: Issues for the Community of Practice	Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
13:00 – 14:00	Lunch	All
14:00 – 15:00	Break Out Session: Steps in implementing and using NCA	Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
15:00 – 15:30	Sharing and Feedback	Facilitated by Mark Eigenraam & Dr. Michael Vardon (WAVES, World Bank)
15:30 – 16:00	Community of Practice: A collaborative opportunity for enhancing NCA in the GDSA	Dr. Kim Reuter (Natural Capital Accounting Director, CI)
16:00 – 16:30	Interactive Activity to discuss the Community of Practice	Facilitated by Dr. Kim Reuter (Natural Capital Accounting Director, CI)
16:30 – 16:45	Closing remarks	Disikalala Gaseitsiwe (Deputy Executive Secretary, GDSA Secretariat)
16:45 – 17:00	Tea	All

Day 3 June 23 2016 (GDSA government officials and workshop organizers)***Mara North Conference Room (Ground Floor, Intercontinental Hotel)***

Time		Institution
08:30 – 09:00	Welcome coffee	GDSA Secretariat
09:00 – 09:10	Welcome remarks	Carlos Manuel Rodriguez (Vice President, CI)
09:10 – 09:50	GDSA + NCA Overview (past, present, future)	Ruud Jansen (Executive Secretary, GDSA); Dr. Kim Reuter (Natural Capital Accounting Director, CI)
09:50 – 10:10	Community of Practice: Overview of Previous Day's Discussions	Dr. Kim Reuter (Natural Capital Accounting Director, CI)
10:10 – 12:00	Feedback on Community of Practice	Facilitated by Mark Eigenraam
12:00 – 12:15	Tea	All
12:20 – 12:45	Summarizing Morning Discussions, Next Steps, and the GDSA NCA Statement	Ruud Jansen (Executive Secretary, GDSA); Dr. Kim Reuter (Natural Capital Accounting Director, CI)
12:45 – 1:00	Closing Remarks	Ruud Jansen (Executive Secretary, GDSA)
1:00 – 2:00	Lunch	All

ANNEX 2: LIST OF PARTICIPANTS

Regional Perspectives on Natural Capital Accounting Nairobi, Kenya, June 21-23, 2016

Botswana

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World Bank

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ANNEX 3: GDSA STATEMENT ON NCA

Gaborone Declaration for Sustainability in Africa

Natural Capital Accounting Statement

23 June 2016

Intercontinental Hotel, Nairobi, Kenya

UNDERSTANDING that the aim of the Gaborone Declaration for Sustainability in Africa (GDSA) is to ensure that the contributions of natural capital to sustainable economic growth, maintenance and improvement of social capital and human well-being are quantified and integrated into development policies and planning and business practice through the integration of the value of natural capital into national accounting and corporate planning and reporting processes, policies and programs;

APPRECIATING that the GDSA was endorsed by the fifteenth session of the African Ministerial Conference on the Environment (AMCEN) in Cairo, Egypt in March 2015, as contributing to pursuing sustainable development and implementing the African Green Economy Partnership Regional Flagship Programme of AMCEN, the decisions of which were subsequently accepted by the Executive Council of the African Union during its Twenty-Seventh Ordinary Session in June 2015 in Johannesburg, South Africa;

RECALLING furthermore that natural capital valuation, accounting and analyses are supported in operative decisions, resolutions and declarations by the sixth special session of the African Ministerial Conference on the Environment (AMCEN) in Cairo, Egypt in April 2016, the second United Nations Environment Assembly in Nairobi, Kenya in May 2016, and the eighth Summit of the Heads of State and Government of the Africa Caribbean and Pacific (ACP) Group in Port Moresby, Papua New Guinea in June 2016;

NOTING that concepts and methods of natural capital valuation and accounting are becoming standardized, such as by the System of Environmental-Economic Accounting, within governments, research communities, and entities such as the United Nations, European Commission, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development, and The World Bank Group;

NOTING the development of a standardized approach for the identification, measurement, and valuation of impact and dependencies on nature by private sector, the Natural Capital Protocol as developed by the Natural Capital Coalition, will enable businesses to assess and better manage their direct and indirect interactions with natural capital, as developed by the Natural Capital Coalition.

NOTING the synergies between the commitments made under the GDSA, the post-2015 development agenda, Agenda 2063, and the role that environmental-economic accounting will play in reporting towards the post 2015 development agenda;

NOTING also the progress which GDSA member countries have made towards valuation and accounting for nature as per implementation programs facilitated by the United Nations Statistical Division (UNSD), the World Bank's Wealth Accounting and the Valuation of Ecosystem Services (WAVES) Global Partnership, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the United Nations Environment Programme (UNEP), and others;

RECOGNIZING the GDSA, Conservation International, the World Bank WAVES Global Partnership, and other partners for their leadership in facilitating learning exchange and resource mobilization across the GDSA member countries on natural capital accounting;

RECOGNIZING the need for GDSA member countries to continue capacity building, learning exchanges, resource mobilization, and engaging in other collaborative efforts such that knowledge of natural capital accounting is enhanced to facilitate national programs in natural capital accounting;

RECALLING the role of the GDSA Secretariat, hosted by the Conservation International on behalf of the Government of Botswana, to take guidance from the Gaborone Declaration for Sustainability in Africa and work on behalf of the GDSA member countries to facilitate progress towards the GDSA commitment;

NOTING that the GDSA member state officials present at the GDSA Regional Perspectives on Natural Capital Accounting Workshop in Nairobi, Kenya from Botswana, Ghana, Kenya, Liberia, Madagascar, Mauritius, Mozambique, Namibia, Rwanda, South Africa, Tanzania, and Uganda were nominated to participate on behalf of their respective governments;

The delegates present at the GDSA Regional Perspectives on Natural Capital Accounting Workshop in Nairobi, Kenya, 21-23 June 2016:

CALL ON the GDSA and partners to strengthen and expedite NCA initiatives within member countries and establish a Community of Practice (COP) on Natural Capital Accounting for the specific purpose of learning and sharing of approaches, experiences, and best practices in NCA among the GDSA countries via south-south exchanges, dialogue by both practitioners and decision-makers on NCA, and training opportunities as appropriate including both technical practitioners (account producers and analysts) and decision-makers (account users).

CALL ON the GDSA secretariat to convene the COP and facilitate the collaboration referred to above through a range of mechanisms;

CALL ON participating countries to develop an NCA roadmap in order to mainstream NCA nationally and in support of the COP as aligned to existing international commitments such as the Aichi targets, the SDGs and other respective national priorities;

CALL ON participating countries to nominate a country NCA-COP Contact Point who will be the contact person within their respective countries with responsibility for communication and information exchange in relation to NCA-COP matters.

ANNEX 4: NCA READINESS AND METHODS – SCOPING QUESTIONS

Scoping for Natural Capital Accounting²⁴

Please provide your thoughts in response to the following questions, which are designed to help us understand the status of Natural Capital Accounting in your country²⁵. Please return the questionnaire to Kim Reuter (kreuter@conservation.org) by **June 1st 2016**.

Background

Natural Capital Accounting (NCA) has been recognized as an important tool for evidence-based policy making on the role of nature toward sound economic planning and development. NCA has been identified as one of the useful frameworks for the purpose of monitoring and reporting on the United Nations post-2015 development agenda.

In Africa, the development of Natural Capital Accounts has been ongoing since the late 1980s, with dozens of pilot accounts developed by numerous countries across the region. With NCA now gaining global momentum, countries are exploring more comprehensive solutions to mainstream the results of accounts into decision making.

The Gaborone Declaration for Sustainability in Africa (GDSA)²⁶ provides a platform for using NCA to inform and encourage sustainable development. The overall objective of the Declaration is, “to ensure that the contributions of natural capital to sustainable economic growth, maintenance and improvement of social capital and human well-being are quantified and integrated into development and business practice.” The Declaration, agreed to by ten African Heads of State in 2012, commits signatory countries to:

1. Incorporate the value of natural capital in public and private policies and decision-making;
2. Pursue sustainable production in agriculture, fisheries, and extractive industries while maintaining natural capital; and
3. Generate data and build capacity to support policy networks.

The GDSA was endorsed as a vehicle for green development by the African Ministerial Conference on the Environment (AMCEN) in March 2015, thereby earmarking the GDSA for inclusion in the African Union (AU) structures of programs. Conservation International (CI)²⁷ has been delegated the functions of the GDSA Secretariat by the Government of Botswana until 2018. In addition, CI has conducted innovative research and development of Ecosystem Accounting efforts, working together with the Government of Peru.

²⁴ This scoping was developed together with the World Bank WAVES partnership and the IDEEA Consulting Group and is replicated here as it was presented to the country delegations for the workshop.

²⁵ Questions adapted from the following materials:

- Ben Milligan, Emma Terama, Rafael Jiménez-Aybar, Paul Ekins (June 2014) GLOBE Natural Capital Accounting Study, 2nd Edition (GLOBE International and University College London, London).
- World Bank WAVES (2014) System of Environmental-Economic Accounting: Experimental Ecosystem Accounts. Diagnostic tool for strategic planning. Version 4.0.
- World Bank WAVES. Questionnaire for WAVES Assessment.

²⁶ See: <http://www.gaboronedeclaration.com>

²⁷ <http://www.conservation.org>

In Botswana, Madagascar, and Rwanda – along with additional countries in other areas of the world – the Wealth Accounting and the Valuation of Ecosystem Services (WAVES)²⁸, a World Bank-led global partnership, aims to promote sustainable development by ensuring that natural resources are mainstreamed in development planning and national economic accounts.

Recognizing the importance of NCA in measuring progress towards the Sustainable Development, the Secretariat of the Gaborone Declaration for Sustainability in Africa (GDSA and Conservation International (CI) and in partnership with WAVES, will hold a Natural Capital Accounting (NCA) workshop on the 21-23 June 2016 in Nairobi, Kenya. **In preparation for this workshop, we are conducting this scoping assessment for natural capital accounting.**

Objectives

The objectives of this scoping are to:

- 1) Understand past and current natural capital accounting, as well as other related efforts, in countries in Africa.
- 2) To understand the hurdles and opportunities in natural capital accounting in the region.

The information collected here will be used in the following ways:

- 1) To put together a report, to be published after the June 2016 workshop, to highlight the successes of ongoing natural capital accounting work in Africa. The report will also highlight opportunities for future work in the individual countries that send delegates to the workshop. This report will be shared with the delegates of the workshop as a useful tool for them to use in fundraising and information sharing.
- 2) The report will also be used by the GDSA and its partners, including the World Bank WAVES program, to guide future efforts and funding opportunities towards natural capital accounting in Africa. For this reason it is important that the information collected in this scoping is accurate.

General Instructions

Please fill in this questionnaire to the best of your ability and knowledge. Careful estimates are acceptable if detailed information have not been kept.

Additional instructions and information are provided for particular questions within the questionnaire. It would be appreciated if you could fill in this form in English and submit it electronically (i.e. typed directly into this word document). There should be a response to each of question. Space is provided for open-ended responses. Do not worry about the changes to format.

In several questions you are to provide documents relating to the development and use of natural capital accounts. Please send these as attachments with the completed questionnaire. Attaching these documents is very important, particularly if the documents are unpublished or not readily available on the internet.

²⁸ <http://www.wavespartnership.org>

Please feel free to provide additional information about the implementation and use of natural capital accounting in your country.

If you require any assistance with the questionnaire, please contact Kim Reuter via email (kreuter@conservation.org).

Each section begins with a series of multiple choice questions followed by a set of open-ended questions designed to allow you to provide us more detail on your natural capital accounting initiatives.

Questions for Workshop Participants:

Preliminary Information:

Name of your country:

Please provide contact details of people for possible follow-up questions and clarifications:

	Name	Telephone	Email
Primary contact			
Alternative contact 1			
Alternative contact 2			

Please list all of the persons involved in completing this questionnaire:

Name	Organization

1. State of natural capital knowledge

1.1. Based on the information available to your national government, what is the status and economic value of your country's natural capital?

1.2. How has the status and economic value of your country's natural capital changed over the previous 5 years?

1.3. How have the threats to your country's natural capital changed over the previous 5 years?

1.4. Based on the information available to your national government, what are the major threats to the status and economic value of your country's natural capital?

1.5. What types of information does your national government have access to regarding the status (condition, stocks) of your country's natural capital?

1.6. What types of information does your national government have access to regarding the economic value of your country's natural capital?

1.7. Are there important gaps in the natural capital information that your national government has access to?

1.8. Overall, how would you describe the general state of knowledge of natural capital in your country?

Check the most appropriate box with an "x".

Very poor	Poor	Moderate	Good	Very good

2. Creation and content of natural capital accounts:

2.1. Information about your country's historical and current natural capital accounting efforts is important in understanding your readiness to develop natural capital accounts further. In the table below please indicate which of the following accounts have been developed for your country or that you would like to see developed. Please list the key agencies or ministries involved (or who would be involved) in these efforts, listing the lead agency first. Feel free to add additional rows if necessary. Please send reports of accounts along with this questionnaire.

Account	Check box if you have already developed this account	Are there reports available for the accounts? Provide full name and web address of accounts produced if possible.	Check box if the account has been developed more than once	Check box if you have not developed this account but would like to	List ministries that have been involved, or would be involved, in account development
Agriculture					
Biodiversity					
Carbon					
Ecosystem					
Emission					
Energy					
Fisheries					
Forest/Timber					
Freshwater/Aquatic/Lake					
Land					
Minerals					
Soil					
Waste					
Water					
Other (please specify)					

2.2 Does your country's accounting for natural capital include material flows through the economy and, if so, does it relate these flows to the value added of different sectors or to the output of the economy as a whole (GDP)?

2.3. In the creation of Natural Capital Accounts, has your country used any of the following documents for producing and using accounts? How useful were they?

	Not used	Not very useful	Useful	Very useful
System of National Accounts				
SEEA Central Framework				
SEEA Water				
Draft SEEA Implementation Guide				
Environmental Goods and Services Sector Handbook				
SEEA Experimental Ecosystem Accounts				
SEEA Applications and Extensions				
Uses and Users of Environmental Accounts				
Designing Pilots for Ecosystem Accounting				
Ecosystem Natural Capital Accounts Quick Start Package				
Final Ecosystem Goods and Services Classification				
Other (please specify)				

2.4 What additional types of implementation material would be useful?

3. Institutional arrangements for natural capital accounting

3.1. What are the institutional arrangements used to produce accounts? In particular, what have been the connections to units involved in the compilation of national accounts (i.e. GDP)?

3.2. What processes were used to guide the development and use of natural capital accounts and to monitor progress within your country and how long did they take to establish? If accounts have not been developed, which process do you think would be effective in your country?

Check all that apply with an “x”.

Planning and management process	This process has been used in your country in the development of accounts.	Time in months to establish this process.	If accounts have not been developed, which process do you think would be effective in your country?
Steering committee			
Working group			
Oversight by senior government official(s)			
Other (please specify)			

3.3 If there has been a break in production of accounts, what were the reasons for this?

3.4. Since 2010, what types of assistance has your country received for producing and using natural capital accounts and how useful was it? This includes all assistance, not just that provided by Conservation International or WAVES.

Check all of the appropriate responses with an “x”.

	Do not use	Not useful	Moderately useful	Useful	Very useful
Training					
From World Bank (including their consultants)					
From Conservation International (CI)					
From TEEB (including their consultants)					
From local providers (government, academia, NGOs)					

From others (e.g., international agencies, bilateral donors)					
Financing					
For staff					
- From World Bank					
- From Conservation International					
- From others (e.g., bilateral donors)					
For other costs					
- From World Bank					
- From National government					
- From others (e.g., bilateral donors)					
Expert advice					
From World Bank (including their consultants)					
From Conservation International					
From TEEB (including their consultants)					
From local providers (e.g., government, academia, NGOs)					
From others (e.g., international agencies, bilateral donors)					
Involvement at meetings					
WAVES Annual Partners Meeting					
WAVES PTEC					
Gaborone Declaration for Sustainability in Africa					
London Group Meeting					
Natural Capital Forum					
VANTAGE Meetings					
TEEB Meetings					

Other (please specify)					
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3.5. For any assistance provided to your country, please provide additional information on the type of assistance, when it was received, and how it was useful. How could the assistance that you have received been improved?

4. Data environment to support natural capital accounting

4.1. What organizations in your country collect, manage and process information concerning your country's natural capital? In particular, please specify the role of the national statistical office and describe the agencies involved in the organization of spatial and geographic data (e.g., land planning and land cover maps)

4.2. What frameworks or processes are used in your country to collect data and information in order to create your country's natural capital? For example, is there a clearinghouse for data and is there legislation concerning sharing natural capital and other information between different government departments and agencies?

4.3. What types of natural capital information does your national government share with the public and commercial sector?

5. Use of natural capital accounts in decision-making:

5.1. What documents have been informed by natural capital accounting or could be informed by natural capital accounting in the future?

	Check with an "x" if the documents have been informed by NCA	Check with an "x" if the documents could be informed by NCA in the future	Please provide additional details (e.g., the names of the documents, and if available, the web link to those documents)
National Development Plan			
National Strategies or Vision			
- Sustainable Development/Green Development			
- Low Carbon Economy Plans			

- Environment			
- Industry (e.g., mining or tourism)			
- Themes (e.g., for forest, water or energy, climate change)			
Poverty reduction and economic growth, economic diversification			
NBSAPs			
Other (please describe)			

5.2. Are there any other ways in which natural capital information is used, or could be used, by your country's national government during policy development that is not already captured in question 5.1?

5.3. How is natural capital information made available to parliamentarians, and used by your country's parliament or legislature during the development and drafting of legislation? Are there opportunities for this in the future?

5.4. Does your country have regular national reporting processes for natural capital information, for example a regular State of Environment report? How are reporting obligations to international conventions and agreements concerning natural capital coordinated (e.g., UNFCCC, CBD, UNCCD, SDG)?

5.5. Are natural capital accounting data or indicators used in your country's budgetary process, i.e. in the budget, the estimates or supplementary estimates? Is the Minister of Finance including them in the Budget speech? Are there opportunities for this in the future?

5.6. Are there other individuals within your government that act as champions and promoters of natural capital accounting? Are there opportunities for this in the future?

6. Legal and policy development concerning natural capital:

6.1. Please identify any relevant national laws or policies concerning natural capital accounting. What are the key features of these laws or legislation?

6.2. Please identify any national laws or policies that require economic values of natural capital to be considered during government decision-making. What are the key features of these laws?

6.3. Please identify any national strategies to develop new laws regarding natural capital and natural capital accounting. What are the key features of these strategies?

7. Success stories, challenges & lessons learned

7.1. Please describe at least one success story from your country regarding management of natural capital. *Examples could include: investment in ecological infrastructure, payments and markets for ecosystem services, REDD+ projects, use of natural capital accounts in decision-making, or expansion and administration of protected areas.*

7.2. Please indicate which of the following challenges (ranking in order of importance; with 1 being the most important) are faced in the advancement and implementation of natural capital accounting in your country.

	Rank the hurdles in order of importance from highest to lowest
Lack of statistics/data	
Inter-institutional coordination	
Lack of technical expertise	
Absence of demand for NCA	
Financial resource availability	
Disarticulation between statistical registries and NCA	
Other (please specify)	

7.3. Please identify three (3) important lessons learned regarding readiness for implementation of natural capital accounting in your country.

8. Other comments

8.1. Do you have any other comments?

ANNEX 5: SCOPING ASSESSMENTS: COUNTRY SUMMARIES

Botswana

Introduction

The Botswana scoping assessment was completed by staff from the Ministry of Finance, the Department of Water Affairs and the World Bank. They considered that, overall, the general state of knowledge about natural capital in Botswana was good. This was reflected in a sound understanding of the contribution of minerals to economic activity, the impact of ongoing drought conditions and government access to a range of information on the status of natural capital including climate change vulnerability reports and natural capital accounts.

Implementing natural capital accounts

Botswana have implemented a number of natural capital accounts – for minerals, energy, and water. They would like to extend this program to develop accounts for ecosystems, emissions, and land. In developing their accounts they have found some of the international guidelines and materials very useful including the SEEA Central Framework and the SEEA Water.

Institutional arrangements for NCA are well established through the WAVES project with overarching coordination by the Ministry of Finance and Development Planning. Implementation and compilation itself is led by different government agencies depending on the account, and this work is supported by cross-agency technical working groups who supply data and technical expertise. Statistics Botswana is involved in all of these arrangements.

In recent years, implementation has been driven through the WAVES program following initial NCA compilation work in the 1990s that ceased due to limited technical capacity and limited use of data by government.

There are a wide range of data available and a number of institutional mechanisms in place to support access to data, data sharing and data quality, for example a clearing house mechanism exists for biodiversity related information at the Ministry of Environment, Wildlife and Tourism (MEWT).

Use of NCA

To date only a limited number of areas have been informed by NCA results including the National Development Plan and National Strategy for Water, but the potential to use NCA exists in a number of other areas such as water strategy documents, land management policy, agricultural policy, tourism policy and climate change adaptation policy.

There are regular reporting requirements including a national state of the environment report and international reporting (e.g., to the three Rio Conventions (UNFCCC, UNCCD, CBD)) with some level of coordination through MEWT. However, at this stage the results of NCA have not been incorporated in this reporting or used in other government contexts such as annual budgetary processes. Unfortunately at this stage there are no clear champions or promoters

of NCA within the Botswana government but the GDSA initiative may provide an opening for engagement with relevant people.

The relevance of natural capital is high in Botswana and there have been success stories in relation to the management of natural capital, particularly the improved management of mineral resources and associated revenue, the existence of a National Environment Fund and a Protected area management program to protect scarce species such as elephants.

Barriers and lessons

Botswana sees the greatest barriers to NCA implementation as being the lack of technical expertise and the lack of demand for NCA from government. They are less concerned with issues such as the lack of statistics and the availability of financial resources.

Their experience in NCA has highlighted the importance of NCA being seen as a continuous development process that complements advances towards sustainable development. They have seen that well established institutional coordination and infrastructure for data management are important to maintain progress on NCA and finding opportunities to demonstrate the use of accounting information in policy is key.

GHANA

Introduction

The scoping assessment for Ghana was completed by staff from the Environmental Protection Agency (EPA) and the Ministry of Environment, Science, Technology and Innovation (MESTI). They considered that, overall, the general state of knowledge about natural capital in Ghana was moderate. There was a reasonable understanding of their natural resources including minerals, timber and fisheries although work to determine the economic value of these resources has not yet been completed. The information gaps concern the understanding of the extent of degradation and pollution and related issues of resource sustainability. The threats to Ghana's natural capital are well recognised and include deforestation, water pollution, illegal mining, land degradation, urbanization and the intensification of agriculture.

Implementing natural capital accounts

Ghana have compiled carbon and GHG emissions accounts but would like to implement many more NCA including accounts for agriculture, biodiversity, energy, fisheries, forests, water, land, minerals, soil and waste. In considering the development of this broad range of accounts, they have used, and found useful, most of the international guidelines on NCA.

Establishing institutional arrangements for NCA is an ongoing process with steering committees, working groups and overarching senior level management being expected. There are a number of institutions mandated to produce NCA, principally the Ghana Statistical Service, the EPA, MESTI and the Ministry of Finance, in coordination with relevant sector institutions.

Current work to build NCA has been facilitated through World Bank technical assistance but it is recognised that ongoing improvement will require establishing regular opportunities to share knowledge, take part in training and similar activities.

The current data management arrangements in Ghana in relation to natural capital are limited but systems are being established through a collaborative project led by the Ghana Statistical Service.

Use of NCA

To date no key national documents have been informed by NCA results but the scoping assessment indicated the potential to use NCA to inform the National Development Plan, National Strategies in specific themes (e.g., sustainable development, climate change, water) and in National Biodiversity Strategic Action Plan (NBSAP). Through presentations to the Ghana legislature awareness of NCA is growing and numerous opportunities can be identified.

There are regular reporting requirements including a national state of the environment report and international reporting (e.g., to the three Rio Conventions (UNFCCC, UNCCD, CBD)) which may be an opportunity for future NCA data.

There have been some good success stories on mainstreaming environmental and natural capital, particularly at a local level. Examples of this are present in the development of several

REDD+ projects and in establishing institutional arrangements to estimate the cost of environmental degradation.

Barriers and lessons

Ghana sees the greatest barriers to NCA implementation as being the lack of data and the lack of technical expertise. They are less concerned about establishing institutional arrangements and finding suitable demand for NCA from government. To date however, they have limited experience in NCA and have no specific lessons to convey.

Mauritius

Introduction

The Mauritius scoping assessment was completed by Statistics Mauritius. They considered that, overall, the general state of knowledge about natural capital in Mauritius was moderate. This view reflected that they had a reasonable understanding of the physical state of certain environmental assets, particularly through the development of experimental ecosystem condition accounts, including biodiversity, but less understanding of linkages to economic activity.

Implementing natural capital accounts

Mauritius have implemented a number of natural capital accounts – for biodiversity, carbon, ecosystem condition, emissions, energy, forestry, land, soils and water with much of this work being encapsulated in the development of experimental ecosystem natural capital accounts following the CBD Quick Start approach. They can see opportunities to extend this program to include accounts for agriculture, fisheries, and waste.

Institutional arrangements for NCA have not been established in Mauritius with NCA being undertaken through the collection and organisation of data with general managerial oversight rather than through inter-agency mechanisms. Support for the NCA work has been received from UN Statistics Division, UNDP, the Indian Ocean Commission and AFD.

A range of data are available and while no specific data arrangements are in place for natural capital related data, collaborative work led by Statistics Mauritius under the Statistics Act has been possible.

Use of NCA

To date, work on NCA in Mauritius has informed national environmental strategies, thematic policy work (for example on climate change and water) and NBSAPs. Other applications can be identified including using NCA to inform the National Development Plan, other national strategies (e.g., on sustainable development) and work on poverty reduction and economic diversification. NCA is used to underpin reporting to the CBD and UNFCCC and opportunities exist to extend the use of NCA in reporting.

Barriers and lessons

Mauritius sees the greatest barriers to NCA implementation as being the lack of inter-institutional coordination and the lack of technical expertise. They are less concerned with issues such as an absence of demand for NCA and the connection between statistical offices and NCA work.

Their experience in NCA has highlighted the importance of staffing, coordination and technical expertise – all three being key for progressing the work.

Uganda

Introduction

The Ugandan scoping assessment was completed by staff from the National Planning Authority, the Ministry of Water and Environment, the Uganda Bureau of Statistics and the Ministry of Tourism, Wild Life and Antiquities. They considered that, overall, the general state of knowledge about natural capital in Uganda was moderate. They understand key economic connections to natural capital in terms of mining and tourism and also the key threats to natural capital around pollution, invasive species, infrastructure, ground water extraction, deforestation and wetland encroachment. While there is a range of information to build this picture, it is generally not accessible to a general audience and hence mainstreaming the information is challenging.

Implementing natural capital accounts

Aside from some small scale efforts in specific sectors, Uganda have not compiled any NCA at present but they would like to implement a comprehensive NCA program. The discussion here on implementation is therefore prospective. Uganda sees benefit in establishing appropriate institutional arrangements (e.g., steering committees and working groups) involving staff from different sectors and agencies. They also see the importance of assistance from international agencies, noting in particular a World Bank project currently underway to estimate the contribution of natural resources to GDP.

There are no formal protocols in place for data sharing but work to develop appropriate systems for natural capital data is being led by the Uganda National Bureau of Statistics with contributions from the National Forest Authority and the National Environment Authority.

Use of NCA

Given there are no NCA results for Uganda at this stage, there have been no instances of using NCA. However, it is anticipated that NCA results can be applied in many contexts including the Ugandan 5 year Development Plan, Uganda Vision 2040, the National Strategy for Greening the Economy, the Water and Environmental Investment Strategy and Operation Wealth Creation.

Uganda does complete a state of environment every two years however 90% of the data are qualitative rather than quantitative in nature. NCA could contribute directly to improving data in this reporting and an opportunity is also envisaged in terms of sector specific information for decision making.

The importance of natural capital in Uganda has been recognised through success stories such as the designation of critical wetlands as Ramsar sites, i.e. wetlands of international importance.

Barriers and lessons

Uganda sees the greatest barriers to NCA implementation as being the lack of statistics and data the related issue of ensuring the connection between statistical agencies and NCA. They

are less concerned with issues such as the lack of technical expertise and the potential absence of demand for NCA.

Even though Uganda have not implemented any accounts, they have already identified some important lessons, namely the relevant institutions can be assembled, technical accounting tools are already available, and data are available to commence accounting work but it is scattered across various agencies.

Madagascar

Introduction

The Madagascan scoping assessment was completed by staff from the Ministry of Water, Sanitation and Hygiene, the Ministry of Environment and Forest and the Ministry of Economy and Planning. They considered that, overall, the general state of knowledge about natural capital in Madagascar was moderate. Madagascar has a range of information and accounts on the physical stock and value of its natural resources, noting in particular the increase in investment in the mining sector in the past 5 years. The major threats to natural capital are recognised as deforestation; soil degradation; air, water and soil pollution; and climate change. Notwithstanding this knowledge of natural capital, they see gaps arising as a result of a lack of clear mechanisms to coordinate the production and use of data on natural capital.

Implementing natural capital accounts

Madagascar have been working on a number of natural capital accounts with release due in mid 2016. The accounts being developed are for minerals, water and timber/forests. They would like to extend this program to develop a comprehensive set of natural capital accounts including ecosystems and biodiversity; carbon, emissions, energy, land, soil, freshwater, and waste.

Institutional arrangements for NCA are well established. There is an NCA unit in the National Institutions of Statistics (within the Ministry of Economy and Planning) which leads the compilation of accounts. There are currently four supporting technical working groups (forests, mining, water, macro-indicators) led by subject area champions.

In recent years, the roles of the World Bank, through the WAVES partnership, and CI have been important in taking forward implementation. In the past, production of the accounts had been stalled at various times due to the time required to find resources for projects, the hiring of expert consultants, acquiring access to data and approving final outputs.

A range of data is available in Madagascar, particularly on water and hydrology. However, data sharing and coordination is limited with each institution collecting and managing their own data to report on and analyse their direct activities.

Use of NCA

To date, NCA information has been used in formation of the Madagascar National Development Plan. In the future, it is hoped that other national strategies can be informed by NCA including their low carbon economy plan (INDC Madagascar) and their water strategy (Document de Strategie et de Planification du Secteur Eau, Assainissement et Hygie).

There is also the potential to use NCA information in other areas including disaster management, local planning and budgetary allocations. Also, further engagement with economic institutions is likely because the Ministry of Finance and Budget will be represented on the NCA Steering Committee and the technical working group on macro-indicators will be championed by the Governor.

Barriers and lessons

Madagascar has had great success in creating a protected area network across the country. NCA related work is helping to further develop the policy framework around natural capital particular with regard to the distribution of economic benefits.

Based on Madagascar's experience in developing accounts, they have identified four main barriers to success in implementation of NCA, namely: lack of statistics, lack of technical expertise, a lack of inter-agency coordination and a lack of integration between statistical agency work and NCA.

Their three main lessons are (i) the need for a sound road map; (ii) the need for a clear strategy for capacity building based on understanding the current gaps in data and expertise; and (iii) the need to translate political buy-in into effective institutional arrangements. High level involvement of ministry and statistical office staff is of great benefit in advancing an NCA agenda.

Namibia

Introduction

The Namibian scoping assessment was completed by staff from the Namibia Tourism Board, the Ministry of Agriculture, Water and Forestry and the Ministry of Fishery and Marine Resources. They considered that, overall, the general state of knowledge about natural capital in Namibia was poor. While there was considered to be information available on agricultural practices, wildlife stocks, marine biomass, mineral resources and water resources, there was concern that the available data did not provide a meaningful estimate of changes over time and hence obtaining a good understanding of the situation with respect to natural capital was difficult.

Implementing natural capital accounts

At various points in time, Namibia have compiled various NCA including accounts for livestock (1998), energy (1998), fisheries (1998, 2012), minerals (1990s, 2003), water (1998, 2002/3, 2006), wildlife (2004), forests (2004) and carbon emissions (2012). In addition to this broad list of accounts, Namibia have a desire to develop accounts for ecosystems and biodiversity, land, soil, waste and environmental expenditure accounts. There is particular interest in advancing work on linking natural capital and tourism activity.

At this stage, in developing their accounts, not much use has been made of a range of NCA materials and documentation, although they have noted interest in additional detail on accounting for biodiversity expenditures (BIOFIN) and manuals that are tailored to local conditions and circumstances.

Institutional arrangements for NCA are quite well established, involving all sectors of the economy, the Namibia Statistics Agency Board, economic ministries, industry associations and data producers and users. Memorandums of Understanding have been developed with all stakeholders.

The staggered development of accounts, as described above, has resulted for a number of reasons including, lack of data and expertise, lack of interest from senior management, and a view among some that environmental protection on the one hand, and development on the other, are competing policy agendas. This attitude has changed in Namibia.

Since 2010, both the World Bank and CI have provided important support through training, expert advice and resourcing. Data are notionally coordinated through the Namibia Statistics Agency but there are limited resources for the coordination work required for NCA implementation. Generally, there is a sense that there are a wide range of data that are available to support development of NCA. It is hoped that newly re-established committees and mechanisms will be able to support the integration of NCA related data.

Use of NCA

To date no direct use has been made of NCA data in the policy space. A number of plans and strategies can be identified however that could use NCA information. These include the National Development Plan IV, Vision 2030 and the Harambee Prosperity Plan, the Green Plan for Namibia, and the poverty reduction strategy. There is also regular State of the

Environment reporting that could use NCA. Annual compilation of NCA is envisaged as something that could be used in adjusting measures of GDP to inform macro level decision making and planning processes. In terms of international reporting, Namibia completes the various required transmissions (UNFCCC, CBD – NBSAPs, SDGs) however each report is coordinated through separate processes.

A general challenge for gaining momentum for NCA use in government is that high-level staff in specific ministries (e.g., water, agriculture, energy, environment, fisheries, forestry, etc) are usually experts in the specific discipline and management of specific resources. In this setting the add value of NCA is less clear, especially as the work is not being driven from an economic perspective but rather from the Ministry of the Environment.

There have been a number of successful cases of improved management of natural capital in Namibia including expanding the network of protected areas and community forests and establishing the Environmental Investment Fund that invests in environmentally friendly project.

Barriers and lessons

Namibia sees the greatest barriers to NCA implementation as being the lack of data, the lack of technical expertise and the lack of demand for NCA from government.

Their experience in NCA has highlighted that often data are available but obtaining access to the data and processing the data to compile accounts is tricky due to lack of statistical training and related accounting skills. Namibia feels it would receive much benefit from longer, face-face courses on these aspects.

The lack of interest in NCA at high levels within relevant ministries is also a barrier and a legal requirement for NCA may be helpful. It is also acknowledged that in some cases the collection of data can be difficult, for example wildlife data and forest inventories. the importance of NCA being seen as a continuous development process that complements advances towards sustainable development. They have seen that well established institutional coordination and infrastructure for data management are important to maintain progress on NCA and finding opportunities to demonstrate the use of accounting information in policy is key.

South Africa

Introduction

The South African scoping assessment was completed by staff from the South African National Biodiversity Institute (SANBI) and Statistics South Africa (StatsSA). They considered that, overall, the general state of knowledge about natural capital in South Africa was moderate to good. This was reflected in a sound understanding of ecosystems and species condition in South Africa and also a reasonable understanding of some components of natural resources such as mineral and energy resources. However, it was felt that the information was not well consolidated or easily available in a format for decision makers and the general public.

Implementing natural capital accounts

South Africa have implemented a number of natural capital accounts – including for some ecosystem types, emissions, energy, minerals, fisheries, rivers, water and land (for one province). They would like to extend this program to develop accounts for more ecosystems types, a complete national coverage for land accounts, accounts for soil resources, and for carbon and biodiversity.

Institutional arrangements for NCA are well established. StatsSA has an environmental-economic accounting unit that leads the compilation of mineral, energy and fisheries accounts in partnership with other relevant agencies. SANBI have led the development of ecosystem accounts in partnership with StatsSA, the Council for Scientific and Industrial Research and other agencies. Relevant strategic advisory committees and working groups have been established.

Generally, the implementation of accounts has been driven from within the country. Recently however, South Africa was part of the ANCA project to advance ecosystem accounting with six other pilot countries. The connections made through this project have been important in advancing NCA work.

Many national department and agencies are involved in gathering and managing natural capital related data. Provincial environmental affairs and conservation authorities are also important sources. The Spatial Data Infrastructure Act (2003) and the Promotion of Access to Information Act (2000) provide good encouragement and support for data coordination and sharing with all information available on agency based websites.

Use of NCA

There are a number of policies and plans that NCA information could inform including the National Development Plan 2030, the National Strategy for Sustainable Development, the Biodiversity Economy Development Strategy, the National Water Resources Strategy, the National Protected Area Expansion Strategy and NBSAPs. There is also thought that NCA data could support the development of national indicators for South Africa for inclusion in the annual report published by the Department of Planning, Monitoring and Evaluation.

While regular reporting to international agencies takes place the responses are not coordinated in any particular way at this time.

There are a number of instances of successful management of natural capital in South Africa. This include environmental programs – Working for Water and Working for Wetlands; the expansion of the protected area network through the Biodiversity Stewardship Program; and the recognition of the concept of ecological infrastructure in the Framework for Investing in Ecological Infrastructure. These program apply the concepts of natural capital and would be directly supported through NCA implementation.

Barriers and lessons

South Africa sees the greatest barriers to NCA implementation as being the lack of technical expertise and the lack of financial resources. They are less concerned with issues around inter-agency coordination.

Their experience in NCA has highlighted the importance of providing demonstration accounts to show decision makers what might be possible. It is also clear that there needs to be a leading institution that can convene relevant partners and experts and working with other agencies to produce accounts. Finally, NCA and particularly ecosystem accounting requires the involvement of ecological and scientific expertise, it is not sufficient to apply only expertise from statistics, national accounting or resource economics.

ANNEX 6: DEVELOPING AND IMPLEMENTING NCA

The advantages of Natural Capital Accounting (NCA)

In establishing an NCA COP, it is important to articulate a broader rationale for its importance in moving forward NCA in Africa. As such, it is relevant to consider the following four policy and information challenges that are faced in all countries undertaking NCA:

- The increasing need to find integrated policy solutions across multiple domains;
- The need for greater coordination among institutions, sectors, and countries;
- The need for increased efficiency and effectiveness in data collection and management;
- The need for reporting to multiple national and international programs, including for example, reporting on progress towards the SDGs.

The potential advantages in applying NCA in response to these challenges emerge in the following ways. **First, NCA encourages the integration of data across data domains.** Specifically, it can result in a better integration of data and stronger link in considering both economic activity and the environment. The development of integrated environmental-economic datasets to support integrated decision making is at the heart of the motivation for the development of the NCA.

Second, communication is essential for improved coordination especially between agencies and disciplines that may not have traditionally worked together. In this context, NCA provides a common language for the organisation and analysis of information that should support improved dialogue and decision making.

Third, NCA can be articulated in statistical frameworks (see Box 4.1), such as the System of Environmental-Economic Accounting (SEEA), that are designed to support an understanding of the connections between different data sets, to facilitate comparison and reconciliation of data, and to identify data gaps. Overall, by using statistical frameworks, a clearer understanding of the data that are available, its quality and its use can be established. This provides the basis for making decisions regarding improvements in data collection and management.

Fourth, through the process of data comparison and reconciliation, the compilation of NCA encourages communication of a common understanding of past trends and current state of natural capital, both as whole and in terms of component stocks and flows. With this common understanding in place, it becomes possible to envisage the regular compilation of a single, broad and coherent database to underpin the derivation of indicators, and more detailed analysis²⁹ – at sub-national, national and international levels.

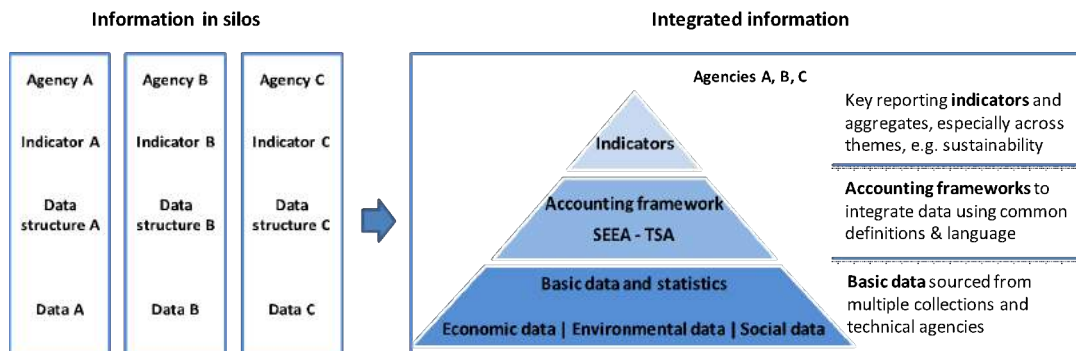
²⁹ In the same way as the standard national accounts database underpins the measurement and reporting on GDP as well as detailed modeling on demand, production and investment.

Box 4.1: What is a statistical framework?

A statistical framework is an organizing structure for data and statistics that provides a common understanding on concepts, definitions and related terminology, and is independent from the methods by which data might be collected.

The information pyramid, below, depicts how one type of statistical framework — accounting frameworks — play the role of integrating data from multiple sources through coherent concepts and definition. The coherent data formed in accounting frameworks can then be used to derive consistent and cross-cutting indicators covering multiple themes. Examples include indicators relating to sustainability, productivity, carrying capacity and resource efficiency.

Figure: The Information Pyramid



Some benefits of a statistical framework are that it:

- Aligns with information needs of users;
- Underpins collection and analysis of data by promoting coherence, consistency and clear thinking about a subject;
- Identifies how to measure agreed concepts: data sources, relevant classifications, methods, variables and indicators;
- Helps focus, prioritize resources towards statistics that matter the most; and
- Helps identify data gaps and areas of duplication.

Adapted from the UNSD and the Australian Bureau of Statistics

More specifically, the application of a standard statistical framework for NCA, such as the UN SEEA, would underpin discussion in the NCA COP and implementation of NCA in GDSA and non-GDSA member countries with the following advantages:

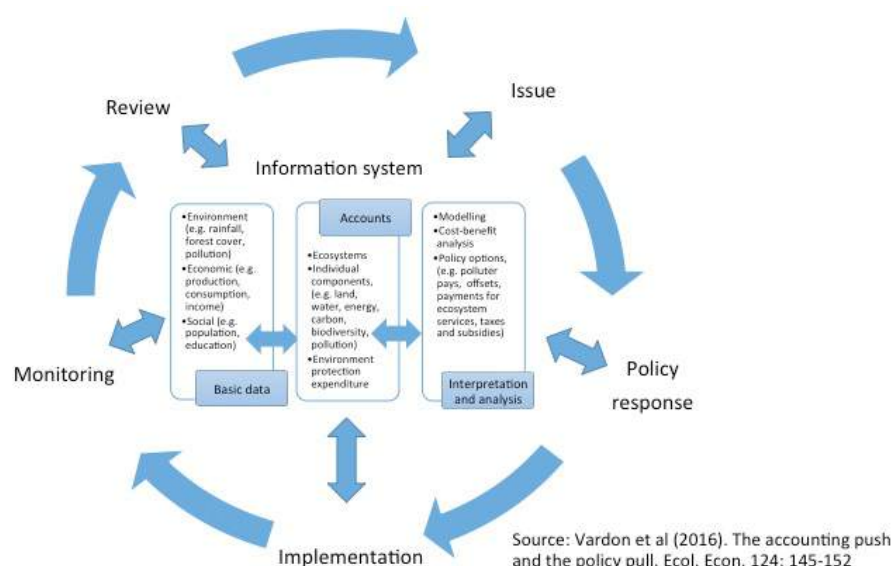
- The use of common terminology, definitions and language concerning NCA.
- The capacity to compare and contrast results across, for example economic sectors and countries, and hence assess policy outcomes in a consistent and 'big picture' manner.

- The use of an NCA framework that is fully aligned with the System of National Accounts³⁰ and hence the capacity to integrate current measurement work on the economy with the implementation of NCA
- The connection to the NCA implementation projects being advanced by the WAVES partnership, the UN Statistics Division, the EU, Conservation International and other key donor organisations such as GIZ (Germany) and NORAD (Norway).
- The potential to streamline training and capacity building, and in the longer term, operational systems for compiling NCA.
- The use of a framework that is beginning to underpin reporting and derivation of indicators for international comparison and assessment purposes such as the UN SDGs.

NCA policy connections and key stakeholders

At the outset, it is important to keep in mind that the compilation of natural capital accounts does not represent an end point. Rather, the compilation of these accounts should be considered as one tool to support better informed decision making. Figure 4.1 shows the place of accounts in an information and an on-going policy cycle (or “washing-machine” as it was dubbed at the workshop). **It is for this reason that an NCA COP, in which the goals and targets of the NCA COP were revisited every three-years (as proposed, above), would be critical source of information as countries move through this cycle.**

Figure 4.1 Accounting information in the policy cycle



At an international level, a key driver for NCA has been the policy imperative of sustainable development which has a particular need for a sound and coherent information base to support alignment of policy across environmental, economic and social spheres. NCA can thus be linked to supporting the measurement of progress towards the recently agreed SDGs.

³⁰ The System of National Accounts (SNA) is the statistical framework used for the organization of economic data and provides definitions for key economic measures such as gross domestic product (GDP), saving and national wealth.

More specifically, there are also more targeted programs of work concerning the connection between the economy and the environment that can be supported through NCA. These include the UN Sustainable Development Goals (SDGs), climate change, food security, poverty, the conservation of biodiversity, land degradation, deforestation and water stress and scarcity,.

The broad range of policy connections means that there are also a large number of stakeholders to consider and include in the NCA process. The different groups or cohorts of stakeholders include policy agencies (including environmental, planning, development, economic), technical agencies (statistical offices, geospatial agencies), local authorities, international organisations and donors, private sector businesses, universities and research bodies, and civil society.

Given the importance of connecting NCA outputs, and the process of NCA, to policy, it became clear that the NCA COP should support country level activities aimed at understanding policies and stakeholders relevant to NCA, and to provide support for establishing appropriate mechanisms, including institutional arrangements, for the effective engagement of these stakeholders.

Phases in implementing Natural Capital Accounting (NCA)

As presented by technical experts and country delegations during the workshop, there are four broad phases of NCA implementation. These phases, include:

- I. *Strategic planning*: involving the establishment of a core group of stakeholders and undertaking an initial assessment/scoping of relevance and feasibility.
- II. *Building mechanisms for implementation*: involving the establishment of an authorizing board or group and implementation teams.
- III. *Compiling and disseminating accounts*: involving, in the first instance, the compilation of demonstration accounts before implementation of ongoing accounting programs.
- IV. *Progressive strengthening of national statistical systems*.

It is to be expected that there will be regular iteration through these phases (as noted, above) as initial accounts are developed and expanded in coverage over time.

Across all four phases, regular communication between all stakeholders is an essential requirement. Establishing functional communication mechanisms and institutional arrangements is part of this requirement but more importantly, it is necessary to allocate time and resources to ensuring that discussion is regular, ongoing and open. Without this investment, it is difficult to achieve the level of coordination necessary for effective and timely implementation.

While NCA is often seen as solely a statistical or measurement task, it is essential that the design and implementation of NCA involve users of the data. Across government agencies, this will range from the perspectives of ministers and senior government advisers, through to those involved in policy development and monitoring. Especially for governments, it is also

important to understand the possible applications and policy connections, especially in the early phases of implementation. Ongoing support for implementation cannot rely on the production and dissemination of accounts, it also requires use and application, making this connection requires ongoing engagement and discussion. A particular application in the initial stages might be the derivation of indicators for reporting on international programs of work such as for the SDGs. The need to establish policy connections for NCA was a consistent theme through the workshop.

Wherever possible, a country should build on its past experience in NCA and link to current policy processes, for example existing reporting and budgetary processes, to help inform and support the implementation process. Since, at its heart, the NCA approach is one of integration of various, usually existing data, all past and current activities that support the integration of environment and economic statistics should be taken into consideration.

In general, implementation of NCA will not be possible without the involvement of a range of agencies that hold and manage different data sets. Establishing the arrangements and infrastructure for these data to be organized and shared is thus essential. In addition, developing and applying statistical tools and capacity (such as establishing a central business register and developing skills in surveys and classifications) will be important in supporting embedding NCA in the medium to longer term. Finally, it is likely to be relevant that there exists an environment in which data sharing between agencies can be undertaken in a relatively straightforward fashion. In some cases, this may be best enabled through legislation, something that is already in evidence in some GDSA countries.

Notwithstanding the need for the involvement of multiple agencies, there must also be a clear lead or champion agency for any given account. Since one of the key motivations for NCA is to integrate environmental data into economic and planning decisions, it is likely advantage if a ministry of finance or planning can be the leading agency.

The need to extend and improve data coordination and management for NCA purposes may prove a useful foundation to advance the development of national statistical systems. It is important to recognize however that the development of demonstration accounts is likely to be undertaken without a fully developed statistical system in which the statistics from all data sources required for NCA are produced using common classifications and similar features. Compiling demonstration accounts before advancing work on a broader statistical system is appropriate, provided that it is recognized that embedding and institutionalizing NCA will ultimately require investments in these systems and processes.

Another key factor that will impact on the nature of NCA implementation is the level of development of a country's economic statistics and national accounts. With well-established economic statistics³¹ underlying a range of areas of national accounts it is likely that implementation of NCA accounts can be achieved in more straightforward fashion by building on systems and experience already gained in national accounting.

³¹ For example, where economic statistics are collected using on a business register and surveys of business activity are regularly conducted and have broad coverage of industries.

Where experience and the level of national accounting is more limited, it may be necessary to improve the underlying economic statistics in order to gain the full benefits of NCA implementation. In this regard, for many countries, combining projects on the implementation of NCA and improvement in national accounts may be a useful way forward.

In addition to national accounts and economic statistics, the level of development of a country's environment statistics is equally important. Where the experience and development of environment statistics is not well advanced, it is important to develop programmes through which environment statistics can be better coordinated and developed. Programmes to implement NCA may be an important catalyst for this activity. Ultimately, successful long-term implementation of NCA is dependent upon soundly based environment and economic statistics programmes.

There are many potential areas and themes that can be the target of NCA implementation. Often, this broad scope can lead to fears of complexity, or confusion over whether implementation should be considered to relate to compiling all possible accounts or to just one or two accounts.

The accounts selected for commencing NCA implementation should be those of highest priority at national level based on policy and information requirements. It is recommended that only a limited number of accounts be considered in early phases of implementation for a number of reasons.

- First, each account or module is likely to involve somewhat different groups of stakeholders and hence it is likely to be more effective to develop mechanisms and processes for one or two groups of stakeholders in the first instance.
- Second, each theme and set of related accounts will require the use or development of technical accounting capacity. This capacity is generally quite limited at the commencement of implementation. Thus, in the initial stages of implementation it is likely to be most useful to direct available resources to a small number of target accounts.
- Third, accounting is an approach to measurement that benefits significantly from 'learning by doing'. Once there is a basic understanding of implementing an accounting approach, there is a significantly lower cost in adapting the approach in other circumstances. Thus the initial development of relevant accounting skills and systems in targeted areas is likely to be a powerful upfront investment ahead of increasing the coverage of the accounts.

Given the notion that NCA implementation should start relatively small and build over time, it is likely that the four broad phases listed above will be repeated at various points along the implementation journey. Phase 1 should be revisited on a regular basis to determine what additional areas should be incorporated into an NCA compilation programme and it will be necessary to work through phases 2, 3 and 4 for each new area or theme, although it should be possible to build directly on the experience from past work

Establishing precise estimates of the time and resources required to undertake NCA is difficult since it will vary directly with the types of accounts that are to be compiled and the extent to which data are currently available. The following points should be kept in mind:

- The situation of each country will be different with different institutional arrangements, information systems and technical expertise. Care should be taken in assuming cost estimates across countries will be similar, even for the same types of accounts.
- Some accounts will take longer to develop than others, for example, generally a full set of ecosystem accounts will take longer to compile than a set of water accounts. However, in both cases intermediate accounts and outputs will be able to be produced and hence staging the development process by recognising various milestones is important.
- It is likely to be necessary in the initial phases to access appropriate technical experience in NCA to work with country level staff and build NCA capacity.
- Throughout the development of NCA resources and time should be allocated to communication among NCA compilers, users, data source agencies, and work in other countries.
- Initially, it may be most appropriate to develop costings for the production of one or two demonstration accounts and a detailed feasibility assessment over a period of around six months; and, based on results and feedback, then develop estimates for longer term development and implementation.

CONSERVATION
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