





Terminal Evaluation of the 'National Grasslands Biodiversity Programme' project

Republic of South Africa

United Nations Development Programme

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TABLE OF RECOMMENDATIONS

The following is a list of the recommendations found in the text. This is a comprehensive rather than a prioritised list; the latter is included in the executive summary. These recommendations have been organised under four major headings;

- UNDP and GEF mainstreaming;
- Project documents, log-frames and reports,
- for SANBI and South Africa,
- Learning that can and should still be extracted from this project.

General recommendations to UNDP & GEF regarding Mainstreaming	Page
What is biodiversity? In the definition of biodiversity used for mainstreaming, consider redefining the term biodiversity to include (1) the importance of ecosystem health and local services as a means to (2) conserving (species?) biodiversity and global biodiversity values. The operational definition of biodiversity in mainstreaming projects needs to place more emphasis on ecosystem health or services (and perhaps less on single species diversity per se)	23, 112
Re-think the policy process. Learn from the Grasslands Project to show how careful combinations of stakeholders working to solve practical problems often result in a change process that spreads from norms to standards and, presumably in the long term, to policy.	29
Policy-practice loop. The Grassland Project suggests that a successful "policy-practice loop" must involve leaders and the grassroots and consist of (1) facilitating stakeholders to develop mutually desired guidelines collaboratively (2) which then take on the character of norms or even legal requirements for zoning and standards, eventually (3) emerging through policy and legislation. This, indeed, was the crux of the mining mainstreaming process. By contrast, top down policy processes may generate fear, conflict and impasse.	96
Policy-practice Loop and Log-frames. In mainstreaming projects, consideration should be given to ensuring that log-frames capture a mainstreaming process including (a) knowledge development (b) specific targets in terms of land use change (c) a clear case for biodiversity in production systems (d) inclusion of stakeholders to ensure 'norming' of new processes and capacity development and (e) institutionalisation through tools/guidelines, standards/plans/zones as a stepping stone to the larger goal of policy/legal reform.	40
The potential wins from joint development of a guideline type product between industry, regulators and biodiversity sector, is the primary lesson from the component.	41
What is "making the case"? Seriously consider undertaking an intellectual and practical synthesis and evaluation of all components in the Project with a view to developing a better conceptual understanding of the idea of "making the case" for biodiversity.	61
Where is the cross-project learning? UNDP and GEF need seriously to address to optimise the HUGE learning potential from and between projects, individually and collectively	100
Biodiversity Maps . Biodiversity maps are an important, even critical, entry point for mainstreaming biodiversity into development planning processes. Funding of such maps therefore should be considered by GEF early in mainstreaming initiatives.	112

Best practice example of monitoring. The monitoring surveys to assess the uptake of the Mining and Biodiversity Guidelines conducted by Outcome 5 provides an important precedent for other mainstreaming Projects and shows how they can and should monitor their effects even within the timescale of the project cycle	93
General recommendations to UNDP & GEF Regarding Project documents and log-frames and reporting systems	40
Shorten, strengthen, re-organise Pro-Docs: Consider revising the structure of the ProDoc to increase its potency as an implementing tool. Include a strengthened "development hypothesis" section linked to the log-frame. Cut certain formulaic components out of the ProDoc to make it more powerful as a document for guiding implementation, e.g. include sections justifying the Project to GEF through incremental cost analysis, "UNDP comparative advantage", "linkages between the project and other interventions", "country drive-ness" etc. as mandatory annexes rather than as narrative in the ProDoc.	44
Add change or development hypothesis to ProDoc: Add a short section to the log-frame narrative to succinctly describe the change hypothesis that is being captured by the log-frame	40
Strengthen log-frame processes: Thought needs to be given to how log-frames are to be used for GEF Projects, and whether or not to address these issues. If the log-frame is to remain central to project implementation and evaluation, give greater consideration to using a well facilitated log-frame process. In addition, there is much to be gained by training key participants in how to use a log-frame to manage a project.	43, 44
Provide training in LFA: GEF/implementing agencies offering quality training on LFA prior to project inception workshops to the project team/leader/s. This would allow for close scrutiny of the logframe in the early implementation (or pre-implementation) stages and through this, buy-in of the implementing team to the logframe, if it was not them involved in the design stage.	45
Simplify Project Reporting and link it to the LogFrame : Simplify project reporting through a five column reporting matrix (Table 7): objective, target/indicator, status, problems faced and corrective action. All reporting (i.e. internal project self-review, GEF PIR, and UNDP quarterly reports) should use the same, simple format based on the log-frame.	48
Link risk tracking to log-frame risks and assumptions: Give consideration to adding a fourth column in the log-frame in which indicators and means of verification for measuring risks and assumptions are specified, leading to regular tracking of these during project implementation	40, 47
Recommendations to SANBI and partners regarding this project and follow up activities	71
Consider devolved civic agriculture/land management mainstreaming for GEF VI: Consider a national mainstreaming project targeted at improved conservation on farmland. Think seriously about developing grassroots civic institutions as the primary mechanism for internalizing the costs and benefits of biodiversity into production landscapes. Thus, mainstreaming might be built around the civic capacity of landholders to use collective action for the self-design, self-monitoring and self-regulation of biodiversity in its broadest terms – ecosystem services, soil, water, forestry, wildlife and species. Upscaling of civic organization should also enable landholders to engage with and even lead national policy processes (in line with lessons from Grasslands Projects, especially in mining and forestry). This will need to be supported by knowledge, through	73, 74

a combination of research and extension related to wise use practices. If guided by civic processes, the alignment between the demand for and production of knowledge will be closer. Specific technical inputs will be required to address regulatory issues (e.g. over-regulation in the wildlife sector) and technical issues (e.g. the realistic expectations from conservation farming).	
How to support booming stewardship in the long term?: Give consideration to how to support the declaration, planning and auditing of stewardship sites given the anticipated rapid growth in such sites and the recognition of limited capacity within provincial conservation agencies to service the potential demand for biodiversity stewardship. Also consider developing stewardship as a bottom-up landholder based conservation movement.	86
Develop Nzima community in Wakkerstroom as a demonstration site: Evaluate the long term economic and social consequences of "business as usual" versus the "flip to a bio-experience economy" in Nzima Protected Environment. Seriously consider a major investment to flip this economy from one dependent on external grants to one based on sustainable use of wildlife, tourism and water.	76
Do we needs a new national park for Soweto? : SANBI should consider commissioning studies and policies relating to the long term contribution of protected areas to urban living in South Africa. Specific attention should be to developing game parks accessible to and targeted at the urban poor and middle class, such as Soweto. As noted by Shelhas (2001), the persistence of the national park ideal in the USA owes no small measure to their alignment with the needs of middle class Americans.	67
Recommendations for further learning from the Grasslands Project	68
Recommendations for further learning from the Grasslands Project Evaluate effect of biodiversity good management practices: The interventions made by the project in biodiversity good management practices represent an important experiment that should be scientifically monitored to inform the on-going evolution of grazing and burning guidelines and extension. There is a huge opportunity for Grassland Society of Southern Africa to take this forward. Evaluate whether and by how much production, profits and biodiversity were improved by pilot interventions (4+1 grazing practices, 20-point farm planning). Use this independent study to inform potential future interventions in the sector. If possible, a similar independent analysis of the effects of conservation farming should be included.	68 70, 80
 Recommendations for further learning from the Grasslands Project Evaluate effect of biodiversity good management practices: The interventions made by the project in biodiversity good management practices represent an important experiment that should be scientifically monitored to inform the on-going evolution of grazing and burning guidelines and extension. There is a huge opportunity for Grassland Society of Southern Africa to take this forward. Evaluate whether and by how much production, profits and biodiversity were improved by pilot interventions (4+1 grazing practices, 20-point farm planning). Use this independent study to inform potential future interventions in the sector. If possible, a similar independent analysis of the effects of conservation farming should be included. Analyse and publish certification experiences (forestry plus red meat standards): This Project experimented successfully and less successfully with standards and certification in both forestry and agriculture respectively. The experience of the Grassland Project in FSC standards and certification is profound (and by itself is worthy of further analysis (and publication). This experience should be captured through detailed analysis (and publication) of these intense experiences. This analysis should include an analysis of the transactions costs of establishing certification and standards, their costs and benefits, and their ultimate effects on biodiversity. The process of mainstreaming through certification is also worthy of detailed analysis. 	68 70, 80 75, 93

KEY LESSONS

Key Lesson 1: South Africa's detailed biodiversity mapping is a critical input into mainstreaming and biodiversity management at many scales. Developing similar maps for other countries could have a high impact in terms of long term GEF conservation and mainstreaming goals

Key Lesson 2: Jumping directly to "policy reform" in mainstreaming projects is an unrealistic goal, and may backfire. In certain circumstances, a far better approach is mainstreaming that emerges when stakeholders, including government agencies, work together to solve real problems. Institutionalising emerges more slowly (but possibly more surely) first through norms, then through standards and guidelines, and only later through national policy.

Key Lesson 3: Extension was highly valued by farmers, suggesting that knowledge is an important limiting factor to sustainable land management. This implies that the provision of high-quality extension in the future is likely to add value in terms of biodiversity and production.

Key Lesson 4: Highly qualified Outcome facilitators were central to the successful outcome of this complex project. Key attributes were the ability to link scientific credibility and practice into a Vision, or case, for biodiversity and production, and the ability to manage stakeholder processes sensitively and productively, including designing, managing and supporting multi-actor implementation processes.

Key Lesson 5: Certification is a tool that relies heavily on technical and process indicators. It is not good at recognizing fine scale gains in complex environments, which are central to biodiversity conservation (itself a complex system) especially at smaller scale and with communities. It is also not good as an agent for changing significant deleterious practices in large scale operations. However the tool has an impact on forestry practices because failing an audit can have serious consequences for market access.

Key Lesson 6: Flipping biodiversity "language" from species to services results in greater impact and buy-in from officials and society

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This Terminal Evaluation was a rewarding experience because of the personal commitment and introspection provided by so many dedicated individuals at so many levels.

I would like to extend my personal thanks to Anthea Stephens, the Project Manager for the Grasslands Project, for the enormous work that she and her staff put into the Project, and not least preparing the documentation for the TE, organizing immensely valuable field trips, and providing individual and group presentations and stimulating discussion about the projects. I would like to single out the team leaders for the exceptional contributions to the evaluation process: Tsumbedzo Mudalahothe and Angus Burns (WWF-SA) for Agriculture, Steve Germishuizen for Forestry, Budu Manaka for Urban, Stephen Holness for Mining and Aimee Ginsburg for her comprehensive databases and publication materials. The planning of the numerous interviews and field trips was meticulous and complex, and for this I extend my thanks to those working behinds the scenes in the Grasslands Coordination Unit.

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ACRONYMS AND ABBREVIATIONS

AgriSA	Agriculture South Africa
ARC	Agriculture Research Council
AsgiSA	Accelerated and Shared Growth Initiative in South Africa
AWP	Annual Work Plan
BII	Biodiversity Intactness Index
СО	Country Office (of UNDP)
DAC	Development Assistance Committee (of OECD)
DACE	Department of Agriculture, Conservation and Environment (Gauteng Province)
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DRDLR	Department of Rural Development and Land Reform
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
DWAF	Department of Water Affairs and Forestry
EA	Executing Agency
EWT	Endangered Wildlife Trust
FSA	Forestry South Africa
FSC	Forestry Stewardship Council
GCU	Grasslands Coordination Unit (= Project Management Unit)
GDARD	Gauteng Department of Agriculture and Rural Development
GEF	Global Environment Facility
GSC	Grasslands Steering Committee (= Project Steering Committee)
IAIA	International Association of Impact Assessment
KZN	KwaZulu-Natal
LogFrame	Logical Framework Matrix
M&E	Monitoring and Evaluation
MTE	Mid-Term Evaluation
MTPA	Mpumalanga Tourism and Parks Agency
NAFU	National African Farmers Union
NERPO	National Emerging Red Meat Producers Organization
NEX	National Execution (for UNDP projects)
NGBP	National Grasslands Biodiversity Programme
NGO / NGOs	Non-Government Organization/s
OECD	Organization of Economic Cooperation and Development
PDF-B	Project Development Facility – Phase B (of the GEF)
PES	Payment for Ecosystem Services
PIR	Project Implementation Review
PM	Project Manager
ProDoc	Project Document
QPR	Quarterly Project Report
RPO	Red Meat Producers Organization
RTA	Regional Technical Advisor (UNDP/GEF)
SANBI	South African National Biodiversity Institute
SMART	Specific, Measurable, Achievable, Relevant, Time-bound (qualities of Indicators)
1°f	Task Team
UNDP	United Nations Development Programme
WESSA	Wildlife and Environment Society of South Africa
WRSA	Wildlife Ranching South Africa
WWF-SA	World Wide Fund for Nature – South Africa

DEFINITIONS

Biodiversity Sector Plans

It is easy to get lost in South Africa's nomenclature relating to biodiversity planning. In essence, a **systematic biodiversity plan** is a map at national, provincial or other scales of critical biodiversity areas, accompanied by land use guidelines. They inform **biodiversity sector plans** (also known as systematic conservation plans) which invariably feed into provincial and municipal planning processes even before they are legally formalized as **Bioregional Plans** because of the demand for information on biodiversity to guide development planning, environmental impact assessments and the like.



Systematic Biodiversity Plans: also known as systematic conservation plans, identify priority areas for biodiversity conservation based on internationally recognised systematic biodiversity planning principles, methodologies and techniques. Provincial spatial biodiversity plans, or fine-scale biodiversity plans at the district or local level, form the basis for bioregional plans published in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (South Africa, 2004), as set out in the Guideline for Publishing Bioregional Plans (DEAT, 2009).

Biodiversity Sector plans are also spatial plans, usually at the level of a municipality, that map in more detail critical biodiversity areas with accompanying land-use planning and decision-making guidelines. These plans are a precursor to a published bioregional plan, but nonetheless feed into multi-sectoral planning and assessment processes and to support and streamline environmental decision-making. Because they fill such an important planning gap, they are invariably used to support the development as Environmental Management Frameworks, Spatial Development Frameworks, Strategic Environmental Assessments, Environmental Impact Assessments and development licensing processes even before they are formalized. These biodiversity sector plans do not have the legal weight of a bioregional plan, but nevertheless invariably play a critical role in informing land-use planning and decision-making

Bioregional Plans: a spatial plan, including a map of critical biodiversity areas (CBAs) with accompanying land-use planning and decision-making guidelines, published in terms of the Biodiversity Act. The purpose of a bioregional plan is to inform land-use planning, environmental assessment and authorisations, and natural resource management by a range of sectors whose policies and decisions impact on biodiversity. Bioregional plans are intended to feed into multi-sectoral planning and assessment processes such as Environmental Management Frameworks, Spatial Development Frameworks, Strategic Environmental Assessments and Environmental Impact Assessments and to support and streamline environmental decision-making. The procedure for developing a Bioregional Plan is explained in the Guideline for Publishing Bioregional Plans and illustrated above. A Bioregional Plan should

- Be based on a systematic biodiversity plan;
- Include a map of critical biodiversity areas (CBAs) and ecological support areas (ESA).

- Include accompanying land-use guidelines for avoiding loss or degradation of natural habitat in critical biodiversity areas and maintaining ecological functioning in ecological support areas.
- Be configured as district municipalities, metropolitan municipalities, local municipalities, or groups of local municipalities anywhere in South Africa (although, priority will be given to areas that fall within or overlap with the broad biodiversity priority areas identified in the NSBA, 2004).

Bioregional plans must meet the necessary requirements as set out in the Guideline for Publishing Bioregional Plans (DEAT, 2009) before they are submitted for publishing by the MEC or Minister (if they straddle two provinces).

Definition of areas protected through Biodiversity Stewardship Agreements

Four categories of biodiversity stewardship are defined by the Biodiversity Stewardship South Africa (BSSA 2009):

a) *Nature Reserves* - declared as a nature reserve (s.23 of NEM:PAA) (South Africa, 2003) but allows for landowner to be the management authority of the protected area.

b) *Protected Environments* - declared as a nature reserve (s.28 of NEM: PAA) (South Africa, 2003) but allows for landowner to be the management authority of the protected area.

c) *Biodiversity Management Areas* - contractual biodiversity agreement between province and landowner with legal status in terms of National Environmental Management: Biodiversity Act (NEM: BA, Act of 10 of 2004) (South Africa, 2004) (see definition in glossary)

d) *Conservation Areas* - voluntary conservation areas, single sites, properties or multiple properties, including sites of conservation significance and conservancies. Has no legal status.

In all cases, management plans are required.

EXECUTIVE SUMMARY

Development objective	The biodiversity and associated ecosystem services of the Grassland Biome are sustained and secured for the benefit of current and future generations.
Immediate objective	Major production sectors are directly contributing to the achievement of biodiversity conservation priorities within the Grassland Biome
Outcome 1	Enabling environment for biodiversity conservation in production landscapes is strengthened
Outcome 2	Grassland biodiversity conservation objectives mainstreamed into agriculture
Outcome 3	The forestry sector directly contributes to biodiversity conservation objectives in the Grassland Biome
Outcome 4	Grassland biodiversity management objectives mainstreamed into urban economy in Gauteng
Outcome 5	Biodiversity management secured in coal mining sector

Table 1: Project Summary Table

1.1. PROJECT DESCRIPTION (BRIEF)

1. The South Africa Grassland Biome is a repository of globally significant biodiversity. However, in common with other temperate grasslands across the globe, this rich ecosystem is threatened. At Project start, 30% of the total area had already been irreversibly transformed by anthropogenic activities and only 2.8% was formally conserved within a protected area estate that is not wholly representative of biodiversity patterns. Much of the grasslands ecosystem presently lies in production landscapes allocated to livestock production, agriculture (mainly cereals), afforestation with exotic tree species, and coal mining. South Africa's largest urban and industrial centre is located within the grasslands.

2. At Project start, production activities were identified as constituting the main threat to grasslands biodiversity. The high turnover of biodiversity across the ecological landscape and the nature of threats to the biota imply that the expansion of protected areas alone will not be sufficient to protect this biological heritage. This led to the conclusion to mainstream biodiversity management objectives into the practices of the production sectors that provide the stimulus for land use changes that threaten biodiversity.

3. The National Grasslands Biodiversity Programme (the "Project") aimed to mainstream conservation objectives into the major production sectors operating in the Grassland Biome, namely: agriculture, forestry, urban development and coal mining. The programme aimed to lift a number of barriers to conservation, namely, market failure, systemic and institutional capacity weaknesses and limited know-how for conservation management within production sector institutions. The baseline was characterised by many uncoordinated efforts to manage grassland biodiversity. Although the enabling environment for 'mainstreaming' was largely in place with a supportive policy and legal framework, there was a gap between policy and implementation. The fifth component of the project aimed to strengthen the enabling environment for mainstreaming by addressing this gap. This provided the entry point for GEF interventions. The Project was designed as a catalytic initiative to coordinate existing conservation efforts in the biome and improve their efficacy by expanding the management 'tool box'.

1.2. EVALUATION RATING TABLE

4. This was an innovative Project. Background analyses were of high quality, and extremely strong in biodiversity. Understanding of sectors and particularly mainstreaming process was good in places, but did not receive the same weighting as biodiversity in terms of Project development expertise, theory or analysis. Nevertheless, the project concept and design was of high quality and innovative and is rated **Highly Satisfactory**. A weakness flagged in the text was the logical framework. This is discussed in detail, suggesting that there is general scope in GEF projects to make better use of the "logical framework approach" as a planning, monitoring and adaptive tool.

5. Stakeholder participation in project formulation was one of the real strengths of this Project. There was clearly buy-in to the concept, and several people interviewed recalled their involvement in planning as part of the reason for high levels of participation. This aspect is rated **Highly Satisfactory**.

6. The implementation/execution of this Project is rated **Highly Satisfactory**. Not only did the Project go further than outlined by the log-frame targets, but in doing so it "invented" a mainstreaming process. This, on its own, is a major contribution.

7. The Project is rated **Highly Satisfactory** in terms of monitoring and evaluation. The Project created a learning organization at multiple levels, where a combination of high quality data (of many different types) and well managed stakeholder processes contributed to significant amounts of learning and adaptation. Key aspects of monitoring and evaluation were quarterly project meetings at which all team members discussed progress, barriers and solutions, the Mid Term Evaluation, the sustainability planning process, stakeholder processes in each Outcome, and the excellent "Lessons Learned" documents. Interestingly, the more formal mechanisms of monitoring and evaluation including the log-frame and PIR were less useful and, as noted above, there is scope to evaluate why and how to improve their contribution.

8. One of the key ingredients of the success of this Project was the high levels of stakeholder engagement in implementation. This is rated **Highly Satisfactory**. Indeed, one of the profound lessons of this Project is that the engagement of well selected stakeholders around implementing key activities at field level resulted in lessons being institutionalised in the form of industry-wide guidelines, spatial plans, and standards.

9. Overall, this Project is rated **Highly Satisfactory**. It was not perfect, but it achieved more than anticipated at Project design. Almost all land area targets were reached. A large number of highly relevant guidelines, spatial plans and standards were institutionalised. Much more financing emerged than initially planned for. And, perhaps most importantly, the act of implementing the Project developed considerable capacity in terms of individuals, organisations, stakeholder norms and processes, and institutions, for example capacities in developing and managing stewardship protected areas, new capacities and norms in the mining and biodiversity sector, potential breakthroughs in the future with Payments for Ecosystem Services or Investment in Ecological Infrastructure, and the inculcation of biodiversity priorities into planning processes at Provincial and Municipal level.

List of GEF evaluation criteria	Project
Project concept and design	HS
Stakeholder participation in project formulation	HS
Implementation/ execution	HS

Table 2: Overall Evaluation of Project

Monitoring and evaluation	HS
Stakeholder participation in project implementation	HS
Overall results (attainment of objectives)	HS
Relevance	R
Effectiveness and efficiency	HS
Sustainability	
Impact	

10. This Project is highly **Relevant**. It has targeted the conservation of grassland biodiversity which is greatly under-represented in South Africa, but even more so globally. A significant contribution has been made to the protection of biodiversity in terms of species and habitats. Moreover, as a foundational Project is has piloted the "mainstreaming" process in four different kinds of production landscapes – grazing agriculture, plantation forestry, mining and urban areas. This has powerful global lessons for how a mainstreaming process can and should work, but also how this may differ in different sectors.

11. In terms of effectiveness and efficiency, this Project is rated as **Highly Satisfactory**. Of course there have been blind alleys, such as the Free State Rivers Project and red meat certification, but the Project identified and responded to these quickly, turning potential areas of wastage into important lessons and adaptation strategies. In the judgement of this Evaluator, seldom if ever have I evaluated a Project that gives so much care to assessing whether it is achieving results (effectiveness) and working out how to do this efficiently.

12. Sustainability can only really be rated with a crystal ball. However, the Project has given careful consideration throughout implementation, including the specific sustainability assessment process conducted in 2012 and sustainability is rated **Likely**. It is likely that many key activities will be sustained especially where:

- (i) SANBI has taken over long term responsibility for an activity (e.g. urban sector, mainstreaming policy)
- (ii) Where many key people in the sector have been involved in the mainstreaming process (e.g. forestry, mining, urban and, to some extent and especially at field level, agriculture)
- (iii) Where key process have been developed and 'normed' into the sector, such as the process of developing stewardship sites, the mining and biodiversity guidelines and, critically, the inclusion of priority biodiversity into formal land use planning and approval processes at many levels through maps, GIS and guidelines,
- (iv) Where the Project has negotiated for new positions to be created to take aspects of the Project further beyond Project close (e.g. Biodiversity Stewardship position in MTPA, Ezemvelo KZN Wildlife, Gauteng Department of Department of Agriculture and Rural Development, just renamed with Environment in the new title)
- (v) Where the Project implemented activities through agencies and individuals committed to the future (e.g. WWF-SA Wakkerstroom Project, Conservation-SA red meat certification, highly motivated individuals who have raised money to continue working with forestry, the commitment by Coaltech and others to take forward work on mining rehabilitation).

13. Impact, like sustainability, is difficult to measure during the lifetime of a mainstreaming project. Nonetheless, projecting forward the longer-term consequences of this Project suggest that the impact will be **Highly Satisfactory**. Momentum to take the project forward has certainly been created in all four sectors, encouraged by high levels of participation the strategy taken by the project to "make

a case" for each sector for why biodiversity is critical to their long term future. The long term impact of the stewardship sites is likely to be high in terms of avoided land conversion, especially given the replication of stewardship in non-project areas. The second area where impact appears to be high is through the on-going and carefully considered of further incremental GEF projects that are learning from the experiences in the Grasslands Project

1.3. SUMMARY OF CONCLUSIONS, RECOMMENDATIONS AND LESSONS

1.3.1. KEY OBSERVATION ABOUT THE GRASSLANDS PROJECT

14. The Grasslands Project is an excellent programme and is rated Highly Satisfactory because it has achieved considerable results in terms of land protected and mainstreaming biodiversity within sector guidelines, norms and planning mechanisms. Equally importantly, the Grasslands Project provides important lessons for how to do mainstreaming through a practice-policy loop. At the human resources level, significant organisation and individual capacity in mainstreaming processes have been built and strengthened, and South Africa's repository of key facilitators, capacity and experience is now an invaluable resources.

15. Mainstreaming is a deep institutional process of bringing people and agencies together with common norms, and is often slow and messy and needs time to emerge. The project cycle of mainstreaming projects may well need to be rethought along the lines of the same money in twice the time. It probably requires twice standard project timeframes to deliver the impact level results (i.e. hectares, species) that are of interest to the GEF. Other critical mainstreaming impacts (improved capacity, strengthened institutional process) also only begin to emerge towards the end of a 5 year investment - expecting changes on the ground at the level of impact required by the GEF within 5 years is extremely hard and difficult to predict.

16. A key lesson from the Grasslands Project is the power of "loose tight" management or a longhook short-hook approach. This requires a combination of:

- "tight" goals in the form of, for example, hectare targets and policy outcomes, or at least guidelines and norms,
- high quality staff and facilitators with considerable flexibility in getting to these goals,
- The development of field projects that may be an end in themselves, but the primary purpose of which is to bring stakeholders together and to use this experience to frame the macro policy environment. This redefines the policy-practice loop process. It begins with a combination of bottom-up technical problem solving and effective stakeholder groups who use practical process to define, norm and then and only then legislate 'policy'.

17. The definition of biodiversity needs to be rethought for mainstreaming. The experience of the Grassland Project suggests that a 'purist' species approach (especially a single species approach) tends to impede mainstreaming because its association with dogmatic conservation practices is weak at making the case for biodiversity to landholders, and often results in unnecessarily conflicting goals and even acrimony and mistrust. There seems to be considerable demand for mainstreaming when conservationists find common ground with the users of production landscapes around some form of ecosystem services, be this improved soil management, water production, wildlife income, and so on. Thus, if we think of biodiversity more holistically as "ecosystem health and diversity", mainstreaming is more concerned with overall ecosystem health and the ecosystem processes, structures and services that are associated with this.

18. We also need to recognise the importance of a quality technical organization like SANBI and the excellent staff in the Grasslands Project in managing with great sensitivity and quiet determination the complex social processes necessary for mainstreaming. SANBI was universally praised by stakeholders for being technically strong, socially astute and managerially competent, and was

credited with making this Project work. SANBI was described as an agency that worked for the common good, and which sought results rather than the limelight which it often gave to partners. In other words, SANBI and the Grasslands Project had non-egotistical leadership ideally suited to the mainstreaming process, with women playing a prominent role, and perhaps Geographers too. Government agencies were high in their praise of the Project. Often overwhelmed by their responsibilities, they regularly praised the capacity of SANBI to enable them to be proactive and incremental, and also appreciated the financial flexibility and timeousness provided by the Grasslands Project. Stakeholders also noted that, as a government technical agency, SANBI had more power, was more balanced in its dealing of stakeholders at opposite ends of the spectrum, and was more accountable than NGOs. Within the Grasslands Project itself, a key success factor was the quiet, thoughtful and committed leadership of the Project Manager, and her ability to recruit, retain and empower exceptional staff, with the leaders of the agriculture, forestry, urban and mining components being technical strong and purposeful with the ability to bring people together in productive partnerships and to manage these partnerships quietly and without needing to burnish their own egos.

19. This is why the economic returns on investment from GEF dollars in the Grasslands Project was so high. An investment of \$8.3 million by the GEF brought 252,606 hectares of land under stewardship arrangements at a cost per hectare of \$32 (compared to \$10-50,000+ to purchase the same land), yet these land area gains were merely the means to greater ends, setting in places the norms and policies for these impact to grow in the future. This is an exceptionally inexpensive means of achieving biodiversity conservation. Or put the other way, the returns on investment of investing scarce biodiversity dollars in exceptional agencies like SANBI that are able to design and manage quality projects like the Grasslands Project are very high. This suggests that serious consideration should be given to further GEF mainstreaming investments using a Grasslands-type project to address biodiversity conservation on agricultural land on a national basis. Suggestions for this are provided – see page 47.

20. However, as noted by the former RTA, this Project was conceptualised following a comparative economic study of land uses and grassland¹, and one of the opportunities not taken by the project was to advance the economic understanding of the mainstreaming process, including the need to "make the case for" biodiversity conservation.

21. A stark finding of this TE is that the increasing length and complexity of the Pro-Docs and reporting systems like PIRs are now becoming an impediment rather than an aid to effective project management, performance and accountability. Further, the power of the Logical Framework Approach, comprising both the use of the log-frame as an objective-setting, planning and performance accounting tool, and the use of log-frames as a group agreement and assessment tool to knit together stakeholders in common and adaptable programmes, is not being used to its full. Project performance and accountability would be improved by simplifying the Pro-Doc, and by using a single and simplified log-frame based performance accounting system for all reporting, including within the project, to UNDP and to GEF. Consideration should be given to training project planners and managers in the use of the logical framework approach as a rigorous adaptive management tool.

22. Redford notes that GEF has supported 327 biodiversity mainstreaming projects, investing \$1,631,684,477 in GEF funding and \$5.2 billion in co-financing but that this investment is not supported by robust, credible evidence as to the efficacy of these actions, with far more written about how and why mainstreaming should be done, than evaluating the process in practice (Redford 2013).

1.

¹ Murray M.I. 2005. Grasslands comparative agricultural economic and trends assessment. Report for the South African National Biodiversity Institute's National Grasslands Biodiversity Programme.

The absence of learning from and between Mainstreaming Projects is and continues to be a glaring weakness, and was considered to be a HUGE opportunity lost by the Grasslands Project. Comments given to this consultant note that "the biggest missed opportunity (and this gap is Huge) is learning from and between other UNDP funded projects (nationally, regionally and globally). There are NO opportunities for engagement between projects, except in circumstances like CAPE & Grasslands where both projects happen to fall under the same implementing agency, in this case like SANBI."

23. Further, not only are projects not learning from each other, or indeed contributing to the peer reviewed literature, but GEF is effectively funding some 327 policy experiments in mainstreaming, but is not specifically or proactively using this process to learn. Many mainstreaming projects could be easily designed as learning experiments by basing the log-frame on a theory of change or development hypothesis, and then adaptively managing and monitoring the experiment through a well-managed log-frame process. Hence the recommendation that a small section be added to the ProDoc called "theory of change" or "development hypothesis".

1.3.2. MAIN LESSONS

24. The spatial mapping of biodiversity at a national scale is a powerful tool for influencing planning at all levels, and is rapidly adopted in national, provincial and municipal planning and approval processes.

25. The experience of the Grasslands Project suggests that policy reform as written into many projects is both naïve and often counter-productive; most projects fail because even where policy documents are reformed, they are very often not implemented. The Grassland Project demonstrates a much surer way of encouraging policy reform, basically by involving stakeholders to implement field based projects and using this experience to collectively develop national guidelines, which results in shared norms which in turn provide the social fabric for genuine policy reform. This process, which recognised the importance of norming as the social foundation for rule making, worked well in South Africa, and should be tested elsewhere.

26. This suggests that mainstreaming projects log-frames might be improved if they capture both the outcomes and process embedded in a mainstreaming process, namely (a) knowledge development (b) specific targets in terms of land use change (c) developing a clear case for biodiversity in production systems (d) inclusion of stakeholders to ensure 'norming' of new processes and capacity development and (e) institutionalisation through tools/guidelines, standards/plans/zones as a stepping stone to the larger goal of policy/legal reform.

27. In the definition of biodiversity used for mainstreaming, consideration needs to be given to redefining the term biodiversity and the means-ends relationship between biodiversity and production. Landholders respond strongly the importance of ecosystem health and ecosystem services (ecological infrastructure), and this can be used as the means of conserving (species?) biodiversity and global biodiversity values.

1.3.3. KEY RECOMMENDATIONS

28. A list of recommendation is provided above, but is unordered and unscaled. The big recommendations arising from the Grassland Project TE are as follows with the first two relating to South Africa and SANBI, and the last two of a global nature:

29. The Grasslands Project represents an extremely well managed experiment in biodiversity mainstreaming that has been remarkably successful. These lessons have been captured in reports and in the heads of key participants. However, there is still scope to make more of this learning opportunity by encouraging further reflection by the Grasslands Team, and by further stimulated reflection by linking it to scholarship. Further resources should be made available to enable the Grassland Team to meet once or twice with a few selected scholars, with the product of this being five to ten peer reviewed articles or perhaps a book on the project published by a recognised academic publisher (e.g. Earthscan). Consideration should be given to writing up each sector as a case study, to a comparative and more theoretical analysis of the mainstreaming process, and to evaluating more carefully and theoretically what (business / economic) case was made (or could be made) for biodiversity in this set of case studies.

30. Given this excellent team and the lessons learned about mainstreaming, and emerging knowledge that there is a strong demand by many landholders to improve biodiversity conservation on their land, serious consideration should be given to immediately developing a mainstreaming project that targets the opportunities to enhance biodiversity conservation and the bio-experience economy on privately owned land in South Africa. There is no reason that part of this project might also be targeted at communal land provided the complexities of this sector do not water down the opportunities for biodiversity enhancement on private land. In other words, take on communal land as a main challenge for political and equity reasons, but not at the expense of the low hanging fruit of conservation on private land.

31. The structure of Pro-Docs, PIRs and other project administration paperwork needs to be simplified to serve the single objective of project planning, performance accountability and learning. Linked to this, much better use needs to be made of the Logical Framework Approach as a tool for performance control, learning, stakeholder engagement, and accountability.

32. Serious consideration needs to be given to designing and using mainstreaming projects as learning tools. At a project level, they can and should be designed as policy experiments using change or development hypotheses that can be monitored through well-designed log-frames. At a GEF programmatic level, steps need to be taken to encourage learning between projects, and ensuring that project experiences, both positive and negative, contribute to the global discourse, because this surely is a critical component of mainstreaming. There is certainly scope to develop learning circles between the people implementing GEF mainstreaming projects on the ground. However, staff supervising GEF Projects in implementing agencies have developed enormous experience, and an important opportunity is being lost because these people are overwhelmed by administrative responsibilities. Proactive opportunities are not made to encourage them to reflect, synergize and theorise about biodiversity mainstreaming, or to provide them with the space to contribute technically to projects and to sharing lessons between projects. Given the biodiversity budgets that these people control, even small increments in such knowledge are likely to have very high returns on investment.

2. INTRODUCTION2.1. PURPOSE OF THE EVALUATION

33. The purpose of this evaluation is two-fold. First, it is to conduct a standard Terminal Evaluation of the design, implementation and results of the National Grasslands Biodiversity Programme (NGBP) PIMS 2929.

34. However, this project is so well documented and innovated and so quickly rated **Highly Satisfactory**, that a second purpose is added; to describe and conceptualise the emerging mainstreaming processes that are being developed by the Grasslands Projects as a theoretical endeavour that contributes to GEF thinking. This responds to Redford's legitimate concern that: "Although billions of dollars have been spent, there is very little robust, credible evidence as to the efficacy of these actions, and that far more is written about how and why mainstreaming should be done, than evaluating the process in practice" (Redford 2013).

2.2. SCOPE & METHODOLOGY

35. The Project was extremely well prepared for the evaluation, clearly seeing it as an opportunity for further learning. Following a commendable sustainability planning process (Ginsburg 2013) the Project developed a series of high quality lessons learned documents for the Agriculture, Forestry, Mining, Urban components and for the Wakkerstroon Agricultural Demonstration Project (Botts 2014; Botts 2014; Botts 2014; Botts 2014; Botts 2014). Project team leaders also prepared and presented thoughtful and comprehensive presentations and self-evaluations to stakeholders and the Consultant. The quality of presentations was good, and even exceptional, as was the quality of peer-evaluation, debate and introspection observed in the meetings. Third, the Project team and stakeholders accompanied the TE on a field trip to assess the projects at field sites. Finally, a large amount of quality documentation was also provided to the Consultant.

36. The departure point for a mid-term or terminal evaluation is the Project Document (Pro-Doc), and specifically the results framework (Logical Framework Matrix). Somewhat ironically, in this Project the Log-Frame does not provide a good point of departure for the evaluation. That fully 14 of the 20 indicators were modified, removed or replaced at the MTE suggests that the Log Frame did not capture the essence of the Project, with the real 'spirit' of this project being partly explained in the (very long) ProDoc but captured even more powerfully in the norms and aspirations that developed amongst stakeholders during the participatory process of formulating and implementing this Project. To simply evaluate this Project against the log-frame would be to short change it.

37. For the sake of completeness, the evaluation was based upon documentary review and a significant number of interviews, field visits and presentations. Every attempt was made by the evaluator to be independent, impartial, transparent, ethical and credible.

38. This Project has resulted in genuine mainstreaming. Therefore, I have taken the TE beyond the technical requirements of a TE (while also fulfilling them) to understand why this Project has worked, and to do this in a way that contributes to the theory of mainstreaming and also to GEF mainstreaming more broadly. My methodology in doing (set out in the paragraphs that follow) is to briefly describe the various conceptual models of mainstreaming (from the literature) against which I evaluated the Project.

2.3. **BIODIVERSITY MAINSTREAMING IN A GLOBAL CONTEXT**

39. Mainstreaming biodiversity is prioritized at the highest level of international policy (Convention on Biological Diversity) and policy investment (GEF). Between 2004 and 2014, GEF will have supported 327 biodiversity mainstreaming projects, investing \$1,631,684,477 in GEF funding and \$5.2 billion in co-financing (Redford 2013). As noted above, Redford is concerned that expenditure measured in the billions of dollars is not supported by robust, credible evidence as to the efficacy of these actions, and that far more is written about how and why mainstreaming should be done, than evaluating the process in practice. According to Redford, "Mainstreaming biodiversity has no single agreed-upon definition though most of the definitions are quite similar to that of Petersen and Huntley (2005):

"to internalise the goals of biodiversity conservation and the sustainable use of biological resources into economic sectors and development models, policies and programmes, and therefore into all human behaviour"

2.3.1. DEFINING BIODIVERSITY IN THE CONTEXT OF MAINSTREAMING?

40 Redford further notes that "mainstreaming" both integrates biodiversity into development, but also modifies development by changing its valence to incorporate the values of biodiversity. As has emerged during the implementation of this project, the meaning of the term biodiversity is important. My preferred definition of biodiversity refers to the "health and diversity" of ecosystems. In practice, mainstreaming depends on the ecosystem services and their benefits at a local level (e.g. water quality, habitat productivity), and this becomes the means towards conserving genetic, species and habitat diversity (Figure 1). Importantly, this shifts the way we need to think about biodiversity from the more purist "single species" thinking to the more pragmatic "wise use" approach. As illustrated (Figure 1), this may well result in a more effective means-end relationship as the basis for GEF funding. Thus, GEF funding (based on global species/habitat conservation priorities) is used to "make the case" for mainstreaming biodiversity at local level, usually because healthy habitats provide better services like water, soil productivity and so on. Once landholders, who are unusually deterministic of land use outcomes, realize this value, they pay more attention to biodiversity conservation in their production systems. This results in global biodiversity gains. In this way, making the case for improving biodiversity health locally becomes the means towards conserving diversity for global reasons.



Figure 1: The definition of biodiversity in relation to scale and political economic considerations

41. This suggests that the formal definition of biodiversity as defined by the CBD may be too narrow and too species-orientated to provide the basis of mainstreaming, and may need to be updated to include the strongly emerging concepts of ecosystem services (MA 2005). The CBD defines biodiversity as "the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (CBD 1992). In other words, biodiversity includes diversity within species populations (genetic variation); the number of species, and the diversity of ecosystems. However, this definition does not explicitly refer to the functional health of ecosystems and the services that healthy ecosystems provide in ways that are important to mainstreaming.

Recommendation 1: In the definition of biodiversity used for mainstreaming, consider redefining the term biodiversity to include (1) the importance of ecosystem health and local services as a means to (2) conserving (species?) biodiversity and global biodiversity values

2.3.2. MAINSTREAMING AS AN ECONOMIC IDEA?

42. Mainstreaming represents the challenge of fully accounting for the high value of biodiversity, which by some accounts is worth significantly more than global GDP, or some \$125 trillion annually (Constanza, d'Arge et al. 1997; Robert Constanza, Rudolf de Groot et al. 2014). Fully accounting for the value of biodiversity requires internalising and/or offsetting the costs and benefits of often unpriced natural capital. Our methodological task is to define exactly what mainstreaming is, so that we can analyse the project.

43. Richard M. Cowling, Benis Egoh et al. (2008) provide an erudite explanation of mainstreaming, but define endpoints (i.e. empowered, local, resilient management) rather than the means of getting there, although they see the starting point within planning processes. However, an older review of mainstreaming by Swiderska (2002) suggests that planning approaches have been less than successful. Nadia Sitas, Heidi E. Prozesky et al. (2013), a paper like that by Cowling et al that is primarily authored by South Africans, suggest that we need to use a trans disciplinary approach to learning what mainstreaming is and how to do it. Alternatively, Pavan Sukhdev, Heidi Wittmer et al. (2010) discuss the need to incorporate the values of ecosystems into decision making, through incentives and price signals. Redford (2013) suggests that offsets, payments for environmental services, Reduced Emissions from Deforestation and Degradation (REDD), environmental certification, climate change adaption, the Equator Principles and so on, are all mainstreaming but by other names. In other words, there is not a strong consensus on what mainstreaming is and how to do it. My preferred definition is much closer to that of The Economics of Ecosystems and Biodiversity (TEEB) (Pavan Sukhdev, Heidi Wittmer et al. 2010) and reflects the practical experience of southern Africa in recovering wildlife by re-formulating its ownership and governance as a competitive land use (SASUSG 1996; SASUSG 2003; Martin 2009). For the purpose of this review, therefore, I use a new definition that is based on economic principles, i.e.

44. Mainstreaming seeks to incorporate the values of ecosystems into land use decision-making by bringing about a full accounting of the contribution of biodiversity to economic production through the internalisation and/or offsetting of associated costs and benefit. This usually occurs at the level of the landowner, who are deterministic of most land use outcomes, but higher level control structures are also necessary.

2.3.3. CHALLENGES OF PROCESS AND SCALE

45. Thus mainstreaming needs to deal simultaneously with the challenges of internalisation costs and benefits, and the scale at which these are internalised and governed. The challenge with internalising biodiversity and ecosystem services values is that they are not easily consigned to simple, individual private ownership, and nor has top down leviathan state regulation proved effective; the

answer lies in some combination of these, with the important addition of the idea of collective action and common property management (Ostrom 1990). In other words, in an increasingly full world (Daly 2005), mainstreaming will require the reconfiguration of the proprietorship and governance of natural wild resources.

46. The second, and linked challenge, is that of scale. We can argue with some elegance about the importance of polyvalent governance, nested institutions, and the importance of pluralistic and multilevel approaches to conservation (Blomquist 2009). But try operationalizing this as a Project manager. Although Ostrom's seminal work on the commons recognized the importance of scale, she tacks scale on as an eighth principle that recognizes local common property regimes as parts of larger systems or 'nested enterprise' (Ostrom 1990). But this is too loose. To operationalise these concepts (and avoid becoming paralysed by their complexity), we need a stronger conceptualisation of the directionality, accountability and governance of cross scale structures.

47. Hence we invoke the principle of subsidiarity. This is the social doctrine (promulgated by the Roman Catholic Church) that all social bodies exist for the sake of the individual so that what individuals are able to do, society should not take over, and what small societies can do larger societies should not take over (Handy 1994). This corresponds with Hardin's statement to "never globalise a problem if it can possibly be solved locally" (Hardin 2001), while Martin suggested that "there is no need for any institution to be larger than the size of the problem it has to deal with" (Martin 1999). This concept is congruent with systems thinking in that the "the purpose of the upper layers of the hierarchy is to serve the purposes of the lower layers" (Meadows 2008). In other words, the conventional strategy whereby the bureaucratic technical elite regulate biodiversity on behalf of society is no longer appropriate, as we can clearly see in practice; we need new ways for governing natural, wild resources that are, of necessity, much more democratic and much more cognizant of the effects and incentives faced by people living on the land and, in a large measure, determining land use outcomes. As we go through this document, we will see the importance of the democratization of natural resource governance, and practical process for how to do so, emerging, at least as an idea to be further developed.

48. The next step in conceptualizing mainstreaming is to lay out a relatively simple model for operationalizing the new definition presented above. Combining the theories of institutional economics (Ostrom 1990; Murphree 2000), systems thinking (Meadows 2008) and the sustainable use hypothesis (Child 2012), a full accounting of biodiversity costs and benefits is developed at three levels.

- **Privatisation**. First, the resource is privatised to internalise as many costs and benefits as possible. This needs to be accompanied by market reforms that seek to remove market restrictions (such as use/trade bans) and to ensure that payments for ecosystem services reach the producers of these services (usually landholders).
- Collective action. Second, natural resources are fugitive resulting in economic <u>externalities</u>. <u>Attribution</u> of cause and effect is also difficult because of the complexity of many ecological interactions. This makes it difficult to internalise costs and benefits. What we are learning is that central regulation is a very blunt tool for managing many externalities and for coping with the problem of attribution (of costs and benefits). By contrast, local social controls and collective action can be highly effective at managing these complex effects, especially when supported by science and extension. This was demonstrated by Elinor Ostrom for natural resource governance problems ranging from groundwater control in California to the management of massive irrigation systems in Sri Lanka (Ostrom 1990).
- **Regulation**. Finally, regulation is important for several reasons, though perhaps not the more common associations of regulations with restrictions and negative incentives. First, policy and

regulation is important to legally empower the local collective action and sub-subsidiary control systems just mentioned. Second, regulators play a critical role of last resort to (a) as an oversight mechanisms to identify where local controls are failing to prevent soil erosion and so on through something like a "lands inspectorate" or "biodiversity inspectorate" and to (b) as the ultimate authority to control resource use where (and only where) the subsidiary control systems fail. Note here that mainstreaming may need us to upturn the way we think about regulation. If mainstreaming is informed by systems thinking and scale thinking, the implication is that mainstreaming will require a normative culture that prioritises persuasion and "making the case" over top-down coercion.

49. This presents us with a simple model for assessing in a theoretical way the implementation of the Grasslands project (Figure 2).

Figure 2: Internalizing biodiversity/ecosystem costs and benefits through a mainstreaming process



2.3.4. FOUR INSTITUTIONAL ECONOMIC THEORIES FOR UNDERSTANDING MAINSTREAMING?

50. We draw on four related theories to support this analysis of mainstreaming.

- The first is the Coasian idea that if property rights fully internalise the costs and benefits of the use of resources, and exclude others from these costs and benefits, resources will be allocated with perfect efficiency.
- The second is Ostrom's thesis that well-structure collective action is a serious and often a superior alternative for controlling externalities than pure privatisation on the one hand, and pure state ownership and regulation on the other.
- The third set of theories, developed by New Institutional Economists like Williamson and North, relates to the complex interplay between culture, rules, organisation and day-by-day

use and allocation of resources in the design, formulation and maintenance of economic institutions or policies.

• The fourth theory relates to how scale is institutionalised in natural resource governance, and is best propounded by Murphree (2000).

51. In Figure 3, we present a model that attempts to include both theoretical frameworks and operational necessities in the designing of new governance configurations for better internalising the costs and benefits of using natural wild resources (i.e. for mainstreaming them). At its base is Coase's highly influential idea that where property rights fully internalise costs and benefits, this leads to efficient resource allocation (Coase 1960). It follows that mainstreaming starts as a problem of property rights whereby landholders can use their wild resource fully, but are also fully responsible for their management of them. Weaknesses in property rights are an obvious challenge to mainstreaming in communal lands in Africa, and for fugitive resources like water.

52. While some privatisation of resources is essential, the attributes of biodiversity mean that perfect privatisation is not possible. We therefore draw on Ostrom's principles of collective action to use local social process to further internalise costs and benefits by (i) controlling externalities and (ii) ensuring that costs and benefits are more fully attributed. This present the intriguing question of if we can use Ostrom's Design Principles for Long-Enduring Common Property Resource Institutions (Ostrom 1990) as an analytic tool for assessing mainstreaming in the Grasslands Project as we have attempted in Table 26.

However, both Coase's and Ostrom's analysis are static. By contrast, the Grasslands Project 53. is dynamic in that it seeks new institutional configurations that mainstream biodiversity. We need to understand both configurations of property rights, collective action and regulation work, but also the process of getting them into place. New Institutional Economics helps to understand the process by which economic rules are changed. Thus Williamson suggests that an economy operates at four levels (Williamson 2000). Put simply, cultures, norms and traditions (layer 1) determine which institutions or rules (layer 2) are possible. Institutions, or "the formal and informal rules of the game", determine how people organise themselves (layer 3) to allocate, use and exchange resources (layer 4, or what is often called neo-classical economics). North asks three questions (North 2003): What rules/institutions do we need to make the system work? (i.e. to achieve economic allocation, distributional equity, democratic participation); How do we get these into place? (change management, adaptive learning, policy reform, etc.); and how do we protect the rules? (through micro, meso, macro, and global governance and monitoring). Finally, Murphree's particular contribution is to understand how to sequence and scale nested layers of resource governance (Murphree 2000). These four sets of theories are summarised in Figure 3.

54. Note that this model differs from that of Richard M. Cowling, Benis Egoh et al. (2008) who see mainstreaming as a process initiated by research and planning, the end-point of which is local, empowered, adaptive management and resilience.

55. Learning from the Grasslands Project, mainstreaming is perhaps better seen as an institutional economics process in which stakeholders, through trying to improve action on the ground, react to information (e.g. social, valuation and biophysical assessments) and incentives. This causes them to work together to reform their (collective) norms and to then rewrite these norms into the maps, guidelines and standards that frame these actions and incentives. In so doing, they progressively institutionalize or mainstream biodiversity into rules and decision-making. As we illustrate, key inputs into this process are maps, information, science and concepts, but also sound facilitation of communities-of-practice. Real outcomes come in two forms – change on the ground, and changes in individual and organisational capacities and in the way things are done (i.e. formal and informal rules, or institutions).



Figure 3: Conceptualising Mainstreaming as a Dynamic Collective Action Resolution Process

2.3.5. A PRACTICAL MODEL FOR MAINSTREAMING DEVELOPED BY THE GRASSLANDS PROJECT

56. The Grasslands Project has a great deal to contribute to the practical question of mainstreaming and of how to get new institutional configurations into place. We will describe this process here, and later use it to frame the evaluation of the five Project Outcomes. In brief, SANBI/GP has used high quality facilitators to link (1) the process of practical interventions at site level to (2) the development of communities of practice involving state regulators, the private sector, civil society and research/training organizations. Key to this has been (3) the provision of information to prioritize action (especially SANBI's high quality biodiversity mapping (Driver, Sink et al. (2012)) and also the emerging ability to (4) "make the case" for biodiversity. Important outcomes have been (5) the building of individual, organisational and institutional capacity. Informatively, (6) "institutionalization" has started with the development of tools and norms, often in the form of guidelines. These are beginning to evolve into institutions with legal teeth, including zoning regulations and standards. A number of people interviewed suggested that the normally assumed policy process of writing laws or regulations and building down from there would not have worked – "the policy process is slowed down by aggressive pushing".

57. In 2013 the Grasslands Project developed six practical principles for mainstreaming emerging from the deep sustainability planning process the project undertook and an attempt to bring together the lessons of what mainstreaming requires. This reflects the Project's determination to capture its learning on mainstreaming and is described in detail in http://www.grasslands.org.za/document-

archive/category/22-mainstreaming-biodiversity-lessons-learnt?download=91%3Akey-principles-inmainstreaming-biodiversity-from-the-gp. In summary these are:

- To provide science-based leadership and expertise,
- To deliver high quality tools
- To make the case for biodiversity
- To strengthen capacity to mainstream biodiversity
- To convene focused discussion platforms
- To provide science-based policy advice

Figure 4: Six key ingredients that emerged in the Grasslands Project when biodiversity was successfully mainstreamed



Recommendation 2: Re-think the policy process. Learn from the Grasslands Project to show how careful combinations of stakeholders working to solve practical problems often result in a change process that spreads from norms to standards and, presumably in the long term, to policy.

The mainstreaming process developed by the Grasslands Project is summarised in Figure 5. 58. On the right hand side, we show that high quality facilitation by experts with high levels of technical knowledge, and abilities to keep multi-stakeholder processes case on track, are the critical ingredient for generating the positive (and often messy) interactions in the centre of the figure. Here, information, the ability to articulate new visions, and especially information (and maps) about the value of biodiversity, are an important starting point for the mainstreaming process. Next, stakeholders work together to solve a real on-the-ground problem. In all four sectors (agriculture, forestry, urban, mining) it was possible to "make a case for biodiversity" that brought the stakeholders together with common These communities of practice then worked together to understand and test practical goals. applications, the outcome of which was carefully managed to develop new norms and rules of engagement with biodiversity. Indeed, as Ostrom suggests, a key indicator of effectiveness is that "most individuals affected by rules can participate in modifying them". The Grasslands Project was particularly effective in institutionalizing these new norms and rules, usually first as agreed norms (e.g. widely debated and accepted guidelines) which evolved into formal regulations in the form of zones and standards. Perhaps the key outcome of the Grassland Project is the new norms, standards,

guidelines, biodiversity plans, park designations and so on (i.e. rules) that emerge from this process; as we noted above, getting the institutions right is the essence of mainstreaming.

Later we use this model to assess the effectiveness of Project Conceptualization (e.g.

59. Table 6) and Project Implementation (e.g. Table 25).

Figure 5: The mainstreaming process developed by the Grasslands Project



2.4. LONG HOOKS AND SHORT HOOKS AND THE EMERGING MAINSTREAMING PROCESS

60. The ProDoc mentioned that that starting point of this project was the implementation gap between excellent policy and on-the-ground conservation². At the close out workshop Mr. Nik Sekhran noted that the Project had been conceptualised around the short hook of making progress at ground level (e.g. declaring new protected areas) and the long hook of policy reform. This is also captured in the ProDoc as the "practice-policy process loop" of linking on-the-ground conservation to the policy process. The point here is that not only has the Project taken a short hook and long hook approach, but it has filled in and tested key gaps between implementation and policy that were not well understood at the time of the Project Design Phase. The Project has also revealed that, at least in the case of South Africa, the slow policy processes developed through stakeholder collaboration and focused on practical implementation (that we have just described) may be much superior to the leap to centrally-developed and policy processes (which are erudite, but not implemented).

3. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

3.1. PROJECT START AND DURATION

^{1.} _____

² But this does raise the question of how policy can be seen as excellent if it is not implemented.

The Project timeline was as follows:

- Project submitted to GEF sec for approval late Oct 2007
- ProDoc was signed in February 2008. The Project was officially launched in May 2008 and implementation commenced in August 2008 with the first disbursement.
- However with its own bridging funds, the implementing agency (SANBI) was able to embark on project set up and initial implementation from late 2006, appointing a project manager in April 2007, allowing the project a good head start.

The Project was designed to last 60 months with operational closure in February 2013 (revised from December 2012). Following recommendations of the MTE, the Project requested a no cost extension to an operational close on 31 December 2013 with a financial close on 31 December 2014.

3.2. PROBLEMS THAT THE PROJECT SOUGHT TO ADDRESS

61. The project sought to address the risks to high levels of biodiversity and associated ecosystem services in South Africa's grassland biome (Figure 6) posed by agriculture, forestry, urban development and coal mining. The grassland biome covers 30% of SA's land surface and has important national and global biodiversity assets including:

- More species per unit area than the fynbos 82 species per 1000m2
- 5 Ramsar sites & mountains & wetlands that provide water for millions
- Half of SA's endemic mammal species
- An endemic bird area with 52 of SA's 122 important bird areas; 10 of SA's 14 globally threatened bird species
- 20% of SA's endemic reptiles
- 3 world heritage sites
- Supports production sectors & urban centres core to SA's economy...
- 2.34% of biome under formal protection 12% more needed to meet PA targets

Figure 6: Location of Grassland Biome in South Africa



62. The Project sought to address the "gap between policy and implementation" and the uncoordinated nature of the many efforts to manage grasslands biodiversity (p32 ProDoc). It anticipated making improvements in (1) knowledge management systems (2) better informed

production enterprises resulting in improved output and the internalisation of conservation costs and benefits and (3) improved capacity and coordination of regulatory agencies to conserve grassland biodiversity.

3.3. IMMEDIATE AND DEVELOPMENT OBJECTIVES OF THE PROJECT

63. The overall Project strategy was to pilot mainstreaming in the four major industrial sectors affecting grasslands, namely agriculture, forestry, urban development and coal mining, with a fifth Outcome to strengthen the enabling environment for these activities. This would encourage major production sectors to contribute to biodiversity, thus securing grassland biodiversity and ecosystem services. The Goal, Purpose and Outcomes of the Project are described in Table 3.

Goal	The biodiversity and associated ecosystem services of the Grassland Biome are
Development	sustained and secured for the benefit of current and future generations.
objective	
Programme	Major production sectors are directly contributing to the achievement of
Immediate	biodiversity conservation priorities within the Grassland Biome
Objective	
Outcome 1	Enabling environment for biodiversity conservation in production landscapes is
	strengthened
Outcome 2	Grassland biodiversity conservation objectives mainstreamed into agriculture
Outcome 3	The forestry sector directly contributes to biodiversity conservation objectives
	in the Grassland Biome
Outcome 4	Grassland biodiversity management objectives mainstreamed into urban
	economy in Gauteng
Outcome 5	Biodiversity management secured in coal mining sector

Table 3: Project Goal, Purpose and Outcomes

3.4. BASELINE INDICATORS AND EXPECTED RESULTS

64. Given the major changes to indicators (and therefore to baseline indicators) this section refers to the indicators formally adopted following the MTE. Indicators, baselines and targets are summarized in Table 4. The ProDoc log-frame shows 18 impact indicators, with roughly three indicators for the Objective and the five Outcomes (p75-81). However, as noted above, the MTE modified or removed 12 indicators, and retained 6. I agree with the MTE that several indicators were hard to follow, were not a good fit with the objective, were difficult to measure, and were not SMART (i.e. specific, measurable, achievable, relevant and realistic, time bound (Tortell 2011). As noted by the MTE, this was initially problematic as the Project used Indicators/Targets as the yardsticks for performance, initially losing sight of the Objective. This was rectified at MTE.

65. The single high level indicator retained (in modified form) after the MTE is the geographical extent of new protected areas, which was expected to increase by 90,000 hectares³.

66. In terms of the enabling environment (Outcome 1) the adoption of Biodiversity Sectors Plan was expected to increase from 0% to 45% of the biome, while "institutional mainstreaming effectiveness" in ten key organizations was expected to increase from <30% to between 66% and 76% depending on organisation.

^{1.}

³ The MTE provides a detailed assessment of why indicators were changed or removed

67. In the agricultural sector (Outcome 2), the narrative target was the adoption of "national grazing guidelines for biodiversity" and that biodiversity priorities (in SANBI's excellent GIS spatial database of priority biodiversity areas) were reflected in the agricultural (CARA) permitting processes. It was also expected that market-based standards for red meat production would be piloted and approved formally by the industry. Finally, the project expected to increase the amount of land under Better Management Grazing Practices from 60,000 to 100,000 hectares, and the amount of land secured through Biodiversity Stewardship arrangements from 9,000 to 22,000 hectares.

68. In the forestry sector (Outcome 3), better management was expected on 300,000 ha out of the total of 532,780 hectares of unplanted land on forestry owned land. The second target was to define priority biodiversity areas in the area that was potentially earmarked for new plantations (140,000 ha) and to ensure that there were no new plantations in these priority areas. The third target was to participate in the development of a National Forest Stewardship Council standard to ensure that (1) grasslands biodiversity objectives and (2) criteria appropriate to small growers were incorporated into the standards.

69. In the rapidly growing Gauteng urban sector (Outcome 4), the first target was to increase the overlap between approved provincial and municipal plans (i.e. Gauteng Conservation Plan, Municipal Spatial Development Frameworks, Open Space Frameworks, Environmental Management Frameworks (EMF) and Bioregional Plans) and priority biodiversity areas from 40% to 60%. The second target was to legally re-proclaim or proclaim 30,000 ha of protected areas, many of which were under pressure from developers but had unclear prior legal status. This reflects FEF PIR goals to "strengthen the protection of protected areas". The third target was to develop key mainstreaming tools including three Bioregional Plans, two Guidelines and the Provincial Protected Area Expansion Strategy.

70. In the coal mining sector (Outcome 5) mining concessions and prospecting claims cover a staggering 20% and 40% of Mpumulanga Province respectively. The first target was to pilot biodiversity stewardship arrangements with mining companies. The second target was to ensure that mapping of priority biodiversity areas was incorporated into the Department of Mineral Resources' system for making decisions about mining.

INDICATOR (at MTE)	BASELINE	END TERM TARGET		
Objective: Major production sec	tors are directly contributing to	the achievement of biodiversity		
conservation priorities				
Contribution of GEF-funded	0	90,000ha		
Grasslands Programme to				
increased extent of protected				
areas (including state & private				
land) in production landscapes in				
the Grassland Biome				
Outcome 1: Enabling environment for biodiversity conservation in production landscapes in the Grassland				
Biome is strengthened				
1.1 Biodiversity sector plans (or	0%	45% of biome		
bioregional plans) for Grassland				
Biome produced and adopted by				
relevant authorities				
1.2 Institutional mainstreaming	Mainstreaming effectiveness	76%		
effectiveness scorecard	scorecard has been developed	72%		
SANBI	29%	66%		
GDACE,	28%			

Table 4: Project Indicators and Targets (as agreed after MTE) Source: ProDoc and MTE

Forestry SA	29%	Calculate end target for additional	
Put include additional agamaias &	Calculate baseline for additional	aganaias	
But include additional agencies &	Calculate baseline for additional	agencies	
calculate end targets:	agencies		
• EKZNW; MIPA			
• DAFF, DMR, DWA			
CoalTech, AgriSA			
Outcome 2: Grassland biodiversity	conservation objectives mainstream	ed into agriculture	
2.1 Agricultural laws, policies and	Laws, policies and guidelines	 National Grazing Guidelines 	
guidelines incorporate	focus on production	for Biodiversity (NGGB)	
biodiversity management		developed and adopted by	
objectives		relevant sector bodies	
		• Biodiversity priorities inform	
		provincial official's	
		recommendations in the	
		CARA permitting process	
2.2 Market-based mechanisms	None	Industry approved standard	
incorporate biodiversity		developed	
management objectives for red		act crop cu	
meat production			
2.3 Amount of agricultural land in	Amount of agricultural land in	Amount of agricultural land	
the Grassland Riome where	Grassland Biome where	demonstration districts where	
agricultural planning decision	BMGP is being implemented:	 BMGP is being implemented: 	
making and extension	60 000 Ha	$100\ 000\ H_2$	
incorporates biodiversity	• A maximum of a amiguitum of land in	• Amount of actional land in	
monogement objectives	• Amount of agricultural land in	• Amount of agricultural land in	
management objectives	demonstration districts	demonstration districts	
	Stewardship has secured	Stewardship has secured	
	biodiversity: 9 000 Ha	biodiversity: 22 000 Ha	
Dutcome 5: The forestry sector airo	ectly contributes to bloatversity conse	ervation objectives in the Grassiana	
2 1 Amount of land in forestry	2 1 1 Degie management og	2 1 1 200 000ha	
5.1 Allouit of faile in forestry	5.1.1 Dasie management as	2.1.2.25.000	
2 1 1 antiana anag	2 1 2 Example and 352,780 hectares	5.1.2 55 000na	
3.1.1 options areas	3.1.3 Formal conservation: 0 ha		
5.1.5 formal conservation			
3.2 No new plantation	National FSC compliant	National FSC compliant	
development in biodiversity	Standard not yet set	Standard exist (by mid-term)	
priority areas within the	Grassland biodiversity not	• FSC Principles & Criteria	
Grassland Biome	adequately reflected in FSC	incorporate grassland	
	Principles & Criteria	hiodiversity objectives (by	
	No small grower certification	mid-term)	
	system successfully	• Small grower certification	
	implemented	system implemented	
Implemented system implemented			
4.1 Biodiversity priorities	Quarlan between a nice and	20% increase everlap	
4.1 Biodiversity priorities	overlap between c-plan and	20% increase overlap	
accommodated in municipal open	ENTER activity of at 400/		
space frameworks (OSF) and	EMFS estimated at 40%		
spatial development frameworks			
(SDF).		20.0001	
4.2: Protected areas (incl state &	0	30 000ha	
private land) give legal protection			
to refugia representative of			
grassland biodiversity			
4.3: Biodiversity mainstreaming	0 tools developed	Approved Bioregional Plans	
tools developed and adopted by		(X3); Guidelines (X2) and	
land use planners and other		Provincial Strategy (X1)	
decision-makers in Gauteng			
Outcome 5: Biodiversity management secured in coal mining sector			

5.1 Biodiversity stewardship is piloted with one mining company in the coal mining region of the grasslands	No land set aside	One biodiversity stewardship agreement on coal mining land signed by relevant authority
5.2 Biodiversity information* used by the DMR, DWA, DEA and mining companies in the assessment and decision-making processes for the prospecting or mining of coal, and for the authorisation of associated activities * e.g. MBCP, threatened ecosystems data, areas earmarked for protection, including wetlands, offset guidelines	Biodiversity information not used by the DMR, other authorities, and by mining companies	Biodiversity information used by DMR, DWA, DEA & mining companies

3.5. MAIN STAKEHOLDERS

71. As a mainstreaming project working in four sectors, the ProDoc mentioned numerous stakeholders. These will be described in later sections. The core strategy was for the Grasslands Project through SANBI to appoint a facilitator/manager for each of the four industry sectors. This person then worked closely with the (1) key government and municipal agents in the sector, (2) key private and state landholders and their representatives (e.g. Mining houses, farmers, protected area agencies, industry bodies), (3) civil society including NGOs and (4) informed stakeholders including academics.

4. FINDINGS

4.1. **PROJECT DESIGN / FORMULATION**

72. The ProDoc was comprehensive and successful in persuading the GEF to fund critical biodiversity investments in South Africa. The ProDoc's considerable length (136 pages) is both a strength and a weakness. It provides:

- A well-researched justification of the biodiversity value of the Grassland Biome and the need for interventions in grassland conservation (p 6-12).
- Grassland conservation in the context of the agricultural, urban and coal mining sectors (p12-16) (but not forestry?),
- A detailed description of the policy and legislative context (p16-19).
- A description of the way the sectors are organised, including the national biodiversity sector, and the agriculture, forestry, urban, and coal mining sectors (p20-22)
- A detailed analysis of the threats to grassland biodiversity in the four sectors (p22-26)
- The baseline situation is described in some detail (p26-33)
- The barriers to biodiversity conservation (p34-36) are identified as:
 - Market failure
 - Organisational capacity weaknesses in translating a strong macro-enabling framework into practice
 - Gaps in the management tools and capacities for mainstreaming

73. The Project Strategy argued that (incremental) inputs are required in addition to a number of conservation efforts in the Grassland Biome to coordinate, strengthen and mainstream these efforts. GEF-supported activities were planned to build momentum (2007-2012), which would leverage investments and change towards further mainstreaming (2012-1017). As noted above, the project strategy was to secure biodiversity objectives in the coal mining, urban, forestry and agriculture sectors and to strengthen the enabling environment for biodiversity conservation in production landscapes (outcomes 1-5), thus contributing to the conservation of biodiversity and associated ecosystems in the Grassland Biome (goal). The five outcomes are described in detail (p37-43), with the threats, baselines, normative solutions and programme strategy being carefully detailed (p44-46).

74. The key risks to success were seen as development pressures, conflict between biodiversity and production sectors, delays in developing appropriate incentives, weak commitment and the loss of governance capacity by regulatory authorities (p47). Alternative strategies of taking a pure protected areas approach, and the sector scope of the programme, were carefully considered (p48). The national and global benefits of conserving grassland biodiversity also justified this intervention (p50).

75. The eligibility of the Project for GEF funding was strongly justified, as was its eligibility under the Convention on Biological Diversity (p50). The ProDoc demonstrated convincingly that South Africa was driving the project, and also showed how it linked with and learned from other GEF projects (p51-53). The project was also designed so that the production sectors themselves would ensure the sustainability of gains (p53-54). Similarly, the project was designed to be catalytic of wider changes in the respective sectors (p55-56). The global and national experience within the planning team also ensured that a wide range of lessons were incorporated into the planning (p56-59).

76. The grasslands project was designed to focus on mainstreaming in the four sectors, but also to link to a wide range of complementary and on-going initiatives (p59). SANBI was sensibly chosen as the executing agency, and a number of crucial stakeholder groups were planned or supported including a task team for each sector (p60-63). In the final analysis, these decisions and the high level of stakeholder participation were crucial to project success.

77. A monitoring and evaluation plan was laid out, as was the overall budget for this US\$8.3 million GEF investment (p64). The cost effectiveness of the project was carefully evaluated (p65-67), with the uptake and improved efficiency of biodiversity management by the productive sectors anticipated to be highly cost favourable in the long term (p65-67).

78. The incremental cost analysis (p67-68) justified this investment by lifting barriers to improved environmental governance in a country with many pressing development priorities, and in terms of mega-diversity.

79. The Baseline Scenario suggested that national, provincial and local stakeholders would invest some US\$143 million into the threats and sustainable management of the Grassland Biome through a large number of initiatives (p68-69), with GEF assisting greatly (the Alternative Strategy) to shift the paradigm on productive landscapes towards including biodiversity concerns (p69-71). The GEF agreed to fund US\$8.3 million out of a total investment of US\$45.56 million in order to shift the paradigm of conservation in productive sectors towards mainstreaming. It cost US\$705,500 to prepare the Project, of which GEF funded US\$350,000. These costs are carefully justified in terms of national and global level benefits in a detailed table for each outcome (p71- 74).

80. In other words, this is a well-researched, well prepared project based on a number of high quality background reports and on considerable stakeholder involvement. As we will see below, this has resulted in an excellent project.

81. Table 5 rates different aspects of project preparation and design. Only two of these scores are formally required in the Terminal Evaluation and these are marked in bold. Thus, overall, project design and preparation was Highly Satisfactory, as was stakeholder participation in project formulation. However, it serves our purpose to unpack the conceptualisation and design of this project in more detail. A real strength of the Project was its Vision for mainstreaming. Importantly, this coincided with a strong demand for spatial maps of biodiversity priorities to support EIA and other permitting processes. This meant that there was a genuine demand for the knowledge products, and especially biodiversity maps, provided through the Project⁴.

82. The background on biodiversity was very detailed, and sectors were well described, but the understanding of institutionalisation opportunities and modes within sectors was uneven – we will comment on the challenges to agricultural mainstreaming below. The change hypothesis is rated highly satisfactory as it was formed by stakeholders, although it could have been articulated more clearly in the ProDoc. The log frame was weak (MS) and could have been strengthened using a Log-Frame Approach (US).

Aspect of Project Formulation	Rating	Comment
Overall project concept and design	HS	Innovative project, with high level of stakeholder participation and country leadership enabling the Project to adapt to (inevitable) weaknesses in Project design given the high levels of challenges being addressed and the new ideas being tested.

Table 5: Rating different aspects of Project conceptualization and design

1.

⁴ It is therefore ironic that GEF will no longer fund "any more maps" in SA – despite how much of an essential entry point they have been to successful mainstreaming and many other conservation initiatives.
Big Picture thinking and Vision	HS	The big visions is encapsulated by the statement "Closing the policy practice loop" (p42 ProDoc) and by the links between short hook (hectare by hectare) and long hook (policy reform) objectives (Sekhran statement at close out workshop) Good timing by linking issues of EIA administration and growing industry impact on biodiversity to the demand for spatial biodiversity prioritisation.
Background on biodiversity	HS	Very detailed information on biodiversity.
Background on sectors	S	Good description of sectors
Understanding of sector dynamics, opportunities, threats	U/MS	Variable – some sectors well understood (forestry, urban), some tentatively understood (mining) and some seen through a biodiversity rather than a systems lens (agriculture). Note that sector understanding increased through engagement, and that there were unpredictable changes – such as in the mining sector that could not have been predicted through a better understanding at project start.
Change hypothesis	MS/HS	Big ideas normed with key stakeholders, articulated in ProDoc as highly conceptual level (sometimes hard to follow), but not operationalised in the log-frame.
LFA (log-frame approach)	US	While the project was well thought through including at steering committee meetings and with stakeholders, the LFA might have been strengthened by holding a workshop specifically held to (1) thrash out goals, purpose, outcomes and indicators define (situation and stakeholder analysis) and model the problem being solved (i.e. problem and objectives analysis), before settling on a project design.
Log-frame	MS	Only identifies areas of work. Never articulates a change hypothesis. Indicators were a misfit with intended project outcomes – many needed to be changed at MTE
Stakeholder participation	HS	Strengths of key stakeholders identified, and roles defined

83. The identification of conservation priorities, and the simultaneous focus on the four industrial sectors (urban agriculture, mining, forestry) affecting biodiversity has, in retrospect, paid off handsomely. So too has the identification of the three primary barriers: market failure; systematic and institutional capacity weaknesses; and management tools and capacities. This led to a project that set very broad goals at the Outcome level, and very specific targets in terms of on-the ground biodiversity conservation.

84. The strategy for implementing mainstreaming is not explicitly described in the document, for example as a development hypothesis linked to the log-frame. It also tends to be obscured within quite specific lists of activities (p37-43), some of which worked well (e.g. biodiversity toolkit in urban conservation) and some of which didn't and had to be considerably modified (e.g. certification in beef sector and agriculture; offset banking in mining). This section of the ProDoc may have been more effective had the strategy or change hypothesis and mechanism have been explicitly stated; it is clearly articulated by some participants, but more of a result of engagement in Project design than through the ProDoc. Further, it would have been useful to capture activities in the form of a table (workplan) that for each Outcome listed activities and targets, both making comprehension and tracking easier, and allowing flexibility in implementation.

85. The ProDoc contains lucid and aspirational statements, yet these high end ideas are difficult to follow exactly and it takes several re-reads to follow exactly what is said. Perhaps the greatest criticism is that the Project, including these fine ideas, are not well operationalised in the log-frame. This is emphasised by the MTE which changed many of the indicators, and also suggested that the objective statements were over-ambitious given that this was a "foundational" project that was trialling innovative interventions. Despite weaknesses in the log-frame in defining the Project, the ProDoc has led to an excellent Project. This presumably works so well because of widespread conceptualisation and buy-in to Project ideas generated during project formulation and implementation, rather than through the document itself. The Project was presumably effective because of the inspiring narrative (even if it is often operationally unclear) and big Vision, the dialogue with stakeholders and stakeholder driveness at formulation (though not in developing the log-frame), and strong formulation of stakeholder strengths and roles (e.g. Tables 16 and 17 in the ProDoc). From a theoretical perspective, therefore, was the project normed with a future vision, rather than specifically designed, and does this mean that vision is as or more important than the log-frame? Could the Project have been made even more effective by capturing this Vision in a much stronger log-frame and log-framebased workplan?

86. Note that from the perspective of an evaluator, a weak log-frame introduces significant conundrums. Thus, I rated this Project HS, whereas a more pedantic evaluator that strictly used the log-frame as the framework against which the evaluation was done might well have rated the Project lower. My rationale in doing this was that it was the log-frame that was the weakness, and that the Project developed a remarkable process and remarkable results.

87. The MTE noted that a weakness in UNDP/GEF Project Preparation can be the disjuncture between project planning and implementation. In this project this was largely ameliorated because the project was prepared in country, and because of continuity between project design and implementation, and through the continual support of the UNDP team. However, the log-frame approach can and should play a much stronger role in linking project preparation, implementation and evaluation, and better use of the log-frame approach might have further strengthened this project and other projects.

88. The log-frame approach (as opposed to a log-frame) can be time consuming and needs specialised resources (i.e. a qualified facilitator). Nevertheless, it is highly likely to have a positive benefit cost ratio. Thus, using quality facilitation to bringing the planning team and key stakeholders together to develop or finalise the log-frame results has significant benefits. It results in stronger cause-effect logic, even to the extent of using the log-frame as a change hypothesis. It also results in better wording, and a greater communality of understanding, and certainly results in better linkages between Outcomes and Indicators. This provides a more reliable platform for implementation. Indeed, the benefit of this are borne out by the positive effects that the MTE had by reformulating about 60% of the indicators. Going through the log-frame process, and understanding the underlying logical, would also have avoided the Project chasing targets without necessarily understanding the Outcomes and how these linked logically to the Goal as noted in the MTE (Tortell 2011).

89. In summary, the essence of the project was never really captured in the log-frame, 12 of 18 indicators had to be changed at the MTE, and in general the power of the log-frame as a development hypothesis and adaptive management tool were lost. As noted below, this was further reduced by the excessive complexity of the PIR mechanism, and lack of feedback to submissions.

4.1.1. ANALYSIS OF LFA/RESULTS FRAMEWORK (PROJECT LOGIC /STRATEGY; INDICATORS)

90. As noted in the MTE, the Logical Framework Matrix (Log Frame) should describe what the project is attempting to do (Goal, Project Objective, Outcomes), how it will do it (Activities), how we will know when it is done (Indicators and Targets), while acknowledging Assumptions and identifying the Risks faced by the project with proposed mitigation measures. The ProDoc Log-Frame to some extent contained these essential elements, but the Activities were a lengthy list attached to the budget and lacked targets.

91. The MTE notes that although the Log-Frame featured on the agenda of the Inception Workshop, the Log-Frame was not really used as an adaptive management tool. The MTE suggests that this is because the log-frame was not used as a tool for bringing stakeholders to consensus and clarifying objectives and indicators. The TE confirms that the log-frame does not capture the essence of the Project, nor is it properly used as an adaptive management tool.

92. The Logical Framework Analysis has been difficult to evaluate. On the one hand it encapsulates the innovative long-hook (policy) short-hook (practice) approach well, but at a general rather than an operational level. The ProDoc includes the insightful but general comment that "actions around these priority sites will serve as demonstrations for closing the policy practice loop" (p42); this is not explained specifically in relation to the Project strategy as encapsulated in the log-frame. In addition, the objective statements in the log-frame are very broad and the indicators were often weak, difficult to understand and not SMART until significantly adjusted at the MTE (Tortell 2011).

93. For an evaluator, the log-frame fails to encapsulate the effective mainstreaming approach that emerged in this project. In retrospect, it appears that the success of the project may have been driven more by the shared goals, experiences and norms developed through the planning processes than it was guided by the quality of the log-frame. This also suggests that mainstreaming is as much a social norming process as a technical process.

94. When a log-frame is done well, it represents the development or change hypothesis upon which the Project is based. Indeed, if GEF Projects are to become the learning tools that they could be, adding a short section in the ProDoc that describes the log-frame as a development hypothesis may be very useful (recommendation). However, as a general comment, the ProDoc is now becoming too long and, in places, formulaic, which reduces its power. In this regard, the Grasslands Project has been highly successful, and latterly has been innovative and adaptive. It is revealing that the logframe was in some ways central to project management (the Project manager kept a very close eye on targets), but that critical processes were never captured in the log-frame and much of the impact of the project has occurred beyond the bounds of the log-frame. For example,

95. Table 6 conceptualises the practice policy loop discussed briefly in the ProDoc and that emerges so strongly during project implementation. When we place outcome indicators in this framework we note significant gaps, but these do not occur when we assess project implementation Table 25.

Recommendation 3: Add a short section to the log-frame narrative to succinctly describe the change hypothesis that is being captured by the log-frame

Recommendation 4: If the log-frame is to remain central to project implementation and evaluation, give greater consideration to using a well facilitated log-frame process. In addition, there is much to be gained by training key participants in how to use a log-frame to manage a project.

Recommendation 5: Consider revising the structure of the ProDoc to increase its potency as an implementing tool. Include a strengthened "development hypothesis" section linked to the log-frame. Cut certain formulaic components out of the ProDoc to make it more powerful as a

document for guiding implementation, e.g. include sections justifying the Project to GEF through incremental cost analysis, "UNDP comparative advantage", "linkages between the project and other interventions", "country drive-ness" etc. as mandatory annexes rather than as narrative in the ProDoc.

4.1.2. SOME COMMENTS ON LOG-FRAMES IN MAINSTREAMING PROJECTS

It is worthwhile taking a moment to analyse the use of log-frames in mainstreaming projects. We do this by comparing the Grassland Project log-frame with the mainstreaming process developed by the project. The top row in

Table 6 lays out the mainstreaming process described in Figure 5. Read from the right, the implementation logic runs as follows: the provision or development of knowledge (Column 6) is applied in practice to protecting priority diversity on productive land (C5). This is done by making a case for biodiversity in various ways (C4), and by encouraging stakeholders to work together to (C3) achieve on-the-ground results together (C5), but also to institutionalise their combined and accumulating knowledge through tools and guidelines, standards, zones and plans (C2).

96. The indicators in the ProDoc log-frame are then placed within this framework. While there are gaps, the prominent feature is that indicators cluster in C5 (practice, or short hook strategy) and C2 (policy, or long hook strategy). C3, C4 and C6, which relate more to process than to outcome, are sparsely inhabited by the log-frame indicators. The log-frame indicators (but not the ProDoc more generally) give short shrift to (C6) knowledge development, some consideration to (C4) "making the case" (but only through certification), and largely ignore (C3) stakeholder processes and capacity building. However, when we record what the Project actually did, we fill in this table very differently. We find a great deal of activity related to the process of (C6) knowledge development, some to (C4) "making the case" and a lot to (C3) stakeholders and processes (Table 25). This is a key weakness in how we currently measure the effectiveness of mainstreaming at the 'early' (in project) stages. On the other hand, many projects have too much tendency to focus on process (e.g. 'talk shops', training that is not results based) without ever delivering tangible outputs.

97. We can analyse this issue using the concept of "loose-tight" management (Peters and Waterman 1982), where the leadership sets "tight" performance goals but allows management teams a great deal of flexibility or "looseness" in achieving these goals. This was a legitimate and highly effective approach given the excellence of the management team and partners in the Grasslands Project. It is also highly empowering and builds capacities and confidences, because team members are entrusted with innovation provided they reach their targets, and are not simply well-supervised task managers in the way of old fashioned 'scientific management' (Micklethwait and Wooldridge 1998).

98. This raises several questions. In the future, and having learned from the Grassland Project, should project planning and log-frames more carefully define this mainstreaming process including both outcomes and processes, or should they stick to the "loose-tight" formulation reflected in the Grassland Project log-frame? Does the approach taken depend on the capacities of the executing team? In other words, with a weaker team, or early in the mainstreaming process, will a mainstreaming log-frame that defines both outcomes and processes be more effective than one which just defines outcomes? Or should we still stick to the loose-tight approach of defining short hook and long hook objectives, and expect the implementing team to be up to managing the required processes? These questions can only be answered with more field experimentation.

Recommendation 6: In mainstreaming projects, consideration should be given to ensuring that log-frames capture a mainstreaming process including (a) knowledge development (b) specific

targets in terms of land use change (c) a clear case for biodiversity in production systems (d) inclusion of stakeholders to ensure 'norming' of new processes and capacity development and (e) institutionalisation through tools/guidelines, standards/plans/zones as a stepping stone to the larger goal of policy/legal reform.

C1		C2	C3	C4	C5	C6
	Sector	Law/Policy 1. Law/Policy 2.Standards/ Plans / Zones 3.Tools/ guidelines	Stakeholders and Processes	Making the case for / addressing market failure	Land protected	Knowledge development
1.	Enabling Environment	Bioregional plans (1.1) Mainstreaming scorecard (1.3)	Partners with MOUs (1.2)			
2.	Agriculture	Laws, policies, guidelines (2.1)		Certification (2.2)	Land protected (2.3)	Knowledge to rehabilitate rivers (2.4)
3.	Forestry	Certification (3.3)		Certification (3.3)	Land protected (3.1) No new forestry (3.2)	
4.	Urban	Biodiversity zoning improved (4.1) Legal protection to parks (4.2) Mainstreaming scorecard (4.3)			Legal protection to parks (4.2)	
5.	Mining				Wetland protected (5.1)	Biodiversity information used (5.2)

Table 6: 0	Comparison	of ProDoc Log-F	Frame Indicators	with Emerging	Practice Polic	ev Loon
	Comparison		I unit inditutory	WITCH LINE CHIC		

4.1.3. A GENERAL COMMENT ON LOG-FRAMES AND PROJECT MANAGEMENT

99. The log-frame is critical to all project documents, so I will further analyse its use and usefulness. Personal experiences with the Logical Framework Approach⁵, and earlier evaluations of the GEF Agulhas Biodiversity Initiative, lead me to conclude that full use of the power of the LogFrame Approach was not achieved in this Project, nor in other UNDP GEF Projects. Here, we draw a very clear distinction between the log-frame which is a high level management plan, and the Logical Framework Approach (LFA) which brings together stakeholders not only in designing the

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⁵ The Logical Framework Approach, for example, was critical in the conceptualization, planning and performance management of the CAMPFIRE Programme in Zimbabwe. It was also critical to the turnaround of the NORAD-funded Luangwa Integrated Rural Development Project in Zambia

management plan, but in analysing and modelling the project together - the important word being together.

100. In the Grasslands Project, the log-frame is being used as a key management matrix. However, as noted, perhaps not enough was made of the LFA and its power in (1) framing an intellectual hypothesis, (2) as a means of transforming stakeholder paradigms and building common visions, and (3) as a well-articulated adaptive management tool.

101. Thus an LFA (as opposed to a log-frame) would bring together 15-20 key stakeholders for 4-5 days to define the problem (situation and stakeholder analysis) and model the problem being solved (i.e. problem and objectives analysis), before settling on a project design. Where there is a combination of quality facilitation and quality participants, this is a highly intellectual process that forces participants to analyse a problem taking into full account the world views of other stakeholders and disciplinary approaches. This often creates ah-ha moments and paradigm shifts, and very often brings people together over overlapping visions. Similarly, the iterative writing and wording of objectives, indicators and assumptions/risks by stakeholders (using cards), and the considerable debate over this, serves to build a much stronger common understanding of the project and of each other. The rather unclear wording of this log-frame is a strong indication that the log-frame was never subjected to such a process. The Project confirms that, linked to the MTE, they went through a fairly extensive and in-depth process of defining words used in the log frame, and that this was essential to getting a handle on this unclear wording.

102. Finally, the means-ends logic within the log-frame in effect represents a clearly articulated means-ends development hypothesis. The causative logical of the log frame suggests that if we provide input x, and provided assumption y holds, then it is highly likely that we will get result z, and so on. In this way the log-frame becomes a hypothesis, and the project can be used as a rigorous adaptive management tool. Adaptive management is not a process of muddling along. Rather it is a rigorous and iterative process of:

- a. setting objectives with key landholders or stakeholders
- b. framing a hypothesis for how best to achieve these objectives,
- c. making interventions following this hypothesis, measuring and analysing outcomes, and
- d. cycling this knowledge back at different scales, including into better operational management and into improved theoretical understandings of the process being managed.

103. Having noted the power of a properly managed Log-Frame Approach, I would also note that it has disadvantages and risks. Workshops are expensive and time consuming, and do not fit well with the consultant-driven planning processes, though these costs are often a small investment relative to the value of the project. However, the main risk is where a combination of weak or poor selection of stakeholders, or powerful stakeholders with personal agendas, can water down a project's vision. Similarly, quality facilitators are few and far between, but absolutely essential for such a process. This speaks to the need for these skills to be part of the project team – or at least linked to the project team for an ongoing period. However, project implementers should also be required to undertake some non-negotiable training in LFA by GEF implementing agencies (UNDP, etc.). In the Grasslands Project

(and other Projects), SANBI explicitly in-sourced the development of GEF5 log frames. Good projects were developed, but the effectiveness of the LFA approach is another question⁶.

Recommendation 7: In summary, thought needs to be given to how log-frames are to be used for GEF Projects, and whether or not to address these issues.

104. Developing log-frames requires specialist skills that biodiversity experts often do not have, raising the question of whether this should this be built specifically into the ProDoc process. The Log-Frame Approach requires that log-frames are developed by, or subject to, in-depth scrutiny by project partners (NORAD 1999; AusAID 2005; UNDP 2009; CIDT undated); would this strengthen projects, and in what circumstances? Further, activities and budgets, and reporting matrixes (PIRs) should be related directly to the log-frame; indeed activities and targets should be incorporated directly below Outcomes.

105. Even when this is done, the log-frame only becomes a living document (and, indeed, the powerful adaptive management tool that it can and should be) when Project Managers are using it for quarterly and annual reporting because it adds value to these processes, and when they know why and how to adjust targets, indicators and even outcomes. Therefore, careful consideration should be given to providing key project managers with quality training in the use of log-frames and the log-frame approach.

Recommendation 8: GEF/implementing agencies offering quality training on LFA prior to project inception workshops to the project team/leader/s. This would allow for close scrutiny of the logframe in the early implementation (or pre-implementation) stages and through this, buyin of the implementing team to the logframe, if it was not them involved in the design stage.

4.1.4. PROJECT REPORTING AND THE PIR

106. This review of the Grassland Project requires a comment on reporting and monitoring. Two parallel systems of reporting are used, namely the PIR (which is effectively the annual report to GEF) and quarterly reporting to UNDP. Interviews with the project team indicated that quarterly review meetings were a critical ingredient in Project adaptability, innovation and success. However, the telling fact is that neither these meetings nor the quarterly reports (to UNDP) were integrated with the PIR, even if they did initiate the "laborious PIR reporting". Rather, a great deal of separate effort was invested in filling in the PIR, and there was some frustration with the complexity of the PIR. Moreover, the PIRs as currently structured do not lend themselves to a joint 'let's do this together in a meeting' process. On the other hand, the RTA noted that the PIR, and especially the narrative statements in the PIR, provide very useful information for tracking and supervising a large number of projects. The PIR has the potential to be a powerful instrument for tracking project progress, identifying shortcomings, adaptive management and remedial actions, but (see Table 7) should be simplified to a format that exactly follows the log-frame, but in which longer narrative explanations are encouraged. As with the MTE, the TE raises the limitations of the PIR for risk management, but provides the concrete suggestions that indicators for risk and assumptions are also tracked (see table 7).

107. The PIR now has 13 spreadsheets, changes regularly, and contains many elements that are undefined and unclear, appear to originate in global objectives, and are difficult for the project to interpret. Moreover, the PIR matches the log-frame far more loosely than the reporting matrix described above (Table 7), and is not easily used as an adaptive project management tool. One

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⁶ The evaluation of the Agulhas Biodiversity Initiative was similarly problematic because of weakness in, and the static management of, the log-frame.

therefore has to consider that the PIR has lost its usefulness as the key tool for Project tracking and adaptive management. It is certainly a duplication of effort on the part of the Project. A review of the PIR suggests that an attempt is being made to use it as a single tool for both Project Management and to collect global data. This is resulting in neither task being done well. This leads to a recommendation that the purpose, design and use of the PIR needs to be evaluated.

108. Reporting and monitoring should be greatly simplified and unified and based on the Log-Frame using a matrix with five columns: objective, target/indicator, status, problems faced and corrective action (see Table 7). Three process, namely internal quarterly project reviews, UNDP reporting, and GEF (PIR) reporting should use the same format, and this format must be simple and directly aligned with the log-frame.

Recommendation 9: Simplify project reporting through a five column reporting matrix (Table 7): objective, target/indicator, status, problems faced and corrective action. All reporting (i.e. internal project self-review, GEF PIR, and UNDP quarterly reports) should use the same, simple format based on the log-frame.

Recommendation 10: Give consideration to adding a fourth column in the log-frame with indicators and means of verification for tracking risks and assumptions (see page 48, assumptions and risks)

Table 7: A	simple	format	for	project	reporting	and	risk	management	that	promotes	adaptive
managemen	ıt										

OBJECTIVE	INDICATORS/	Status	Problem Faced	Corrective Action
	TARGETS			
Objective	 for outcomes for risk/ assumptions 			
Purpose				
Outputs				
Activities				
Sub-activities				

4.1.5. PROJECT STRATEGY

109. In the light of six years of experience, we turn now to a retrospective analysis of the original Project strategy. In brief, the implementation of the forestry and urban components has closely followed the original plans, and has worked well. The mining component was initially a bit of a shot in the dark, but after the MTE the use of a highly effective sector facilitator with a clearly thought out strategy has yielded very positive results and has definitely resulted in mainstreaming. The biggest challenge lies with the important, large and complex agricultural sector. The agricultural team has worked extremely well, and have reached all their targets. They have mainstreamed biodiversity stewardship in Mpumalanga and KZN Provinces, have gone some way towards red meat standards, and have tested important ideas. However, it cannot be said that "Grassland biodiversity conservation objectives [have been] mainstreamed into agriculture" (although perhaps the groundwork has now been laid to do so).

110. Retrospectively, the agriculture mainstreaming strategy was perhaps too orientated towards a single sector (red meat), and did not take sufficiently into consideration an understanding of the way agriculture sectors are structured locally and across scale. Despite the importance of the agricultural sector to biodiversity mainstreaming, the understandable budget limitations of a multi-sector project (limited budget needed to be spread across 4 very big sectors) meant that biting off agriculture as a

whole was too much for this project. This speaks to whether the agricultural sector was too big to be included in a multi-sector project such as the GP. The complexity, scope and diversity – as well as close links with the natural resource base (biodiversity) presumably warrants a mainstreaming project on its own, and with the experience of this Project, successful planning of such an intervention is enhanced.

4.1.6. A COMMENT ON MAINSTREAMING IN THE AGRICULTURE SECTOR

111. We will discuss mainstreaming in the agricultural sector in some detail because of the continuing importance of getting this right. The Agricultural mainstreaming strategy was based on a background report that suggested that livestock and game farming were most compatible with biodiversity, but that crop agriculture was neither likely to increase and was considered to have damaged biodiversity beyond repair. This led to a focus on incorporating biodiversity criteria into the red meat sector, on an assumption that the Project's greatest impact would be through encouraging beef producers to consider biodiversity and not just production. This was addressed by providing site level extension and planning linked to a pilot red meat certification scheme (an attempt at certification failed) and to upscaling this at a national level. There was significant overlap and integration of this with the very successful stewardship processes.

112. The agriculture sector is huge, sectoral and difficult to engage, but key opportunities appear to have been missed in the analysis and design of this component. These issues were discussed at some length during the TE workshop with the Project, and are clearly difficult. However, several issues emerge. First, was the focus on a single sector like beef production correct? Second, and retrospectively, could alternative approaches have been taken to ensuring that pilots were replicated more broadly, with greater active engagement of sector organisations? Third, the ProDoc approached mainstreaming from the perspective of red meat and biodiversity; might it have been more effective if its starting point (i.e. the means) included a greatest focus on understanding the "case for biodiversity", institutional fit, capacities, scale and roles (with biodiversity being the ends)? In the event, significant inroads were made with agriculture using the language/concept of "ecological infrastructure" where the common interests between agriculture and ecosystem services in the form of water production coincide.

113. As noted in the ProDoc, conservation, game and livestock have the least impact on grassland, followed by dryland crops, rural communities, irrigated crops and dairy, with the highest impact being through timber, mining and urban development. In the agricultural component, the project focused strongly on livestock. Retrospectively, the game farming sector seems to offer at least as many benefits as the beef sector, especially in tipping the economy towards conservation, and probably faces more barriers, yet this sector was not specifically engaged. Also retrospectively, the emergence of the importance of water in all aspects of the project suggests that more consideration should have been given to crop agriculture. It is possible that significant benefits in terms of soil conservation, water quality and even agricultural profitability can be derived by shifting conventional crop agriculture to practices including minimum tillage and conservation farming. These were not identified in the ProDoc or Project.

114. Interviews with farmers suggested that their primary incentives for involvement were (1) stewardship arrangements to protect their land from mining and (2) the acquisition of quality extension including vertical and horizontal learning. There are two further observations regarding extension. First, the provision of extension support to individuals and small groups was subsidised and unsustainable beyond a pilot phase, especially given the overstretched capacity of provincial extension agencies. Yet, information and extension are crucial to "making the case" for biodiversity and for mainstreaming. Second, the potential power of grassroots organisations (e.g. farmer study groups, and the often referenced but now defunct soil conservation committees) was observed and noted in a number of interviews and field visits.

115. In retrospect, mainstreaming needs to be holistic covering all aspects of land management on farms including soil conservation, range management, wildlife, woodland, water production and biodiversity management. It also needs to be institutionalised. This is difficult to achieve by approaching the challenge through a single sector (e.g. red meat) or from the top-down, suggesting that an alternative and bottom-up form of mainstreaming is required.

116. For the purpose of mainstreaming, a deeper analysis of the agricultural sector at a systems level may be necessary. A sound agriculture sector depends on linkages between quality research (macro-level), extension and cross-scale learning (meso-level), effective local farmer organisations in self-learning and self-discipline (meso-level), and the farmers themselves (micro-level). Indeed, mainstreaming in agriculture may relate to the challenge of understanding how roles relate to scale. Thus:

- At the macro-level, economies of scale allow the provision of regulatory support, research and legal redress. Also, deeper, more sustained work at engaging the national policy environment in the agriculture sector is needed. Much of what 'goes wrong' on the land is due to inconsistent policies between agriculture, water and environment, and the significant challenges of properly implementing just the agricultural policies alone. A programme based on local level civic engagement is necessary, but this should be used to influence the national policy frameworks and their implementation following the bottom up model used in the Grasslands project, as noted above.
- The meso-level (catchment, municipality, etc.) is the level at which quality extension can be provided, and is also the nexus of critical vertical and horizontal learning.
- Perhaps most significantly, the meso level (catchment, 20-40 landholders) is also the level at which collective action can be extremely effective at designing, monitoring and enforcing (Ostrom 1990) environmental self-regulation. This effectiveness of this level for self-regulation was mentioned with regard to local fire control units in the forest component, and also historically with soil conservation committees. Finally, I have personally observed the remarkable efficacy of legislated and highly democratic grassroots collective action for holistic conservation on private land in Zimbabwe, including for wildlife, soil, grazing and woodland management (Child and Child in press).
- It is the micro-level, or farm, that is deterministic of land use, ecosystem service and biodiversity outcomes. However, what happens at the micro-level is often guided by higher levels.

117. South Africa faces challenges in terms of the capacity to provide extension, and weaknesses in grassroots collective action; farmers associations are primarily involved in security and political issues, not self-regulation in the context of ecological sustainability. There are also questions of how the rapid expansion of stewardship sites will be supported in terms of oversight of land use plans and implementation. This suggests a strong case for consideration of mainstreaming based on a combination of local collective action, knowledge development and extension. Rather than being aimed at the agriculture sector, this should be aimed at building the civic capacity of all landholders to identify and respond to biodiversity opportunities and concerns.

118. All these points in the preceding paragraphs speak to the agriculture sector being too big for a multi-sector mainstreaming project like the GP to chew –leading to the following recommendation for a national agriculture mainstreaming project. Further, agriculture sector interventions in Grasslands (and other mainstreaming projects – CAPE etc.) have provided a better understanding of the complexities of the agriculture sector and thus laid good foundations for a deeper mainstreaming intervention focusing only on agriculture – as proposed above/below

Recommendation 11: Consider a national mainstreaming project targeted at improved conservation on farmland. This might be built around the civic capacity of landholders to use

collective action for the self-design, self-monitoring and self-regulation of biodiversity in its broadest terms – ecosystem services, soil, water, forestry, wildlife and species – but linking this to more sustained work in engaging the national policy environment. This will need to be supported by knowledge, through a combination of research and extension related to wise use practices. Specific technical inputs will be required to address regulatory issues (e.g. overregulation in the wildlife sector) and technical issues (e.g. the realistic expectations from conservation farming).

4.1.7. ASSUMPTIONS AND RISKS

119. The ProDoc lists five Risks with Risk Mitigation Measures (p47). However, these do not match the Risks and Assumptions in the Log-Frame, and neither are they matched in the PIR. This anomaly, and the failure to correct it, speaks to the over-complex nature of Project documentation. The 2012 APR includes a significant discussion from the Project about how to access and use the ATLAS system regarding risk, with the complexity of filling in various forms leading to the Project to spend more time working out how to fill out forms as opposed to tracking and managing risk. To rectify this, risk and assumptions should be included in the log-frame. If they are important, they should be tracked in the quarterly review process. This might warrant the inclusion of a fourth column in the log-frame that provides risk indicators and means of verification (recommendation). As with the PIR, the complexity of the ATLAS risk management system is a real barrier to risk management, as is the inability of the project team to access, or at least view, ATLAS (as raised at MTE).

Recommendation 12: Include a fourth column in the log-frame in which indicators for measuring risks and assumptions are specified, leading to regular tracking of these during project implementation

120. Nonetheless, as we can see below (Table 8), the Project has been effective at managing the risks mentioned in the ProDoc.

ProDoc risks	Р	R	Mitigation	MTE
1. Significant increase in external development pressures	Μ	Η	High level engagement,	Consider withdrawing from work
beyond projected scenario (global			environment GSC	withdrawal from the FS rivers demo
econ)			engagement	project - see comment on pg 29 of
,			0	MTE report.
2. Difficulties in attaining	Μ	М	Agriculture: revised	Revised approach to certification
mutual consensus between			approach to agriculture	(following a broader approach of
biodiversity & production sectors			& biodiversity	developing "a market mechanism"
on biodiversity needs &				as opposed to an "industry
production imperative.				approved certification system")
3. Delays in instituting	Μ	М	Business case for	Not a risk but a barrier being
appropriate incentives that			biodiversity	addressed
trigger mainstreaming in targeted			stewardship; revised	
production sectors.			approach to agriculture	
			cert	
4. Institutional commitment for	S	Η	Champions, high level	Not a high risk (esp urban);
mainstreaming outside			engagement, MTC,	satisfied by measures
conservation remains shallow &			demos	
doesn't percolate across divisions				
(e.g. operations)				

Table 8: Summary of Project Risks (source: Anthea Stephens)

5. Governance by regulatory authorities weakens resulting in	М	Η	Partnerships, capacity building, high level &	Linked to above measures
increased lack of compliance.			GSC engagement	

4.1.8. LESSONS FROM OTHER RELEVANT PROJECTS (E.G., SAME FOCAL AREA) INCORPORATED INTO PROJECT DESIGN

121. Table 9 in the ProDoc presents lessons learned, and provides a list of practices and principles that need to be followed. There is no specific reference to lessons learned from either the World Bank/UNDP-GEF CAPE Action for People and the Environment Project or from the UNDP-GEF Agulhas Biodiversity Initiative, although reading between the lines lessons from these projects were incorporated. However, the Project is clearly built on lessons culled from similar initiatives across the world and incorporates best practices and further innovation, as claimed on p 120 of the ProDoc.

4.1.9. PLANNED STAKEHOLDER PARTICIPATION

122. The ProDoc devotes the entire Part IV to stakeholders and their involvement in the project. The stakeholder analysis (p111-118) lists 5 national government agencies, 8 provincial agencies, 5 government conservation agencies, 7 municipalities, 10 universities or research organizations, 9 civic organizations and 14 private sector organizations. The ProDoc also lists the strengths of various stakeholders (p118) and builds on them. This includes the use of systematic conservation planning, a huge strength of the sector in South Africa. It uses NGO expertise in key partnerships (e.g. WWF-SA and Stewardship expertise) and is inclusive of industry bodies and the private sector.

123. The ProDoc also seeks to decentralise the management of each Outcome to a series of lead agencies (and supporting partners), and defines the key roles of these agencies (Table 19, p118-119). It did not describe the Agriculture and Coal Mining Management Units beyond a conceptual level, because at the design stage it was unclear which 'external' stakeholders would lead implementation in these sectors. This is fully understandable in project preparation phase and rightly became part of project implementation. Table 19 in the ProDoc is invaluable in setting the normative approach of the Project, including the decentralization of responsibility to agencies like Forestry-SA (Outcome 3) and Gauteng Department of Agriculture and Rural Development (GDARD). Nonetheless, it should be noted that the Project has, to its considerable credit, has moved even further than envisaged in developing the will and capacity of lead agencies to sustain activities beyond the Project close.

124. As noted by the MTE, the ProDoc does not acknowledge explicitly the degree of participation in project design and formulation by prospective stakeholders. This, however, is evident from the narrative and confirmed by interviews with stakeholders, many of whom mentioned their involvement in the project's design and evolution. This suggests that future projects might be strengthened by involving stakeholders in a well-managed Log-Frame Approach process, noting that this is a powerful process (see page 42) (albeit with occasional risks in countries where stakeholders have limited capacity or commitment to project objectives).

4.1.10. REPLICATION APPROACH

125. The conceptual detail missing in the log-frame emerges clearly in Replication Strategy in the ProDoc (p120-121). This comprises two levels of intervention. First, making the case for the intervention by demonstrating its value, and integrating biodiversity into industry norms and standards. Second, it includes strengthening of data management systems, collaborative stakeholder governance structures and networks, feedback loops between demonstration projects and policy and guidelines, and a communications strategy. This approach proved to be largely correct, and was built upon by the Project.

4.1.11. UNDP COMPARATIVE ADVANTAGE

126. UNDP and particularly, the two RTA's who supervised the design and implementation of this project, provided exceptional support to it. There is no doubt that they contributed to pushing important conceptual boundaries with the project (e.g. the long-hook short-hook policy process), and that they provided significant support to its implementation, showing a keen interest and passion for the project, attending steering committee meetings on a regular basis, and facilitating adaptation and key administrative tasks such as the amendment of the log-frame after MTE. UNDP has clearly shown considerable leadership and innovation in promoting this Project (but is not specifically mentioned in the ProDoc).

127. However, we do need to question if the ProDoc should be cluttered up by devoting space to assessing UNDP's comparative advantage. This section of the Pro-Doc is often self-evident, detracts from the clarity of ProDocs, and if it is required should be included in a standard assessment annex.

4.1.12. LINKAGES BETWEEN PROJECT AND OTHER INTERVENTIONS WITHIN THE SECTOR

128. The programme contributes to meeting the objectives as set out in the UNDP Country Programme 2007-2010 for South Africa (CP 2007-2010). It falls under Objective B of the Country Programme 'Promoting Equitable Growth, Poverty Reduction and Sustainable Development'. The programme contributes to Service Line 3.5 'Conservation and Sustainable Use of Biological Diversity', under Goal 3 'Managing Energy and Environment for Sustainable Development', of the Multi-Year Funding Framework 2004-2007 (MYFF 2004-2007). Furthermore, the programme is in line with the major development challenges identified in the United Nation's Common Country Assessment (CA) of development needs, prepared by the Government of South Africa in 2005. The CA underlines biodiversity's critical role in providing for sustainable development and poverty alleviation.

129. The Project is highly complementary with a number of national GEF-funded biodiversity projects. The ProDoc builds upon networks of partners and conceptual ideas developed in the World Bank/UNDP-GEF CAPE Action for People and the Environment Project" and the "UNDP-GEF Agulhas Biodiversity Initiative". Project also built on the conceptual ideas of the Maloti-Drakensberg Conservation and Development Project mentioned below (i.e. their work on PES informed our starting point on PES). There are further synergies and learning opportunities with the "UNDP-GEF supported Conservation and Sustainable Use of Biodiversity on the South African Wild Coast Project" (the forestry component engaged and made linkages with this project) and the "World Bank-GEF supported Maloti-Drakensberg Conservation and Development Project (MDTP)".

4.1.13. MANAGEMENT ARRANGEMENTS

- 130. SANBI as the Executing Agency, is responsible for:
 - (i) coordinating activities to ensure the delivery of agreed outcomes;
 - (ii) certifying expenditures in line with approved budgets and work-plans;
 - (iii) facilitating, monitoring and reporting on the procurement of inputs and delivery of outputs;
 - (iv) coordinating interventions financed by GEF with other parallel interventions;
 - (v) approval of Terms of Reference for consultants and tender documents for subcontracted inputs; and
 - (vi) reporting to UNDP on programme delivery and impact.
- 131. The structure of the Project is illustrated in
- 132. Figure 7.

133. The Grasslands Forum pre-dated the Project and is an open meeting of private, public, civil society, and academic institutions and individuals who are committed to the vision of the NGBP

134. The Grassland Steering Committee (GSC) oversees the Grassland Project. It includes:

- key national and provincial government agencies:
 - Department of Agriculture, Forestry and Fisheries (DAFF),
 - o Department of Environmental Affairs (DEA),
 - Department of Water Affairs DWA),
 - o Gauteng Department of Agriculture and Rural Development,
 - o Ezemvelo KwaZulu-Natal Wildlife,
 - o Mpumalanga Tourism and Parks Agency
- key industry bodies
 - o Agri-SA,
 - Forestry South Africa,
 - South African Mining & Biodiversity Forum which includes the Chamber of Mines),
- civil society (WWF-South Africa),
- UNDP/GEF and SANBI.
- It meets approximately three to four times a year and is chaired by SANBI.

135. The Grasslands Coordination Unit is housed within SANBI's Biodiversity Planning and Policy Advice Division based in Pretoria, reports to SANBI's Biodiversity Planning and Policy Chief Director, and manages the Project (these changes came about after the ProDoc).

136. According to the Pro-Doc, each Outcome is supported by a Task Team including:

- *Grasslands Urban Task Team* comprising Provincial government (GDACE), municipalities (three metropolitan, two districts, two local), NGOs (WESSA, IAIA) and SANBI. The Grasslands Urban Task Team elected a member to represent the urban component on the Grassland Steering Committee. GDACE (now GDARD) is the Implementing Agent and houses the GEF-funded Programme Manager with administrative assistance, office space and logistical/communication support provided by GDACE.
- A *Grasslands Agriculture Task Team* comprises the Agribusiness Chamber, Agri-SA, NAFU, RPO, NERPO, Grain South Africa, Wildlife Ranching South Africa and the national Department of Agriculture. The Implementing Agent for the diverse agricultural sector funded by GEF was located within SANBI. Resources were provided to establish three stewardship officers' positions (for forestry and agricultural outcomes) to the three provincial conservation authorities in KZN, Mpumalanga and the Eastern Cape.
- A *Grasslands Forestry Task Team* comprises SANBI, DWA, DAFF, Forestry South Africa, large timber growers, small/emerging timber growers, medium timber growers, civil society, research institutions, and the three provincial conservation authorities most affected by forestry (Ezemvelo KZN Wildlife, Mpumalanga Parks and Tourism Agency, and the Eastern Cape Department of Economic Affairs and Environment). Forestry SA is the Implementing Agent, so the Forestry Programme Manager and short term advisers funded by GEF were located within Forestry SA's offices with administrative assistance, office space and logistical/communication support provided by FSA.
- The document was less clear about the *Grassland Coal Mining Task Team* which was still to be established. Eventually a dynamic Coordinator was appointed, who helped to re-invigorate the South African Mining and Biodiversity Forum.

During Project implementation the names of several government agencies were changed. Moreover, the membership of Task Teams changed according to implementation priorities, but nonetheless proved to be an important aspect of the Project. The emphasis on high stakeholder participation in each of the sectors is reflected in the implementation and governance arrangements at Project design (Table 7).

Figure 7: Implementation and governance arrangements for Grasslands Project as envisaged at project design (from Anthea Stephens)

Note that these evolved to include other notable industry bodies, e.g. South African Mining & Biodiversity Forum, the CoalTech Steering Committee, and Forestry South Africa's Environmental Management Committee.



4.2. **PROJECT IMPLEMENTATION**

4.2.1. OVERALL IMPLEMENTATION

137. **UNDP** is the implementing agency responsible to the GEF for the timely and cost-effective delivery of the agreed project outputs. It works with the Government of South Africa through its agreement with SANBI as executing agency. UNDP provides technical backstopping services, and monitors adherence to the work plan to ensure accountability. The Country Office in Pretoria has legal responsibility for the GEF funds. The ATLAS mechanism underpins UNDP's work on the

project addressing risks, financial management, etc. UNDP accounts for the project annually to the GEF using the PIR. The MTE noted that although the PIR is less cumbersome and rigid than in the past, it still posed difficulties to the Project such as consideration of risk and, as noted above, the Project developed a duplicate management system because of the impracticalities of the PIR reporting systems. The complexity of the reporting systems is also flagged by the Terminal Evaluation because it is undermining its intentions of improved accountability, transparency and adaptability (see, for example, comments on the PIR on page 44). UNDP ensures annual audits are carried out, approves budget revisions, approves formal changes to the log-frame (in this case, indicators at MTE), and coordinates evaluation through APRs/PIRs and by approving ToRs for independent Mid-Term and Terminal evaluations. It should be noted that concern was expressed about risk management in the MTE, and that the project found it difficult to capture, categorise and update risks over time (from ProDoc, through PIRs to Atlas). As suggested elsewhere, this could be simplified by adding a fourth column to the log-frame and PIR to track risks.

138. The UNDP/GEF Regional Coordination Office was based in Pretoria until 2013. The Regional Technical Advisors provided considerable intellectual, strategic and technical support to the design and implementation of the Project and contributed to its success. This was over and above the technical support to the UNDP Country Office and the GEF National Operational Focal Point, which approves the project inception report and terminal reports, reviews budget revisions prior to signature, follows up closely on implementation progress, assures the eligibility of project interventions in light of GEF policy guidance and approved project design, represents UNDP/GEF on the GSC, and approves PIRs, including performance ratings, for submission to GEF. The RTA played a very central role in the design and formulation of this project and in project implementation. The Country Office supports 7 GEF Biodiversity Projects amongst its wider responsibilities and can provide basic administrative support (finances, procurement, and key meetings) but is too overstretched to have the capacity for strategic support.

139. **Grasslands Steering Committee.** The GSC met for the first time in September 2005 and had 2-3 meetings a year since then. It was very influential during the project design and formulation stage. The MTE flagged lowering attendance and weak engagement of some key organizations is a matter of some concern since it could be reflecting a reduced level of ownership for the project and this, in turn, is of particular concern in relation to sustainability. The MTE also recommended that the GSC interrogate its focus in relation to the Project specifically around the needs and expectations of members on the GSC – both in terms of what the Project needed from them, but also in terms of their expectations from the Project. This exercise was undertaken shortly after midterm and resulted in an amendment to the TORs of the GSC, a sharper focus of the GSC, fewer meetings (2 per annum) and greater commitment of GSC members.

140. The Project Coordination Unit is headed by the Project Manager assisted by an Administration Officer, a Finance Manager, a Programme Officer and a Communications Coordinator. Each component has a Coordinator, i.e., Agriculture, Urban, Forestry and Coal Mining. The Project Manager is *de facto* also coordinator for the Enabling Environment component, with a technical expert in mainstreaming policy being recruited following the midterm evaluation in 2012. The Management style is democratic, consultative, and effective, and staff are motivated, confident and innovative. An attitude of peer-learning and introspection is apparent – this is a learning organization. Project communication functions well, and documentation, events organization and tracking of the impact of these are particularly impressive. These are a major reason why the Project was able to influence biodiversity (through ecological infrastructure) being included as a potential 19th Strategic Integrated Project (SIPS) determined by the Presidential Infrastructure Coordinating Committee (PICC) (see below). The success of this project can be related largely to its collaborative style, strong management systems and the recruitment of excellent staff. Project management and administration is rated **Highly Satisfactory (HS)**.

141. As with the Project Components (Outcomes), the effectiveness of the Project can be traced back to a clear conceptualization of the approach to mainstreaming (Figure 5).

142. In each of the following assessment of the five Project Outputs, a table is provided that compares Project results to targets. It also compared the Pro-Doc indicators to those agreed at MTE. This provides a succinct over-view of how the Project evolved and what it did. However, many key achievements of the Project are not captured by the log-frame, so a fuller description of these is provided in Table 25. In addition, a narrative description of the strategy adopted in the implementation of each Outcome is discussed, as are some of the implementation lessons.

TABLE 9 IMPLEMENTATION AT OBJECTIVE LEVEL

143. Overall, the Project has significantly exceeded the Objective-level target of extending protected areas by 90,000ha. This has been achieved primarily through stewardship arrangements which have considerable momentum and demand so this figure is likely to expand significantly post Project.

 Table 9: Objective: Major production sectors are directly contributing to the achievement of biodiversity conservation priorities - indicators and targets

ProDoc Indicators	Revised Indicators	Targets	Status
Contribution of NGBP towards achievement of biodiversity target for Grassland Biome. The target is 22.3% of vegetation types within natural areas in the Grassland Biome	Contribution of GEF- funded Grasslands Programme to increased extent of protected areas (incl state & private land) in production landscapes in the Grassland Biome	90,000ha	 <u>Stewardship</u> Declared: 165,727 (39 properties) In process: 86,878 (28) Total: 252,606 total <u>Biodiversity Good</u> <u>Management Practices</u> 258,276 ha (158,276ha overlap with stewardship⁷)
Biodiversity Intactness Index	REMOVE FROM GEF LOGFRAME but retain as higher level programme indicator in M&E framework	No less than 2% of decline from baseline	These indicators were removed at MTE
Degradation indicator – percentage of biome degraded	REMOVE FROM GEF LOGFRAME but retain as high level programme indicator (although currently dormant)	No major increase in degradation	

144. Detailed descriptions of land protected through stewardship and Biodiversity Good Management Practices are included in Table 12 and Table 13. These details are included to provide a comprehensive summary of Project achievements, and also to illustrate the extensive (and complex) databases maintained by the Project to monitoring progress. The overall achievements are summarized here, and attributed to each Outcome in the sections that follow. This, Table 10 shows that the Project secured a total of 252,606 hectares of land through stewardship arrangements (including land in an advanced stage of being declared). More than 258,276 hectares of land have

^{1.}

⁷ This figure doesn't link to this indicator but to agric outcome indicators – but is retained here as an indication of project footprint at a higher level

been subject to Biodiversity Good Management Practices (Table 11), albeit with 158,276 hectares overlapping with stewardship sites.

	Declared	In process	Total
Area (hectares)	165,727	86,878	252,606
Number	39	28	67

Table 10: Summary of areas secured through stewardship arrangements

Table 11: Summary of areas with Biodiversity Good Management Practices

Land jurisdiction	Number of properties	Area (hectares)
Stewardship	9	108,091
Stewardship in process	7	50,185
Outside stewardship areas		>100 000
Total		>258,276

Table 12: Description of Areas Secured through Stewardship Agreements

Source: Grassland Project Databases (Aimee Ginsberg)

Hectares and number of areas secured (A) or in the process towards being secured (B) as Nature Reserves, Protected Environments or under Biodiversity Agreements through four components of the Grasslands Programme (mining, agriculture, urban and forestry).

	A. Declar	ed or ga	zetted with inte	nt to de	eclare as		B. In process towards being gazetted as						
	Nature reserve Protected Environment Biodiversity Agreement			Nature rese	rve	Protected Enviro	onment	Biodiversity Agr	eement				
	На	No	Ha	No	На	No	ŀ	На	No	На	No	На	No
Mining			9,244.00	1				9394	1	34800	1	991	1
Agriculture	1,208.00	1	96,552.00	5	1,913.00	3				19324.664	3		
Forestry	23,397.89	15	9,390.00	3				12,525.0000	12	8605	5		
Urban	24022.53	11			-			1238.55	5			-	
Total	48,628.42	27	115,186.00	9	1,913.00	3		23,157.55	18	62,729.66	9	991.00	1

	A. Declared or ga	azetted with intent to de	clare as	B. In process towards being gazetted as			
	Nature reserve	Protected Environment	Biodiversity Agreement	Nature reserve	Protected Environment	Biodiversity Agreement	
		Pongola Bush PE		Arrarat NR	Elandsfontein PE (used to	Nkosi Nzima BA	
					broadly be referred to Phongola		
Mining					Bush PE Phase 2)		
	Tafelkop NR	KwaMandlangampisi PE; KPE	Mabaso; Ukuthanda Ukukhanya		Lakenvlei; Mabaso PE;		
		Extension; Mabola PA; Mndawe	CPA; Bambanani CPA		Wakkerstroom Wetland Reserve		
Agriculture		PE; Chrissiesmeer PE			PE		
	Mokobulaan; Umgano ;	Excelsior; Mount Shannon; Weza		Mkambathi Nature Reserve	Izanqawe; Tygerskloof; K Block		
	Gelykwater; Gilboa vlei; Forest	PE		expansion; Oosterbeek (Twello);	Catchment; Kwambonambi		
	Side; Mbona Private NR;			Angle Ridge (Twello); Mount	Coastal Wetland PE; Hogsback		
	Clairmont Mountain; Nelsberg			Morgan (Kempstone);	PE		
	Reserve (Nelshoogte);			Groenvaley (Doyerhoek); Sabey			
	Queensriver Reserve			grassland (Escarpment);			
	(Nelshoogte); Blouswaelvlakte			Ngodwana River Valley(Camelot			
	Reserve; Ngodwanakloof			S.); Mpulusi (Lothair);			
	Reserve; Tweefontein Reserve;			Tarjaardsvlei (Camelot N.);			
	Hartebeesvlaktke Reserve; Mac			Ndubazi Block C grasslands;			
	Mac Reserve; Morgenzon			Torbulea (Camelot South); Lake			
Forestry	Reserve			Merthley			
	Colbyn; Suikerbosrand;			Leeupan; Bill Steward; Glen			
	Marievale; Faerie Glen;			Austin; Kloofendaal; Klipriver			
	Leeuwfontein; Alice Glonchner;			(Klipriviersberg NR)			
	Voortrekker Monument;						
	Rietvlei; Roodeplaat;						
Urban	Klapperkop; Groenkloof						

 Table 13: Description of Areas benefiting from Biodiversity Good Management Practices

	A. Declared or g	azetted with intent to de	clare as	B. In process towards being gazetted as			C Outside protected areas	
	Nature reserve	Protected Environment	Biodiversity Agreement	Nature reserve	Protected Environment	Biodiversity Agreement	C. Outside protected areas	
Inside demonstration district area								
Mining		9,244 1		9394 1	34800 1	991 1		
Agriculture	1,208 1	35,523 3	1,913 3					
				Outside demonstration dist	rict area			
Agriculture		60,203.00 1				.	Estimated >100 000	
Forestry					>5000 4			
Total	1,208 1	104,970 5	1,913 3	9,394 1	39,800 5	991 1	>100 000	
	A. Declared or g	azetted with intent to de	clare as	B. In pro	cess towards being gaze	C. Outside protected areas		
	Nature reserve	Protected Environment	Biodiversity Agreement	Nature reserve	Protected Environment	Biodiversity Agreement		
				Inside demonstration distr	ict area			
Mining		Pongola Bush PE		Arrarat NR	Elandsfontein PE (used to	Nkosi Nzima BA		
					broadly be referred to Phongola			
Agriculture	Tafelkop NR	KwaMandlangampisi PE; KPE	Mabaso; Ukuthanda Ukukhanya		Bush PE Phuse 2)			
Agriculture		Extension; Mabola PA	CPA; Bambanani CPA					
				Outside demonstration dist	rict area			
Agriculture		Chrissiesmeer PE			Lakenvlei; Mabaso PE;		Farmers involved in the biodiversity-friendly red meat	
					Wakkerstroom Wetland Reserve		pilot project:	
Forestry					also being implemented in the			
					communally owned areas in			
					KwaZulu-Natal linked to			
					futurebiodiversity stewardship			
					forestry and grazing (in			
					Ozwathini, Izangawe, Umgano			
					and Babanango)			

4.2.2. OUTCOME 1: ENABLING ENVIRONMENT FOR BIODIVERSITY CONSERVATION IN PRODUCTION LANDSCAPES IN THE GRASSLAND BIOME IS STRENGTHENED

145. Output indicators (ProDoc indicators and those agreed at MTE) are summarised in the report prepared for the Grasslands Steering Committee together with agreed targets and the status of outcomes. Although the Project did not achieve Indicator 1.1 (which is unrealistically high), it made enormous progress in ensuring that fully 32% of the grassland biome is now subject to planning that incorporates priority biodiversity areas. Moreover, the Project has pioneered the process of integrating GIS-databases that map priority biodiversity areas into the formal planning process at Provincial and Municipal level (e.g. Bioregional Plans, Spatial Development Frameworks), and built capacity and precedent, so progress is likely to continue beyond the Project. In addition the Project has built capacity for mainstreaming into at least 17 key organizations (Figure 8). These activities are elaborated below.

ProDoc Indicators	Revised Indicators	Targets	Status
1.1 Bioregional plans for	1.1 Biodiversity sector	45% of biome	32% covered by
Grassland Biome gazetted at	plans (or bioregional		Biodiversity Sector
appropriate levels	plans) for Grassland		Plans or Bioregional
	Biome produced and		Plans developed of in
	adopted by relevant		process (but being
1.2 Number of lease officiated			useu)
nivete and public sector	REMOVE		
organisations that have			
entered into Mol with			
NGBP contributing towards			
conservation targets			
1.3 Institutional	1.3 Retain but include	76%	Baseline (2008) 13%
mainstreaming effectiveness	additional agencies &	72%	Midterm (2010) 48%
scorecard: SANBI, GDACE,	calculate end targets:	66%	End (2013) 63%
Forestry SA	• EKZNW; MTPA	Calculate end target for	
	• DAFF, DMR, DWA	additional agencies	
	CoalTech, AgriSA		

Table 14: Indicators and targets for enabling environment

A. Indicator 1.1 Bioregional plans for Grassland Biome gazetted at appropriate levels

146. South Africa has a world class system of biodiversity maps and priorities. These are captured in key publications (Driver, Sink et al. 2012) and are available at broad and fine scales through an online database called BGIS (Biodiversity GIS). South Africa also has a strong regulatory framework for provincial, municipal and other planning. The intention of the Project was to ensure that biodiversity priorities were inserted into land use planning and approval processes, and there was a strong demand from many planning agencies for biodiversity information to inform planning, EIA's and development permitting processes. The formal target of the project was that provincial and municipal Biodiversity Sector Plans (or draft Bioregional Plans) for Grassland Biome be produced and adopted by relevant authorities so that 45% of the biome was also included. This is a highly ambitious goal. It should also be a Purpose rather than an output goal as it captures the work of all five outcomes.

Key Lesson 1: South Africa's detailed biodiversity mapping is a critical input into mainstreaming and biodiversity management at many scales. Developing similar maps for other countries could have a high impact in terms of long term GEF conservation and mainstreaming goals

147. Through the urban component, the Project worked with all five municipalities in Gauteng to develop Bioregional Plans. These is a lot of evidence that these are being incorporated into EIA and planning permitting processes even before they are formally gazetted by the MEC to become Biodiversity Sector Plans. This process takes longer than anticipated because it legally requires a process of public participation and gazetting by the MEC. Through the agricultural component the Project worked with Mpumalanga provincial authorities to prepare a bioregional plan for the large Gert Sibande district municipality. This coincided with a necessary update to the provincial biodiversity plan which the project was able to support. This resulted in a province-wide biodiversity sector plan (which identifies Critical Biodiversity Areas, associates them with Land Use Guidelines and supports users with a handbook and land user guidelines), which can then easily be adapted into municipal level bioregional plans. The project also supported the province to capture priority biodiversity areas in a province wide Mpumalanga Protected Area Expansion Strategy (20 years). The result of the project's interventions have been significant strengthening to the regulatory biodiversity planning tools in provinces such as Mpumalanga and Gauteng which are under massive development pressure (from mining and urban development respectively). These tools are the backbone of biodiversity mainstreaming in South Africa's land use planning context.

148. By June 2012, the PIR reports that 18.5 of the grassland biome was formally covered by bioregional plans (or biodiversity sector plans), increasing to 32% by the Terminal Evaluation in May 2014. This is a huge achievement, and even if it remains below the overambitious target of 45% the processes developed by the Project are becoming sector norms.

B. 1.3 Institutional mainstreaming effectiveness scorecard

Institutional mainstreaming scorecards were developed by the Grasslands Project to evaluate institutions. The original scorecards had 100 questions. This was considerably shortened and tailored to each organization to match what was agreed between the Project and the partners regarding mainstreaming goals; indeed, the scorecard was a valuable tool that supported the social process of negotiating joint goals by requiring that partnership goals be codified. By and large partners did not institutionalise the use of the scorecard except as a Project-related reporting tool - most have not taken it up to be used in the future. Thus the scorecards were only adopted by organisations in relation to external reporting as the partners did not see the scorecards as internally valuable to their organisations. The Project managed a database for these scorecards, the summary results of which are illustrated in Figure 8 to show that the Project met its targets, but also that considerable capacity in mainstreaming was built in no less than 16 organisations.

Summary	Baseline (2008)	Mid-term (July 2010	End-term (Jan 2013)
MTPA	9%	48%	67%
EKZNW	36%	58%	78%
Organised mining S	0%	7%	73%
DMR	0%	0%	67%
DAFF	15%	48%	70%
DWA	0%	33%	67%
GDARD	33%	56%	74%
FSA	37%	56%	74%
Agri-SA	24%	43%	57%
SANBI	26%	55%	69%
Ekurhuleni	38%	62%	75%
Johannesburg	44%	56%	46%
Mogale City	48%	59%	59%
Sedibeng	21%	45%	37%
Tshwane	no data	87%	96%
West Rand DM	13%	52%	65%

Figure 8: The mainstreaming scorecard and results

149. However, the log-frame does not capture the amount of progress made through this Output. **Error! Reference source not found.** Figure 9 illustrates how the Project works at policy, implementation and site levels to improve the enabling environment through (1) developing learning networks, materials and capacities and (2) influencing policy (Ginsburg 2013). As noted in several places in the document, the conceptualisation by the Project of several of its key activities in this way is an important strength of the Project. Some of the additional achievements are documented below.



Figure 9: An illustration of Project activities under Outcome 1 Enabling Environment

150. The Project has an impressive set of databases for monitoring all manner of Project data and, perhaps more importantly, programmatic data. We have already noted the national importance of the Biodiversity GIS, which underpins a great deal of planning in the country, and to the use of which the Project has contributed significantly. The Project has also developed or contributed to databases that track:

- o the extent of Protected Area Networks,
- Biodiversity Targets,
- PA Management Effectiveness Tracking Tools,
- PA Management Plans,
- o the extent of land under biodiversity friendly fire management,
- o the inclusion of biodiversity in Integrated Development Plans,
- the Mainstreaming Scorecard (Figure 8),
- o habitat loss, rare and protected species, invasive alien plants,
- o fire protection associations,
- biodiversity intactness index,
- o variability in river flows,
- the status of bioregional plans,
- o MOUs,
- o the use of information tools including print, electronic and events,
- \circ and so on.

151. In addition, the Project has contributed to the development of a long term "Monitoring and Evaluation Framework for the Grasslands Programme" (Wilkinson and Ginsburg 2010). This includes protected areas, policy, good management practices, local communities, coverage of spatial plans, and awareness (communication and research products).

152. In "making the case" for biodiversity, through Outcome 1 the Project contributed to the development of a "Biodiversity Sector Messaging Strategy Document". This is based on three levels of appeal to three levels in the target audience: emotional (heart), financial, (need) and practical (ability to effect change).

153. However, retrospectively more attention needs to be given to the technical aspects of "making the case" for biodiversity to build on the significant progress and lessons emerging from the Project. In all Outcomes, one of the striking observations is that there was invariably a "case to be made" for biodiversity, be this through water pricing, reduction of reputational and legal risk to mining houses, improved range productivity, standards and certification, the personal satisfaction of conserving biodiversity, and so on. With urban and mining offsets, moreover, the Project was in many ways initiating market-based solutions. Indeed, the Project has developed an array of exciting developments and examples relating to the challenge of "making a case for biodiversity" that are deserving of more introspection and analysis. In this vein, I make the comment that with the exception of one partner in the mining programme, I did not meet a single economist during the evaluation process. These examples were being developed by people with biological backgrounds (and geographers) who were developing economic tools intuitively, suggesting scope for additional economic and institutional knowledge in developing these lessons.

Recommendation 13: Seriously consider undertaking an intellectual and practical synthesis and evaluation of all components in the Project with a view to developing a better conceptual understanding of the idea of "making the case" for biodiversity.

154. The Project sought to influence policy and regulatory frameworks through its various teams and by hiring a policy specialist. In addition to the impressive progress in bioregional plans, national biodiversity offsets framework, biodiversity stewardship, and communicating the value of biodiversity, the Project has begun to put the issue of the role of healthy ecosystems in water production squarely in the minds of policy makers. After early difficulties in persuading potential buyers of the validity of Payments for Ecosystem Services (PES), the Project made significant progress in norming the idea of "Ecological Infrastructure' into the policy debate at several levels.

155. The idea of Ecological Infrastructure was regularly mentioned in interviews, confirming that this idea is influencing policy and practice and helping to make the case for further investment in biodiversity. For example, commercial foresters discuss ecological infrastructure in terms of reduced risk of floods to roads and other infrastructure. Moreover, innovative partnerships have leveraged significant commitment to taking forward the concept of ecological infrastructure into the management of critical water catchments that serve major urban and other uses in KZN and the Eastern Cape (e.g. uMngeni Ecological Infrastructure Partnership – a water security project). Serious discussions are beginning with large water users, including an emerging recognition that it is just as important to protect the catchment that feeds dams as to build new dams.

156. For the first time, Ecological Infrastructure has been included in "Water Reconciliation Plans"; these plans include calculations of how new dams, water conservation measures and so on will enable water authorities so match supply to demand. The turning point engendered by the Project is recognition in these documents of the importance of catchment management for the first time. Given the growing demand for water in a water-scarce country, I have to admit to being somewhat surprised that consideration of catchment management was such a new idea to large water companies.

157. The Project also made important contributions to a water pricing strategy, making the breakthrough that a share of the water charge is earmarked for catchment management. The finalization of this process is currently frustrated at the political level. Similarly, the Project contributed to offset guidelines in both the urban and the mining sector that have the potential to emerge as market mechanisms for biodiversity conservation, of which an important component is water production.

Finally, the Project has produced a large number of knowledge products. As with much of this Project, the strategy has been carefully conceptualised. Knowledge is captured in multiple forms, is articulated in multiple formats, and effort is made to connect and inspire users of this information (Figure 10). Careful tracking shows that 400 to 1,300 people visit the website each month, especially around events such as the national dialogue on Ecological Infrastructure, the launch of the Mining and Biodiversity Guidelines and so on. At least 83 online and print articles and information products have been produced (Figure 10). Regular stakeholder forums at Outcome and Project level involved very many people in the Project. Noteworthy events include three national dialogues.

158. Since the Grasslands Partners Forum (GPF) held its first national dialogue on biodiversity in the economy in 2011, the discussion moved in 2012 to how investments in ecosystems (ecological infrastructure) can support development and job creation (Dialogue on Ecological Infrastructure held in partnership with DBSA) and to the role of ecological infrastructure supporting water security. By targeting leading decision makers and key institutions in national planning processes these dialogues, investing in ecological infrastructure has been mainstreamed into national policy and planning. Incredible traction was found using the concept of ecological infrastructure with engineers, development planners, the agriculture and water sector as well as politicians, resulting in biodiversity being firmly mainstreaming into the national development dialogue. Further, the Grasslands Programme has catalysed the Umgeni Ecological Infrastructure for Water Security proposal being taken up by the important Presidential Infrastructure Coordinating Committee. It was at this event that the Umgeni Ecological Infrastructure Partnership (UEIP) was launched. The UEIP is likely to be the focus of a 19th Strategic Integrated Project (SIPS) being considered by the Presidential Infrastructure Coordinating Committee (PICC).

159. It is now likely that the protection of watersheds in South Africa, especially related to the construction of new dams, will be included as a potential 19th Strategic Integrated Project (SIP 19) coordinated by the Presidential Infrastructure Coordinating Committee (PICC) as "Ecological Infrastructure for Water Security". It is noteworthy that this committee has a three year budget of R1 trillion. As further support to the power of quality mapping in mainstreaming biodiversity is the observation that quality mapping of key water catchments, has been a critical input into the decision process and the prioritisation of investments; thus the centrepiece of SIP 19 is a map circling South Africa's high yield watersheds.

Figure 10: Conceptualization of the information strategy, and list of publications to date

	Produce		
Information (spatial & facts)			- \
Case studies & factsheets	Articles for various audiences	Connect & Inspire	
Lessons learnt (pilots & interventions)	Design and production of technical and user products	Communicate (website,	7
Develop technical tools &	Dissemination strategy	outside SANBI)	
DIP reporting & M&E	Other awareness products	Branding & comms strategy	
FIN TEPOTUNE & MAE	(boards, hats, banners etc)	Platforms (GPF, and other)	
	-	Share products (implement dissemination strategy)	
		Publications	

Publications	Number
Magazine articles	35
Blog	5
Video	3
Online news (General)	22
Newspaper (Online and Print)	8
Book	1
Report	1
Proceeding	2
Guidelines	6
Peer reviewed articles (3 in prep)	0
Total	83

160. In conclusion, Output 1 has covered a wide range of opportunities, with flexible but strong management and an understanding of the power of participatory processes and inclusiveness resulting in important additional opportunities for mainstreaming, especially relating to priority biodiversity mapping and water services (ecological infrastructure). Nonetheless, it is highly likely that had this Outcome not been constrained by a relatively short project cycle, gains would have been even more significant. Importantly, this has been recognized by SANBI which has absorbed key Project functions that have proven to add value.

4.2.3. OUTPUT 2: GRASSLAND BIODIVERSITY CONSERVATION OBJECTIVES MAINSTREAMED INTO AGRICULTURE

161. Agriculture is the sector with the greatest geographic footprint on the grassland biome, and comprises crop agriculture, intensive livestock production, rangeland livestock production and game farming. The ProDoc was less well conceptualised for the Agriculture component than for other Outcomes (see above) and this hampered implementation (Botts 2014), but the lessons learned are important for future potential investments in agricultural/land mainstreaming⁸. This was partly rectified by stakeholder consultation in the development of an Agricultural Mainstreaming and Action Plan in November 2010.

162. Targets were formally modified following the MTE to be made both more achievable and more realistic (see Table 15). This included moderate changes in targets for indicator 2.3, significant changes in targets and approaches relating to indicators 2.1 and 2.2, and the dropping or indicator 2.4 altogether. However Botts is correct in concluding that "there should have been a stronger attempt to understand the complexity of the sector before the project was formalized into a set of target indicators" (Botts 2014).

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⁸ An important point was made at the internal workshop to discuss TE findings, that mainstreaming should not focus on agriculture as a sector but on land management more generally

Table	15:	Indicators	and	targets	for	agricultural	mainstreaming

ProDoc Indicators	Revised Indicators	Targets	Status
2.1 Agricultural laws, policies and guidelines incorporate biodiversity management objectives	2.1 Agricultural laws, policies and guidelines incorporate biodiversity management objectives	 National Grazing Guidelines for Biodiversity developed and adopted by relevant sector bodies. Biodiversity objectives are embedded in CARA regulations permitting process 	 Grasslands Ecosystem Guidelines completed Grazing and Burning Guidelines 4+1system 20 point system piloted Policy Recommendations developed with DEA and DAFF (external factor)
2.2 Certification system and marketing programme in place for environmentally appropriately farmed red meat	2.2 Market-based mechanisms incorporate biodiversity management objectives for red meat production	• Biodiversity friendly red meat production standards is developed and adopted by the meat industry	Red meat standard developed through CSA.Environmental criteria being included in: • Woolworths "Free Range Protocol" • SA Livestock Good Agricultural Practice standards used by 5 major retailers
2.3 Amount of agricultural land in the Grassland Biome where agricultural planning, decision making and extension incorporates biodiversity management objectives 2.3.1 Amount of land in demonstration districts where biodiversity management good practice (BMGP) is being implemented by farmers 2.3.2 Amount of land in demonstration districts within biodiversity priority areas where stewardship has secured land for biodiversity conservation	2.3 Amount of agricultural land in the Grassland Biome where agricultural planning, decision making and extension incorporates biodiversity management objectives	 Biodiversity Good Management Practices BGMP is being implemented on 100 000Ha 22 000Ha of land in biodiversity priority areas is secured through stewardship 	 Declared (99,673ha) Nature reserves 1,208 ha (1) Protected Environments 96,552 ha (5) Biodiversity agreements 1,913 ha (3) In process: Protected Environment 19,325ha (3) BGMP 38,644ha (in Stewardship) >100,000ha (elsewhere)
2.4 Knowledge about how to conserve and rehabilitate non-perennial river ecosystems and the impact of agriculture contributes towards the 20% river ecosystem type target within the Grassland Biome	Indicator removed at MTE		 Taken up in SANBI Ecological Infrastructure programme Concept document for EI in Umgeni SANBI EI framework

163. An Agriculture Task Team was created. Although the agriculture coordinator was very effective at creating and maintaining relationships, especially with government, this did not always lead to the

institutional relationships necessary to drive the Project (Botts 2014). This outcome included three major efforts described in the following paragraphs.

164. **Policy:** Very positive early support to the re-writing of the Conservation of Agricultural Resources Act (CARA) (Act 43 of 1983) was thwarted by a major restructuring of various sectors as the Department of Agriculture, Forestry and Fisheries. However, technical and personal relationships were built in this process, and efforts may pay off in the future; interviews with the Director of Land Use and Soil Management indicated familiarity with these inputs and ideas, and intentions to integrate previous work done into pending changes in legislation. However, with policy discussion in government continuing it is important to note that the agricultural law reform in agriculture in South Africa) and as a result of the Project, the biodiversity sector (represented by SANBI) now has a permanent seat at these DAFF Letsema meetings allowing for ongoing influence after the Project.

165. **Red Meat Standards / Certification:** The initial approach to red meat certification was replaced by what was considered to be a more realistic effort to ensure that biodiversity friendly red meat production standards were developed and adopted by the meat industry. This activity was managed by Conservation South Africa (part of Conservation International) and resulted in the development and uptake of an industry supported environmental red meat standard.

166. **Stewardship and Biodiversity Management Good Practice**. The third leg of Outcome 2 is the development of biodiversity management good practice (BMGP) and protected stewardship sites. This was piloted through a strong partnership with WWF-SA, building on earlier efforts by WWF (and previously the Botanical Society of South Africa). The key to the success of this effort was the pilot Wakkerstroom Demonstration Project which led to highly practical relationships with Stewardship Coordination Unit in both MTPA and Ezemvelo KZN Wildlife was instrumental in pioneering the declaration of stewardship agreements and also developing Provincial capacity to take this forward in the future.

167. **Free State Rivers Project.** The fourth leg of Outcome 2 as an ambitious multi-organization project that was planned to rehabilitate two rivers (Korana and Sepane Spruit) in the Fee State. Support, including from Department of Water Affairs, which was critical to the programme, did not materialise. This activity was reviewed by a consultant, considered unfeasible because of overambitious design and because project assumptions (i.e. cooperation of partners) external to Project control were not met. With the approval of UNDP and the Grasslands Steering Committee, this project was dropped and resources reallocated towards water sector mainstreaming interventions under the Enabling Component (Outcome 1).

168. We now turn to discussing the activities related to each of the three indicators in more detail.

A. 2.1 Agricultural laws, policies and guidelines incorporate biodiversity management objectives

169. **Support to Agricultural Laws, Policies and Guidelines.** The Grasslands Project was intended to feed into the re-writing of the Conservation of Agriculture Resources Act 43 of 1983 (CARA) as the Sustainable Use and Protection of Agricultural Resources (SUPAR) Bill. As noted, a major external factor was the extensive restructuring of the Department of Agriculture as the Department of Agriculture, Forestry and Fisheries. Not surprisingly, the intended legal revisions never materialised. A combination of consultant-developed draft regulations and strenuous lobbying had little effect. Botts speculates that the good relationships with the Department of Agriculture, Forestry and Fisheries (DAFF) did not contribute significantly to Project gains because of over-stretched capacity and low prioritization of biodiversity (Botts 2014). Relationships were developed with Agri-SA and other industry associations, but these were also not really converted into Project gains (Botts 2014). One can only speculate that this is because key Project activities (stewardship, red meat standards) were somewhat marginal to the perceived core business of this large and diverse sector, suggesting that any future interventions should establish how to better "make the case" for biodiversity in agriculture or land management more generally. Also, in Outcome 2, the links

between field projects, stakeholders and anticipated institutional changes were much more diffuse than for the other Outputs, reinforcing the lessons that simply jumping to "policy reform" is an unrealistic strategy for mainstreaming projects.

Key Lesson 2: Jumping directly to "policy reform" in mainstreaming projects is an unrealistic goal, and may backfire. In certain circumstances, a far better approach is mainstreaming that emerges when stakeholders, including government agencies, work together to solve real problems. Institutionalising emerges more slowly (but possibly more surely) first through norms, then through standards and guidelines, and only later through national policy.

170. Implementation of proposed changes to legislation and uptake of Guidelines (see below) will take time beyond the end of the Programme. Even if policy is reformed, there are questions of whether state regulatory agencies have the capacity and focus to implement these regulations by providing extension support and ensuring compliance (as identified in the project document)⁹.

171. The Project has taken additional steps in planning for sustainability. These include a process to update the Agricultural Mainstreaming Strategy to identify priorities for the biodiversity sector's work with the agricultural sector going forward, and to build an appetite from Agri-SA and provincial Agricultural Departments to improve the regulatory system. This is being developed with partners who are key stakeholders in taking the work of the Programme into the future. DAFF have indicated a willingness to engage on the regulatory reform process, but have some more pressing legislative amendment processes to conclude first. However as a result of the project, SANBI, through its permanent seat in the Letsema NRM Working Group and its strong relationship with DAFF is well placed to support policy reform processes and the department views SANBI positively for its ability to provide credible, science-based biodiversity sector inputs. While the Project was only able to make initial inroads during the project timeframe, there is strong likelihood of this work being taken forward.

172. In terms of policy development, the Programme has made significant progress in the development of guidelines to industry on how to mainstream biodiversity. The Grassland Ecosystem Guidelines were completed. The subjects of grassland production and conservation, grazing and fire have long been controversial. The Grasslands Project convened several workshops of key players to build consensus on guidelines. After a long process of discussion and collaboration (including with Grasslands Society of Southern Africa) the output was the development of Grassland Ecosystem Guidelines (October 2013) and Grazing and Burning Guidelines (February 2014). There is already evidence of a strong demand for these guidelines from provincial agencies (MTPA, KZN Wildlife), companies (e.g. SAPPI) and individuals. The guidelines were used for training DAFF resource auditors, and are the subject of three articles in Farmer's weekly. Perhaps the lesson here is that the process of building a community-of-practice around working pilots, and using this to work towards policy revisions through guidelines, then zones and rules, and only then through policy and regulation is, in the end, faster, more effective and results in a much higher quality regulatory product.

173. However, the scientific basis of intervention in grasslands is probably weaker than anticipated at Project design. Moreover, extension is based on expert knowledge and even opinion that in the long run needs to be supported by scientific evaluation. Debates¹⁰ on grassland management and fire management

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⁹ As noted above (page 32) the model of providing extension support and compliance monitoring through state or provincial agencies may be logistically unworkable. Serious consideration should be given to using local civic collection action as the primary mechanism for managing and monitoring land.

¹⁰ One interesting observation is that through the forums provided by the Grassland Society of Southern Africa, this is starting to happen. The project has been a strong driving factor in creating space at the forum (and in the broader

are often as much informed by an ideological stance as by science, presumably because grassland ecosystems are too complex and land use objectives diverse for simple answers. Nonetheless, there does seem to be added value in bringing together the production sector and the biodiversity sector together to strengthen the scientific basis for grassland management to produce herbivores (livestock, wildlife), water and biodiversity.

Recommendation 14: The interventions made by the project in biodiversity good management practices represent an important experiment that should be scientifically monitored to inform the on-going evolution of grazing and burning guidelines and extension. There is a huge opportunity for Grassland Society of Southern Africa to take this forward.

174. This component is rated **Moderately Satisfactory** for reasons within the control of the Project but also outside of the Project's control. Progress was made in influencing policy and practice through guidelines and background work on policy, but finalisation of the latter was stalled by external factors. It is possible that better understanding, analysis and management of the admittedly complex stakeholder environment, including both DAFF and Agri-SA might have entrenched mainstreaming ideas more strongly.

B. 2.2 Market-based mechanisms incorporate biodiversity management objectives for red meat production

175. The initial indicator in the Pro-Doc called for the certification of biodiversity friendly beef as a market mechanism for biodiversity mainstreaming. This indicator was changed following recommendations made at MTE and drawing on observations in a Project appointed consultant's report. This report noted that there are no premiums for certified products (except perhaps in a niche market that represents 3% of red meat consumption), that premiums are in any case not passed down to producers through complex value chains, and because defining and auditing "biodiversity friendly" criteria were onerous (see also (Botts 2014).

176. Following the recommendation of the MTE, certification was abandoned in favour of a piloting red meat standard. The Project contracted Conservation South Africa to scope and develop a red meat environmental standard, and supported Conservation South Africa to pilot this standard at a landscape and market level under their Meat Naturally Initiative. CSA, under the Project's support, also facilitated a stakeholder processes. Members included the emerging National Emergent Red Meat Producer Organisation (including beef producers, breed association, academics, meat outlets - e.g. Woolworths, Massmart) and DAFF (which supports animal production; quality assurance).

177. CSA has made progress inserting biodiversity criteria into standards used by most major meat outlets in South Africa. Biodiversity criteria are now included in the "Free Range Criteria" used by Woolworths. Additionally, they have been inserted into the South African Livestock Good Agricultural Practice standards (under the umbrella of the Global Good Agricultural Practice) which are used by five major retailers. These standards are primarily aimed at meat safety standards, but environmental and social standards are slowly being incorporated. This includes better range management through rotational grazing, alien clearing and farms maps and planning.

178. The Red Meat Standard reported drew on findings from the Project's three biodiversity-friendly red meat pilot projects in Vryheid, Harrismith and Colenso. The Project was working with three groups of farmers and the meat processor/retailer (Meat Master Ltd) to better understand what 'biodiversity friendly red meat production' entailed at the level of commercial farms. This incorporated the red meat value chain

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community that comes together at the forum) for more emphasis on biodiversity objectives in grassland management (as opposed to production objectives, which much of the GSSA stakeholders/discussions had previously focused on).

which consists of producers, abattoir, and retailers. Through this pilot, a draft red meat standard and a rangeland management toolbox were developed. Extension tools, including guidelines, 4+1 veld management and 20-point farm planning (see below).

179. This sub-component is rated **Satisfactory**. Important progress was made in implementing and learning how to operationalise standards and/or certification. However, we need to evaluate the returns on investment in such approaches, and also whether national standards result in biodiversity gains at farm level¹¹.

Recommendation 15: This Project experimented successfully and less successfully with standards and certification in both forestry and agriculture respectively. This experience should be captured through detailed analysis (and publication) of these intense experiences. This analysis should include an analysis of the transactions costs of establishing certification and standards, their costs and benefits, and their ultimate effects on biodiversity. The process of mainstreaming through certification is also worthy of detailed analysis.

C. Biodiversity Good Management Practices and Biodiversity Stewardship in priority areas

The Wakkerstroom Demonstration Project is headed by a Manager (located in WWF-SA) who has high quality staff in the commercial and communal sectors, and has created strong partnerships with Stewardship Officers located within the two collaborating provincial organizations (Mpumulanga Tourism and Parks Authority, Ezemvelo KZN Wildlife). The conceptual underpinning of this intervention (Figure 11) is that most rangeland producers are currently damaging their ecological production base. This situation can be addressed, first through biodiversity good management practice and, second, through stewardship arrangements in priority areas.

Figure 11: Conceptualizing the role of BGMP and Stewardship in Biodiversity Conservation in Outcome 3

(modified from Tsumbedzo Mudalahothe, 23 May 2014)



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¹¹ A preliminary observation is that national and global standards represent a rather blunt tool. Consideration should be given to further devolution of these ideas by validating far more local systems of standards.

180. **Biodiversity Good Management Practices.** The Pro-Doc suggested (largely correctly) that rangeland management on farms was often at a basic level and "most rangeland producers were not even implementing basic agricultural best practices". Addressing these inefficiencies through improved management would result in gains in production, profit and biodiversity conservation.

181. To achieve this, an extension consultant was contracted to work with twenty pilot farmers and on at least one Land Resettlement Farm. The consultant introduced a 4+1 veld management process (i.e. carrying capacity, resting, burning, control of invasive species + biodiversity conservation measures) and assistance to farm planning (through a 20-point management plan). This was supported by awareness and technical training in veld assessment. Although veld monitoring using current scientific methods is too onerous for farmers to implement themselves, the pilot indicated that farmers have surprisingly little training in veld management and value learning highly. The value that farmers accord to extension and assistance with planning serves to highlight structural weaknesses in the sector concerning linkages between research, extension and regulation. It also suggests that the value-added in providing high quality extension related to biodiversity and production is likely to be high.

Key Lesson 3: Extension was highly valued by farmers, suggesting that knowledge is an important limiting factor to sustainable land management. This implies that the provision of high-quality extension in the future is likely to add value in terms of biodiversity and production.

182. Anecdotally, farmers noted that the new ideas provided in the extension pilot were resulting in simultaneous gains (synergies) in both production and biodiversity. The impact of this small intervention is reported to enable farmers to get more (production, profit) from less (ecological pressure). This suggests that the sector as a whole is trapped in a sub-optimal situation of lower than necessary production and profits and higher than necessary ecological impact. Biodiversity gains occurred because farmers learned both about what biodiversity was important and also about how biodiversity could be better managed. This led to improved stocking practices (rotation, stocking rates, burning practices) and, in some case, alien clearing and the protection of biological hot spots on farms. Farmers certainly recognized these synergies p16 (Botts 2014).

183. The corollary is that there is a strong "case to be made" for future interventions that combine research, extension, collective action and regulatory reform. However, these conclusions are based on informed opinion. This needs to be scientifically validated to better inform trade-offs and synergies between production practices, composition diversity and ecosystem functioning.

Recommendation 16: Evaluate whether and by how much production, profits and biodiversity were improved by pilot interventions (4+1 grazing practices, 20-point farm planning). Use this independent study to inform potential future interventions in the sector. If possible, a similar independent analysis of the effects of conservation farming should be included.

184. In retrospect, Outcome 2.3 was a useful pilot, but was not really mainstreamed into higher level processes. The uptake of lessons learned from the pilots into communities of practice including regulatory agencies, research organizations, and industry was weaker than for, say, the mining sector (Figure 17). This was partly rectified by the Red Meat Standards process (see above). If we analyse this pilot against the mainstreaming process developed by the project (Figure 5, Table 25), we note several deficiencies. The extension was invaluable at farm level, and informed the two guidelines – Grasslands ecosystem guidelines & Grazing & Burning Guidelines – and the national red meat standard. But there is less evidence that these methodologies were validated or absorbed by key government and industry organizations.

185. This may well be due to the large size and sectoral nature of the agriculture sector, weaknesses in provincial extension capacities, and the scale challenges of having an impact across a sector that contains

thousands of farmers. However, as noted (see p 46) these issues received insufficient attention in the ProDoc. Nonetheless, aligning work more closely with agricultural commodity organisations would have increased impact and sustainability (Botts 2014). Similarly, stronger linkages between the field pilots to Departments of Agriculture, training colleges and research, while perhaps challenging, would have given this aspect of the Project greater replicability and sustainability. In other words, this aspect of the Project has had less success in taking pilot lessons upwards into institutional reforms than other for the other outcomes.

186. The Project, however, held several workshops with experts to agree on key approaches, resulting in the Grasslands Ecosystem Guidelines and Grazing and Burning Guidelines. Lessons and guidelines were developed, but so far these do not appear to have permeated upwards through sector stakeholder groups as institutional reform to the extent seen in the other sectors – these are temporal issues, because these guidelines were only recently approved.

187. That being said, the lesson to emerge from the pilot is that mainstreaming of biodiversity into land management has considerable potential. Key findings are (1) the thirst by farmers for information and extension, and also (2) that there is a "more for less" case to be made for interventions in the livestock, wildlife, and crop sectors related to biodiversity and ecosystem services, especially water.

188. This pilot within sub-component 2.2 /2.3 should be rated **Satisfactory**. Good progress was made, but more consideration is needed in how to upscale and institutionalise these efforts, and also to scientifically test their efficacy. This sub-component deliver significantly in the GEF currency of hectares on the ground (through stewardship and land better managed), and could have anticipated HS. But despite the GEF 'gains on the ground' the weakness has been the 'mainstreaming' or institutionalisation of lessons from the pilots into sector bodies (e.g. DAFF & commodity organisations), and WWF is taking this forward energetically. The project also strengthened stewardship as a biodiversity management tool, but also as a tool for agricultural mainstreaming – which is institutional uptake, but not where the Project expected it.

189. If we took this idea forward, what would be needed?

190. First, there would need to be an investment in knowledge creation to support this intervention, including how to get the greatest net biodiversity and productivity gains from the livestock, wildlife and crop sectors.

191. Second, and even more importantly, attention would need to given to issues of scale, institutionalisation, replication and sustainability which were problematic in this pilot. The potential power of collective action in the form of farmer learning groups, fire management units and so on should be seriously considered as the foundation for civic action and institutionalization of further interventions. Currently, Farmers Associations are focused much more on political issues than technical issues (e.g. provision of services, security).

192. Thirdly, the development of civic institutions for the management and internalization of the costs and benefits related to biodiversity should be seriously considered as the foundation of such an intervention. Local collective action might have major advantages for (a) the scale-challenges in providing extension and (b) the development of local social controls as the key mechanisms for controlling environmental externalities. These is a strong theoretical base for such action (e.g. (Ostrom 1990). There are also long-standing examples that can be learned from (e.g. (Child and Child in press). What the Project is already showing is that simple hierarchical systems of governance (including extension and regulation) are highly unlikely to cope with the increasing pressures and complexities of conservation in production landscapes. New forms of natural resource governance based on economic realities and civic responsibility are required not only in South Africa but in mainstreaming generally.

Recommendation 17: Consider the development of civic institutions as the primary mechanism for internalising the costs and benefits of biodiversity into production landscapes.

193. **Biodiversity Stewardship and Biodiversity Good Management Practice**. There are four levels of stewardship sites with increasing levels of conservation value and support from conservation authorities. These, as defined on page 13 are:

- Nature Reserves
- Protected Environments
- Biodiversity Reserves
- Conservation Areas

194. Stewardship was piloted under the Wakkerstroom Demonstration District Project. The implementing partner for this pilot was WWF-SA which had considerable experience in initiating stewardship. As we will see, this pilot re-enforces our confidence in the power of site-based biodiversity mainstreaming interventions to build institutional capacity through stakeholder commitment and the institutionalization of new rules of engagement that are locally derived but also centrally accepted.

195. An important result was the declaration of the KwaMandlangampisi Protected Environment in 2010 (23 657 ha declared). This was the first Protected Environment declared in South Africa. Implementation was planned strategically to involve and develop (Mpumulanga) and strengthen (KZN) collective capacity for stewardship, not least in the two provincial protected area agencies (Ezemvelo KZN, MTPA). Sustainability was reinforced by the establishment of stewardship line positions and experiential training in both agencies, supported by the Project. Key institutional progress included:

- a. procedures for declaring stewardship sites in two provinces
- b. associated Five-Year Management Plans
- c. auditable Annual Plan of Operations

196. These 'rules or norms' were all piloted and institutionalised. This provides the foundation of an excellent system (with the problem being the future capacity to support these activities). Because this was done with stakeholders the results were practical and doable, and because it was done with in partnership with regulatory authorities, these methods have become regulatory norms.

197. The demand for stewardship was stronger than expected, motivated initially by a desire to upscale landholder plans for a conservancy to something more formal with better levels of protection and management¹². When the mining threat appeared (during the process of assessing and preparing declaration documents), it provided additional momentum, and may have become a large motivation moving forwards (to not only protect farmland from mining but any incompatible/conflicting landuse activity). The threat posed by mining is illustrated with reference to the Enkangala Grasslands project in Figure 12; fully 20% of Mpumalanga Province is currently subjected to mining claims, with an additional 40% having prospecting licenses. Other incentives for stewardship are the association of stewardship with extension services, and a genuine desire by many landholders to manage biodiversity individually and collectively. Indeed, at least one community of farmers had been in the process of forming a conservancy¹³ when the

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¹² The motivation of landholders towards conservation, and towards doing conservation right, is often much stronger than assumed by biodiversity specialists, so farmers are treated as the problem when in fact they are very often the solution. This was also observed in the Agulhas Biodiversity Initiative, and in global trends towards more diverse forms of protected areas.

¹³ These are still seen as part of stewardship, but the weakest/lowest level

legally stronger option of a protected environment under the stewardship framework was developed. The remarkable progress of stewardship, and its rapid spread, including to the Free State, is illustrated by Figure 13. The KwaMandlangampisi pilot Protected Area (blue) led to a rapid spread through landholder demand and extension efforts by WWF-SA, the Grasslands Project and the Provincial Authorities, first in the area of Groenvlei/Utrecht, with later spread to the Memel area.

198. Farm planning and audits are currently implemented by the provincial protected area authorities. This raises the question of long term capacity and sustainability in keeping up with the rapid envisaged expansion of stewardship sites. The ability of the Project to respond to the demand for declaring and supervising stewardship sites, and the ability of the Provincial Agencies to oversee the 5-year planning and annual auditing process, however, is highly likely to exceed capacity if it has not already done so. However, where strong capacity exists within NGO's and other partners to support provincial stewardship programmes, the planning component is done by these partners or at least collaboratively. The Grasslands Project is a case in point, suggesting that in the long term such partnerships will be necessary to provide the capacity to support stewardship. Moreover, the Business Case for Biodiversity Stewardship is emerging quite rapidly, but could emerge more rapidly still with further research and support into the costs and benefits of soil erosion, water production, improved grazing regimes, wildlife, tourism and the bio-experience economy.

199. However, the present approach to stewardship is to a significant extent top-down, and bottom up approaches (with some high level support) may be more effective. New institutional approaches based on local collective action could significantly lower transaction costs and improve performance. Presumably the lead would be taken by farmer groups like the old soil conservation committees, but with a commitment to develop and support these groups by NGOs and government agencies. Consideration should be given to trialling local collective action as the primary mechanism of accountability, supported by extension (i.e. WWF-SA) and regulatory backstopping (provincial authorities).

Recommendation 18: Give consideration to how to support the declaration, planning and auditing of stewardship sites given the anticipated rapid growth in such sites and the recognition of limited capacity within provincial conservation agencies to service the potential demand for biodiversity stewardship. Also consider developing stewardship as a bottom-up landholder based conservation movement.

Figure 12: Illustration of the serious threat that mining has for farmers and biodiversity Figure provided by Angus Burns, WWF-SA



Figure 13: The spread of stewardship programmes following the successful KwaMandlangampisi pilot



200. **Engagement with Land Reform:** Three visits were made to Land Reform Communities. At Bambanani and Ukuthanda Ukukhanya 15 and 17 households have been resettled on 750ha and 950ha respectively. These communities were selected as trials because they had priority biodiversity and a reasonable level of organisation. Most of the meeting with community members concerned issues about the partial or non-fulfilment of promises made by various support agencies to provide livestock, ploughing, seeds and social services. It is very difficult to see how the economic sustainability of these communities will be achieved, except through long-term state subsidisation or at the expense of the environment. The primary role of the Project (and WWF-SA) has become one of facilitating improved delivery of services, with some potential biodiversity gains. One has to be highly sympathetic with the plight of people in positions where productive lifestyles are all but impossible. However, the example should be used as an experiment to analyse the operational questions of biodiversity conservation in non-viable communities, and how best to use biodiversity dollars in these circumstances. Light needs to be shone on these tough issues to guide future investments.

201. By contrast, much more can be made of opportunities at MooiPlaas resettlement farm that has been declared as a Protected Environment because of its biodiversity, scenic attractiveness, and critical position in the headwaters of the Pongolo river system. Nkosi Nzima and his community claim a history in this area dating back to King Shaka, and clearly value a rural lifestyle. Approximately 120 households live on 3,500 hectares. This community expressed a strong desire to retain their culture and heritage, rural lifestyle and environment. This present a stark policy choice.

202. On the one hand, the business-as-usual scenario is that the community attempts to live through agriculture. This is not viable, and will require continuation of government grant support and/or ecological risks to the upper headwaters of the vital Pongolo river system.

203. On the other hand, a serious attempt could be made to transform this community to one dependent on the bio-experience economy. Restocking wildlife, developing tourism joint ventures with the private sector (but with a traditional model of accommodation), and protecting the watershed all fit very closely with the community vision expressed to us.
204. This suggests that developing a long-term business plan to compare these two options financially and economically (i.e. in terms of society) should be prioritised. Transforming a community to a bio-experience economy will have high transactions costs probably measured in the tens of millions of rand – training, restocking wildlife, tourism investments, wetland rehabilitation, brokering of PES schemes, cultural strengthening and so on. However, if it can't work in this community, where can it work? Further, if such investments are not made, communities like this will continue to be subsidised by the taxpayer and the environment, the long term cost of which needs to be set against the short term investments in flipping the systems. Interestingly, this choice reflects changes in the private sector where, following the cessation of apartheid era subsidies to white farmers, conventional commodity agriculture (e.g. cattle ranching) were often revealed to be economically and environmentally unsustainable in drylands and other complex environments. Many farmers only survived by diversifying or flipping to a biodiversity economy based on some combination of wildlife, hunting, tourism and so on.

Recommendation 19: Evaluate the long term economic and social consequences of "business as usual" versus the "flip to a bio-experience economy" in Nzima Protected Environment. Seriously consider a major investment to flip this economy.

205. A third visit was made to the Mabaso Land Reform Biodiversity Reserve where 30 households manage cattle on the 1,300 hectare Gelykwater farm. This property appears to be moderately sustainable. The members claim to control stocking rates, at least to some extent. Extension provided by the Grasslands Project in terms of 4+1 principles and 20-point farm plans has clearly helped. This pilot was invaluable to the Project for creating lessons that spread to other areas. However, the underlying challenge of how to make conventional livestock production viable on relatively small areas of land supporting several families remains.

206. In summary, the initial motivation for stewardship was to upscale and formalise the conservation impulse on private land. Farmers then learned that stewardship was a powerful tool to protect their land from mining claims, while they also greatly appreciated extension and advice. New grassland management guidelines, but especially stewardship arrangements and associated land use plans and audits of the Annual Plan are likely to maintain or improve biodiversity on these properties, to protect the land from further degradation, and to conserve important bird and other species.

207. The audit assesses what management is done, and to some extent how biodiversity is affected. This presents an opportunity to measure the effectiveness of these measures on ecosystem services and diversity scientifically, and beyond what the Project has currently been able to do. For example, are the proposed grazing methods maintaining the grass sward in a sub-climax and productive state, and what are the consequences of this for biodiversity?

Recommendation 20: Encourage a scientific evaluation of the effects of grassland stewardship, land use plans and audits on biodiversity in the Wakkerstroom and other pilots

208. In conclusion, the implementation of Outcome 2 is rated **Satisfactory** because it created and tested important new protocols and guidelines for Stewardship (Highly Satisfactory), Biodiversity Good Management Practice (Satisfactory), and Red Meat Standards (Satisfactory) and made some progress with sector policy and guidelines (Moderately Satisfactory – because of external factors). The practice-policy learning loop appears to have been much weaker than for other Outcomes, noting on the positive side significant institutionalisation of stewardship in two provinces, and the future potential of the red meat standard. There are also questions of the unit costs of rolling these approaches in the future, and therefore the efficacy of replication. Outcome 2 is clearly only the start of what needs to be a much longer term programme.

4.2.4. OUTPUT **3**: THE FORESTRY SECTOR DIRECTLY CONTRIBUTES TO BIODIVERSITY CONSERVATION OBJECTIVES IN THE GRASSLAND BIOME

209. Fast growing plantations of *Pinus, Eucalypt* and *Acacia* (Wattle) are grown in high rainfall areas along the eastern escarpment of South Africa in the Grassland Biome, but the potential to address biodiversity priorities on some 662,832 ha of unplanted land within these plantations was identified by the Pro-Doc. The sector is dominated by large corporate timber companies (e.g. SAPPI, Mondi) but about a third of forestry (250,000ha) is conducted by farmers with 100-5,000 ha of timber. The majority of these growers organized themselves through a number of Cooperatives such as the NCT Forestry Cooperative Limited, the Transvaal Wattle Growers (TWK) Agriculture Limited and found markets in Japan and elsewhere to protect themselves from low prices offered by the corporates. In addition, small community plantations provide income to rural households. The industry is well organized through Forestry South Africa, an association of timber growers. FSA is funded through taking a percentage of the revenues from timber sold and by virtue of the fact that the largest growers contribute the most they also receive the bulk of the benefits.

210. The forest sector has a good record of environmental commitment, and is quite well regulated, especially through the Department of Water Affairs given the association of forests with key water catchments. As early as 1978, the sector had produced its own environmental guidelines, while large companies established environmental units. The well-organized South African forestry sector was ready to embrace certification when it emerged in the early 1990's, and eighty percent of South African plantations are certified through the Forestry Stewardship Council. However, this is a global system of certification that emerged largely in response to threats to indigenous forest in tropical areas. Therefore standards needed to be modified to suit the grasslands and biodiversity sectors in South Africa, as well as plantation forestry. The Project approached this by supporting the development of National FSC Standards. Standards are very crude tools but definitely shape sector responsibility. Currently, they tend to be based on process-based indicators (presumably because these are more easily managed) rather than output-based indicators (Steve Germishuizen, personal communications).

211. At the start of the Project, there was approximately 662,832ha of unplanted land on forestry owned or managed land. There were only two formally declared protected areas (under provincial legislation) in plantation areas and the biodiversity stewardship programme was in its infancy. Plantation owners lack the tools and support necessary to access the benefits of biodiversity stewardship. At this time, government set a target for plantation expansion of 140,000 ha in South Africa (40,000 ha in KZN, 100,000 ha in Eastern Cape), mainly with small growers on communally owned land. There was however a need for tools to ensure that forestry expansion avoided priority biodiversity areas to assist with the water licensing and EIA processes.

212. In response to this, the Component was designed with three key objectives (Table 16):

- To improve the management of unplanted forestry land for biodiversity. This was to be done through (a) improved management practices and (b) by securing important biodiversity in Nature Reserves and Protected Environments under the Protected Areas Act in partnership with the provincial conservation agencies (MTPA and Ezemvelo KZN (3.1.3),
- To prevent the proposed new investment in 140,000 hectares of new plantations impacting priority biodiversity areas (3.2), and
- To build on FSC certification to strengthen biodiversity criteria, including for small-growers (Table 16).

Table 16: Indicators and targets for forestry mainstreaming

ProDoc Indicators	Revised Indicators	Targets	Status

 3.1 Amount of forestry estate in Grassland Biome under: 3.1.1 Plantation; unclear 3.1.2 Options are as, i.e. existing unplanted forestry company owned land that is better managed 426,224ha 3.1.3 Formal conservation areas (all in units of ha) 35,000ha 	 3.1 Amount of land in forestry estate in Grassland Biome under: 3.1.1 [REMOVE] 3.1.2 options areas 300,000ha 3.1.3 formal conservation 35,000ha 	3.1.2 300 000ha 3.1.3 35 000ha	Better managed >290,000ha (60,000 in process) Protected 32,780ha 52,000ha pipeline
3.2 No new plantation development in biodiversity priority areas within the Grassland Biome	Retain	3.2 No new plantations in designated priority areas.	0
3.3 Industry certification system and standards better incorporate grassland biodiversity objectives	Retain	3.3.1 National FSC compliant Standard exist (by mid-term) 3.3.2 FSC Principles & Criteria incorporate grassland biodiversity objectives (by mid- term) 3.3.3 small grower certification system implemented	FSC National Forest Stewardship Standards for South Africa (2014) a. Plantations b. Small Low Intensity Managed Forests

213. Outcome 3 was well-conceptualised from the start, and has followed initial plans closely. The Project Coordinator, was involved in the design of this Outcome, and worked closely with the industry at three levels:

- with corporate foresters, farmers and communities at field level;
- with Forestry-SA and provincial and national authorities; and
- with the Forest Stewardship Council at global level.

214. The three levels of intervention are illustrated in Figure 14. This also shows how tools were developed for each sub-outcome at field level, and institutionalise through stakeholder processes at the core of which was Forestry-SA. This resulted in an iterative learning and institutionalisation process between local, provincial/national and global level (i.e. cross-scale governance). The coordinator played a critical role in facilitating these cross scale linkages, and in operationalising the stakeholder process linked to each tangible output whereby and stakeholders, working together, tested and developed appropriate tools to support Project Sub-Outcomes.

Key Lesson 4: Highly qualified Outcome facilitators were central to the successful outcome of this complex project. Key attributes were the ability to link scientific credibility and practice into a Vision, or case, for biodiversity and production, and the ability to manage stakeholder processes sensitively and productively, including designing, managing and supporting multi-actor implementation processes.

Figure 14: Conceptualisation of inputs into the forestry sector



A. Indicator 3.1 Improved management in the forestry estate

215. Working with the Environmental Management Committee of Forestry SA and other stakeholders, The Grassland Project integrated prioritized biodiversity maps into forestry sector planning. The Project facilitated and led the development of Guidelines for Grassland Management in Plantation Areas and integrated some of these concepts into FSC standards at national level. Practical guidelines on how to manage grasslands in the plantation landscape have been drafted and will be incorporated into the industry's well respected 'Environmental Guidelines for Commercial Forestry in South Africa' as part of the revision that is currently in progress. The Forestry Coordinator's chapter on grassland management is also incorporated as guidelines into the South African Institute of Forestry's Forestry Handbook. This publication is widely distributed and used by the industry. Additionally, NCT Forestry (medium grower industry body) has incorporated the grasslands management guidelines into their own plantation management manual which is used by all their members. This represents significant mainstreaming by norming biodiversity objectives cost-effectively into production practices in the forestry sector. It has also increasing the total area of ecologically sensitive land under effective and sustained conservation.

216. The combination of industry attested guidelines, peer learning and the desire on the part of large companies to fulfil FSC requirements at annual audits has resulted in improved management of biodiversity in the forest estate (331,437ha). Through the development of the Conservation Planning Tool, biodiversity priorities are included into the GIS layers that several companies use to guide management practices (including on mobile tablet computers for use in the field).

217. With this field experience behind them, the Grassland Project worked at global level to attempt to tailor FSC Certification Principles and Criteria. To better reflect biodiversity requirements, the forestry coordinator was selected to represent the southern environmental chamber on the FSC's Expert Panel for Ecosystem Integrity. It also participated in the Lisbon Process to improve certification for Small Growers.

218. As noted above, forestry companies respond strongly to FSC Audit requirements, but the list of some 180 "process orientated" indicators may not always recognise or drive the system towards the outputs that are envisaged. This was illustrated on the field trip to Ozwathini community. Much of the commercial plantations in this area are FSC certified and consists of wall-to-wall timber plantations and sugar cane

fields, with small offerings to biodiversity conservation in the form of the clearing and rehabilitation of tiny ribbons of riparian and wetland zones.

219. By contrast, the Ozwathini community is protecting and wants further assistance to protect, fairly large areas of priority biodiversity including a Nature Reserve to protect the last fragments of KZN Sandstone Sourveld/Misbelt. In the Ozwathini community, multiple use forestry is practiced (albeit scruffy and less than optimally managed in some places). It appears to be providing wood products such that remaining indigenous forests (not present in the commercial areas) are relatively intact. Forestry is improving local livelihoods, and forest and conservation practices are responding rapidly to extension and mentoring by the Grasslands Project. Yet, the heavily used commercial areas are FSC certifiable, but the less organized Ozwathini area are not certified or currently certifiable despite clearly providing more conservation benefit and arguably doing more for empowerment and poverty reduction. Communities have far greater difficulties in meeting FSC Certification Criteria (not to mention economies of scale in audit costs) than commercial areas even when they provide more biodiversity and social gains.

220. The Project is using this pilot, and several other community pilots, to push for a National FSC Standard suited to enabling small growers and communities to obtain FSC certification. This is important because FSC certification brings, while offering a small price premium, is crucial to market access as it is becoming increasingly difficult to sell forest products that are not certified.

Key Lesson 5: Certification is a tool that relies heavily on technical and process indicators. It is not good at recognising fine scale gains in complex environments, which are central to biodiversity conservation (itself a complex system) especially at smaller scale and with communities. It is also not good as an agent for changing significant deleterious practices in large scale operations. However the tool has an impact on forestry practices because failing an audit can have serious consequences for market access.

221. The Grassland Project worked effectively with the forestry sector and provincial conservation agencies to identify priority biodiversity areas (using the Conservation Planning Tool). At least 17 Nature Reserves and Protected Environments were declared (33,000ha), plus the development of two Biodiversity Compatible Grazing Plans (Hogsback PE, Umgano PE). The declaration of stewardship Nature Reserves and Protected Environments reflected priority biodiversity areas. It then involved a process of developing Management Plans that described priority biodiversity and associated management requirements,). Some companies are now doing this by themselves. A perusal of the plan for one of the Nature Reserves visited indicates a thorough, thoughtful and effective 30 page document. Moreover, key people in the forestry sector are not being pushed into biodiversity conservation; they are leading the push.

222. A further 8 sites are in the pipeline awaiting final proclamation (12,007 ha) and 15 sites (15,675 ha) are in document drafting stage. In total, the Project has engaged with landowners in 45 sites (approx. 60,000 ha). However, activities have been put on hold for 19 sites for a variety of reasons, which are informative. Some companies have withdrawn, siting financial pressures due to the global economic conditions. Some sites have been put on hold due to unresolved land claims. Other sites have had a change in ownership resulting in the need to start negotiations from the start. An important gain is that all three Provinces (Mpumulanga, KZN, and Eastern Cape) have appointed Stewardship Managers in response to or supported by the Project.

223. This Sub-Outcome can be deemed **Highly Satisfactory**. The management of priority biodiversity areas has clearly been mainstreamed into industry practice at all levels, with improved management on some 350,000 ha and 32,780ha protected through stewardship arrangements with a further 52,000ha in the pipeline or with significant potential to be declared in within 3 years.

B. Indicator 3.2 No new plantations in designated priority areas

As noted, at the start of the Grasslands Project, there were concerns that plans to plant an additional 224. 140,000 hectares of forests, mainly in the small scale sector, and mainly in the Eastern Cape (100,000 ha) would have adverse impacts on priority biodiversity areas. In the Eastern Cape, the Grasslands Project worked with the Eastern Cape Rural Development Agency (ECRDA) to develop a biodiversity screening tool for all catchments in the Eastern Cape where forestry potential had been identified. The biodiversity screening tool that was piloted has been absorbed by Eastern Cape Departments of Environment, Water, ECRDA and consultants, and it is being used to identify where important biodiversity areas are, and not least to streamline the water-use licensing and EIA processes. The tool was invaluable in showing that forestry at Mkambathi was in conflict with the sensitive biodiversity in the area It resulted in improved decision-making with the community choosing to focus on biodiversity and tourism rather than forestry (much as the private sector in Eastern Cape has done). Through this engagement, sustainable forest Management Plans and Operational Procedures were incorporated into provincial management norms. The Project has also engaged with the UNDP-GEF funded Wild Coast Project, DEDEA and the newly established East Cape Rural Finance Corporation to coordinate the development of an integrated land use plan for the Mkhambathi Reserve and adjoining lands. The goal is to provide support for the expansion of Mkhambathi Nature Reserve and for livelihood support through sustainable land use of the remaining areas. The plan also looks at income generation from the reserve through tourism or breeding of game.

225. This Sub-Outcome can be deemed **Highly Satisfactory**. None of the priority biodiversity areas in either Eastern Cape or KZN Provinces has been afforested during the Project period and this is unlikely to occur in the future. The Biodiversity Screening Tool continues to be effective in enabling decision makers to proactively plan to avoid biodiversity priority areas when planning new afforestation in the Eastern Cape. Indeed, the use of the screening tool has expanded well beyond what was initially envisioned. It is used widely in the Eastern Cape for planning, including for EIA decision making when applications for afforestation are reviewed. There has not been any significant conversion of land to plantation forestry in the Eastern Cape over the last 5 years. The Eastern Cape is currently the only area in SA where significant forestry expansion is being contemplated. There has been significant interest in applying the biodiversity screening tool to other land uses in the Eastern Cape as well as developing a similar product for forestry in KZN.

C. Indicator 3.3 National FSC standards incorporate grassland biodiversity objectives and are adapted for small growers and communities

226. The Project played a significant role in developing South African National FSC standards for large and particularly for small-scale timber growers. The international FSC standard was developed for natural forest management rather than plantations in grasslands. Key improvements relating to grassland management incorporated into the draft national FSC standard include:

- Indicators related to levels of alien plant infestation allowed on certified estates.
- The monitoring of areas of areas under formal conservation (stewardship sites).
- Criteria related to the delineation of ecological networks within the plantations have been improved to incorporate a more biodiversity orientated approach.
- Criteria relating to ecosystem integrity have been modified to make them more appropriate to the Grassland Biome.

227. These standards are audited annually, and interviews confirm that they have a powerful impact on forestry practice because failing an audit can have serious consequences for market access. However, I agree with the Forest Coordinator that the multitude on input criteria that are audited may not be ideal, and that a system based on outcome monitoring may be even more useful.

228. This Sub-Output must be rated **Highly Satisfactory** given the major task that has been achieved in influencing FSC standards at a global level and the uptake of responsible management by most forest companies.

Recommendation 21: The experience of the Grassland Project in FSC standards and certification is profound. This experience is worthy of further analysis and publication.

229. The Project has engaged with the small scale sector by providing extension support as a learning process with the intention not only of certifying small grower sites, bit of positively influencing FSC standards which currently do not suit small grower or community circumstances, and may cut them out of legitimate markets. The Project works with at least three community certification pilot projects including:

- (i) a communal multi-functional landscape in which forests are important for production (exotic) and conservation (indigenous patches) reasons (Ozwathini),
- (ii) a Land reform project (Izanqawe), and
- (iii) a large communally managed plantation (Umgano).

230. The Project does this by providing quality mentorship and support for sustainable plantation management, grassland management and fire protection, and protection of endangered vegetation types (i.e. KZN Sandstone Sourveld/Misbelt). It also contributes to managing and restoring ecological infrastructure including clearing of alien vegetation, and to market access by addressing barriers to forest certification.

231. Visits to sites clearly show improved forest management, and also the effective protection of key remnants of indigenous vegetation in a largely transformed agricultural landscape. As noted above, the FSC system has so far proven to be inappropriate for the communal context, and if the current Project fails to change this, then it may be necessary to develop an additional forest certification scheme. There are already investigations into additional forest certification scheme in partnership with NCT. The Ozwathini project is being used to highlight areas where the FSC system needs to change in the context of communal land ownership and small-scale forestry, including a landscape approach to certification.

232. These pilots have informed the Project's intervention in the FSC standard for small grower certification, and have resulted in improvements to the global FSC standard for small growers - a major achievement in ensuring greater accessibility for small growers around the world to markets for environmentally produced forest products. This work is exciting and done well, but is not finished. The Forestry Coordinator has raised significant funding from Forestry-SA, FSC, The Critical Ecosystems Partnership Fund, and a number of companies to continue this valuable work.

233. This Sub-Component is rated **Satisfactory**, but only because it is on-going, because key results are still to come, and because it so far remains a pilot at a few sites. However, the work being done is exceptional and is likely to bring important results in the future.

234. In conclusion, Output 3 is rated **Highly Satisfactory**. There is little doubt that biodiversity is being mainstreamed into an already responsible forestry sector at multiple levels. Further, the engagement with the sector exemplifies best practice, working across scales, promoting key gains, and inculcating critical ideas and science.

235. Indeed, it is worth conceptualising this component of the Project using Ostrom's principles, and the operational process described in Figure 3. As shown by Table 25, Outcome 3 has encouraged the use of science, and especially biodiversity priority mapping, to demonstrate to the forestry sector that they have important biodiversity, that the costs of conserving this are low, and that this is probably exceeded by benefits in terms of recognition, certification criteria, and improved system management (e.g. supply of water, fire management). Stakeholders have worked together through various "collective choice forums" to design "locally appropriate rules" and, through FSC certification and the stewardship process,

"performance monitoring" is beginning to happen. Regarding the latter, Ostrom does point out that monitoring is more effective when "carried out by the users or someone accountable to the users" so a more bottom up and less to top down monitoring approach may be more powerful, responsive and cheaper. Importantly, the forestry community-of-practice is recognised by higher level authorities, and in many cases welcomed by them, with much cross participation. Multiple layers of "nested enterprises" are beginning to fall into place. In other words, the interventions in the forest sector have considerable congruence with Ostrom's accepted principles of collective action and, as predicted, they are working quite well.

4.2.5. OUTPUT 4: GRASSLAND BIODIVERSITY MANAGEMENT OBJECTIVES MAINSTREAMED INTO URBAN ECONOMY IN GAUTENG

236. Output 4, is focused on Gauteng which is the most urbanised province and economic hub of SA, and where rapid growth and developmental pressures are threatening important biodiversity. The population of Gauteng was 12 million in 2011, and has increased by 30% since the 2001 census.

237. Gauteng falls largely within the Grassland Biome, and is at the centre of the Bushveld-Bankenveld grasslands type. This represents the transition zone between the Highveld grasslands on the plateau and the Lowveld and as such is species rich with numerous endemic and threatened species. Gauteng contains many endangered vegetation types including several Critically Endangered 'Highveld Grassland' types. Urban development results in near complete transformation of natural vegetation, with the consequent loss of species and ecological functioning.

Figure 15: Maps of Gauteng municipalities in relation to the Grassland Biome



238. The implementing agency for the Outcome is the Gauteng Department of Agriculture and Rural Development. Through the Urban Component, GDARD worked mainly with municipalities in Gauteng, including the three Metros (City of Johannesburg, City of Tshwane, Ekurhuleni Metro) and two District Municipalities (West Rand DM and Sedibeng DM) but also with two Local Municipalities (Mogale City LM and Emfuleni LM). Efforts were coordinated through the Urban Task Team, and the project served to develop important personal relationships between officials in many of these municipalities.

There were three key objectives (Table 17):

- To secure priority sites representative of grasslands biodiversity in Gauteng by ensuring that priority biodiversity areas were incorporated into provincial and municipal planning tools, and that biodiversity refugia were formally declared as protected areas,
- To develop a toolkit to strengthen biodiversity mainstreaming in the urban sector,
- Through these process to strengthen capacity for urban biodiversity management through awareness and training.

Table 17: Indicators and targets for urban mainstreaming

ProDoc Indicators	Revised Indicators	Targets	2014

4.1 Biodiversity priorities accommodated in municipal open space frameworks (OSF) and spatial development frameworks (SDF).	4.1 Indicator unchanged: Biodiversity priorities accommodated in municipal open space frameworks (OSF) and spatial development frameworks (SDF).	20% increase overlap (over 40% overlap at start of Project)	 40% overall overlap at Project start, At midterm review there was 53% increase in overlap for OSF and 25% for SDFs. At terminal there was an increased overlap to 63% for SDFs¹⁴
4.2: Conservation areas give legal protection to refugia representative of grassland biodiversity	4.2: Protected areas (incl state & private land) give legal protection to refugia representative of grassland biodiversity	30 000ha	 25,117.2 ha (5PAs) gazetted; 1,238ha (6 sites) completed public participation process, awaiting signature from MEC before being gazetted 52,000ha in process through stewardship¹⁵ JNB has over 40 Nature Reserves Two green servitudes established¹⁶
4.3: Institutional mainstreaming effectiveness scorecard for GDACE, Tshwane MC, Ekurhuleni MC, Jo'burg MC, Mogale LM, West Rand DM, Sedibeng DM and Lesedi LM	4.3: Biodiversity mainstreaming tools developed and adopted by land use planners and other decision-makers in Gauteng	Tools approved and/or gazetted by relevant national, provincial or local government	Biodiversity sector plans for five municipalities (Jhb, Tshwane, Ekurhuleni, West Rand & Sedibeng) approved by Municipal Councils, now undergoing final phase before gazetting as bioregional plans Guidelines (4 ¹⁷) and Provincial PA Strategy (1 ¹⁸) approved See Mainstreaming Scorecard

1.

¹⁷ Guidelines include:

- Green servitude regulatory tool approved by senior management at City of Johannesburg, now awaiting approval from Council.
- Gauteng offset guideline and strategy approved by senior management at GDARD, going through process of getting approval from Gauteng Legislature.
- Gauteng Biodiversity Stewardship Strategy
- Lifestyle estate guideline

¹⁸ Gauteng Protected Area Expansion Strategy (GPAES) approved by senior management at GDARD, acknowledged by Gauteng Legislature, now awaiting final sign off from the Department of Environmental Affairs

¹⁴ No assessment done for OFS since most were not yet updated. Bioregional plans were regarded as a replacement and since Bioregional Plans are generally using Conservation Plan as a base layer, the overlap tends to be almost 100%.

¹⁵ This additional area is land protected under World Heritage Convention Act which is deemed secured under NEMPAA (Chapter 2 Section 9). Area was verified as still valid for conservation and an ecological audit conducted by GDARD

¹⁶ City of Johannesburg is piloting a green servitude with a private land owner. There are several other areas also earmarked for green servitudes

A. 4.1 Biodiversity priorities accommodated in municipal open space frameworks and spatial development frameworks

239. The purpose of this Sub-Outcome was to incorporate grassland biodiversity priorities into key municipal land use planning instruments to better enable biodiversity considerations to be factored into municipal land use plans. This also assists municipalities and the province to immediately flag (and address) development plans submitted for EIAs or other approvals if they affect prioritised biodiversity. There are a plethora of instruments into which biodiversity priorities feed, including provincial biodiversity plan (known in Gauteng as Gauteng's C-Plan), Municipal Open Space Frameworks (OSF) and Spatial Development Frameworks (SDF), Environmental Management Frameworks (EMFs), Strategic Environmental Assessments (SEA's) and Environment Impact Assessments (EIAs).

240. The practical outputs of this Sub-Component have been impressive. The Gauteng C-Plan 3 was officially approved by the Gauteng Legislature in November 2011. This revised C-Plan 3 was used as a base layer for compiling Bioregional Plans being developed by Gauteng's Municipalities. The C-Plan also fed into other spatial plans and strategies (i.e. Gauteng Climate Change, Gauteng Green Economy Strategy, Gauteng Protected Areas Expansion Strategy).

241. A detailed review of GEF Indicator 4.by the Project showed a 63% overlap between C-Plan3 and the municipal SDF's. This is a remarkable increase from the initial 24.83% observed during the 2010 mid-term review. The calculations are presented in Table 18 below.

Municipality	SDF open space (ha)	Biodiversity Priorities accommodated in SDF (ha)	SDF % overlap (2010)	SDF % overlap (2014)
Ekurhuleni Metropolitan Municipality	30,603	25,551	4.68	83
Sedibeng District Municipality	199,189	96,983	28.76	89
West Rand District Municipality	96,983	129,564	36	49
City of Johannesburg	36,905	23,611	17.2	64
City of Tshwane	196,171	122,685	93.5	63
Metsweding District Municipality	**N/A	**N/A	**N/A	**N/A
Total			63%	84%

Table 19: Overlap of municipal SDF's with C-Plan biodiversity priorities.

Source: Grasslands Monitoring and Evaluation Indicator report

** N/A: Not Applicable. Municipality merged with City of Tshwane

242. As with the other Outcomes, many additional gains were made in the process of getting to these targets. Interviews suggest that "internal mainstreaming" within Provincial Government was just as important as "external mainstreaming" with Municipal and other partners. Interviewees consistently agreed that a general acceptance to including biodiversity into standard planning processes had emerged. They also volunteered that the development of personal relationships between people in different planning departments lent additional strength to the process. For example, excellent relationships have been developed in GDARD between the Planning Directorate and the Biodiversity Management and Conservation Directorate through the process of establishing the Gauteng Protected Area Expansion Strategy, linking this to the C-Plan, and then linking this to Municipality planning levels through Biodiversity Sector Plans (before gazette) and Bioregional Plans (when gazetted). The quality of these plans has been significantly improved by the Project, and by the participatory way in which Bioregional plans were developed, in several place resulting in field validation of data. Internal mainstreaming improved the following processes:

- Management of EIA processes and development application
- The review of Integrated Development Plans and Spatial Development Frameworks
- Horizontal and vertical integration of spatial biodiversity plans

243. The value of this process of integrating biodiversity priorities into the overall development planning process is reflected in the uptake of many of these tools even as they are being developed. This reflects a strong demand by officials to have credible technical information when they are processing EIAs and other development permits. Similarly, there is a strong demand for this information by the private sector to avoid future delays and legal issues related to development proposals in priority biodiversity areas. Numerous instances of planning departments and development consultants using these bio-plans were cited. The planning process and not least the multiple relationships built through the Grasslands Project also helped considerably with the horizontal and vertical integration of spatial plans.

244. Importantly, interviewees noted a significant shift from top-down technical planning (that had little buy-in) towards a culture of democracy and participatory planning that results in plans being implemented and also garners support at the political level. They said that this was contributing to democratisation in South Africa, and was in part an antidote to the centralized planning of the apartheid regime. Interviewees noted a shift towards: Science + Public Participation + Environmental Justice. They also noted that in flipping biodiversity "language" from species to services they were getting a much greater impact and buy-in from officials and society.

Key Lesson 6: Flipping biodiversity "language" from species to services results in greater impact and buy-in from officials and society

245. Overall, this Sub-Outcome is rated **Highly Satisfactory** because it reached its targets, but also had a powerful impact on the integration of biodiversity targets into planning instruments at all levels.

B. Indicator 4.2 Protected area networks give legal protection to refugia representative of grassland biodiversity

246. Many of the Protected Areas in Gauteng were proclaimed under pre-1994 legislation, or were managed as nature reserves having never been formally proclaimed as such. In some cases their legal status was being challenged by developers. The passing of the Protected Areas Act in 2003 provided a legislative framework for the proclamation of protected areas in South Africa. However, the process of proclaiming protected areas under this new legislation was undefined and untested in Gauteng.

247. Working with the Gauteng Department of Agriculture and Rural Development (GDARD) the Project hired consultants to prepare documentation for protected area proclamation in 21 potential sites, including locating title deeds, confirming boundaries and compiling biodiversity information for the sites, checklists, application forms, templates and flow charts that would define the steps that need to be taken prior to proclamation. Capacity constraints within GDARD and the municipalities slowed implementation. There was some criticism that the Project was driven more by log-frame targets than by developing the correct procedures and increasing institutional capacity to conduct proclamations (Tortell 2011; Botts 2014). Nonetheless, practical site preparation clearly brought officials together and built collective capacities. In 2011, the intention was to proclaim 47 813ha (see PIR). This proved impossible. In some places conflict required boundaries to be revised, and in other cases title deeds were not available.

248. Six proclamation applications were formally signed by the MEC during January/February 2012. By 2014, five of these sites were officially gazetted while six more had already completed all the necessary public participation phases and were awaiting final MEC signatures before being gazetted. All these sites amounted to 25,117 ha. A further 52,000 ha was confirmed through Gauteng Stewardship Programme where a Fossil Hominid Site comprising 3 priority biodiversity sites, namely the Cradle of Humankind, Makapan Valley and Taung Skull Fossil Site protected under World Heritage Convention Act was deemed protected under the Protected Areas Act (Chapter 2 Section 9). This area was verified as valid for conservation and an ecological audit conducted by GDARD and the Cradle of Humankind officials helped to validate this. The Cradle of Humankind management authority, together with landowners and GDARD are validating this deeming process (this process has not been tested or implemented within Gauteng)

according to the Protected Areas Act through DEA (reporting for the expansion of the conservation estate in line with the National and Provincial Protected Areas Expansion Strategy).

249. During this process:

- Proclamation process and tools were developed for GDARD and local municipalities,
- Capacity building and training was provided for well over 100 individuals in provincial and municipal authorities,
- Linkages and learning networks developed through DEA and other provinces,
- A Biodiversity Stewardship Programme was established for Gauteng Province including the establishment of a Biodiversity Stewardship Unit at GDARD. Following the national elections in 2014, GDARD was renamed as part of a provincial government reshuffle to include the word "Environment" in its title an important reference to the province's natural asset base that had been lost under the previous provincial structure,
- The Gauteng Protected Areas Expansion Strategy, the Gauteng Biodiversity Stewardship Strategy and Offset Guidelines were developed (guiding protected area expansion and stewardship efforts in Gauteng),
- Title deeds were obtained for Nature Reserves in Gauteng,
- Strong linkages and relations were established between GDARD and the Gauteng Surveyor General for prioritising nature reserve proclamation,
- Feasibility studies were conducted for Magaliesberg Mountain range, Sharpeville Dam and an Urban Biodiversity Reserve to assess opportunities and constraints of protecting these three areas.

250. Overall this Sub-Outcome is rated **Satisfactory**. Targets have been achieved, significant obstacles have been overcome, and capacity has been created. The Project was successful in encouraging GDARD to establish and recruit a deputy director post in GDARD to promote the stewardship and mainstreaming processes and procedures for proclaiming sites within Gauteng. SANBI has also internalised a position to address the challenge of biodiversity conservation in municipalities in an urbanizing South Africa. There are still questions about whether there is sufficient capacity to sustain this initiative once the Project closes, or to cope with the future magnitude of the challenges and opportunities related to urban protected areas but with two permanent posts (one in SANBI and one in GDARD) that did not exist before the Project, important institutional and mainstreaming gains have been made.

251. An overall observation, admittedly based on a very small sample, suggests that capacity still needs to be developed within the province and local municipalities to proclaim protected areas, but even more so to implement the protected areas expansion and biodiversity stewardship strategies in Gauteng to match the needs of the future. As we know from, for example New York Central Park, well-managed protected areas are important to urban living; and Africa's cities are destined to double in size in the next two decades.

Recommendation 22: SANBI should consider commissioning studies and policies relating to the long term contribution of protected areas to urban living in South Africa. Specific attention should be to developing game parks accessible to the urban poor and middle class, such as Soweto. As noted by Shelhas (2001) the persistence of the national park ideal in the USA owes no small measure to their alignment with the needs of middle class Americans.

C. 4.3 Tools developed & adopted for mainstreaming biodiversity priorities, targeting biodiversity planning and decision makers in Gauteng

252. The urban component collaborated on the development of seven different tools, each requiring scientific input, drafting, revision, approval and training. There have been suggestions that more effort should have been spent designing fewer tools (Botts 2014) so as not to over-stretch capacity. Arguments to the contrary are also legitimate. Once tools were developed, practitioners needed training to implement these tools, and in some cases this was left primarily to municipalities, with minimal skills training, capacity

building or further collaboration provided by the Grasslands Programme. Nonetheless, there is evidence that all tools have proved useful.

253. A **Gauteng Protected Areas Expansion Strategy** (GPAES) was developed and approved by GDARD senior management, and is currently tabled at Gauteng Legislature for noting and the national Department of Environmental Affairs for endorsement. As noted elsewhere, the value of these tools lies as much in the technical information they require as in their pending legal status, and uptake is rapid even before they are formalized. The GPAES is but one example of this. It is already used by GDARD officials and other stakeholders involved in the expansion of protected areas in Gauteng, and integrated into the Gauteng C-Plan and Bioregional Plans.

254. The **Gauteng provincial biodiversity Plan** (known as the "Gauteng C-Plan") is a provincial systematic biodiversity plan that determines which areas of remaining biodiversity most efficiently ensure biodiversity and associated ecosystem services are maintained. This spatial plan had already progressed to a second version when the Grasslands Programme began it implementation and the Project contributed towards the update of version 3.3 of this plan. The Gauteng Legislature approved Gauteng's C-Plan 3.3 in 2011 (GDARD, 2011).

255. **Bioregional Plans**: Bioregional plans are a management tool required by the NEM: Biodiversity Act (Act 10 of 2004) to map and identify critical biodiversity areas (CBAs), as the basis for land-use planning and decision-making by municipalities and other planning agencies. Bioregional plans are fine scale biodiversity plans that are firmly based on the provincial biodiversity plan and incorporate information from the protected areas expansion strategy and municipal level spatial planning. Five Draft Bioregional Plans (or Biodiversity Sector Plans) were developed for the City of Tshwane, City of Johannesburg, Ekurhuleni Metro, Sedibeng District Municipality and West Rand District Municipality. Gauteng is the first province with 100% coverage by Bioregional Plans thanks to the efforts of the Project.

256. Bioregional Plans are valuable and in demand; there is widespread and daily use of bioregional plans by all municipalities (even before gazetting). This is because they provide fine scale maps and landuse guidelines relating to priority biodiversity that are easily integrated into municipal spatial plans. The provision of a single spatial GIS-based map is particularly valuable. It is also widely recognised that they are on a pathway to being legally gazetted, and they are widely treated as officially approved plans since approval has already been issued by the relevant Municipal Councils prior to the formal gazetting process. Municipalities regularly make these single maps available for use by other departments and the public via internal GIS servers and departmental websites.

257. **Biodiversity Offset Guidelines** are a last resort measure to compensate for negative biodiversity impacts from development. The Gauteng Biodiversity Offset guideline and strategy was developed jointly by the Grasslands Programme and GDARD. A draft was completed in 2012 (GDARD, 2012), and is awaiting approval from the Gauteng legislature, pending the National Biodiversity Offset Framework that is being developed by SANBI and DEA.

258. Lifestyle Estates Guidelines are a response to the rapid development of lifestyle estates around urban areas, and provide recommendations for biodiversity friendly decisions in the planning of these estates.

259. The **Green Servitudes Regulatory Tool** supports green servitudes as a legal mechanism that local authorities can use to conserve biodiversity and ecological infrastructure by limiting certain types of land use activities on private land. This tool was developed to support the legal and business case for the establishment of green servitudes for the City of Johannesburg municipality.

260. The biodiversity offsets, green servitudes and lifestyle estates tools are currently not widely used by municipalities. They are comprehensive but largely descriptive guidelines rather than defensible

regulatory rules, and are still awaiting approval from the relevant authorities or senior management. Most municipalities acknowledge that they are aware of these tools and say they would consult them should a need arise several. However, a good indicator of their value is that these tools are finding a ready audience in voluntary use by environmentally conscious developers, EIA practitioners and civil society groups (Botts 2014).

261. **The Gauteng Biodiversity Stewardship Programme Strategy** was one of the first tools completed by the Grasslands Programme, in collaboration with GDARD, in 2010. It consists of a Stewardship Operational Manual, a Business Plan and a confidential manual for negotiating positions. The Strategy provides a systematic approach for entering into agreements with private and communal landowners, to protect and manage biodiversity priority areas in Gauteng. GDARD is currently readying itself to begin implementation of the provincial biodiversity stewardship programme, following the establishment of a capacitated stewardship unit, and the identification of pilot sites through which it will be possible to test and refine/strengthen the department's stewardship systems and capacities.

262. Other tools developed include the **Criteria for Sustainable Development** and the **Gauteng Biodiversity Toolbox** which is a generic summary toolbox of all available biodiversity and conservation mainstreaming tools and includes a summarised version written for senior managers.

263. This Sub Outcome is rated **Highly Satisfactory** because of the overwhelming value and uptake of Bioregional Plans in serving urban planning, EIA and development permitting processes. This tool has real teeth. The usefulness of the other tools are still emerging.

264. In conclusion, it is likely that many of the interventions initiated through Outcome 4 will be sustained, even if at lower levels than currently. The inherent value of Bioregional Plans will contribute significantly to their sustainability. GDARD has put in place the new position of Deputy Director: Biodiversity Mainstreaming and Stewardship to take forward this initiative. Capacity building of municipalities in biodiversity planning will continue to be built through ICLEI and through the SANBI Municipal Programme. GDARD has stated that it intends to host the continuation of the Urban Task Team with ICLEI as secretariat.

265. The toolbox and other biodiversity tools are being institutionalized, and is anticipated that they will be adapted and rolled out to other provinces (including through the SANBI Municipal Programme). GDARD is already continuing projects with local government such as the proclamation of protected areas and the establishment of biodiversity stewardship sites, as well as the completion and gazetting of Bioregional Plans. All in all, the Project has put in place significant measures to ensure the sustainability and extension of gains made in the project (Table 20). However, there are risks and challenges, foremost being the loss of champions developed through the Project and the pressures that urban growth will inevitably pose; the question remains whether current capacities can cope with future pressures, and the suggestion to be more pro-active regarding urban protected areas has already been made.

Area of Intervention	Sustainability	Reason / comment
ScienceBiodiversity mapping	1	SANBI and Municipalities are likely to maintain these databases
 Biodiversity Integrated into LandUse Gazetted Parks / expansion strategy Stewardship 	√? √?	• Good progress in legally establishing PAs. Some questions about long term management effectiveness

Table 20: Assessment of the sustainability of key elements in the urban component

 Biodiversity sector /Bioregional Plans Lifestyle Estate Guidelines Sustainable Criteria Development Guidelines Green servitudes Biodiversity Offset Guidelines 	✓ ✓ ? ?	 DD recruited Provincial Stewardship Deputy Director Appointed. The concept still needs testing in Gauteng? These instruments are needed to support EIA and Development Licensing and this demand is likely to ensure that they are sustainable
Process & Capacity • Task Team	?	The Task Team will be renamed and supported by GDARD but it will miss strategic Project funding and support

266. Overall Outcome 4 is rated as **Satisfactory**. It has achieved all its targets. The integration of priority biodiversity areas into municipal planning processes and the declaration of protected areas have saved biodiversity that would have been lost. Several of the tools developed, especially Bioregional Plans, are being adopted by municipal and private actors. However, some questions remain about the thinness of long-term capacity relative to the magnitude of the challenges, the management effectiveness of the areas proclaimed for protection, and the sustainability of some of the processes that have been established in rapidly growing urban conurbations.

4.2.6. OUTPUT 5: BIODIVERSITY MANAGEMENT SECURED IN COAL MINING SECTOR

267. South Africa has extensive coal deposits, and coal mining and coal-fired power stations are located largely in Mpumalanga province in the heart of the Grassland Biome. There are significant concerns about the impact of coal mining of wetlands and water through direct destruction and through acid-mine drainage. Key biodiversity is also threatened because of the extent and destructive nature of open cast mining, much of which occurs in wetlands where coal seams are shallower. The mining sector is regulated primarily by the Department of Mineral Resources using the Mineral and Petroleum Resources Development Act 28 of 2002, and the National Environmental Management Act 107 of 1998 (especially relating to EIA process). The need for water usage licenses awarded under the National Water Act 36 of 1998 is a powerful control on mining.

268. While the Pro-Doc was progressive in addressing the coal mining sector, this Outcome was not well articulated and implementation was lagging at MTE. However, rapid progress in the sector was made in the latter half of the Project with the acquisition of a capable Outcome Coordinator. The primary goals of the Project were:

- 5.1 To pilot biodiversity stewardship arrangements in relation to coal mining companies, and especially in relation to wetlands,
- 5.2 To ensure that information on priority biodiversity areas was incorporated into decision making related to EIAs, mining licensing and water licensing through the Departments of Environmental Affairs, Mineral Resources and Water Affairs.

ProDoc Indicators	Revised Indicators	Targets	2014
5.1 Amount of land where wetlands protected through wetland mitigation and/or banking offsets (in terms of hectares protected through offsets)	5.1 Biodiversity stewardship is piloted with one mining company in the coal mining region of the grasslands	One biodiversity stewardship agreement on coal mining land signed by relevant authority	 Agreement signed with Anglo Coal for 119 ha Stewardship Processes tested. Incompatible with current legal regimes for mining concession areas but invaluable for protecting land from mining, e.g. Pongola PE (9,244ha) Elandsberg PE (34,818 ha)
5.2 Biodiversity planning information used by mining companies and regulatory authorities to plan new coal mines (MBCP is Mpumalanga Biodiversity Conservation Plan)	5.2 Biodiversity information* used by the DMR, DWA, DEA and mining companies in the assessment and decision- making processes for the prospecting or mining of coal, and for the authorisation of associated activities * e.g. MBCP, threatened ecosystems data, areas earmarked for protection, including wetlands, offset guidelines	Biodiversity information used by DMR, DWA, DEA & mining companies	 Mining and Biodiversity Guidelines approved by Minister of Environment Affairs and Minister of Mineral Resources, as well as CEO of Chamber of Mines Wetland Offset Guidelines Use of BGIS DMR/WITS training

Table 21: Indicators and targets for coal mining mainstreaming

269. At the MTE, progress towards this Outcome was Moderately Unsatisfactory (MU) because of the challenges of recruiting a suitable Coordinator, resultant limited progress towards implementation and the unclear formulation of indicators. However, progress since then has been rapid indicating that the combination of a quality coordinator and a strong conceptual approach can overcome significant operational challenges in mainstreaming. At the MTE, indicators were rewritten and approved by the GSC and the UNDP. Interventions were clearly articulated to reflect the mining mitigation hierarchy. This led to well-targeted pilots, including of wetland offsets, processes for rehabilitating wetlands, and process for avoiding mining impacts. Testing these approaches in the field with local and national stakeholders led iteratively and collectively to the development of new institutions (i.e. rules) in the form of the Mining and Biodiversity Guidelines. This is now described as an example of best practice.

270. The new conceptualization of Outcome 5 is described in Figure 16 and is linked to the mitigation hierarchy. Industry guidelines were developed collaboratively to provide a common understanding of the management of mining and biodiversity. Spatial information was provided to ensure that new mining avoided priority biodiversity areas, while wetland rehabilitation guidelines were developed to repair areas already damaged, and wetland offset guidelines were prepared for places where biodiversity was irreversibly damaged. These guidelines were developed through a process that deeply involved key stakeholders linked to active pilots to shed light on how to solve problems.



Figure 16: Conceptualizing of the Mainstreaming Process in the Coal Mining Sector (modified slightly from by Stephen Holness)

271. The Mining Coordinator played an important role in building the South African Mining and Biodiversity Forum (Figure 17) into a community of practice This was done by working on specific and meaningful products, by bringing partners together around a three-year work programme and prioritized tasks, and through constant technical support and follow up to ensure tasks were followed through. The original conceptualisation of this Outcome was largely reactive. The project introduced a programme of proactive planning and stewardship in a mining landscape, resulting in increased global benefits and reduced risk.

Figure 17: Partnership Approach in the Coal Mining Sector (modified slightly from by Stephen Holness)



A. 5.2 Biodiversity information used by DMR, DWA, DEA & mining companies¹⁹

272. This Outcome was slow to start. According to the PIR, an evaluation of the project at the beginning of 2012 indicated that attempting to get users to grapple with a range of biodiversity data products (e.g. conservation plans, threatened ecosystems data, areas earmarked for protection including wetlands, offset guidelines) is not efficient and can be counter-productive. "Too much information" can undermine progress towards the target of ensuring that biodiversity information is used by regulators and mining companies in decision-making and authorisation. The Project therefore decided to develop integrated decision support tools, and to mainstream these to users (both industry and regulators) in ways that facilitate uptake and access to and use of the data.

273. At an industry level, mining companies were extremely concerned with the risks that uncertainties around biodiversity and biodiversity regulation. The Project responded to this by providing accurate, online spatial information that identifies where important biodiversity could be found integrates underlying information from diverse products such as the Mpumalanga Biodiversity Sector Plan and the National Freshwater Ecosystem Priority Areas Project. Working in a highly participatory manner with the biodiversity and mining sectors, the Project then assisted with the development of the much touted "Mining and Biodiversity Guidelines²⁰". This includes key information of legal issues, biodiversity prioritization, allowable activities in key areas, and so on.

274. The Project also embarked on three pilot studies to better understand what to include in the guidelines.

- With Anglo American Thermal Coal (AATC) and other partners the Project has worked on rehabilitating important wetlands totalling 119ha.
- Field testing of offset identification methods was piloted using the AATC Isibonelo case study to ensure that potential problems in the offset identification process are identified and rectified. Rules of process including offset ratios, site identification, flexibility of process, etc. were tested.

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¹⁹ The order of these indicators is revered so the text moves logically from the general to the specific

²⁰ Citation: Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013. *Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector*. Pretoria. 100 pages

• A wetland technical recovery process was developed at the Zaalklapspruit field site, including wetland rehabilitation and associated measurements of the ability of wetlands to detoxify mine drainage in terms of pH, micro-organisms etc.

275. It is worth discussing the **Mining & Biodiversity Guidelines** process in some detail. One can speculate that the slow start of this component was in part related to the mutual fear of biodiversity and mining actors of each other. By carefully bringing these actors together around a single, mutually desired output (the guideline), people got to know each other, fears subsided, and a realization emerged that winwin situations existed even between such apparently polar opposite actors.

276. The Mining & Biodiversity Guidelines were completed through an extensive and iterative consultation process aimed at ensuring buy-in from all parties. During the process issues where identified in terms of acceptable terminology and language, which had potential to derail the adoption of the guidelines by the mining industry and the Department of Mineral Resources. Both the process and the Guidelines were welcomed by the industry. The process allayed the considerable fears that mining houses have of working with environmentalists, and vice versa. These stakeholders participated in developing and documenting workable solutions to biodiversity-mining issues, and ensured that clarity of rules reduced business risk and uncertainty. Effective stakeholder management ensured high level endorsement of the Guidelines at Ministerial level (by both DMR and DEA). With high levels of participation in their development, not least by the Chamber of Mines, the Guidelines were quickly accepted and used by the sector. The Guidelines were also almost immediately adopted in both under-graduate and graduate training modules at the key University of the Witwatersrand's Centre for Sustainability in Mining and Industry (CSMI). Over 700 people have been formally trained using the Guidelines, which are also being adopted by a number of private training institutions and consultants.

277. The Mining and Biodiversity Guidelines now provide a single reference point for both industry and regulators to ensure that biodiversity issues are consistently incorporated into the decision making processes for mining projects. The guidelines are specifically aimed at enhancing environmental governance capacities for coal mining planning and management and ensuring that biodiversity concerns are addressed by coal mining industry in future expansion planning21. This point highlights two things:

- Bigger than anticipated project impact influencing whole mining sector as opposed to initial expectations of coal mining sector alone
- The extent to which mainstreaming can be successful (or not) if sub-sectors of a broader sector are targeted and this is not a sensible entry point for mainstreaming (see comments on agriculture).

278. Importantly, the Project conducted surveys to assess the uptake of the Mining and Biodiversity guidelines. For example, 44% of respondents use the guidelines for information, 15% apply concepts they have learned from the guidelines, 12% use the maps, 27% use both guidelines and maps and 3% do not use the guidelines. Similarly 57% of respondents agree that the guidelines and maps have influenced decision outcomes, 41% have used the guidelines, and 3% find the guidelines unhelpful.

Recommendation 23: The potential wins from joint development of a guideline type product between industry, regulators and biodiversity sector, is the primary lesson from the component.

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²¹ It is worth pointing out that in order to get a result in the coal sector, it was necessary to intervene in the whole mining sector, and the guidelines etc are relevant for and have impact on the broader sector

Recommendation 24: The monitoring surveys to assess the uptake of the Mining and Biodiversity Guidelines conducted by Outcome 5 provides an important precedent for other mainstreaming Projects and shows how they can and should monitor their effects even within the timescale of the project cycle

279. The **integrated mining sensitive areas layer** is a single spatial information layer linked to the Mining & Biodiversity Guidelines that responds to issues identified in the stakeholder process (e.g. around buffer areas of World Heritage sites), which would have undermined the use of the layer by regulators and industry. Similarly, an **Atlas of Sensitive Wetlands Areas** was developed for the Mpumalanga Highveld which is under severe mining pressure in partnership with mining industry and supported by Coaltech co-funding.

280. Wetlands Offset Guidelines (Macfarlane D., Holness et al. 2014) are being finalized through a similarly collaborative process. The wetland offset guidelines include methodologies for offset site selection, compensation ratios and hectare equivalents used to determine the size and functionality of the offset. The offset guidelines are now beginning a formal review process with the Department of Water Affairs, other key state entities such as the Departments of Environmental Affairs and Mineral Resources, and the public. The power of these offset guidelines is that they are linked to the water permitting processes administered by the Department of Water Affairs because the process of establishing a new mine requires the formal issuance of a Water Use License by the Department of Water Affairs.

281. The Project facilitated the co-development of a mining offsets process by using two pilot sites (Zaalklap, Isibonelo) to develop offset guidelines:

- Isibonelo set the scene in terms of identifying all the issues that need to be sorted at a national rather than site level in order for offsets to work these include ratios, monitoring mechanisms and issues around securing sites. Therefore the learning from Isibonelo helped shape the development of content of the offset guidelines.
- Zaalklap itself was not aimed at an offset, but was important for setting the basis for successful offsets. Specifically if we cannot rehabilitate wetlands successfully to deal with mining related impacts then the whole "no net loss" concept of offsets is untenable. Therefore, Zaalklap was critical to the offset process. But it cannot be called an offset pilot.

282. In learning how to practically rehabilitate a wetland the guidelines have gone some way towards (1) providing advice on technical recovery issues and, even more importantly, (2) setting "clear rules of the game". These include offsets ratios and exchangeability, site selection, contracting with landholders, practical rehabilitation measures, quantifying (and valuing) changes in water quality and so on.

283. The offset guidelines are in the process of being adopted by Department of Water Affairs to support their powerful process of Water Use Licensing and General Authorisations. The combination of quantifying (and valuing) changes in water quality, and linking this to the permitting of the use of water catchments, represents the beginnings of a market exchange process for optimising trade-offs between mining impacts and wetland conservation.

284. While different in form, this matches the intent of the Pro-Doc to develop market mechanisms for biodiversity conservation. Linking wetland management to a well-informed permitting process is quite likely to lead to market based solutions in the ways originally intended in the ProDoc. This emphasises the importance of a flexible strategy for mainstreaming (and staff capable of managing adaptably), and recognises that end results can end up converging – mainstreaming is unpredictable and often depends on timing, opportunities and appetite in mainstreaming sectors. Significantly, this process has taken place slightly ahead of but parallel to the development of broader national biodiversity offset guidelines, and as a result has been able to help influence this national policy framework on offsets (again, a greater impact

than intended through Project interventions) which has the potential to generate in reducing impacts on globally important biodiversity (especially threatened flora species and habitats).

285. In this Output, we again see the emergence of the ecosystem services versus species diversity nexus in the discussion of biodiversity. The Department of Water Affairs were emphatic that they became much more responsive to the considering biodiversity when it involves measurable ecosystem processes (e.g. water quality) that can be administered rather than when biodiversity is defined to reflect an "old school single species approach".

286. In summary, Indicator 5.2 was reformulated from having mining integrate biodiversity considerations through the Mpumalanga Biodiversity Conservation Plan, and expanded to the development of Mining and Biodiversity Guidelines²². The Project brokered common ground between Mining and Biodiversity around the business case of biodiversity risk. The Mining sector perceived considerable value in a document (and web site) that provided them with well-organised spatial information about priority biodiversity areas, and clear procedures for Environmental Impact Statements and Environmental Management Plans. This document was clearly developed through a highly collaborative process, has buy in from all players, received high level political endorsement (it was jointly signed by the Ministers of both Mineral Resources and Environmental Affairs). It has been further mainstreamed through the training of over 700 people, and has been incorporated as a "Mining and Biodiversity" module into the post graduate diploma and Master's Degree at CSMI at WITS University, South Africa's premier mining school.

B. 5.1 One biodiversity stewardship agreement on coal mining land signed by relevant authority

287. Indicator 5.1 was reformulated from a specific and unachievable target (2,000 ha of wetlands protected through wetland mitigation and/or banking offsets) towards proactive stewardship²³. The project identified that proactive stewardship was necessary to deal effectively with the emerging threats of mining to biodiversity in grasslands. There was considerable concern that numerous smaller mining projects, that are said to be less responsible than large established mining houses and which cumulatively were anticipated to have a very significant footprint on priority biodiversity including water catchments.

288. Initially, the Project intended to work with mining concessionaires to implement stewardship arrangements to protect natural areas controlled by the mining concessions that had not been mined. However, this was not legally possible as a formal biodiversity stewardship arrangement legally negates a mining claim and could jeopardise the mining house's rights in other portions of their rights area. In the future, nonetheless, there may be need for a more flexible kind of stewardship on mining claims, perhaps linked to measuring performance in terms of the area and quality of biodiversity conserved rather than to in-perpetuity stewardship arrangements per se.

289. Because of these issues, Outcome 5 worked with Outcome 2 (i.e. the Wakkerstroom Demo Project led by WWF-SA in the Agricultural component) to capitalise on gains in biodiversity stewardship. The

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²² Originally the Project was supposed to get people to use information such as that contained in the MBCP, but achievements expanded significantly.

²³ The Project was concerned that the 2,000 ha target for offsets was a perverse incentive that was not appropriate to be pursuing at such scale. It was certainly valuable to pilot/test offsets methodologies for mainstreaming. But the concern was that having to 'chase' 2000ha as an offset would result in a lot of important biodiversity being impacted by development before those 2,000ha were achieved. This is an example of another target in the ProDoc that didn't help pursue the real intended outcome.

Project had considerable success in securing voluntary stewardship sites in a high biodiversity value landscape threatened by mining. This includes the Upper Pongola Stewardship project:

•	declared/gazetted Protected Environment	9,244 ha
•	pending Protected Environment,	34,800ha
•	pending Nature Reserve	9,394 ha
•	pending Biodiversity Agreements	991ha
•	Total	54,409 ha

290. We turn now to summarising Outcome 5. The sustainability of this component is highly likely. The South African Mining and Biodiversity Forum has momentum and is strongly supported by the Chamber of Mines. The active Mainstreaming and Training Sub-committee meets monthly and has an ongoing programme of work. The tools produced provide considerable value to the sector, not least the Mining and Biodiversity Guidelines and associated priority biodiversity maps. Further, led by the Chamber of Mines, the sector was fully involved in developing these for its own benefit; there is a strong case to be made for integrating biodiversity priority maps into mining, and the means of doing this are to a large extent 'normed' into sector practice. In addition, funding has been secure to continue several of the pilot initiatives relating to wetland rehabilitation until 2015 through Coaltech and short-term Coaltech and Water Research Commission funding, including the development of the Wetland Offset Guideline. Coaltech is a research organisation that conducts research and development for the coal mining industry and was a primary partner in the development of the Wetland Offset Guideline pilot projects.

291. Overall the rating of this Outcome is **Highly Satisfactory**. It has gone way beyond the initial and reactive aims of the ProDoc. It has used science and maps to make a case for biodiversity. Robust technical, political and administrative processes have been set in place and are likely to continue through the Chamber of Mines. Excellent tools have been produced and mainstreamed. This has followed judicious use of pilots, high levels of participation in all activities, scientifically robust technical information, and sound process management. Consequently, key practices have been mainstreamed into the mining sector aimed at protecting priority biodiversity and ecosystem services (wetlands) in the form of guidelines that are highly endorsed and accepted by the sector. The guidelines are being used in training institutions, and surveys show significant use of the guidelines and maps by industry participants.

292. The way Outcome 5 was conceptualised and implemented provides a model for mainstreaming. Figure 16 shows how interventions have been conceptualised around the "avoid, minimize, rehabilitate, offset" hierarchy. The Project then built a community of practice by facilitating key stakeholders to implement important projects together and to come to agreement over issues that previously divided them. By all accounts the Project has played a catalytic role in re-invigorating the South African Mining and Biodiversity Forum comprising industry, government regulators, civil society and research organizations (Figure 17). The Project was consistently praised for playing this role, with effectiveness being attributed to a combination of SANBI's scientific credibility, legitimacy and even-handedness as a semi-government agency, a joint programme of work in which the Project played a critical role in judiciously tracking and ensuring implementation, and the scientific and emotional intelligence of the Coordinator.

293. Outcome 5 also illustrates a pragmatic process of achieving policy reform. Several interviewees suggested that had the Project plunged into the development of policy and regulatory frameworks this would, in all likelihood, have generated conflict and impasse, and further polarised mining and biodiversity interests. This may well have set the policy process back. Interestingly, reform was largely initiated by the mining sector – it was demand led, with the biodiversity sector perhaps being surprised at the concern by many miners towards conservation. Instead, the Project demonstrated an alternative policy process based on (1) facilitating stakeholders to develop mutually desired guidelines collaboratively (2) which then take on the character of norms or even legal requirements for zoning and standards, eventually (3) emerging through policy and legislation. This is an empirically tested formulation of the "policy practice loop" envisaged in the ProDoc.

Recommendation 25: The Grassland Project suggests that a successful "policy-practice loop" must involve leaders and the grassroots and consist of (1) facilitating stakeholders to develop mutually desired guidelines collaboratively (2) which then take on the character of norms or even legal requirements for zoning and standards, eventually (3) emerging through policy and legislation. This, indeed, was the crux of the mining mainstreaming process. By contrast, top down policy processes may generate fear, conflict and impasse.

4.2.7. ADAPTIVE MANAGEMENT (CHANGES TO THE PROJECT DESIGN AND PROJECT OUTPUTS DURING IMPLEMENTATION)

294. The MTE emphasised that this is a Foundational project with pilot and demonstration projects. The MTE recommended a thorough review of the Log Frame at indicator level, because of the lack of "fit" of certain indicators and the overly strong focus on targets by the Project rather than on higher level Project goals. The MTE suggested that the current high level Indicators and Targets be replaced with ones that focus on whether production sectors is contributing directly to the achievement of biodiversity. The Project responded positively and strongly to this feedback. The log-frame indicators were comprehensively reviewed, and with the consent of UNDP two thirds of the indicators were modified. This is explained in detail above.

295. The MTE also recommended a comprehensive review of the five Task Teams in terms of their purpose, contribution, value to members, membership, frequency & structure of meetings. Each of the task teams subsequently went through a refocusing and repurposing exercise as part of the sustainability planning process which resulted in the agreed way forward for each task team. The exception is the agriculture task team which despite the demand for the task team, currently lacks resources to take this forward. However this work is being taken forward in other ways through SANBI and the task team is likely to pick up momentum again. The MTE also recommended a thorough review of the Grasslands Steering Committee. This was implemented, with the reforms noted above.

296. Finally, the MTE recommended that the Project carry out a Sustainability Planning exercise to identify opportunities for up-scaling and replication together with any barriers that lie in the way, and to plan how to overcome these barriers through capacity building, production of handbooks and other guidance, identification of champions, analysis of policies, etc., to clear the way for replication. Working with stakeholders, the Project conduced an impressive sustainability planning process (Ginsburg 2013). The Project had been designed with sustainability in mind by (1) having production sectors take as much control of mainstreaming processes themselves (2) identifying, working with and strengthening champions in each sector, institutionalizing guidelines through stakeholder processes, and strategically establishing new positions in partners (e.g. Stewardship Officers in three provinces), in SANBI (e.g. SANBI Municipal Programme), and through new funding arrangements (e.g. facilitators for both mining and forest outcomes). These measures are reflected in the sustainability of the five Outcomes (see above).

297. The most important adaptive processes were those managed by the Project, especially wellmanaged quarterly review and planning workshops, and similar processes and workshops within each Outcome.

4.2.8. FEEDBACK FROM M&E ACTIVITIES USED FOR ADAPTIVE MANAGEMENT

298. We have already noted the need to simplify the PIR, to ensure that it directly follows the structure of the log-frame, and that participants are trained in its use, if it is to fulfil its potential as an adaptive management tool. The PIR was difficult for the Project to use, although the UNDP RTA noted the usefulness of PIR narratives for following project progress. The MTE and updated logframe indicators were approved by the Grasslands Steering Committee and the UNDP Country Office, with active involvement of the regional office throughout the project (RTA). The Project also regularly submits quarterly reports that are not linked to the PIR. UNDP noted that they liked template in 2nd quarter 2012, but otherwise entrusted the Project to continue without intervention.

4.2.9. PARTNERSHIP ARRANGEMENTS (WITH RELEVANT STAKEHOLDERS INVOLVED IN THE COUNTRY/REGION)

299. Partnership arrangements were critical to the Project and are described for the Project as a whole, and for each Outcome in the previous sections. Partnership management was of a high quality.

4.2.10. PROJECT FINANCE:

300. The Project has spent 96% of its total GEF allocation of \$8.3m with \$422,742 remaining, with the remainder committed including to Project closure including the Terminal Evaluation. There is under- & over-expenditure on some components due to weaker than anticipated rand (i.e. exchange rate gains) and interest, and over -expenditure on POOM due to No Cost Extension (NCE²⁴). Project Accounts were audited annually by Deloitte & Touche who consider that "the statement of assets and equipment presents fairly and in all material respects the balance of \$ (xxx depending on year inspected) had by the project at xxx date in accordance with UNDP basis of accounting".

OUTCOMES	TOTAL ALLOCATION ²⁵	TOTAL ALLOCATI	EXPENDIT URE TO	% SPENT	COMMENTS
	(per latest	ON	DATE		
	revision)	(per the	(31 March		
	,	NCE)	2014)		
Outcome 1:	1,481,303	2,117,564	2,201,983	104%	This component has well exceeded its targets; with the funds freed from outcome 2 and outcome 5 the Sustainability and PES pilot projects were achieved
Outcome 2:	3,610,999	2,721,458	2,231,121 C ²⁶ =109,036	82%	The targets for this component were met and underspent is due to reallocation to the other components.
Outcome 3:	1,140,666	1,153,332	1,058,481	92%	The full dollar budget of this component was utilized and all the targets were met. Underspent is due to the rand exchange rate
Outcome 4:	719,678	1,054,375	1,077,813 C=53,710	102%	This component has far exceeded the outputs and funds from outcome 5 and outcome 2 ensured additional outputs were achieved.
Outcome 5:	518,118	478,120	404,022 C=51,634	85%	This component had a late start, but also managed to secure counter funding for a number of outputs. This has freed some funds to be accessed by other components to strengthen critical deliverables.

Table 22: Summary of Project Expenditure Compared to Budget Allocations

1. _____

²⁴ At MTR it was recognised that the combination of project "burn rate" and the outcomes achieved against the Pro Doc would require a conversation to request a No Cost Extension from UNDP. The NCE was approved September 2011, whereby the project was granted a no-cost extension of 9 months, to the end of December 2013. The project indicators and targets were revised and this included the budget revisions across the various outcomes.

²⁵ The fluctuating ZAR-USD exchange rate challenged detailed financial planning and will be a characteristic of the project until its closure. Adoption of conservative approach will ensure that the project is not over or under committed due to exchange rate fluctuations.

²⁶ These are the amounts Committed to the end of the project (and not included in the calculation of 96% spend)

		1		1	
POOM ²⁷	829,236	775,151	903,838	$117\%^{28}$	The project terminated in Dec '13,
			C=101,615		but we are currently in financial close
					off and wrap up. This translates into
					costs of the PMU, which has resulted
					in overspent.
TOTAL	8,300,000	8,300,000	7,877,258	96% ²⁹	
			C=422,741		

301. Co-financing has exceeded expectations by a factor of almost four (Table 23). The Project identified 15 additional funding partners. The alignment of the Project with sector objectives enabled it to leverage considerable additional financing mainly through government and private sector participation (Figure 18).

Table 23: Co-financing contributions to the Project

Co-finance contributions		
Projected at Inception	\$37 261 764	
At end-term	\$112 462 220	





1. _____

²⁷ Project Operations, Overheads and Management costs.

²⁸ The over-expenditure on POOM is directly as a result of the project close out period. When the revised budgets were submitted for the NCE, the salaries of the Project Manager and the Finance Manager were not allocated accurately for the last 9 months of the project. These two staff members are critical to oversee the wrap up activities coupled with the financial close out and the final audit in March 2015.

²⁹ A percentage of the remaining funds are earmarked for the country office expenses as they are managing the annual audit fees and other consultant contracts directly. For the last 18 months, the Project has monitored spending on a monthly basis. All the remaining funds are locked into committed contracts and no undisbursed funds are anticipated at the end of the project. The global project budget is 100% committed.

4.2.11. MONITORING AND EVALUATION: DESIGN AT ENTRY AND IMPLEMENTATION (*)

- 302. Monitoring and evaluation tools identified in the ProDoc included:
 - Use of the Logical Framework Matrix for impact indicators and means of verification.
 - A detailed Monitoring and Evaluation Plan (Annex III of Pro-Doc) including (i) a detailed explanation of the monitoring and reporting system for the programme; (ii) a presentation of the evaluation system; and (iii) a work plan and the budget for M&E.
 - Regular project reporting including
 - Annual Project Report;
 - Annual Project Implementation Review;
 - Quarterly Progress Reports
 - Specific reports in the project cycle including:
 - Inception Report;
 - Programme Terminal Report. The objectives of these reports are detailed in Annex IIILog frame
 - External evaluations including:
 - Mid Term Evaluation
 - Terminal Evaluation

303. Project reporting was competent and diligent and is rated **Highly Satisfactory**. The PIRs provide considerable detail and introspection. However, the question remains whether there is too much repetition and redundancy is the UNDP/GEF monitoring and evaluation system, given how much time the preparation of these reports takes, and how little feedback the Project receives.

4.2.12. UNDP AND IMPLEMENTING PARTNER IMPLEMENTATION / EXECUTION (*) COORDINATION, AND OPERATIONAL ISSUES

304. Much of the strength of this Project originates in the highly productive relationship formed between the UNDP RTA and SANBI in the formulation of this and other Projects in South Africa. SANBI has proved to be a truly excellent partner for this mainstreaming Project, and SANBI was praised by many sector and especially government officials because of their personal and scientific integrity, stakeholder management, and ability to unlock and management processes in a proactive manner. As noted throughout the document implementation was **Highly Satisfactory**.

305. UNDP provided:

- 1. Excellent technical guidance and support particularly at a regional level. As noted in the MTE, the RTA played a very central role in the design and formulation of this project and during initial project implementation. This was at a time when the CO was experiencing a lack of capacity and the RTA stepped into this gap. Since then, including with a change in RTS's, this project has been accorded the same degree of attention by the RTA as is usually reserved for regional project. This situation is recorded in PIRs and appears to be working effectively.
- 2. Generally excellent participation in project steering committee meetings by UNDP officials at country & regional level providing a useful mechanism for engagement
- 3. Generally good financial management and processing of financial reports and tranche requests The Project commented that "UNDP financial staff have been great".

306. Areas where UNDP can improve include:

• The duplication and complexity of reporting (e.g. GEF PIR and UNDP quarterly reports mentioned above). There is scope to integrate annual and quarterly reporting as a single system, and to include risk monitoring and management in this system (see Table 7).

- To address the potential concern that the CO may have excessive responsibilities to provide regular technical feedback and to take opportunities for engagement around adaptive management linked to PIR feedback.
- Managing inconsistencies between project data held by project and that in ATLAS (noted at MTE), exacerbated and by staff turnover in UNDP CO and loss of institutional memory of project.

307. However, the biggest missed opportunity (and this gap is Huge) is learning from and between other UNDP funded projects (nationally, regionally and globally). There are NO opportunities for engagement between projects, except in circumstances like CAPE & Grasslands where both projects happen to fall under the same implementing agency, in this case like SANBI. This point was emphasised by the Project, and was also noted at GEF STAP 2013 mainstreaming workshop, as a really is a big gap the UNDP/GEF global learning strategy.

Recommendation 26: UDNP and GEF need seriously to address to optimise the HUGE learning potential from and between projects, individually and collectively

In conclusion, the working relationship between the Project and UNDP positively supported project implementation. Moreover, SANBI clearly values its relationship with the UNDP, while SANBI is also an organisation with the capacity to implement projects effectively, and to enable UNDP to test new ideas effectively.

4.3. **PROJECT RESULTS**

4.3.1. OVERALL RESULTS (ATTAINMENT OF OBJECTIVES) (*)

308. All targets were achieved or exceeded, with the exception of the targets 1.1 (45% coverage), 2.1 (CARA regulations), and 2.2 (red meat standards adopted by meat industry, (Table 24). The target for 1.1 was far too high for a five year project, but is likely to be achieved as Bioregional planning spreads through South Africa. The CARA regulations were external to the Project, and were the one area where the leap was made to policy without building enough stakeholder involvement around pilot projects. Conservation South Africa is making sound progress with the newly formulated indicator regarding red meat standards. Given all the extras that this Project has achieved (see Table 25), and the fact that it has achieved or been close to achieving all targets, overall attainment of objects is rated **Highly Satisfactory**.

Indicator	Targets	Status at End of Project	Assessment	
1.1 Biodiversity sector	45% of biome	32% covered by	Not achieved (target too	
plans (or bioregional		Biodiversity Sector Plans	high) but likely to be	
plans) for Grassland		or Bioregional Plans	achieved beyond Project	
Biome produced and		developed or in process		
adopted by relevant		(but being used)		
authorities				
1.3 Institutional	76%	Average 16 agencies:	Achieved	
mainstreaming	72%	Baseline (2008) 13%		
effectiveness scorecard:	66%	Midterm (2010) 48%		
SANBI, GDACE,	Calculate end target for	End (2013) 63%S		
Forestry SA	additional agencies	(See Figure 8)		
2.1 Agricultural laws,	• National Grazing	Grasslands Ecosystem	Achieved	
policies and guidelines	Guidelines for	Guidelines completed		
incorporate biodiversity	Biodiversity developed	• Grazing and Burning		
management objectives	and adopted by relevant	Guidelines	Not achieved	
	sector bodies.	• 4+1system		
		• 20 point system piloted		

Table 24: Achievement of targets

	• Biodiversity objectives are embedded in CARA regulations permitting process	 Policy Recommendations developed with DEA and DAFF (external factor) 	
2.2 Market-based mechanisms incorporate biodiversity management objectives for red meat production	• Biodiversity friendly red meat production standards is developed and adopted by the meat industry	RedmeatstandarddevelopedthroughCSA.Environmentalcriteria being included in:•Woolworths "FreeRange Protocol"•SA Livestock GoodAgricultural Practicestandards used by 5major retailers	Largely achieved (and well in hand)
2.3 Amount of agricultural land in the Grassland Biome where agricultural	Biodiversity Good Management Practices DCMB is being	BGMP • 38,644ha (in Stawardshin)	Exceeded
planning, decision making and extension incorporates biodiversity management objectives	 BGMP is being implemented on 100 000Ha 22 000Ha of land in biodiversity priority areas is secured through stewardship 	 >100,000ha (elsewhere) Stewardship Declared (99,673ha) Nature reserves 1,208 ha (1) Protected Environments 96,552 ha (5) Biodiversity agreements 1,913 ha (3) In process: Protected Environment 19,325ha (3) 	Greatly exceeded
3.1 Amount of land in forestry estate in	3.1.2 - 300,000ha 3.1.3 - 35,000ha	 Setter managed >290,000ha 	Achieved
Grassland Biome under: 3.1.2 options areas 300,000ha 3.1.3 formal conservation 35,000ha		 (60,000 in process) Protected 32,780ha 52,000ha pipeline 	Exceeded
3.2 No new plantation development in biodiversity priority areas within the Grassland Biome	3.2 No new plantation development in biodiversity priority areas within the Grassland Biome	0	Achieved
3.3 Industry certification system and standards better incorporate grassland biodiversity objectives	 3.3.1 National FSC compliant Standard exist (by mid-term) 3.3.2 FSC Principles & Criteria incorporate grassland biodiversity objectives (by mid-term) 3.3 small grower certification system implemented 	FSC National Forest Stewardship Standards for South Africa (2014) a. Plantations b. Small Low Intensity Managed Forests	Achieved
4.1 Biodiversity priorities accommodated in municipal open space	20% increase overlap (over baseline of 40% overlap)	63% overlap	Achieved

frameworks (OSF) and spatial development frameworks (SDF).			
4.2: Protected areas (incl state & private land) give legal protection to refugia representative of grassland biodiversity	30 000ha	 25,117.2 ha (5PAs) gazetted; 1,238ha (6 sites) completed public participation process, awaiting signature from MEC before being gazetted 52,000ha in process through stewardship 	Achieved
4.3: Biodiversity mainstreaming tools developed and adopted by land use planners and other decision-makers in Gauteng	Tools approved and/or gazetted by relevant national, provincial or local government	 Approved Bioregional Plans (5); Guidelines (4) Provincial PA Expansion Strategy (1) 	Achieved
5.1 Biodiversity stewardship is piloted with one mining company in the coal mining region of the grasslands	One biodiversity stewardship agreement on coal mining land signed by relevant authority	 Agreement signed with Anglo Coal for 119 ha Stewardship Processes tested Pongola PE (9,244ha) Elandsberg PE (34,818 ha) 	Exceeded
5.2 Biodiversity information* used by the DMR, DWA, DEA and mining companies in the assessment and decision- making processes for the prospecting or mining of coal, and for the authorisation of associated activities * e.g. MBCP, threatened ecosystems data, areas earmarked for protection, including wetlands, offset guidelines	Biodiversity information used by DMR, DWA, DEA & mining companies	 Mining and Biodiversity Guidelines Wetland Offset Guidelines Use of BGIS DMR/WITS training 	Exceeded

309. The log-frame only captures two sets of targets (i.e. policy, and area of protected land). It largely ignores much of the knowledge development, "making the case", stakeholder processes, and tools necessary in a mainstreaming processes. Therefore, we have compiled a further table (Table 25) that encapsulates the mainstreaming process laid out in Figure 5. This provides a far better picture of all that the Project has done.

310. In Table 26, some of the mainstreaming examples in the Grasslands Project are tested against Ostrom's Eight Principles for Highly Effective Common Property Regimes. This analysis picks up weaknesses in various mainstream efforts, such as the inflexibility of the FSC certification rules. It also picks up gaps that need to be filled, such as the need for monitoring and graduated sanctions in many

examples. This suggests that a table like this may be a good tool for assessing mainstreaming that relies on collective action.

Table 25: Assessment of Grassland Project against Conceptual Framework (i.e. Emerging Practice Policy Loop)

Sector	Law/Policy	Stakeholders, Processes	Making the case for /	Land protected	Knowledge development
	1. Law/Policy	and Capacities	address market failure		
	2.Standards / Plans / Zones				
	3. Tools/guidelines				
Enabling Environment	 Tax incentive policy for biodiversity stewardship (for Treasury) National Water Resource Strategy (with DWA) Water Pricing Strategy (Draft) SIP 19 Ecological Infrastructure for Water Security proposed to Presidential Infrastructure Coordinating Committee 	 Grassland Steering Committee Biodiversity Stewardship Technical Working Group 3 National Dialogues (Grasslands Partners Forum) Umgeni Ecological Infrastructure Partnership Umzimvubu Catchment Partnership Program (EI above dams) 	 Strong case made for Environmental Infrastructure related to water Making the Case for Biodiversity report30 		 Biodiversity priority mapping (BGIS online) My SANBI internal platform for all project documents Image management system Lessons learned documents (5) Website (Biodiversity Advisor) Publications and products (see list) National Freshwater Ecosystem Priority Areas; Water yield mapping (with CSIR and others)
Agriculture	 FIRST Protected Environment Land Use Plan template Annual Operating Plan template Mpumulanga Protected Area Expansion Strategy (20 years) Developed Mpumulanga Biodiversity Sector Plan (Critical Biodiversity Areas and Land Use Guidelines with handbook and land user guidelines) and being used. This directly supports Municipal Bioregional sector Plans (3). Under review 	 Agriculture Task Team Stewardship officers established in KZN and MTPA and stewardship mechanisms institutionalized Biodiversity Good Management Practices (led to guidelines) Workshops brought realistic grazing and biodiversity sector thinking together (clarified and codified) 	• Pilots demonstrate (anecdotally) increased production and profit + improved habitats from extension	Declared (99,673ha) • Nature reserves 1,208 ha (1) • Protected Environments 96,552 ha (5) • Biodiversity agreements 1,913 ha (3) • In process: • Protected Environment 19,325ha (3)	 Held workshops to reach consensus on grassland management including grazing, fire, management practices and biodiversity ARC/GSSA research continues

1.

³⁰ This report describes a public relations exercise targeted at making the cause for biodiversity. I therefore had some hesitation including it here as by "making the case" I mean making the economic or business case in the form of increased economic output, provision of environmental services, reduced risk, etc.

	 Five-Year Management Plans and auditable Annual Plan of Operations were piloted and institutionalized (includes Red Meat Standard) Grasslands ecosystem guidelines completed Grazing and Burning Guidelines 4+1system 20 point system piloted Red meat standard developed through CSA Biodiversity inputs to CARA produced (engaging in agricultural policy) (mainly arable) 	 Training of DAFF resource auditors SANBI on Letsema (DAFF NRM working group) Facilitate bilateral meetings between DRA and DAFF to coordinate policy 			
Forestry	 Conservation Planning Tool (for existing forestry) Biodiversity Screening Tool (for new forestry) Guidelines for grasslands Management in Plantation Forests Proceedings of Symposium of Grasslands Society of South Africa and Grasslands Project Template for Stewardship on Forest Land Template for Stewardship Land Use Plans on Forest Land Integrated SFM Principles into Management Plans and Operational Procedures in Eastern Cape Lisbon Process to Certify Small Growers National Standards Development Group for FSC 	 Forestry Task Team Environmental Management Committee of Forestry SA Small Growers Sub- Committee Biodiversity Stewardship Working Group for KZN National Standards Development Group for FSC Expert Panel for FSC's Ecosystem Integrity (Principles and Criteria) Indaba – small grower forestry Forestry SA funding small crower certification process 	Pilot small scale forestry increasing income from communities, reducing pressure on critical biodiversity fragments, a and leading to demands for habitat protection	 15 PA Stewardship Plans (Nature Reserves, Protected Environments) Additional areas being done by private sector 2 Biodiversity Compatible Grazing Plans (Hogback and Umgano PE) 3 Sustainable Forest Management Pilots in KZN Mkambati SFM Pilot in Eastern Cape 	 Knowledge on certification in small grower context Symposium of Grasslands Society of South Africa and Grasslands Project
Urban	Gauteng Protected Area Expansion Strategy	• Strengthened internal partnerships within	• Sound technical information to support EIA	 25,117.2 ha (5PAs) gazetted; 1,238ha (6 sites) completed public participation process, 	• Biodiversity priority spatial databases with rules

	 Gauteng Biodiversity Stewardship Implementation Plan All 5 Municipalities have Biosector Plans (when gazetted = Bioregional Plans) Lifestyle Estate Guidelines Sustainable Criteria Development Guidelines Procedures for proclaiming Nature Reserves through NEMPAA Mechanism for establishing green servitudes Biodiversity Offect Guidelines 	 GDARD; feed into IDPs, SDFs Plans feed into EIA and Development Approval processes Urban Task Team (joint work) Municipalities trained in spatial tools New GDARD position for Stewardship at DD level 	and Development Approval processes	 awaiting signature from MEC before being gazetted 52,000ha in process through stewardship JNB has over 40 Nature Reserves Pilot green servitudes established 	 New knowledge/system for protected area proclamation processes in Gauteng New knowledge/system for implementing biodiversity stewardship in Gauteng
Mining	 Mining and Biodiversity Guidelines Wetland Offset Guidelines Stewardship Processes tested 	 Vigorous South African Mining and Biodiversity Forum 700 people trained Community of practice developed 	 Apply Mining and Biodiversity Guidelines to reduce business risk/uncertainty Link of Wetland Offset Guidelines to water use permitting likely to result in market-based approaches 	 Biodiversity stewardship Pongola PE (9,244ha) Elandsberg PE (34,818 ha) Wetland Offsets Guidelines set basis for significant future protection of wetlands through a market mechanism. 	 Detailed mapping of priority biodiversity areas Lessons from wetland rehabilitation Understanding of ecosystem valuation and exchange rules developed as basis for Wetland Offset Guidelines

Table 26: Assessment of Mainstreaming against Common Property Concepts

	Stewardship	FSC	Vryheid Red Meat Pilot	Fire committees	Coal Mining
Clearly defined boundaries (effective exclusion of external unentitled parties; and effective internalization of costs and benefits)	• Yes for land; but can't exclude others from benefiting from water, etc. benefits	• Yes	• Yes	• Yes	• Increasing understanding of value of biodiversity, and effects of interventions on it
Locally appropriate rules (for appropriation and provision of common resources; and in our case to control externalities associated with biodiversity and to improve attribution)	• To some extent. Incentives in stewardship programmes are largely locally defined	• FSC rules complex with unintended consequences. Often do not fit local circumstances	• Worked out between farmers and Meat Masters (with assistance from CSA, GP)	• Yes	Mining and Biodiversity GuidelinesWetland Offset Guidelines
Collective-choicearrangements(mostindividuals affected by rulescan participate in modifyingthem);	• Bought into, or partly participated in, making rules	• Bought into rules. But some opportunity to participate in national standards	• Partly	• Yes	Guidelines developed through stakeholder processes
Monitoring (carried out by users or someone accountable to users)	• By Province	• External	• Small communities and study groups	• Yes, because fire is important and context specific	• Would generally be undertaken by users, or someone appointed by a user, as part of their required reporting to a national entity (e.g. water Affairs) as part of requirement for a Water Use License.
Graduated sanctions (for those who violate community rules);	• No	• Inflexible and sometimes disproportionate	• ??	• ?? Probably through peer pressure	 Through Water Act Through stewardship monitoring requirements
Conflict Resolution Mechanisms (cheap, easy to access);	• Too early to know	• No. Decisions are binary and can be seen as arbitrary.	• ??	• ??	• Generally, the resolution is first via an informal interaction between govt and industry, then a formal default and appeal process, and then should this not work it could end up in a court process and potential withdrawal of rights or imposition of other penalties.
Minimal recognition of rights to organize (self- determination of the community is recognized by higher-level authorities);	• Partly, when groups of properties are gazetted	• ??	• ??	•	• Mining and Biodiversity Guidelines recognized by industry and Ministers of Environment and Mining Resources
Nested enterprises. In the	No. Province works	•	•	• Not	No. Individual basis
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case of larger common-pool	directly with individuals			necessary	
resources: organization in the					
form of multiple layers of					
nested enterprises, with small					
local CPRs at the base level					
Conclusion	Over-centralization will	 Quite centralized and 	 Working well locally, 	• Highly	• Could be effective, but central
	create problems of local fit	inflexible. Loses fit of rules	but can this be scaled	effective	monitoring will be challenging
	(of rules), commitment	and power of self-	up? Does market		
	and monitoring. It will	regulation. Dos provide	matter, or are		
	also overwhelm capacity	access to markets, but does	improvements through		
	to support planning and	it provide biodiversity	local learning?		
	auditing of plans	benefits?	_		

4.3.2. RATING OF PROJECT ACHIEVEMENTS

311. The standard GEF rating system is summarized in Table 27.

Table 27: Standard GEF Rating System

Ratings for Outcomes, Effectiveness, Efficiency, M&E, I&E Execution	Sustainability ratings	Relevance ratings	Impact Ratings:
Highly Satisfactory (HS):	Likely (L): negligible risks to sustainability	Relevant (R)	Significant (S)
Satisfactory (S):	Moderately Likely (ML): moderate risks	Not relevant (NR)	Minimal (M)
Moderately Satisfactory (MS):	Moderately Unlikely (MU): significant risks		Negligible (N)
Moderately Unsatisfactory (MU):	Unlikely (U): severe risks		
Unsatisfactory (U):			
Highly Unsatisfactory (HU):			

312. Overall the Project is more than its parts. Project design was highly innovative, well-supported by background studies and other experiences, and high levels of stakeholder participation in design are a key reason why the Project was so successful. These positive design features greatly outweigh specific weaknesses in the design of Outcomes 1 and 2, some of which simply cannot be anticipated during design and must be solved during implementation. The visions and goals that were normed during the Project design process are a major reason why the Project was able to adapt to the design weaknesses which are inevitable, especially in such a foundational and innovative project. A second weakness is the log-frame, already discussed at length. Overall, Project Design is rated **Highly Satisfactory** Table 28).

313. As noted above Project Implementation is rated **Highly Satisfactory**. Forward thinking during project design, by the Project Manager, and through an excellent sustainability planning by the Project conducted in April 2012 (Ginsburg 2013), suggests that most Project gains will be sustained; Sustainability is **Likely**.

Table 28: Overall rating of the project

	Project Design	Implementation	Sustainability
1. Enabling environment	MU	HS	L
2. Agriculture	MU	S	L
3. Forestry	HS	HS	L
4. Urban	HS	S	L
5. Mining	MS	HS	L
Project	HS	HS	L

The Terms of Reference places an "*" next to essential criteria for rating the Project. These criteria were gleaned from both the MTE and TE ToR and are summarised in the left hand column of

314. Table 29. We now summarise the entire Project as a whole.

List of GEF evaluation criteria	Project	1. Enabling environment	2. Agriculture	3. Forestry	4. Urban	5. Mining
Project concept and design	HS	MS	MS	S	S	MU
Stakeholder participation in project formulation	HS	S	MU	S	S	MU
Implementation/ execution	HS	HS	HS	HS	HS	HS
Monitoring and evaluation	HS		MS	S	S	HS
Stakeholder participation in project implementation	HS	HS	S	HS	HS	HS
Overall results (attainment of objectives)	HS	HS	S	HS	S	HS
Relevance*	R	R	R	R	R	R
Effectiveness and efficiency*	HS	S	S	HS	S	HS
Sustainability*	L	L	L	HL	L	HL
Impact	S	S	S	S	S	S
OVERALL	HS	HS	S	HS	S	HS

Table 29: Detailed overall evaluation of the project

315. **Project conceptualisation and design** was highly satisfactory, with weaknesses in the enabling environments, agriculture and mining components and log-frame being easily outweighed by the innovative nature of the Project and the leadership and participation generated during project formulation.

316. Stakeholder Participation in project design and throughout the project was a critical factor in overall success.

317. **Implementation** was Highly Satisfactory, with the Project being well led, team based, result-orientated and highly participatory. As shown in **Error! Reference source not found.** the implementation of all Outcomes is rated Highly Satisfactory.

318. **Monitoring and evaluation** was also Highly Satisfactory, with the Project Management Team keeping excellent records and databases.

319. **Stakeholder participation** was also Highly Satisfactory, with the possible exception of Agriculture which struggled to mainstream its pilot gains as the process of mainstreaming was over-simplified in the ProDoc (i.e. policy reform) and the sector is complex with the lead agency (DAFF) being restructured during the Project).

320. The **Overall Results** are also Highly Satisfactory. They are judged Satisfactory in the Agriculture sector because all targets were met even though mainstreaming remained elusive. They are judged Satisfactory in the Urban sector because targets were met but does in the end has enough been done to guaranteed the effective management of biodiversity under pressured circumstances?

321. The Project is **Highly Relevant** to both GEF biodiversity conservation priorities, and also responds to the needs for new approaches to conservation mainstreaming at national level. In this respect, the Grasslands Project should be seen as a leading global example of how to achieve mainstreaming.

322. The **Effectiveness and Efficiency** of the Project was Highly Satisfactory overall, especially the Forestry and Mining (after the MTE) Outcomes.

323. Project gains are Likely to be **Sustained**, particularly in the Forestry and Mining Sectors.

324. Finally, the **Impact** of interventions related to all Outcomes are judged to be Significant.

4.3.3. **RELEVANCE** (*)

325. The Project is **Relevant** based on the large number of hectares of globally important biodiversity protected (see p 30), and the development of mainstreaming in four sectors in South Africa.

4.3.4. EFFECTIVENESS & EFFICIENCY (*)

326. If we divide the total cost of the project (\$8.3m) by the amount of land now under stewardship arrangements (252,606), the cost per hectare is \$32. This is an exceptionally inexpensive means of achieving biodiversity conservation. It is certainly far, far cheaper than purchasing land for inclusion into formal state Protected Areas. For a comparison, cattle ranching land in South Africa is valued at about R10, 000/ha (\$1,000), good wildlife properties are worth R75, 000/ha (\$7,500) and irrigate land R150, 000/ha (\$15,000).

327. Yet, this greatly underestimates the return on investment in GEF financing which includes important stakeholder processes, guidelines and the inclusion of biodiversity priorities into formal land use planning processes. The only conclusion is that this Project was an extremely effective and efficient use of GEF financing.

4.3.5. COUNTRY OWNERSHIP

328. Although not discussed specifically in the ProDoc, it is clear at every level that South Africans support, have designed, are committed to, and have taken ownership of this Project. SANBI leadership right from the beginning, and the often mentioned participatory stakeholder processes are important explanations for this positive state of affairs.

4.3.6. MAINSTREAMING

329. The Grasslands Project provides a globally invaluable example of best practice in mainstreaming.

4.3.7. SUSTAINABILITY (*)

330. As described above, it is likely or highly likely that most or all key aspects of the project will be sustained. Of equal importance, SANBI has designed a highly effective field-policy loop that has proven to be effective for the institutionalisation of best practice into norms and policy, and for mainstreaming in particular.

4.3.8. Імраст

The Project has already had significant impact in terms of land declared under various categories of stewardship, and it is highly likely that the process developed through the Project will facilitate the demand for numerous additional stewardship sites. The impact of improved grazing practices is less certain. The effects of new grazing systems, for example need to be monitored, and the capacity to extend such practices may limit their multiplication. In the urban sector, key biodiversity sites have been secured, but there are questions about the capacity to expand this impact in the future. Gains in the forest sector are on-going, both through stewardship and improved management linked to FSC certification. The Biodiversity and Mining Guidelines and Wetland Offsets have the potential to generate large future gains in the mining sector; currently impact is low, but this aspect of the Project is new and gains are likely to be in the future. Overall the Impact of the Project has been considerable and positive.

5. CONCLUSIONS, RECOMMENDATIONS & LESSONS

The Grasslands Project, through SANBI, has been remarkably successful. The central lessons lies in the value of investing in biodiversity conservation through high quality organisations like SANBI that have scientific and individual credibility, that base conservation pragmatically in the context of development realities (rather than ideologically), and that have the confidence and capacity to recruit high quality specialists and to manage stakeholder processes. An important indicator of SANBI's excellent capacity is that it is truly able to undertake adaptive learning processes. As can be seen in the text, most or all of the interventions, including the project approach as a whole, were based on carefully considered change hypotheses, often in the form of a conceptual diagram (see Figure 4, Figure 10, Figure 11, Figure 14). Interventions was carefully monitored, as much through the continual subjective assessments of experts as through objective data, and this data and experience was discussed regularly in learning circles such as the quarterly meetings. The Project was clearly able to adapt to these lessons. Importantly, the project did not only bring stakeholders together, but through quality facilitation displayed considerable competence and tact in managing joint work plans to achieve joint products and even visions. As a result the return on investment in scarce biodiversity dollars was exceptional.

331. The fact that the Project was placed in SANBI and was designed as part of a longer term process bodes well for sustainability, a subject to which the Project clearly gave considerable thought throughout. This is another sign of an excellent organisation.

332. A key lessons is the power of maps of biodiversity priority areas, including water (and perhaps, later, poverty) in leveraging genuine change, and in supporting planning processes at many levels. As noted elsewhere, GEF investment in similar mapping in other counties could well represent an important investment, with the caveat that South Africa's biodiversity maps are the result of many dedicated people working together over many years.

Recommendation 27: Biodiversity maps are an important, even critical, entry point for mainstreaming biodiversity into development planning processes. Funding of such maps therefore should be considered by GEF early in mainstreaming initiatives.

333. An important outcome of this Project is the tested and highly effective practice-policy loop that has emerged as mainstreaming strategy. This is a model of global importance and is described and discussed in detail elsewhere in the document.

334. In this regard, the Grasslands Project has demonstrated the efficacy of stakeholder processes and the democratisation of biodiversity conservation. Bringing a wide range of people together has resulted in far better framing of joint objectives and of causative models, and has led to far better biodiversity solutions. A key lesson is that most people, ranging from miners to farmer to foresters to urban managers want to conserve biodiversity if they know how and especially if it benefits them. This leads to two critical conclusions.

- First, there is considerable merit in replacing top down conservation with much more inclusive processes. As we have seen, there is a strong demand by farmers, miners, foresters and urban planners to include biodiversity in their operations. Note that SANBI was particularly well-suited to initiating this process because of its participatory ethic and entrepreneurial/progressive outlook. This might be less the case with traditional big government natural resource agencies,
- Second, the single-species derived definition of biodiversity may be an important barrier. At the local level, "making the case" for biodiversity through ecosystem services provides much more traction than a tired, weary species approach that is viewed as ideological rather than pragmatic. This suggests that the operational definition of biodiversity used by GEF may need to be re-configured in mainstreaming approaches (see Figure 1).

Recommendation 28: Reconsider the operational definition of biodiversity in mainstreaming projects to place more emphasis on ecosystem health or services (and perhaps less on single species diversity per se) 335. However, achieving mainstreaming within a five year project cycle is highly unlikely without a partner as strong as SANBI. Even in this Project, it is likely that twice as much would have been achieved from the same budget spread over twice the time.

336. Finally, the growing length and complexity of Project documentation including the ProDoc and PIR need to be assessed, as they have reached the tipping point of retarding rather than enhancing project management. The use of the log-frame and log-frame approach also needs to be carefully considered. This is discussed below.

5.1. CORRECTIVE ACTIONS FOR THE DESIGN, IMPLEMENTATION, MONITORING AND EVALUATION OF THE PROJECT

337. No corrective actions are required

5.2. ACTIONS TO FOLLOW UP OR REINFORCE INITIAL BENEFITS FROM THE PROJECT

338. The Grasslands Project has generated a number of important lessons. It has demonstrated how to achieve mainstreaming, and could be used to respond to the criticism that GEF has spent \$1.6 billion on mainstreaming with no credible evidence in the literature to demonstrate that mainstreaming works, and far more written theoretically than about how to do mainstreaming in practice. SANBI and partners are obviously well placed to respond to these deficiencies either through a book that captures the full experience, or through the publication of a series of peer-reviewed papers. It is important that efforts or resources are found to facilitate highly experiences scholar-practitioners who often "don't have the time" or sometimes the academic confidence to publish their experiences. There is also much to be gained by subjecting this experience to further academic review, perhaps through workshop processes that strengthen practical lessons with theory and vice versa.

339. The project made several interventions that are effectively experiments in improved biodiversity management on production landscapes that require scientific evaluation before they are rolled out, and also as the basis of further mainstreaming. A set of independent studies, perhaps through universities, should assess whether and by how much production, profits and biodiversity were improved by pilot interventions. Key practices that need to be carefully assessed and validated include:

- biodiversity good management practices including the combination of 4+1 grazing practices and 20-point farm planning (in the red meat standards pilot)
- the combination of land use plans and audits on biodiversity in the Wakkerstroom demonstration site.
- the effects of conservation farming. This was not specifically part of the Project, but rather was sidestepped, yet there may be significant benefits in terms of soil conservation and water quality and production.

340. The experience of the Grassland Project in the development and application of certification and standards is profound. This experience is worthy of further analysis and publication, and should be captured through detailed analysis (and publication) of these intense experiences. This analysis should include an analysis of the transactions costs of establishing certification and standards, their costs and benefits, and their ultimate effects on biodiversity. The process of mainstreaming through certification is also worthy of detailed analysis.

341. Seriously consider undertaking an intellectual and practical synthesis and evaluation of all components in the Project with a view to developing a better conceptual understanding of the idea of "making the case" for biodiversity. This might be developed through a learning group that included Project members and academics, and should presumably include (practical) resource economist.

342. It is well worth undertaking a detailed evaluation of the long term economic and social consequences of "business as usual" versus the "flip to a bio-experience economy" in Nzima Protected Environment with the intention of making an economic cases for a major investment to flip this economy from one dependent on government and environmental subsidies to one that is self-sustaining through the biodiversity economy including tourism, payments for water production and so on.

343. Careful consideration should be given as to how to support the declaration, planning and auditing of stewardship sites given the anticipated rapid growth in such sites. This could be part of the civic and democratic control of natural resources suggested below.

344. The challenge and value of urban protected areas is an area that needs to be thoroughly addressed before this important opportunity and urban service is lost and overwhelmed by urban expansion. SANBI should consider commissioning studies and policies relating to the long term contribution of protected areas to urban living in South Africa. Specific attention should be to developing game parks accessible to the urban poor and middle class, such as Soweto. As noted by Shelhas (2001) the persistence of the national park ideal in the USA owes no small measure to their alignment with the needs of middle class Americans.

5.3. **PROPOSALS FOR FUTURE DIRECTIONS UNDERLINING MAIN OBJECTIVES**

345. Several lessons emerged during the Terminal Evaluation. The first was the willingness of landholders to consider conservation. The second were glimpses of the power of civil society in driving conservation, both through sector forums but even more importantly in terms of landholder communities; for example, fire associations, farmer learning groups, and conservancies have considerable untapped potential as the basis of the democratization of self-responsible conservation. The third observation is that the combination of good science and good extension has considerable potential to improve crop, livestock and wildlife production, with simultaneous gains in biodiversity and ecosystem services. Finally, there is strong theoretical case to be made for developing local collective action as the foundation for a national conservation initiative, that can be guide both by rigorous theoretical principles (Ostrom 1990) and well-tried practice (Child and Child in press).

346. This leads to the suggestion to consider a national mainstreaming project targeted at improved conservation on farmland. Reversing top-down conservation, this should be built around developing the bottom up civic capacity of landholders to use collective action for the self-design, self-monitoring and self-regulation of biodiversity in its broadest terms – ecosystem services, soil, water, forestry, wildlife and species. In other words, this Project should not be mainstreamed in Agriculture but as Conservation Land Management. Building local civic capacity to set rules, monitor them and sanction deviation (see Ostrom's eight principles for long enduring common property regimes) could well address the challenges identified in the Grasslands Project of scaling up extension and the planning and supervision of stewardship sites.

347. The recommendation is to build a civic system based on communities (delineated by sub catchments) that are empowered to regulate themselves. This will need to be part of a larger system.

- At the meso level, consideration will need to be given to the supply of knowledge and ideas (given the power of and demand for extension illustrated by the Grasslands Project), and to facilitating horizontal and vertical learning and communication in the service of landholder groups.
- At the macro-level, these structures will need to be framed legally and operationally, including a court of appeal, a land/conservation inspectorate, and research and knowledge creation.
- Local civic conservation communities/committees will provide fertile ground for the implementation of new knowledge, as we have also seen in the Project, but capacity to create, organize and disseminate this new knowledge is necessary.
- Specific technical inputs will be required to address regulatory issues, for example the over-regulation that is currently constraining the 16 million hectare wildlife sector, but is not successful dealing with problematic issues. Here, again, and learning from the Grasslands Project, the development of guidelines and regulations based on much more inclusive process are highly likely to be beneficial. In summary, serious consideration should be given to developing and empowering civic institutions as the primary mechanism for internalising the costs and benefits of biodiversity into production landscapes.

5.4. BEST AND WORST PRACTICES IN ADDRESSING ISSUES RELATING TO RELEVANCE, PERFORMANCE AND SUCCESS

348. The monitoring surveys to assess the uptake of the Mining and Biodiversity Guidelines conducted by Outcome 5 provides an important precedent for other mainstreaming Projects and shows how they can and should monitor their effects even within the timescale of the project cycle.

5.5. SUGGESTIONS REGARDING PRODOCS, LOG-FRAMES AND PROJECT IMPLEMENTATION REPORTS

349. Within the text a number of comments and recommendations are made about the Pro-Doc, Log-Frame, PIR and project management documentation in general. As noted, this now appears to have passed a threshold where volume and complexity of documentation are reducing performance capacity.

350. The Pro-Doc is a critically important document, basically the bible for managing a project. However, it is becoming overcrowded because it is serving different functions – it guides project implementation, and it also justifies the project at GEF and other high levels. Consideration should be made to streamlining the ProDoc, and perhaps splitting it into two: a project justification document, and a project implementation document, or a project implementation document to which mandatory justification annexes are added. Thus certain sections of the ProDoc such as the incremental cost analysis, agreements, incremental cost matrix, county drive-ness, GEF eligibility, linkages with GEF and other programmes should be annexed. These in any case tend to become rather formulaic and dry, perhaps because their purpose is not always understood.

351. On the other hand, and certainly if projects are to be treated as learning experiments, a short section should be added to the log-frame narrative to succinctly describe the change hypothesis that is being captured by the log-frame, and that is being 'tested' by the project.

352. The log-frame in this project was weak, creating difficulties for evaluators and hampering the use of the log-frame as the adaptive management tool it can be. This weakness is not limited to the Grassland Project. If the log-frame is to remain central to project implementation and evaluation, then:

- Consideration needs to be given to utilising a well facilitated log-frame process in which stakeholders (1) undertake a situation analysis (2) develop a shared model of the project and (3) frame the objectives, indicators and assumptions in language understood by all.
- Even if a log-frame process is not used, the team compiling a ProDoc should have a good understanding of log-frames, and their cause-effect logic
- There is much to be gained by training key participants should in how to use a log-frame to manage a project.
- All project reporting should be directly related to the log-frame, and duplication should be avoided. Serious consideration should be given to unifying and simplifying project reporting through a five column reporting matrix (Table 6): objective, target/indicator, status, problems faced and corrective action
- To incorporate risk tracking and management into the log-frame reporting matric, consider adding a fourth column in the log-frame that, in identical fashion to the middle column includes indicators to measure each risk factor as well as the means of verification for tracking risks and assumptions. This will link risk tracking to the quarterly review and reporting process, rather than as a separate and unlinked activity.

5.6. KEY LESSONS

353. The spatial mapping of biodiversity at a national scale provides a powerful tool to influence planning at all levels. As we see in the Grasslands Project, a single integrated map is a useful planning tool is rapidly absorbed into all levels of planning because it is spatial, reliable and easily accessible. A single integrated map provides a one-point reference for any biodiversity priority enquiry. A map is also easily incorporated into other spatial planning processes.

354. The Grasslands Project has demonstrated that we need to seriously re-think the policy process within the confines of the project cycle. Policy reform can learn a lot from the Grasslands Project in using careful combinations of stakeholders working to solve practical problems in ways that result in a change process that is encapsulated in new norms to standards and, presumably in the long term, to policy

355. In the definition of biodiversity used for mainstreaming, consideration needs to be given to redefining the term biodiversity to include (1) the importance of ecosystem health and local services as a means to (2) conserving (species?) biodiversity and global biodiversity value.

356. In mainstreaming projects, consideration should be giving to ensuring that log-frames capture a mainstreaming process including (a) knowledge development (b) specific targets in terms of land use change (c) a clear case for biodiversity in production systems (d) inclusion of stakeholders to ensure 'norming' of new processes and capacity development and (e) institutionalisation through tools/guidelines, standards/plans/zones as a stepping stone to the larger goal of policy/legal reform

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7. ITINERARY AND INTERVIEWS

Date	Event	Name	Position
8 May	Preparatory Meetings	Anthea Stephens Mark Botha Stephen Holness	Grasslands Project Team
9 May	Meeting and field trip (Rietvlei Nature Reserve) on Urban conservation	Petrus Links Susan Stoffberg Terence Venter	 Stewardship data, Gauteng Province West Rand District Municipality, Environmental Department GDARD, Assistant Director, Biodiversity Stewardship

		1	
		Ernest Wohlitz	Tswane, Environmental Management Department
		Mahlodi Tau	Ecological Infrastructure Coordinator, SANBI
		Abigail Kamineth	• GDAPD Stewardship
		Rudzani Mukheli	ODARD, Stewardship City of Tshwapa
		Leloko Puling	City of Tshwalle Tshwalle Tshwalle Tshwalle
		5	• Tshwane, Environmental Management
		Riaan Marais	 Manager, Rietvlei NR
19 May	Inception meeting held at SANBI	Kristal Maze	Chief Director: Biodiversity Planning & Policy Advice, SANBI (chair of
		Anthea Stephens	 grasslands steering committee) Director: Grasslands Programme, SANBI
		Aimee Ginsburg	 Learning Network Coordinator, SANBI consultant
			Policy Advisor, SANBI consultant
		Mark Botha	Learning Network Officer, SANBI
		Kennedy Nemutamvuni	• Junior Biodiversity Researcher (intern),
		Maphale Matlala	SANBI
		Budu Manaka	Urban Coordinator, SANBI/GDARD
		Steve Germishuizen	Forestry Coordinator, Forestry South Africa
		Stephen Holness	Coal Mining Coordinator, SANBI
			consultant
		Kiruben Naicker	• Director: Science Policy Interface, DEA (steering committee member)
			Director: Biodiversity Conservation DEA
		Wilma Lutsch	(steering committee member)
		Invited but not present:	Programme Manager Environment and
		Maria Mbengashe	Energy, UNDP (steering committee
		Mahlodi Tau	member)
		Angus Burns	Ecological Infrastructure Coordinator, SANBI
			Manager, WWF-SA Grasslands Programme
19 May	Meetings	Ramakgwale Mampholo	• DAFF
		Mahlodi Tau	Ecological Infrastructure Coordinator, SANBI
		Tsumbedzo Mudalahothe	Agriculture Coordinator, SANBI
20 May	Phone	Johan Beukes	CoalTech
20 May	Phone	Stephinah Mudau	Chamber of Mines (Head of
- -		Matome Makwela	Environmental Division)
20 Mav	Meeting	John Dini	Director, Ecological Infrastructure
	B		SANBI
20 May	Phone	Ingrid Watson	• WITS
20 May	Phone	Patti Wickens	South African Mining and Biodiversity
			Forum / de Beers Environmental Manager
20 May	Phone	Valerie Killian	Department of Water Affairs

21 May	Maining Field Trip,	Arno De Klerk,	• Researcher, Water Ecosystems & Human
	Zaalklapspruit		Health research group, Natural Resources
			and the Environment, CSIR
		Kyle Harris	Consultant, PrimeAfrica
		John Dini	Director, Ecological Infrastructure, SANBI
22 May	Wakkerstroom:	Angus Burns, Vanessa Stone, Ayanda Nzimande, Sam Mnguni	 WWF Grasslands Team Leader BSO Officer, WWF BDS Officer, WWF IAP Officer, WWF
		Dudu Khena Derek Ruiters Nomcebo Kunene	 BDS Officer, WWF EKZNW Stewardship team Manager, Stewardship, MTPA Stewardship Team
22 May	Visit to commercial	Horst Filter Johan	Wakkerstroom farmers:
22 Widy	farmers in Upper Pongolo Stewardship	Klingenberg and Herman van Wyk	• warkerstroom farmers.
22 May	Visit to Land reform communities	Bambanani and Ukuthanda Ukukhanya Resettlement Farmers	Members of the Ukuthanda Ukukhanya Community Property Association
22 May	Visit to Land Reform / Stewardship communities	Nkosi Nzima, three elders, one woman	
23 May	Visit to Land Reform	Nkosi Mabaso, three men,	
5	Stewardship / Good	one women	
	Management Sites		
23 May	Elandsberg Farmers	Farmer 1	
		Farmer 2	
24-25 May	Pietermaritzberg	Analysis and writing	
26 May	Red meat pilot, Vryheid farmers	Alistair Patterson, Karel Pienaar	 Private consultant (ag extension) KZN Department of Agriculture, Extension
		Carl Thiele	Pilot Farmer
26 May	Mondi Field Trip (Mount Shannon)	Dave Everard	Divisional Environmental Manager, Sappi Forests Environmental Specialist (Mondi South Africa)
		Jacqui Shuttleworth,	Environmental Specialist Zululand
		Lize Shaw	(Mondi Limited)Social facilitation specialist, Mondi
		Velapi Dlamini Obet Richard Lechmere- Oertel	 Mount Shannon Forester, Mondi ?? ?? Biodiversity Planning Consultant,
			Forestry South Africa
27 May	Ozwathini	Gilbert Plant,	• Forestry Extension consultant
		Bongani Phama (grower),	Local Grower
		Dongani Ndiovu ()	• UCL extension forester
27 May	LIFIP meeting	Keven Zunakal	Local people SANDL Committeet
∠/ iviay	OEII meeting	Nevali Zullekei	SANBI Consultant

		Jim Taylor	WESSA
28 May	GRADR Meeting, JNB	Eleanor MacGregor Loyiso Mkwana Budu Manaka	 Director, Conservation Chief Director- Sustainable Use of the Environment (SUE Branch) Urban Coordinator
28 May 29 May	Agri-SA Conservation South Africa	Nic Opperman Tsumbedzo Mudalahothe Rosanne Stanway	 Environment, Water and Climate Change, AgriSA Agricultural Coordinator Red Meat Standards Project
30 May	Debrief with Grasslands Team	Angus Burns Anthea Stephens Mahlodi Tau Kennedy Nemutamvuni Kristal Maze Steven Germishuizen Budu Manaka Maphale Matiala Stephen Holness Emily Botts Amy Ginsburg Tsumbedzo Mudalahothe Mark Botha	 WWF-SA Director: Grasslands Programme El Coordinator LNO CD Forestry Coordinator Urban Coordinator Grasslands Project Mining Coordinator Consultant, Lessons Learned LNC Agriculture Coordinator Consultant, Policy
5 June	Telephone	Maria Mbengashe	Programme Manager Environment and Energy, UNDP (steering committee member)