BENEFIT SHARING WITH LOCAL IMPACTED COMMUNITIES DURING PROJECT IMPLEMENTATION

OVERVIEW OF THE LITERATURE AND PRACTICAL LESSONS FROM THE BERG RIVER DAM

April 2010

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1. PURPOSE OF THIS DOCUMENT

This document has been written for a wide audience. Its objective is to serve as an initial reference text. The aim is to provide an introductory information source to practitioners in the water sector. The purpose of this document is to provide an overview of the objectives of benefit-sharing for local impacted communities during project implementation of water resource infrastructure. This document focuses on the theory and principles of benefit-sharing and uses the Berg Water Project (BWP) in the Western Cape of South Africa as a practical case study to illustrate how benefit-sharing was applied during the construction phase.

2. THE CONCEPT OF BENEFIT SHARING

This overview section on the concepts and definitions of benefit sharing is based on the UNEP Compendium on "Dams and Development" (2007) and on the Report of the World Commission on Dams (2000). These reports and the associated specialist studies refer mostly to large dam projects. However, these benefit sharing mechanisms are not exclusive to the unique nature of dams but are applicable to other types of water infrastructure development as well as in transboundary contexts. The publications on benefit sharing by Milewski *et al*. (1999), Égré (2007) and Bachurova (2010) are the main sources of reference for this section. They provide general summary overview information on the characteristics and objectives of benefit sharing mechanisms.

Égré *et al.* (2002) provide three strong arguments supporting benefit sharing from dam projects with project-affected populations:

- First, dam projects may generate a significant rent for dam owners that can be shared with project-affected populations;
- Secondly, there are several ethical reasons for redistributing monetary benefits to project-affected populations; and
- Finally, dams can be conceived as part of a strategy to foster regional and local development.

According to Égré *et al.* (2002) project-affected people sacrifice their access to and use of local natural resources that contribute to project development. There is thus a strong ethical argument that local populations who have to sacrifice water and land uses should receive part of the monetary benefits that accrue to populations and enterprises outside the affected area. Milewski *et al*. (1999) argue that mitigation measures, compensation, community development and livelihood restoration initiatives cannot be considered as benefit sharing mechanisms, because they are required to mitigate negative environmental and socio-economic impacts. My position on the concept of benefit sharing is that it includes a wide range of mechanisms which provide both monetary and non-monetary benefit sharing mechanisms.

2.1 What is benefit sharing?

Dams affect the livelihood of communities in the immediate vicinity of the works, the impoundment zone and downstream areas. Communities in the immediate vicinity of the project are logically the ones who should benefit from the project, particularly during the construction phase. Dams tend to be implemented for the long-term benefit of wider regional and/or national constituencies (Milewski *et al*., 1999). However, communities most negatively affected by dams, are very seldom the recipients of the long-term benefits flowing from these

projects. The objective of benefit sharing is to leverage long-term benefits for those communities negatively affected by water development projects.

According to Bachurova (2010) the concept of benefit sharing is highly relevant both in the political praxis and the scientific literature regarding integrated water resources management. The principal idea of the concept is to share the benefits resulting from the development of the water resources with directly and indirectly affected communities. Within this broad definition, two dimensions of benefit-sharing can be differentiated, i.e.: (i) transboundary benefit sharing; and (ii) benefit sharing with the affected local population (Table 1).

Table 1: Benefit sharing can occur within two different spatial contexts; that of a transboundary context and also within the context of locally affected communities (source: Bachurova, 2010).

Benefit sharing contexts	Description
Transboundary benefit sharing	Transboundary benefit sharing is based on the presumption that a common management of water resources generates net benefits compared to the unilateral development of the water resources. The concept is about the cooperation of riparian states for the use, protection, or joint development of shared water bodies (transboundary rivers, lakes and aquifers), whereby the riparian states focus on the benefits from water cooperation and the win-win options instead of a potentially conflicting water sharing.
Benefit sharing with the affected local population	Benefit sharing with the affected local population refers to a commitment to channel some of the returns generated by the operation of a project back to the population of municipalities, where water resources are exploited and infrastructure projects are developed.

Bachurova (2010) states that one of the main critiques of large-scale infrastructure development in developing countries is the notion that most of the benefits go to urban communities, industries and national power supply systems, while at the same time the directly affected communities are the ones bearing economic, environmental and social costs of the infrastructure project. In this context, it has been recognized, that modern compensation policies for project affected people should involve not only basic in-kind and cash compensation for lost assets and lost access to resources, but also measures that aim to restore and improve the livelihoods of the affected populations in the long term (Bachurova, 2010).

2.2 How can benefits be shared?

Benefit sharing has recently become a key element in strategies for the sustainable development of large infrastructure, such as dams, aiming at equitable distribution of project benefits particularly with the project-affected people (Bachurova, 2010). Large water infrastructure generate direct monetary revenues. According to Milewski, *et al.* (1999) there is growing consensus that local stakeholders should share the benefits of such projects in addition to being compensated for the inevitable environmental and social costs of developing such projects. Milewski, *et al.* (1999) and Égré (2007) strongly argue that monetary benefit is the only form of benefit sharing mechanism. This paper considers this view to be highly restrictive as in effect it implicitly adopts a social welfare approach to development. In addition I believe that Milewski, *et al.* (1999) and Égré (2007) are perhaps not fully appreciative of the wide range of institutional challenges and water price sensitivity that exist in developing countries. Where large water infrastructure is developed on a subsidy

basis for poverty alleviation and mainly for irrigation, then monetary benefit sharing mechanisms are inappropriate and unaffordable for water users. There are a wide range of benefit sharing mechanisms that should be considered for the development of large water infrastructure (Table 2).

Table 2: Appropriate benefit sharing mechanisms are dependent on the context, which is dictated by institutional arrangements, sensitivity of water users to tariffs and the purpose of the water infrastructure (Source: Bachurova, 2010 and Égré, 2007).

Monetary benefit sharing	Revenue sharing	Revenue sharing with the local or regional authorities can be arranged through royalties tied to the output of the project (e.g. power generation), or through water charges. The amounts are either settled through negotiations between the local/ regional authorities and the promoter, or defined in the legislation.
	Preferential rates	Preferential electricity rates or water fees can be negotiated between the local/ regional authorities and the infrastructure operator. In the hydropower context, an important remark in the application of this benefit sharing mechanism is the notion that the benefits would extend to the electricity consumers; however, there may be still local population without electrical connections at all. An adequate measure in such a situation would be to combine this benefit sharing approach with rural electrification programs, for instance.
	Property taxes	Another instrument for benefit sharing is taxing the infrastructure operators on the project's property value or other basis. The State legislation defines the taxes to be paid to the local/ regional authorities, based on a percentage of project sales or net income.
	Equity sharing / full ownership	If communities have the means and willingness to invest in the project, benefit sharing can be extended to equity sharing. In such a case, the local authorities get a greater degree of autonomy over the redistribution of the benefits. However, they also share the risks and responsibilities of the venture.
	Development funds	Development funds financed from, for example, power sales and water charges may be established to foster economic development in the project-

		affected area. The funds can be set up to provide additional long-term compensation to project-affected populations.
Non-monetary benefit sharing	Livelihood restoration, mitigation, compensation and socio-economic development	Livelihood restoration and enhancement – by securing income, for example through employment in the construction and in the operation of the project. Depending on the benefits of the water infrastructure, employment can be also offered in the agricultural, fishery or recreational sectors.
	Community development	Improved community development can be achieved through increasing the access and quality of primary services, such as domestic water supply and electrification, transportation, health and education. The infrastructure project should facilitate the access to markets and common resources (e.g. forests).
	Catchment development	Catchment development triggered by the infrastructure projects could improve the opportunities to generate benefits from the management of the catchment area, for example through improved irrigation, reforestation, etc.

2.3 Women's participation in benefit sharing

Women and men experience development interventions differently. Development related impacts are not gender neutral because of differences in responsibility, vulnerability, and capacity for mitigation and adaptation. Gender-based patterns of vulnerability are shaped by the value of and entitlement to assets, access to financial services, education level, social networks, and participation in local organizations. In most circumstances, particularly in poorer communities women are more vulnerable to the negative impacts of large infrastructure development to livelihoods and physical safety. Policy emphasis and project effort need to be directed to ensure that women and men have equal economic and social opportunities. Empowerment and participation of women in decision making can lead to improved environmental and livelihood outcomes that benefit all.

3. BERG RIVER DAM CASE STUDY

3.1 Benefit Sharing Strategy

The Benefit Sharing Strategy for the Berg River Dam was of a non-monetary category and was divided into three components: (i) a policy; (ii) a strategy; and (iii) implementation mechanisms (Table 3). The vision for the Strategy was provided by an overall preference policy. Operational strategies in support of the preference policy were outlined in the Environmental Management Plan. A variety of implementation mechanisms were developed to give effect to the benefit sharing strategy (Table 3).

Table 3: The Berg River Dam benefit sharing strategy had a specific focus of delivering preferential benefits to the local communities during the construction period.

Benefit Sharing Components	Mechanisms for implementation
Policy	Franschhoek First Policy
Strategy	Environmental Management Plan
Implementation	Contract specifications: • Preferential employment • Preferential procurement • Skills training
	• Compensation for land acquisition
	• Transfer of construction housing
	• Community training, health and welfare
	• Sustainable Utilization Plan
	• Exit strategy

The socio-economic strategy contained in the Environmental Management Plan sought to develop effective operational strategies to maximise social benefits by locating the opportunities provided by social processes and social capital (Table 4). The following broad categories were used for the socio-economic strategy contained in the EMP:

- Land Use and Agriculture
- Employment
- Tourism / Recreation / Aesthetics
- Economic Issues
- Occupational and Community Health
- Safety and Security
- Traffic
- Archaeological and Cultural Resources
- Housing and Community Infrastructure
- Water supply and water quality
- Natural Resource Utilisation
- Public Participation Process

Table 4: The Berg River Dam Socio-Economic Strategy contained in the Environmental Management Plan provided the framework for the means by which benefits would be shared.

THEME	OBJECTIVE
Public Participation Strategy	To ensure the involvement and participation of the public in the project planning and implementation processes through the Environmental Monitoring Committee (EMC) and other project role-players.
Compensation and Mitigation Strategy	To compensate and mitigate for direct and indirect project impacts resulting either a physical or economical loss
Community Institutional and Economic Enhancement Strategy	To ensure involvement, participation and ownership in project related processes, during the planning, implementation and operations and maintenance phases of the project, by the EMC and their constituents as well as other as yet to be identified interested and affected parties
Employment Strategy	*Recruitment Strategy*: to maximise employment opportunities for the local communities and reduce the influx of a foreign labour force whilst ensuring an effective construction process
	Skills Audit: to capture all project relevant skills in the project area with the aim

	to ensure maximum local employment
	Recruitment Manual: to include a list of employment opportunities that will become available during the project planning, construction and post-construction phases and provide guidelines on procedures to be followed by aspiring employment seekers and employers
	Employment Information Desk: to establish an employment information desk to assist with the day to day management of project related labour issues
	Training Strategy: to identify and maximise on appropriate training and skills transfer opportunities that will enhance the skills level of the local labour force during the pre-construction, during construction and after project implementation. It is recommended that training and skills development activities start during the pre-construction period
Procurement Policy	To ensure that local businesses, especially those of Historically Disadvantaged Individuals, women and Small Micro and Medium Enterprises get allocated the maximum appropriate share of project related business opportunities
Housing and Infrastructure Policy	To ensure that construction related housing and service delivery are designed and implemented so as to assist in alleviating local housing shortage and service delivery stumbling blocks.
Education Strategy	To ensure that probable impacts on project area educational facilities are mitigated
Health Strategy	*Community Health and Welfare Strategy*: to mitigate any negative impacts on the health and welfare infrastructure in the project area that may be caused by the project, and to implement measures to enhance the capacity of existing health infrastructure to achieve such mitigation.
	Occupational Health and Safety Strategy: to ensure that during the project construction process and the operations and maintenance phases of the project, employees receive adequate health support from the project team for work-related health problems
Traffic Safety Strategy	To ensure that appropriate traffic management measures are planned and implemented, especially during the construction phase with the expected major increase in both heavy and light vehicle traffic
Archaeological and Heritage Strategy	To ensure that archaeological and heritage resources are managed in accordance with relevant legislation and in consultation with all relevant interested and affected parties
Safety and Security Strategy	To ensure that the expected increase in safety and security risks are mitigated through additional security at the construction sites, additional community policing in the project area and other measures agreed to by the police and the community
Social Monitoring and Evaluation Strategy	To ensure that the project intervention process is monitored with the aim of implementing corrective measures if and when required and to ensure that the mitigation strategies are working as intended
Dam Safety and Emergency Preparedness	To ensure the planning and implementation of an appropriate dam safety strategy including the development of an early warning system for downstream residents in case of severe flooding or dam failure

3.2 Benefit Sharing Policy

The Benefit Sharing Policy for the project was called the *Franschhoek First Policy*. It was a policy designed to give preference to the local communities who were directly impacted by the project. The policy statement describing how preference will be affected is outlined in Box 1.

Box 1: The Franschhoek First Policy was designed and implemented to ensure that the BWP optimised training, procurement and employment to the benefit of the local communities during the construction period.

FRANSCHHOEK FIRST POLICY

BACKGROUND

The Environmental Management Plan (EMP) of the Berg Water Project (BWP) defines the following objectives as central to the BWP recruitment and procurement processes, namely:

- ⇨ To maximize employment opportunities for the local communities
- ⇨ To minimize the utilization of imported labour within the ambit of applicable legislation
- ⇨ To maximize contracting, training and development opportunities for local businesses, HDI-owned businesses and SMMEs so as to ensure maximum procurement opportunities

Against these objectives, the Franschhoek First Policy (FFP) was developed and subsequently endorsed by the BWP Environmental Monitoring Committee (EMC).

METHODOLOGY

The implementation of the FFP will be affected through the:

- ⇨ BWP Employment Information Desk; and
- ⇨ BWP Contractors

BWP Employment Information Desk

The Employment Information Desk has the responsibility to assist BWP contractors to implement the FFP by:

- ⇨ providing preference of employment to project area residents who participated in the Skills Register Survey of 2002 / 2003.
- ⇨ providing BWP contractors direct access to project area residents seeking employment
- ⇨ monitoring whether set employment and procurement targets are being met with specific reference to appointment of local employment seekers and local businesses
- ⇨ providing BWP contractors access to project area based SMMEs who participated in registering their businesses on the database
- ⇨ providing training and development opportunities to project area based SMMEs

BWP Contractors

Berg Water Project Contractors are bound to meet specific project area / local employment and procurement target percentages in terms of their tender requirements. These target percentages were defined to ensure maximization of local employment and procurement inputs in the project.

Public Participation and Communication Programmes

The Berg Water Project Public Participation and Communication Programmes has the responsibility to communicate the implementation status and the meeting of local employment and procurement targets on the project to the residents of the project area.

CUSTODIANSHIP

The TCTA has initiated the FFP in consultation with the project area residents to ensure that the BWP makes a positive contribution to maximizing local employment opportunities and to ensure a decline in project area unemployment rates.

Upon completion of the BWP it is foreseen that the continued implementation of the FFP will revert to project area business people in close consultation with local government structures.

3.3 Key Implementation Mechanism for Benefit Sharing

Benefit sharing on the BWP consisted of the following implementation mechanisms:

- Contract specifications for preferential employment, procurement and skills training
- Compensation for land acquisition
- Exit Strategy

All the benefit sharing mechanisms on the BWP were conceptualised and implemented using a stakeholder and process-oriented approach. Stakeholder engagement was seen as a critical part of facilitating stakeholder and local project community involvement and community engagement.

3.3.1 Contract Specifications

The benefit sharing policy (called the Franschhoek First Policy) was developed by TCTA to ensure that employment, procurement and training opportunities for local communities are maximised. The policy has been given effect by the specifying of socio-economic targets through the contract documentation of the various contractors on the BWP (Table 5). The contract documentation specifies targets for preferential procurement; preferential employment; and training.

Table 5: The contract specifications for preferential employment, procurement and training outlined the means by which benefits would be shared with local communities.

PREFERENCE	OBJECTIVES
Employment	Local communities were given employment preference by stipulating target percentages (of total person hours) in the contract specifications that Contractors were obligated to adhere to. The main dam Contractor for the Berg River Dam was contractually compelled to achieve a local employment target of 75% of his total cumulative employment hours.
Procurement	Preferential procurement objectives were achieved by specifying procurement targets as a percentage of the total contract value. Percentage procurement targets for procuring goods and services from the following categories were specified: • Black Empowerment business (is a business that is 50.1% owned by black persons) – 15% target of 25% of the total contract value • Black Economic Empowerment business (is a business that is at least 25.1% owned by black persons) – 20% target of 25% of the total contract value • Local enterprise or local business - 5% target of 25% of the total contract value • Small, medium or micro enterprise - 10% target of 25% of the total contract value
Training	Contractors had to submit a training policy and plan in response to TCTA's policy of preferential training of local workers. One of the primary objectives for training was to ensure local skills acquisition through training provided by contractors and TCTA. Training occurred on the following levels: • *Community training*: The bulk of training consisted of short courses aimed at addressing particular community concerns, e.g. traffic safety, HIV/Aids training for workers, how to write a CV. • *Construction skills programmes*: The bulk of training that occurred was in the form of short courses that provide learner credits, but that on their own do not result in a qualification. • *Learnerships*: These programmes run over years and result in certification as a tradesperson. .

	• *Operator testing*: Operators learn the basics through gaining practical experience on site and are then tested by a registered assessor before they can officially operate equipment on site. • *Core workers training*: Core workers (permanent staff of contractors) have mainly gained their training through many years of experience, and sometimes through extensive training. • *On-site apprenticeship*: This is informal learning that happens through practice on site, and through the willingness of supervisors to transfer their knowledge to local learners.

3.3.2 Compensation for Land Acquisition

Land acquisition was influenced by the engineering design (in terms of the footprint of the infrastructure) and project influences on the biophysical and social environment. The objective for land acquisition was to minimise the footprint for the project so as to lessen the social impact resulting from land acquisition. All land required by the project for construction, operation and maintenance was acquired in accordance with the provisions in South Africa's Expropriation Act and the Constitution. Informal and unregistered land rights were recognised in terms of the applicable legislation. Two guiding principles were applied, namely:

- ongoing consultation and information sharing with impacted landowners; and
- adherence to the existing legal framework for expropriation and administrative justice.

The rights in land which were acquired for the project was ownership of servitude (permanent servitudes for the pipeline water transfer system and temporary servitudes for construction purposes) and ownership land for the dam area. The method adopted for the acquisition of property and servitudes was expropriation, which is perceived as a fairly heavy-handed method of acquiring land rights. Land acquisition on the BWP was undertaken in three phases (Table 6).

Table 6: The acquisition of land was conducted using three distinct phases.

Land Acquisition Phases	Description
Preparatory Phase	During the preparatory phase, all information necessary to execute the expropriation of the properties was obtained. The information included obtaining an outline of the scheme in cadastral format to identify the properties affected, copies of all deeds of transfer, servitudes and other information from the deeds office and the names and addresses of impacted landowners. Further, the names of third parties with registered rights over the properties (such as bondholders, lessees/tenants and sub-surface rights holders) and the applicable local authorities were gathered. A Social Baseline Study was carried out to give an indication of the social and economic profile of the affected landowners and land users and for what purpose and to what extent they are reliant on affected land.
The Valuation Phase	The valuation process was seen as a valuable opportunity to have meaningful consultations with affected landowners, not only to attach a monetary value to the impact of the project on the affected properties, but also to develop an understanding and provide TCTA with feedback regarding landowners' responses and

	attitudes. The valuers undertook the valuations in accordance with the Expropriation Act and the Constitution.
The Consultative and Expropriation Phase	After affected properties and landowners were identified, maps of the affected land portions was prepared and the prospective expropriatees were notified of the proposed expropriation and the purpose of the project by means of a legal notice. This was done in accordance with the requirements of South Africa's Promotion of Administrative Justice Act. The Notice will contain a clear statement that TCTA intends to expropriate certain land rights for purposes of the project and the owners will be given adequate notice in order to have a reasonable opportunity to make representations to TCTA in that regard. After the issuing of an Administrative Notice, the affected landowners were served with an Expropriation Notice. In the expropriation notice the landowner were notified of the expropriation, the area affected and any necessary additional information. The notice also contained an offer of compensation based on the valuations. The landowner was not bounded to accept the compensation offer and the notice advised them that he may institute a claim for a different amount of compensation. In case of the BWP, there was a lengthy negotiation process. This did not affect the construction of the project as TCTA became owner of the land rights on the date of expropriation.

3.3.3 Exit Strategy

The Exit Policy had three dimensions. One dimension focused on continuing to leverage and maximise the positive project benefits beyond the construction phase into the operational phase. The second dimension of the policy was to recognise the need to plan and implement measures that pre-empted possible latent negative social impacts. The third and linked dimension was the element of promoting learning and knowledge management as part of project implementation. The policy for the exit phase of the BWP is outlined in Box 2.

Box 2: The Exit Policy for the Berg Water Project.

TCTA acknowledges that the significant short-term positive socio-economic benefits arising from the construction phase of the Berg Water Project will gradually decline during 2007 and 2008. TCTA is aware that there may be residual and latent socio-economic impacts which can emerge after the completion of construction. As an environmentally and socially responsible organisation, TCTA is committed to implementing an exit process and initiatives that endeavours to leverage the positive project initiatives for the benefit of the local community and mitigate potential negative socio-economic impacts resulting from the end of the construction phase of the project. The exit process will occur and be supported within a knowledge management framework, which aims to share and disseminate learning about project implementation (particularly exit processes) with the local communities and project stakeholders

Strategic initiatives were designed to give effect to the specific policy objectives (Table 7). The Exit Strategy encompassed a range of initiatives and projects that enabled TCTA to not only comply with the conditions in the EMP, but significantly exceed its requirements. The Exit Strategy was designed to leverage the positive initiatives started during the construction phase and to act as a mitigation mechanism for the negative latent socio-economic impacts that had the potential to emerge long after the construction period. The range of initiatives and projects that were implemented for the Exit Strategy included:

- Appreciative Inquiry
- Holistic health and well-being
- Promotion of Franschhoek First Policy
- Training
- Learnerships
- Ensuring that the assets and services of the Employment Information Desk continue to be used for the benefit of the local community
- Facilitating work opportunities for local workers
- Handover of construction housing
- Sustainable Utilization Plan
- Knowledge Management

Table 7: Various strategic initiatives and projects were implemented as part of the exit process for the BWP.

INITIATIVES	OBJECTIVES
Appreciative Inquiry	• Build social capital • Promote community self-empowerment and capacity-building. • Facilitate relationship building within the community. • Empower the community to become involved in community projects, facilities and infrastructural development. • Empower the community to value partnerships, collaboration and shared effort. • Promote local community development
Holistic health and well-being	• To increase community health awareness, particularly with a focus on a holistic and integrated approach to health and well-being • Empowering local communities to make informed lifestyle decisions that are supportive of a holistic health • To embed HIV and AIDS within a broader and integrated focus on a lifestyle that supports health and well-being • Promote social change and social awareness of the impact of health and diseases
Promotion of Franschhoek First Policy	• Proactively promote Franschhoek First Policy to the private and public sector organisations operating locally. • Encourage local business, the municipality and public agencies to build on the initiative created by the BWP by ensuring the continuation of the socio-economic benefits of maximising local employment, training and procurement
Training	• Provide leadership training to local community leaders • Facilitate the provision of information and awareness sessions on workers rights to community leaders

	• Provide business training for local SMME's
Learnerships	• Facilitate the provision of leanerships and apprenticeships for the 86 local people who completed the TCTA training courses
Employment Information Desk (EID)	• Ensure that the assets and services of the EID continues to serve the employment needs of the local communities • Find an institutional home to ensure that the EID continues to exist beyond the construction phase
Facilitating work opportunities for local workers	• Facilitate further employment of local workers in the construction industry • Encourage BWP contractors and industry sector to source workers from the EID database
Handover of construction housing	• Ensure that the principle benefits which accrue from the sale of the houses benefit the local communities directly
Sustainable Utilization Plan (See Appendix A)	• Maximise local economic development by facilitating a public process for the development of a planning framework that aims to promote optimal utilization of the state land surrounding the dam
Knowledge Management	• Develop a systematic process of creating, gathering, organizing and managing lessons learnt from project implementation • Proactively share knowledge • Develop guidance to improve industry practice

4. CONCLUSIONS

The general consensus in the discourse of large water infrastructure projects is unequivocal. Benefit sharing mechanisms for local project affected communities need to be implemented as part of water resource development. Where there is disagreement and divergence, is on what the exact mechanisms for benefit sharing should be. Currently, there is limited global application of monetary benefit sharing mechanisms. This is because, these mechanisms are complex, the amounts of revenue is fixed and the values and goals of the proponent and affected communities are often seemingly diametrically opposed.

In this document, I have taken the position that non-monetary benefit sharing mechanisms play an equally important role in community development. There is a wide range of non-monetary benefit sharing mechanisms. Some even lead to opportunities for revenue generation and opportunities for business activities. What the example of the Berg Water Project has shown is that non-monetary benefit sharing mechanisms when systematically planned and implemented can deliver sustainable benefits and be as valuable as monetary benefits.

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APPENDIX A: PROMOTING SUSTAINABLE UTLIZATION OF THE BERG RIVER DAM AND CATCHMENT FOR LOCAL ECONOMIC DEVELOPMENT

A Sustainable Utilization Plan (SUP) was developed for the Berg River Dam to facilitate and promote local economic development. The SUP would be used to provide preference for local entrepreneurs to take advantage of the business opportunities offered by the Berg River Dam and its location within the catchment. The objective of SUPs is to develop plans for the sustainable development and management of water resources based on environmental constraints, communal needs and expectations, and sound business principles combined with a representative institutional structure to take charge of the management process in an equitable manner.

The development of a SUP aims to facilitate institutional and economic capacity building and enhancement in the project area, and enable the long-term sustainability of the BWP. The SUP is a development framework that will guide the long term management and land use of the Berg River Dam water body and surrounding state land. The objective of the SUP is to maximise post-construction local economic development opportunities. The SUP will provide broad guidance on:

- Recreational and sporting use of the dam water body
- Opportunities for economic activities on the state land surrounding the dam
- Environmental management
- Institutional arrangements for land management
- Legal and administrative compliance procedures

The BWP has strived to comply throughout the project cycle with the requirements of the World Commission on Dams (WCD). Some of the key WCD principles includes: (a) recognition that affected communities have a development entitlement; and (b) that project benefit sharing mechanisms are negotiated to ensure implementation. The implementation of the SUP represents a further measure and commitment to adhere to the WCD principles and promote social sustainability by ensuring participation of local entrepreneurs and the broader community in economic benefits that can be derived from the Berg River Dam.

LOCAL ECONOMIC DEVELOPMENT OPPORTUNITIES

Land Use

A particular pattern of land use opportunities has emerged from the public participation process and the findings of the specialist studies that are consistent with the overarching laws, policies and plans guiding development in the area as well as the proposed sustainability criteria. The land use is restricted to organic farming (with specific crops), tourism, biodiversity conservation, sporting and recreation (Figure 1). Development on steep cliffs and slopes (greater than 1:4) will be prohibited. Low intensity activities in the high lying areas are envisaged with; hiking, overnight tented accommodation and indigenous plant harvesting; with more intense activities in the low lying areas; fishing, mountain-biking, hiking and picnic areas. There is general agreement that the more intense tourism activities are appropriate close to the dam wall recreational area near the eastern end of the wall where a variety of entertainment, restaurants, café, shops as well as environmental education and clubs and recreation activities can be located. An upmarket tourist lodge could be located at the Bells Lodge site linked to a remote bush camp in the Assegaaibosch Valley. Agricultural areas are identified on the fringes of the Berg River Dam catchment area where they abut existing farms. A wide range of traditional and indigenous crops are proposed in the agricultural areas including essential oils, buchu, proteas, stone fruit and wine grapes.

However, in keeping with the sustainability criteria it is proposed that all these farming activities should be aligned to organic farming principles, which include:

- *The principle of health* (organic agriculture should sustain and enhance the health of soils, plants, animals and humans. The health of individuals and communities cannot be separated from the health of ecosystems.)
- *The principle of ecology* (organic agriculture should attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity.)
- *The principle of fairness* (those involved in organic agriculture should conduct human relationships in a manner that ensures fairness at all levels and to all parties - farmers, workers, processors, distributors, traders and consumers.)
- *The principle of care* (precaution and responsibility are the key concerns in management, development and technology choices in organic agriculture.)

Figure 1 provides an illustration of the agricultural areas and the locations of the proposed economic opportunities.

Water Use

Recreational use of the dam will be limited to low intensity non-motorised activities, such as sailing, angling, canoeing, rowing or similar activities (Figure 2). There is a possibility that a rowing and dragon boat racing course can be established. A quayside to facilitate these activities is proposed in the eastern wall recreation zone. Because of the over-riding constraint of maintaining high water quality in the dam, motorised craft will not be allowed, except those used by the Dam operators and emergency officials.

Figure 1: Proposed land use and economic development activities.

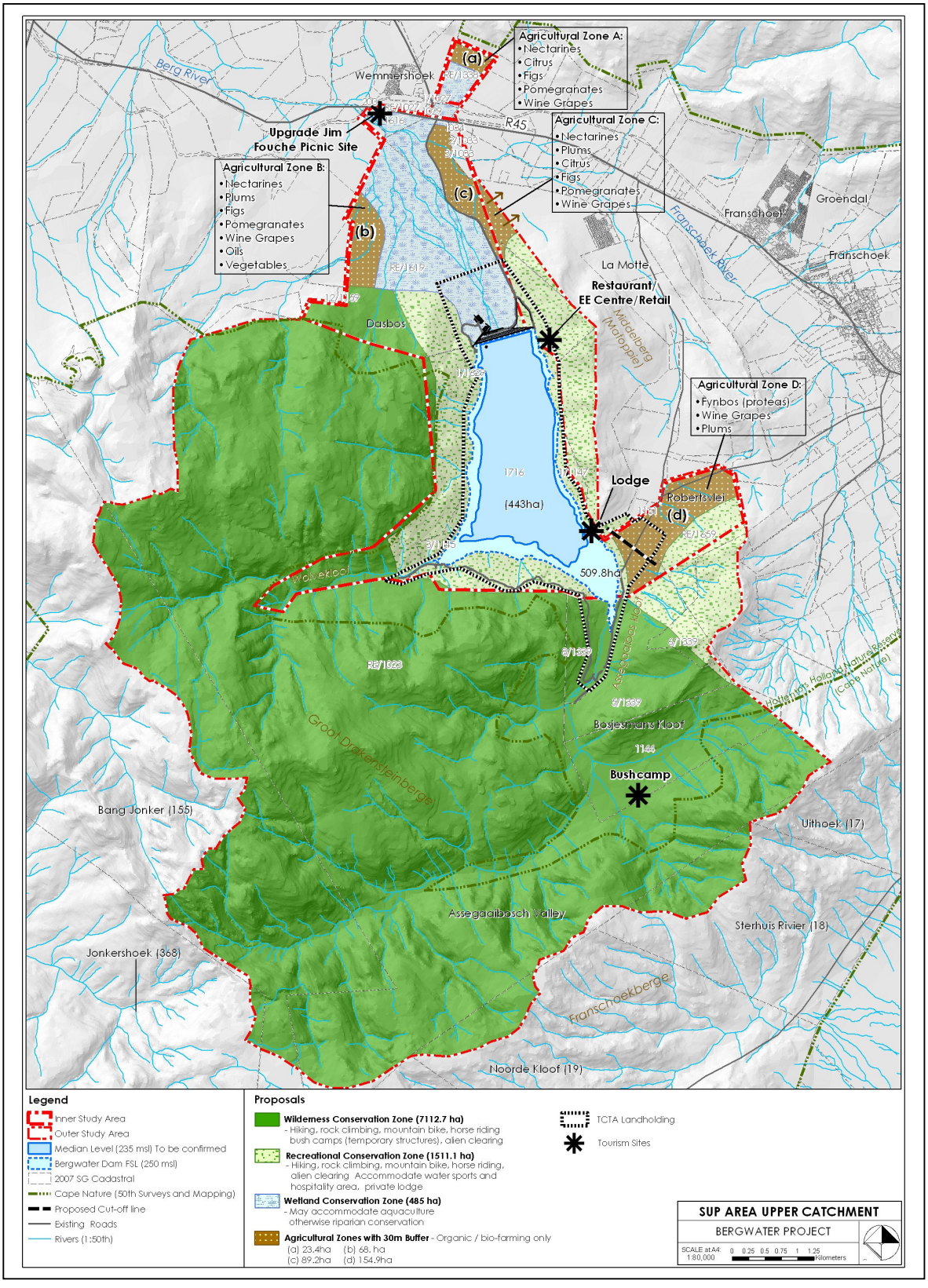
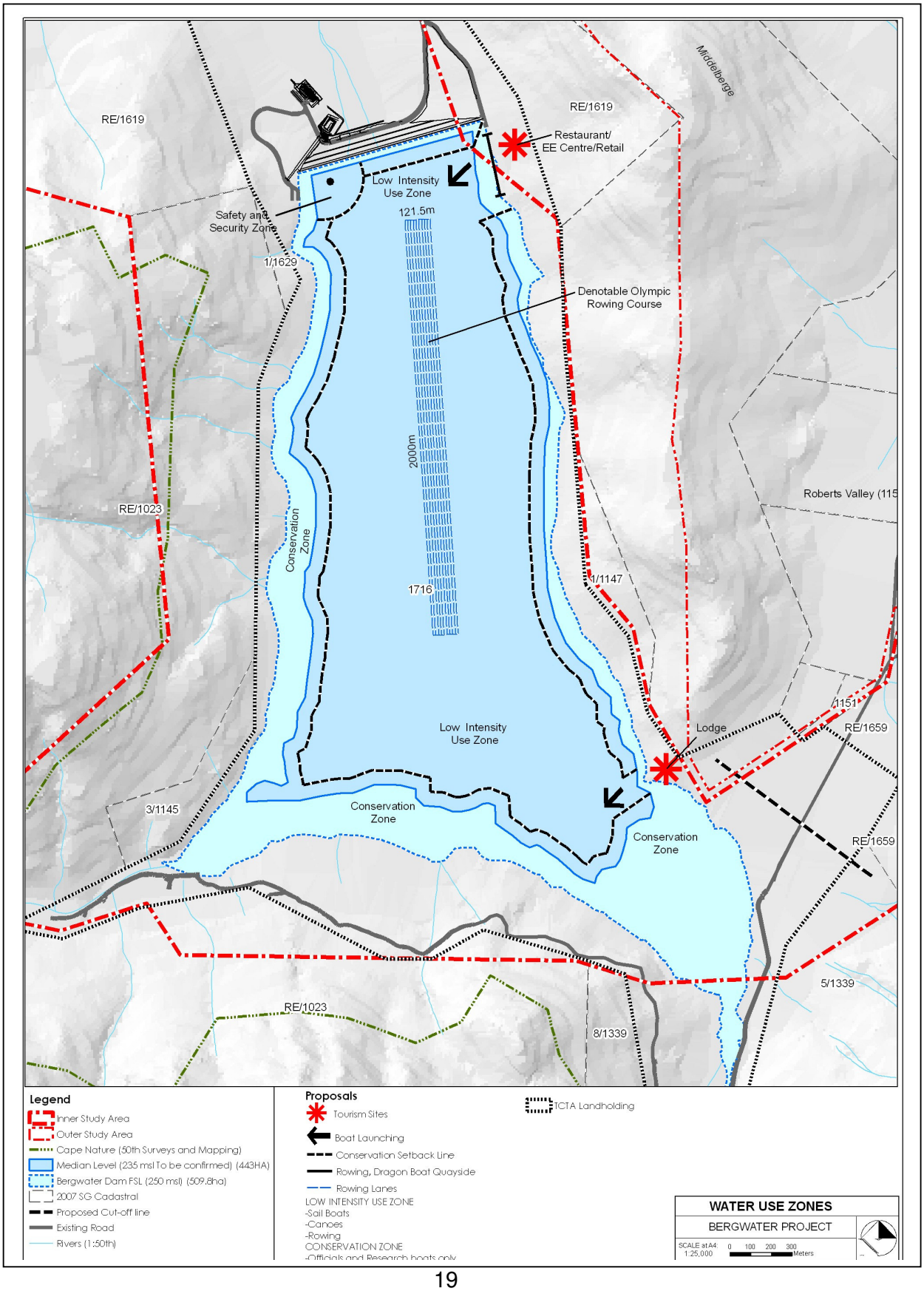


Figure 2: Proposed water use, sporting and recreation activities.

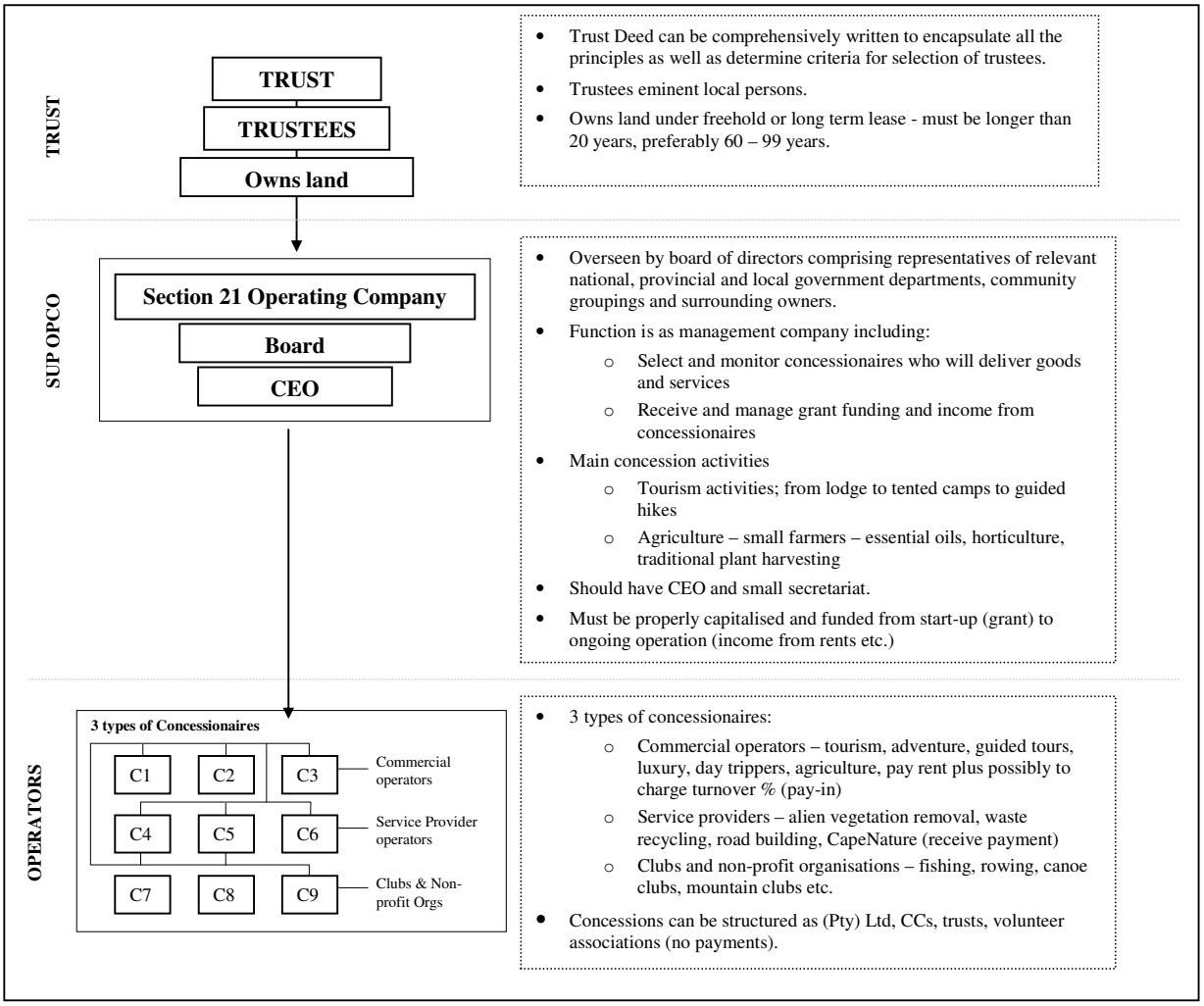


INSTITUTIONAL ARRANGEMENTS

A number of options for SUP implementation have been identified and presented for discussion at various public meetings.

Of the range of options identified and discussed in the public participation process, the preferred institutional model for the management of the Berg River Dam catchment area is the trust with operating company (Figure 3). This model of the Trust with Operating Company provides an arrangement where the land is held and managed separately from the businesses that operate on it. This provides an appropriate risk and liability management model that ensures that land management and sustainability objectives are paramount.

Figure 3: Preferred institutional model for the implementation of the SUP.



5. CHALLENGES

The implementation of the SUP is ongoing and the following key challenges needs to be overcome to achieve the goals of local economic development and environmental sustainability:

- An appropriate institutional, business and financial model needs to be

designed for SUP implementation

- A sound scientific understanding and database needs to be developed for managing the natural resource base
- Land transfer from the state is a vital process that needs to be proactively managed and is the main obstacle for SUP implementation, as this process can take many years to conclude
- A single institution is required to champion and facilitate the SUP process
- There will be a big time lag (i.e. about 3-5 years) before land is made available for development
- Small scale tourism business opportunities need to be developed, implemented and supported within the first year to demonstrate commitment and alleviate local community expectations
- Facilitation and stakeholder engagement are critical processes to obtain trust and legitimacy for SUP implementation