

Appendix 2: Logical Framework

Narrative Summary	Objectively Verifiable Indicators (OVI) (output indicators, impact indicators)	Means of Verification (MOV)	Risks	Important Assumptions
Objective				
To develop and implement participatory land use tools and plans for sustainable land management in the Lower Limpopo River Basin in order to reduce the impact of floods on land, ecosystems and human settlements.	<p>Improved land use management in the Lower Limpopo Basin through community-led initiatives in at least 50% of the area of three relevant flood prone ecosystems as well as in at least six rural settlements of the Lower Limpopo basin;</p> <p>Strengthened co-operation among riparian countries concerning basin management;</p> <p>Enhanced capacity for flood preparedness and mitigation at national level and in at least six flood prone towns in affected areas.</p>	<p>Positive statistical trends monitored</p> <p>Regional and local action plan and relevant policy changes prepared</p>	<p>Long implementation time because of communication difficulties (language), poor infrastructures and lack of resources (human and financial)</p>	<p>There is cooperation among all involved partners (governments, communities and river basin institutions)</p> <p>The upstream riparian country, Botswana, is informed and positively participates to the project as an observer</p>
A. Outcomes level				
<p>Outcome 1</p> <p>A regional integrated land use management plan to lessen land degradation and minimise the risk of losing life and damage to ecosystems in future floods</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • A regional action plan is prepared, agreed and implemented among the three countries; • Enhanced land use planning in at least 50% of the area of one relevant flood prone ecosystem and two rural settlements for each basin country; 	<p>Reports on regular workshops held among participating countries</p>	<p>Difficulties in finding adequate local staff available to implement the activities in due time</p> <p>Similar activities to some on-going initiatives</p>	<p>Cooperation among all involved partners</p> <p>Enabling operational environment</p>

<p>Outcome 2</p> <p>Enhanced capacity and effective tools in participatory land use planning and disaster preparedness techniques for sustainable land management to reduce the vulnerability of communities living in flood prone areas</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • Participatory land use plans for sustainable land management to reduce the vulnerability of communities in at least two flood prone cities/towns of each basin country designed and adopted; • Participatory tools and methodologies in addressing critical issues concerning flood disaster management and biodiversity preservation developed; • Training in disaster preparedness techniques delivered and informative material disseminated. 	<p>Six land use plans for sustainable land management</p> <p>Studies, tools and project proposals prepared</p> <p>Field work reports</p> <p>Training and disseminative material prepared</p>		
---	--	--	--	--

B. Activities level

<p>Activities under Outcome 1</p> <p><u>Activity 1.1.</u> Establish an inter-country co-operation framework for integrated land use management in the lower Limpopo river basin</p> <p><u>Activity 1.2.</u> Stimulate supportive legal, regulatory and policy changes at all levels relevant to flood mitigation, vulnerability reduction and land use planning</p>	<p>By end of the project:</p> <ul style="list-style-type: none"> • At the regional level: agreements are produced, committee and working groups established and annual workshops held; • Inventory of available national legal, policy and institutional framework prepared, gaps identified and new policies and plans are submitted to the respective governments for approval. • Regional action plan for sustainable land use prepared. 	<p>Reviews by regional project coordinators both at the regional and national levels</p> <p>Annual workshop reports</p> <p>Regulatory and policy tools produced both at national and regional levels</p>	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the three levels of action: regional, national and local - Lack of effective actions carried out by the concerned institutions 	<p>Target beneficiaries adopt and promote systems and approaches.</p> <p>Budgets, planning, programs and capabilities of collaborating institutions are sufficient and well managed</p>
--	--	--	---	---

<p>Specific Activities for 1.1.</p> <p>1.1.1 Carry out baseline study on the current cooperation status in flood mitigation and preparedness among the three countries, especially as per the provisions of the LBPTC.</p> <p>1.1.2 Carry out a review of the SADC RSAP, SRAP and of the LBPTC decisions and activities concerning the development of IWRM and sustainable land use planning in the Lower Limpopo River Basin.</p> <p>1.1.3 Carry out a review of, and where not in existence, facilitate production of Memoranda of Understanding and of other types of regional agreements leading to the preparation of a regional plan of action.</p> <p>1.1.4 Assess level of information and technological exchange to enhance regional cooperation and an interactive communication system among the three countries.</p> <p>1.1.5 Organisation of annual regional workshops rotated among the three countries to review and adopt new resolutions at institutional level concerning flood disaster related issues in the Lower Limpopo Basin.</p> <p>1.1.6 Prepare a regional action plan for sustainable land use planning and management of floods.</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • Baseline study, indicating levels of cooperation, and recommendations to improve such cooperation; • Review of the RSAP and the LBPTC, especially with regard to their application in the integrated management and sustainable land use in the Lower Limpopo; • Inventory of Memoranda of Understanding or any other agreements; new agreements are formulated; • Documentation of joint programmes of exchange of information and technology on disasters; • By the end of each year a regional workshop is held in one of the three countries and progress reports, recommendations and new resolutions are produced and documented; • Regional action plan for participatory land use planning for sustainable land management and response to floods prepared and agreed. 	<ul style="list-style-type: none"> • Baseline study reports; • Formulation of new regional agreements; • Documentation of joint programmes of exchange of information and technology on disasters; • National and regional progress reports; • Recommendations and new resolutions are produced by the end of each year. 	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the three levels of action: regional, national and local - Lack of effective actions carried out by the concerned institutions 	<p>No natural catastrophe</p> <p>Data available and accessible</p> <p>Satisfactory level of commitment of all involved partners.</p>
--	---	---	---	--

<p>Specific Activities for 1.2.</p> <p>1.2.1. Carry out studies and formulate recommendations on the effective application of the Protocol on Shared Watercourses and other regional regulatory instruments in the Lower Limpopo Basin.</p> <p>1.2.2. Review available legal, policy and institutional framework concerning flood disaster management and sustainable land use planning at the national and community levels.</p> <p>1.2.3. Recommend land use planning policy changes and related frameworks.</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • In-depth analysis of the mechanisms linking the Protocol and other regional instruments with the existing institutional structures dealing with flood management and sustainable land use planning made; • Country reports on the current national legislation and institutional framework concerning flood management and participatory land use planning for sustainable land management, including recommendations for improvements produced; • New policies and plans to reinforce institutional roles in flood mitigation and land use planning strategies are proposed and submitted to the respective governments for approval. 	<ul style="list-style-type: none"> • Country reports on existing and new legislative tools for flood management and land use planning; • Annual progress reports. 	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the three levels of action: regional, national and local - Lack of effective actions carried out by the concerned institutions 	<p>No natural catastrophe</p> <p>Data available and accessible</p> <p>Satisfactory level of commitment of all involved partners.</p>
<p>Activities under Outcome 2</p> <p><u>Activity 2.1.</u> Development of effective flood forecasting and early warning systems linked to national sustainable land management and disaster management programmes and improving response at community level.</p> <p><u>Activity 2.2.</u> Building institutional and community capacity for implementing participatory land use planning for</p>	<p>By end of the project:</p> <ul style="list-style-type: none"> • Number of trained local technical staff for flood forecasting, monitoring and early warning is increased in each country; • Relevant maps generated; • Information and technological exchange mechanisms are improved and agreed; 	<ul style="list-style-type: none"> • Reports of project teams and collaborating/target institutions • Dissemination of products 	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the three levels of action: regional, 	<p>Target beneficiaries adopt and promote systems and approaches.</p> <p>Budgets, planning, programs and capabilities of collaborating institutions are</p>

<p>sustainable land management to reduce direct or indirect¹ impact of floods on natural ecosystems</p> <p><u>Activity 2.3.</u> Elaboration and adoption of disaster preparedness techniques, contingency plans and awareness campaigns that will strengthen capacities of riparian communities to cope with flood events</p>	<ul style="list-style-type: none"> • Strategic actions to protect from floods at least one relevant ecosystem in each country are implemented; • Training programme for reinforcing institutional capacity and community participation for sustainable environmental management and disaster preparedness is delivered; • Guidelines for environmental conservation, sustainable land management and disaster awareness prepared and disseminated; • At community level, sustainable land use and contingency plans are designed and special committees are formed to reduce vulnerability in at least two flood prone cities/towns of each riparian country; • Flood-safe areas identified through sustainable land use planning in both urban and rural environments. 		<p>national and local</p> <p>- Lack of effective actions carried out by the concerned institutions</p>	<p>sufficient and well managed</p>
--	--	--	--	------------------------------------

¹ Refers to human impact due to uncontrolled resettlement activities in occasion of a flood event

<p>Specific Activities for 2.1.</p> <p>2.1.1. Studies on the current flow of early warning and other flood management information among the three countries and assessment of the existing organisation and structures ensuring the flow of such information from the national/institutional level to the local/community level</p> <p>2.1.2. Use remote sensing and GIS technology to generate flood risk maps, sustainable land use maps, run dynamic simulations and create appropriate databases</p> <p>2.1.3. Train technical staff to enhance local capacity in operating flood forecasting, monitoring and early warning systems in most vulnerable areas, coupled with adequate transfer of related technology</p> <p>2.1.4. Develop project proposals for upgrading information and hardware for regional flood forecasting and early warning systems</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • Reports on current flow of early warning, and on assessment of the existing organisation and structures prepared; • Use of remote sensing and GIS technology and knowledge in governmental institutions participating in the project increased; maps on sustainable land use and flood risk, coupled with dynamic modeling, generated; • Training material concerning flood forecasting, monitoring and early warning produced, and at least 20 technical staff per country trained; • Technical capacity in flood forecasting, monitoring and early warning systems in Mozambique and Zimbabwe improved; • Fundable project proposals formulated and approved. 	<ul style="list-style-type: none"> • Assessment reports and progress reports; • Regional land use maps and flood risk maps produced using GIS and remote sensing tools 	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the three levels of action: regional, national and local - Lack of effective actions carried out by the concerned institutions 	<p>No natural catastrophe</p> <p>Data available and accessible</p> <p>Satisfactory level of commitment of all involved partners.</p>
<p>Specific Activities for 2.2.</p> <p>2.2.1. Review existing studies on globally significant biodiversity in the lower Limpopo River Basin, such as land use and land cover mapping and inventories of natural ecosystems affected by floods, including the</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> • Reports on ecosystems threatened by floods and flood-induced resettlements prepared; digital risk maps linked with exhaustive databases for the lower Limpopo River Basin produced. • Review of institutional capacities 	<ul style="list-style-type: none"> • Situation and progress reports; • Risk maps and database produced. 	<p>Implementation difficulties due to:</p> <ul style="list-style-type: none"> - Limited availability of experienced human resources - Complex coordination of the 	<p>No natural catastrophe</p> <p>Data available and accessible</p> <p>Satisfactory level of commitment of all involved partners.</p>

<p>description of threatened species</p> <p>2.2.2. Perform assessments of institutional and community capacity for sustainable use and management of susceptible bio-diverse environments, and implement activities aimed at improving such capacity</p> <p>2.2.3. Develop sustainable land use planning tools</p> <p>2.2.4. Select project sites for the implementation of land use planning tools at community level</p> <p>2.2.5. Define ecosystem conservation approaches to be implemented by flood-affected populations, including recommendations for rural settlements policies</p> <p>2.2.6. Disseminate ecosystem management guidelines in appropriate languages</p> <p>2.2.7. Facilitate adoption of land use planning strategies and tools at both national and local levels aimed at mitigating the impact of floods on significant ecosystems</p>	<p>prepared and used to improve capacity of communities and institutions.</p> <ul style="list-style-type: none"> • Two project sites selected in each country for the implementation of land use planning tools; • Well packaged ecosystem management guidelines disseminated in appropriate languages and formats; • Strategic actions to mitigate flood impacts in at least two rural settlements in each country that are under serious threat of floods proposed and implemented; • Meetings convened both at national and local levels to discuss strategies and programmes; dynamic land use models or scenarios feeding an adequate decision support system that shows future impact on identified ecosystems produced; monitoring operations implemented. 		<p>three levels of action: regional, national and local</p> <p>- Lack of effective actions carried out by the concerned institutions</p>	
<p>Specific Activities for 2.3.</p> <p>2.3.1. Propose and adopt consensus-based contingency action plans and facilitate their implementation through existing community organizations</p>	<ul style="list-style-type: none"> • Special committees at the community level to implement the contingency action plans formed; • Number of trained local administration staff and trained elected community leaders is consistently increased in 	<ul style="list-style-type: none"> • Progress reports; • Reports on organized awareness events. 	<p>Implementation difficulties due to:</p> <p>- Limited availability of experienced human resources</p> <p>- Complex</p>	<p>No natural catastrophe</p> <p>Data available and accessible</p> <p>Satisfactory level of</p>

<p>2.3.2. Selection and training of local administration staff and elected community leaders to promote awareness and ensure efficient public participation in adopting flood preparedness techniques and sustainable land use planning</p> <p>2.3.3. Organisation of annual workshops and training sessions, both nationally and locally, aimed at reinforcing decision-making capabilities to produce appropriate emergency flood responses</p> <p>2.3.4. Disseminate informative materials for flood awareness in local languages and in easily understandable formats</p> <p>2.3.5. Identify flood-safe areas through participatory land use planning in both urban and rural environments.</p>	<p>each country;</p> <ul style="list-style-type: none"> • One annual workshop at national level and 20 technical staff for each country basin trained in disaster preparedness techniques; • Posters, fact-sheets and newsletters produced in local languages and disseminated; school-teachers to disseminate information through pupils to families trained; instructive coloured magazines for pupils produced; community radio programmes given in local language; theatre events and photo expositions held; • Flood-safe areas identified and vulnerability reduction solutions implemented in at least two rural/urban settlements per country basin. 		<p>coordination of the three levels of action: regional, national and local</p> <p>- Lack of effective actions carried out by the concerned institutions</p>	<p>commitment of all involved partners.</p>
---	---	--	--	---