

Pilot Financial Plan for Conservation Areas in Mozambique (2008-2017)

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Executive Summary

This report summarizes the results and recommendations from a pilot study to initiate development of a ten year financial plan for Mozambique's conservation area network. The purpose of the pilot was to test a financial planning approach on selected conservation areas, aggregate expected costs and revenues for those areas, and develop general recommendations to improve long term financial planning.

The pilot started in September 2007, when the National Directorate of Conservation Areas (DNAC) in Mozambique's Ministry of Tourism approved the following objectives for a network financial plan:

1. Provide baseline financial gap information to support development of a national sustainable financing strategy for Mozambique's conservation area network
2. Initiate a systematic and comprehensive approach to financial planning
3. Help local and national conservation area managers establish revenue targets and make resource allocation decisions

The pilot study revealed that most of Mozambique's conservation areas do not have up to date management and financial (business) plans. Financial planning is not performed regularly, and areas rely on partner organizations to develop them. In addition, financial planning is not coordinated at the national level, so there is no standard format to facilitate network level reporting.

Of the six conservation areas DNAC recommended to include in the pilot, only Bazaruto National Park (NP), Limpopo NP and Quirimbas NP had up to date financial plans that spanned several years into the future – so these were the areas (along with their buffer zones) included in the pilot. DNAC agreed the pilot would cover ten years of projections.

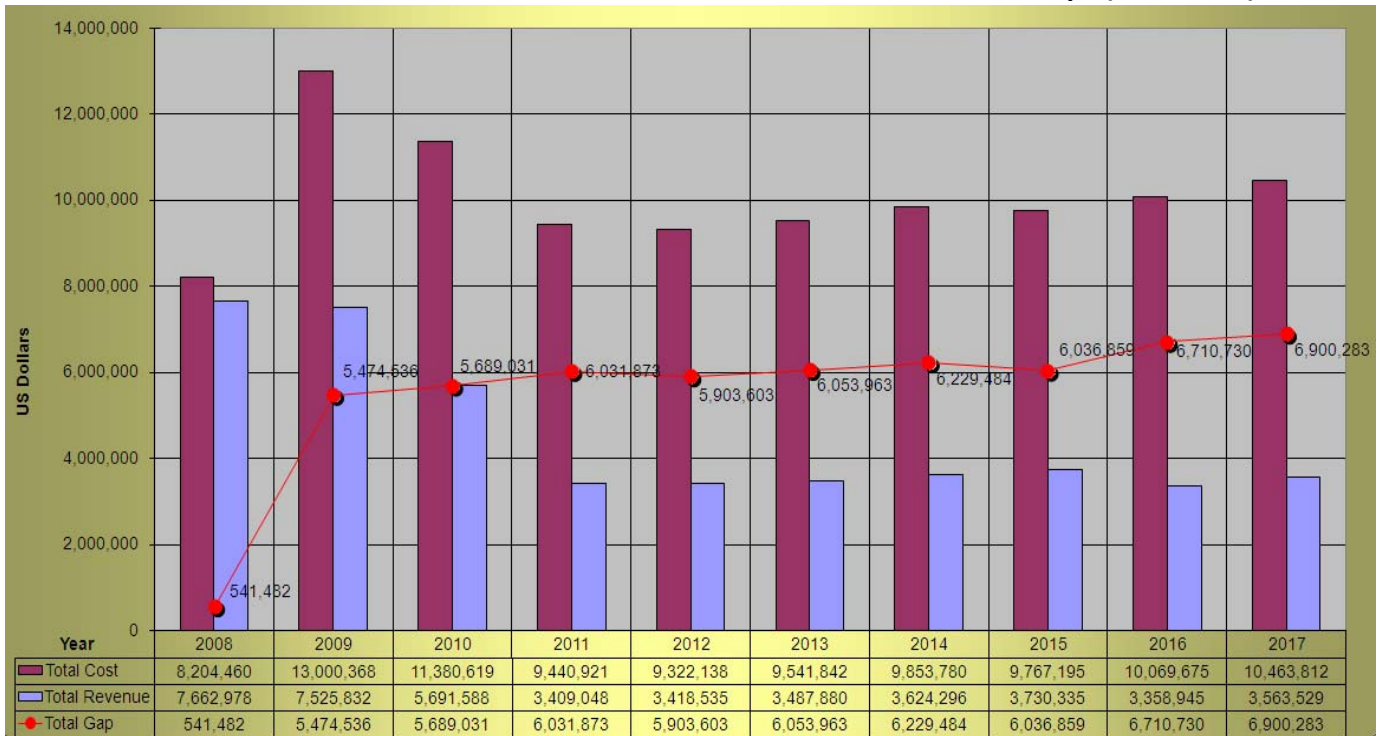
Simple data collection, extrapolation, and analysis produced the following results:

Average Annual Costs, Revenues and Gaps by Conservation Area (US dollars)

Conservation Area	Cost	Revenue	Gap	Gap (%)	Cost per km ²
Bazaruto NP	\$ 610,000	\$ 420,000	\$ 190,000	31%	\$ 430/km ²
Limpopo NP	\$ 8,200,000	\$ 3,100,000	\$ 5,100,000	62%	\$ 820/km ²
Quirimbas NP	\$ 1,300,000	\$ 1,000,000	\$ 300,000	23%	\$ 180/km ²
1-yr TOTAL	\$ 10,100,000	\$ 4,500,000	\$ 5,600,000	55%	\$ 530/km ²
10-yr TOTAL	\$ 101,000,000	\$ 45,000,000	\$ 56,000,000	55%	\$ 530/km ²

Most of the cost increase projected in 2009 and 2010 is from Limpopo NP's expansion of activities related to tourism, infrastructure development, and biodiversity monitoring. The disproportionately high costs and revenues projected in Limpopo NP's financial plan, compared to Bazaruto NP and Quirimbas NP, are based on extensive investment and management for tourism development.

2008-2017 Total Conservation Area Network Costs, Revenues and Gaps (US dollars)



Recommendations

The Government of Mozambique should adopt a strong national financial planning policy framework that includes all its conservation areas, and one organization should be the designated coordinator of the financial planning process. This organization should be responsible for building capacity for conservation area managers to be able to input data and use the model. Sufficient staff time and funding should be budgeted to ensure these activities occur regularly.

Conservation area managers should be required to develop 5-year management plans and 10-year financial plans based on a standard approach and format. These financial plans would summarize costs, revenues and financing gaps, and distinguish between confirmed and expected revenues. At least once annually, managers should validate and update their financial plans based on actual costs, revenues and operational constraints. Network level managers should then aggregate figures across areas and add management, monitoring and other regional costs.

Completed financial plans would then guide and support financing strategies at both conservation area and network levels – and managers could develop scenario analyses for proposed revenue generation mechanisms. Financial plans could also be used as management tools to help make resource allocation decisions. To accomplish these objectives, a proposed next step after this pilot is to develop and incorporate financial plans for Mozambique's remaining marine and terrestrial conservation areas.

2008-2017 Pilot Financial Plan for Conservation Areas in Mozambique

Overview and Purpose

This report describes the results and recommendations from a pilot study to initiate development of a ten year financial plan for Mozambique's conservation area network. The conservation area network refers to the country's system of national parks and reserves.

The purpose of the pilot was to test a financial planning approach on selected conservation areas, aggregate expected costs and revenues for those areas, and develop general recommendations to improve financial planning in Mozambique. A financial plan is a forecast of the costs, revenues and gaps for activities a program should undertake over a specified time period. Financial plans are often called business plans or financial models. They are based on program needs and not on existing budget allocations.

The pilot study was conducted by Jon Tua, WWF-US Conservation Planning and Design, and Hélio Neves, Consultant, with support from WWF. A first draft of the financial model pilot was presented at the conference on *Sustainable Financing of Mozambique's Conservation Areas* in November 2007.

Benefits of Financial Planning

A financial plan is a long-term estimate of all necessary costs, expected revenue¹, and funding gaps for a program, usually over 5 to 10 or more years. Financial plans are often called business plans, financial models, or long term forecasts. They are based on program needs (activities laid out in strategic and management plans), and not on existing budget allocations. A program may consist of a single conservation area, a network of conservation areas, or another geographic or thematic focus.

Knowing the full cost and funding gaps allows a program to establish clear revenue baselines and targets for its sustainable financing efforts. In this way, a financial plan provides important context and background to secure sufficient support for a program through funding proposals, engagement of additional partners, or market-based revenue streams (e.g. tourism, payment for ecosystem services).

Financial plans can also be management tools for conservation programs. Good plans allow managers to update cost and revenue information and change underlying assumptions to demonstrate how financial and operational changes affect long term funding and partner needs.

Another benefit is to help guide high-level program budgeting and resource allocation decisions. By prioritizing strategies and activities in a financial plan, managers can make better decisions on how to allocate scarce funds among competing activities.

¹ Revenue refers to all income including donations, government allocations, concession and tourism fees, etc.

Finally, the process of assigning costs to specific strategies and activities allows a core team to validate conservation activities. Once validated, costed and incorporated into a plan, this data provides a baseline of activity and financial benchmarks to track a program's progress over time.

Financial plans use estimates and extrapolated cost and revenue data to model future financial conditions and needs, and can be developed using spreadsheets or relational database software. Because they are models, and general by nature, they do not match detailed annual operating budgets and annual accounting line items; nor do they track exact costs. Detailed financial data, annual budgets and short term accounting needs are best managed using annual or 2 to 3 year budgets and work plans.

Scope

The pilot started in September 2007, when the National Directorate of Conservation Areas (DNAC) in Mozambique's Ministry of Tourism (MITUR) approved the following objectives for a network financial plan:

1. Provide baseline financial gap information to support development of a national sustainable financing strategy for Mozambique's conservation area network
2. Initiate a systematic and comprehensive approach to financial planning
3. Help local and national conservation area managers establish revenue targets and make resource allocation decisions

Mozambique's MITUR and Ministry for Coordination of Environmental Affairs (MICOA), along with the French Development Agency (AFD), German Agency for Technical Cooperation (GTZ), German Development Bank (KfW), US Agency for International Development (USAID), Endangered Wildlife Trust (FNP) and World Wide Fund for Nature (WWF) provided cost and revenue data for the pilot. DNAC identified the conservation areas of Bazaruto National Park (NP), Gilé Reserve, Gorongosa NP, Limpopo NP, Niassa Reserve and Quirimbas NP as recommended candidates for pilot financial planning.

Of the six, only Bazaruto NP, Limpopo NP and Quirimbas NP had up to date business plans that spanned several years into the future – so these were the areas (along with their buffer zones) included in the pilot. In addition, DNAC agreed the pilot should cover ten years (2008 to 2017) so that exceptional infrastructure building years would not appear to be the norm.

Approach

One of the first tasks in the pilot was to assess the current state of financial planning for Mozambique's conservation areas. Field visits were made to Maputo Special Reserve and Gorongosa NP to assess the current state of management and financial planning in those conservation areas. Other early steps were to: involve key stakeholders, identify a financial planning consultant, and work with DNAC and other partners to determine objectives, scope, reporting structure and assumptions for the pilot.

The next tasks consisted of compiling cost and revenue data from business plans, extrapolating for the full ten years when necessary, and analyzing results. Finding reliable cost data is often the most time

consuming part of a financial planning process. This issue was largely avoided in the pilot by including only conservation areas with up to date business plans.

A spreadsheet model was built to capture and report cost, revenue and gap information for each of the six conservation areas originally proposed by DNAC – plus costs and revenues for regional activities such as management, monitoring and communication.

The model contains expected necessary costs and anticipated donor, government, concession and tourism revenues by calendar year (Mozambique's fiscal year) for 2008 to 2017. Through 2012 the costs and revenues mostly came from existing business plans. From 2012 forward, most figures were extrapolated based on the respective conservation area financial plan.

Revenue projections were based on the assumption that conservation areas retain 100% of self-generated revenue. Projections for self-generated revenue were based on taxes and tariffs listed in the July 2003 Table of Tariffs established by the Mozambican Council of Ministers for all national parks and reserves.

The model also differentiates conservation area revenues allocated to community development activities, such as providing education and generating livelihoods. Once each conservation area's community development needs are carefully estimated, the model can report funding gaps for those activities. Currently in Mozambique, local communities receive 20% of each conservation area's self-generated revenue. The model captures this amount as both revenue, and as an equal and offsetting community cost.

The final task in the pilot was to develop policy, process and management recommendations for how Mozambique can improve financial planning for its conservation area network. These recommendations were presented briefly at the *Sustainable Financing of Mozambique's Protected Areas* conference in November 2007, and they are documented in this report.

Findings

Current State of Financial Planning in Mozambique

The pilot study revealed that most of Mozambique's conservation areas – including Gilé Reserve, Gorongosa NP, Maputo Special Reserve and Niassa Reserve – do not have up to date management and financial (business) plans. Financial planning is not performed regularly, and area managers rely on partner organizations to develop them. In addition, financial planning is not coordinated at the national level, so there is no standard format to facilitate network level reporting.

Costs, Revenue and Gaps by Conservation Area

Projected costs, revenues and gaps for each conservation area are laid out below.

Bazaruto NP

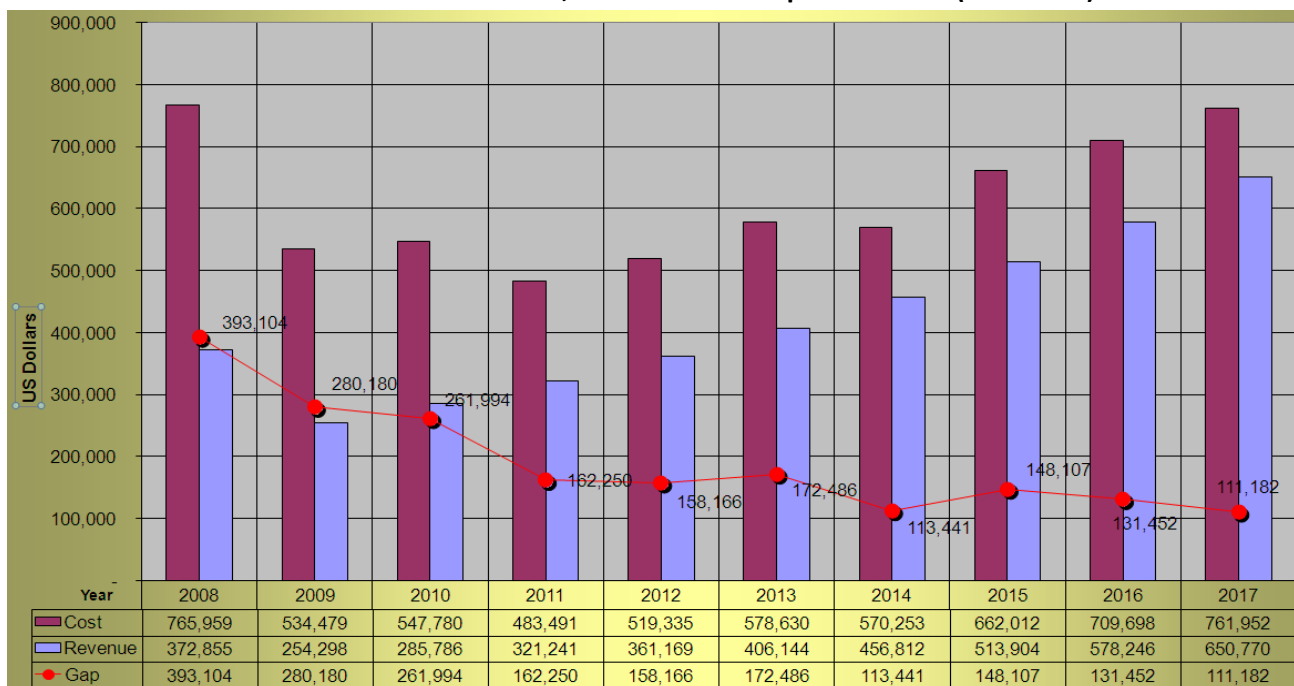
Over the next ten years, Bazaruto NP's average annual costs are projected to be \$610,000, or \$430/km². Its average annual revenues are \$420,000, resulting in an average gap of \$190,000 (or 31% of costs). Costs and revenue for years 2008 to 2012 came from the medium scenario projection in Bazaruto NP's financial plan. For years 2013 forward, costs and revenue were extrapolated based on 2012 numbers.

Relative to other years, Bazaruto NP's costs in 2008 will be high due largely to rehabilitation of park headquarters and other buildings that year. According to the financial plan, in a typical year, fuel², oil, generators, vehicles, personnel insurance, and specialized biodiversity studies are projected to be some of the larger costs.

Revenues will decrease significantly in 2009 due to expected drop in funding from WWF. Otherwise, revenues are expected to rise fairly steadily, with funding gaps decreasing from \$390,000 in 2008 to \$110,000 in 2017. This is based on expectations of more visitors paying entry and activity fees, and an increasing contribution from the Government of Mozambique over that period. Over the ten year period, self-financing is projected to contribute 69% of expected revenue, the Government of Mozambique 28%, and donors 3%.

These projected cost and gap totals may not closely match those in Bazaruto NP's financial plan because there appeared to be a summation error in this plan. Also, the estimated cost per hectare in this report is based on program needs; in the Bazaruto NP financial plan the per hectare estimate is based on revenue.

Bazaruto NP Annual Costs, Revenues and Gaps 2008-2017 (US dollars)



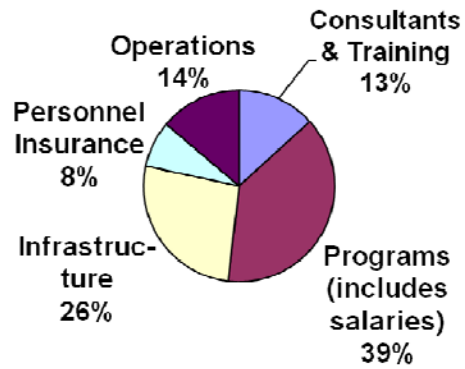
² The price of fuel in Mozambique has quadrupled since 2003 (when the Table of Tariffs was last updated).

Bazaruto NP Cost Detail 2008-2017 (US dollars)

	Consultants & Training	Programs (includes salaries)	Infrastructure	Personnel Insurance	Operations	Total
Average Annual Cost	\$ 81,000	\$ 237,000	\$ 163,000	\$ 48,000	\$ 85,000	\$ 610,000
10-yr TOTAL Cost	\$ 813,000	\$ 2,367,000	\$ 1,625,000	\$ 479,000	\$ 849,000	\$ 6,134,000

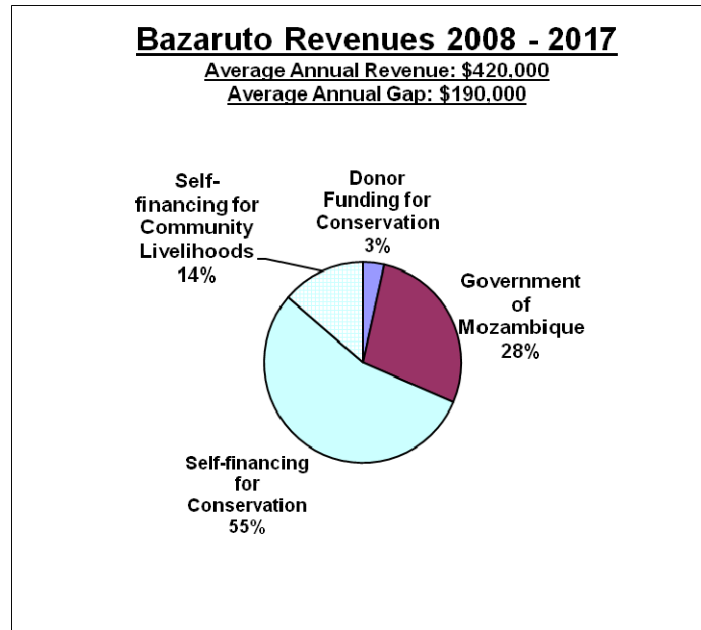
Bazaruto Costs 2008 - 2017

Average Annual Cost: \$610,000 (\$430 /sq.km)



Bazaruto NP Revenue Detail 2008-2017 (US dollars)

	Donor Funding for Conservation	Government of Mozambique	Self- financing for Conservation	Self-financing for Community Livelihoods	Total
Average Annual Revenue	\$ 15,000	\$ 118,000	\$ 230,000	\$ 58,000	\$ 420,000
10-yr TOTAL Revenue	\$ 147,000	\$ 1,177,000	\$ 2,302,000	\$ 576,000	\$ 4,201,000



Limpopo NP

Over the next ten years, Limpopo NP's average annual costs are projected to be \$8,200,000, or \$820/km². Its average expected annual revenues are \$3,100,000, resulting in an average expected gap of \$5,100,000 (or 62% of costs). Costs and revenue for years 2008 to 2011 came from the Limpopo NP Business Plan. For years 2012 forward, costs and revenue were extrapolated based on 2011 numbers. Limpopo NP's resettlement costs, projected to be \$23.7 million over several years (and revenue to fund resettlement, expected to be \$2.1 million), were not included in the model or in the totals and averages in this report.

The disproportionately high costs and revenues projected in Limpopo NP's financial plan, compared to Bazaruto NP and Quirimbas NP, reflect the fact that it is based on a very different approach to park management. Limpopo NP is being managed as part of the Great Limpopo Transfrontier Conservation Area (TFCA), with the level of infrastructure and management in Limpopo NP expected to approach standards in the adjacent Kruger NP in South Africa. This approach differs from that in Bazaruto NP and Quirimbas NP, where tourism is developing around both natural and cultural concepts, emphasizing community participation.

Limpopo NP's costs are expected to be exceptionally high in 2009 and 2010 (\$11.2 and \$9.7 million respectively, compared to \$5.9 million in 2008) due to Limpopo NP's vast expansion of activities related to tourism, infrastructure development, and biodiversity monitoring in those years. Major funding gaps arise in 2009 and persist through 2017. Over the ten year period, donors are projected to contribute 89% of expected revenue, self-financing 9%, and the Government of Mozambique 2%. The motivation for such high levels of donor contributions is a business one – that extensive infrastructure and management will attract many tourists, and therefore produce a good return on investment.

Limpopo NP Annual Costs, Revenues and Gaps 2008-2017 (US dollars)

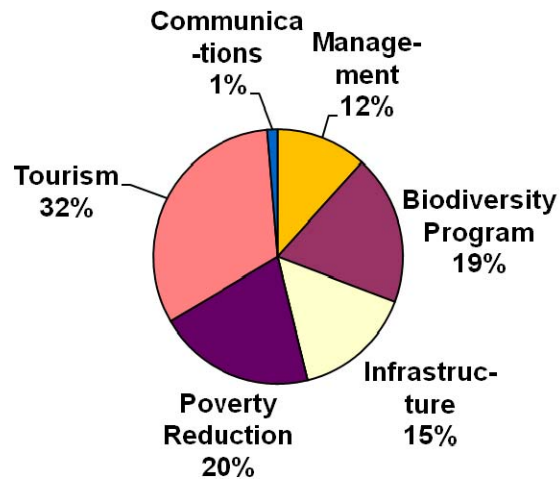


Limpopo NP Cost Detail 2008-2017 (US dollars)

	Manage-ment	Biodiversity Program	Infrastruc-ture	Poverty Reduction	Tourism	Communica-tions	Total
Average Annual Cost	\$ 948,000	\$ 1,537,000	\$ 1,245,000	\$ 1,648,000	\$2,593,000	\$109,000	\$8,200,000
10-yr TOTAL Cost	\$9,475,000	\$15,366,000	\$12,446,000	\$16,479,000	\$25,932,000	\$1,090,000	\$82,000,000

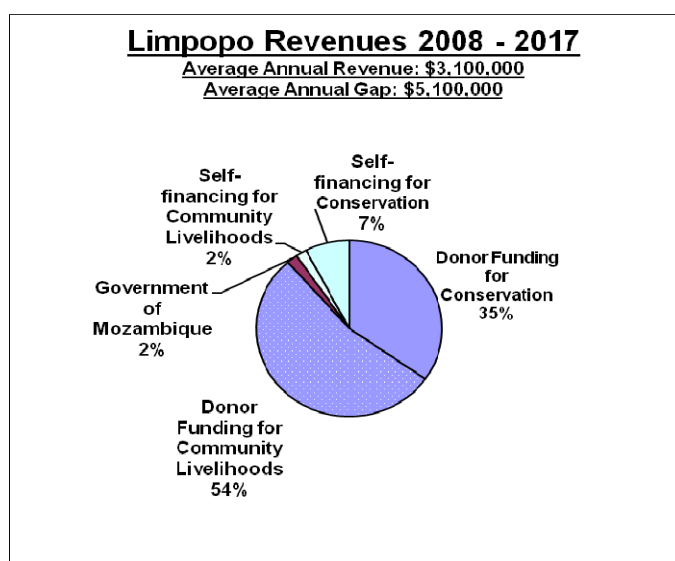
Limpopo Costs 2008 - 2017

Average Annual Cost (not including resettlement costs):
\$8,200,000 (\$820 /sq.km)



Limpopo NP Revenue Detail 2008-2017 (US dollars)

	Donor Funding for Conservation	Donor Funding for Community Livelihoods	Government of Mozambique	Self-financing for Community Livelihoods	Self-financing for Conservation	Total
Average Annual Revenue	\$ 1,075,000	\$ 1,664,000	\$ 58,000	\$ 59,000	\$ 237,000	\$ 3,100,000
10-yr TOTAL Revenue	\$ 10,754,000	\$ 16,636,000	\$ 578,000	\$ 592,000	\$ 2,367,000	\$ 31,000,000



Quirimbas NP

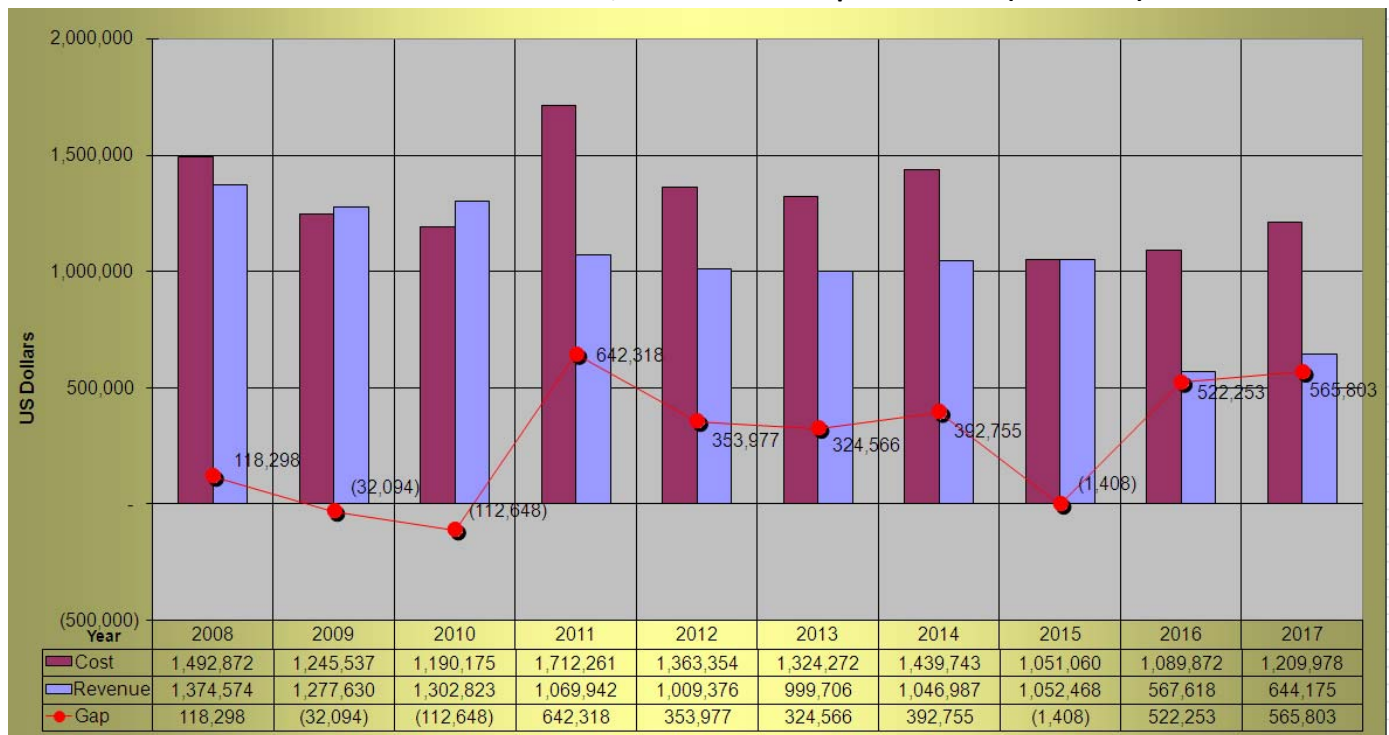
Over the next ten years, Quirimbas NP's average annual costs are projected to be \$1.3 million, or \$180/km². Its average annual revenues are expected to be \$1 million, resulting in an average expected gap of \$300,000 (or 23% of costs). Costs and revenue for all years came from the medium scenario projection in Quirimbas NP's financial plan, with updates from WWF staff.

Costs are projected to be significantly higher in 2011 (\$1.7 million) due largely to construction of buildings and enhanced livelihood programs. In 2008 and 2014 costs are also expected to be higher (\$1.5 and \$1.4 million respectively) as a result of construction and elephant counting activities. In a typical year, construction, vehicle purchases and maintenance, consultants, and ranger salaries will constitute some of the larger costs³. As the need for construction and NGO administration subsidies in 2015, annual costs will decrease to around \$1.1 million.

³ Over the ten year period, construction costs were 8% of total, vehicle expenses 7%, consultancies 6% and ranger salaries 4%.

Revenue for Quirimbas NP is expected to remain fairly steady until 2016, when it will decrease by \$550,000 (46%) due to the end of AFD project funding. Over the ten year period, AFD is projected to contribute 53% of total revenue, land area concession fees 11%, tourist entry fees 11%, and tourist activity fees 10%. Overall, donors provide 63% of expected revenue, self-financing provides 38%, and the Government of Mozambique provides 2%. Gaps will be relatively small or nonexistent through 2010, but average \$400,000 annually from 2011 forward.

Quirimbas NP Annual Costs, Revenues and Gaps 2008-2017 (US dollars)

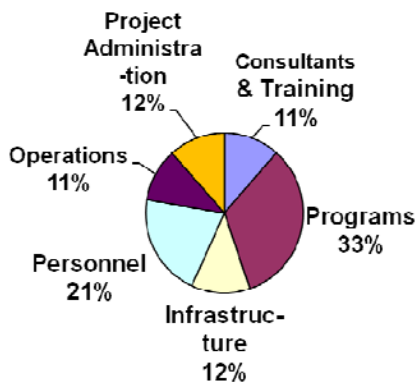


Quirimbas NP Cost Detail 2008-2017 (US dollars)

	Consultants & Training	Programs	Infrastruc- ture	Personnel	Operations	Project Administra- tion	Total
Average Annual Cost	\$ 151,000	\$ 437,000	\$ 158,000	\$ 273,000	\$ 142,000	\$ 152,000	\$1,300,000
10-yr TOTAL Cost	\$ 1,505,000	\$4,370,000	\$ 1,577,000	\$ 2,733,000	\$ 1,417,000	\$1,517,000	\$13,000,000

Quirimbas Costs 2008 - 2017

Average Annual Cost: \$1,300,000 (\$180 /sq.km)



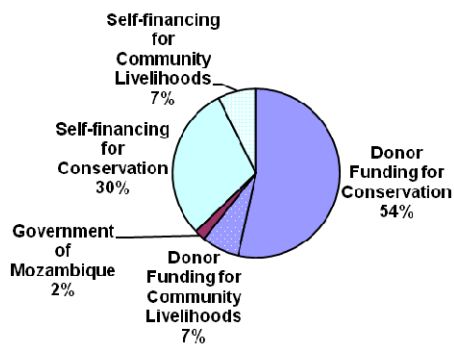
Quirimbas NP Revenue Detail 2008-2017 (US dollars)

	Donor Funding for Conservation	Donor Funding for Community Livelihoods	Government of Mozambique	Self-financing for Conservation	Self-financing for Community Livelihoods	Total
Average Annual Revenue	\$ 553,000	\$ 75,000	\$ 22,000	\$ 308,000	\$ 77,000	\$ 1,000,000
10-yr TOTAL Revenue	\$ 5,531,000	\$ 755,000	\$ 216,000	\$ 3,075,000	\$ 769,000	\$ 10,345,000

Quirimbas Revenues 2008 - 2017

Average Annual Revenue: \$1,000,000

Average Annual Gap: \$280,000



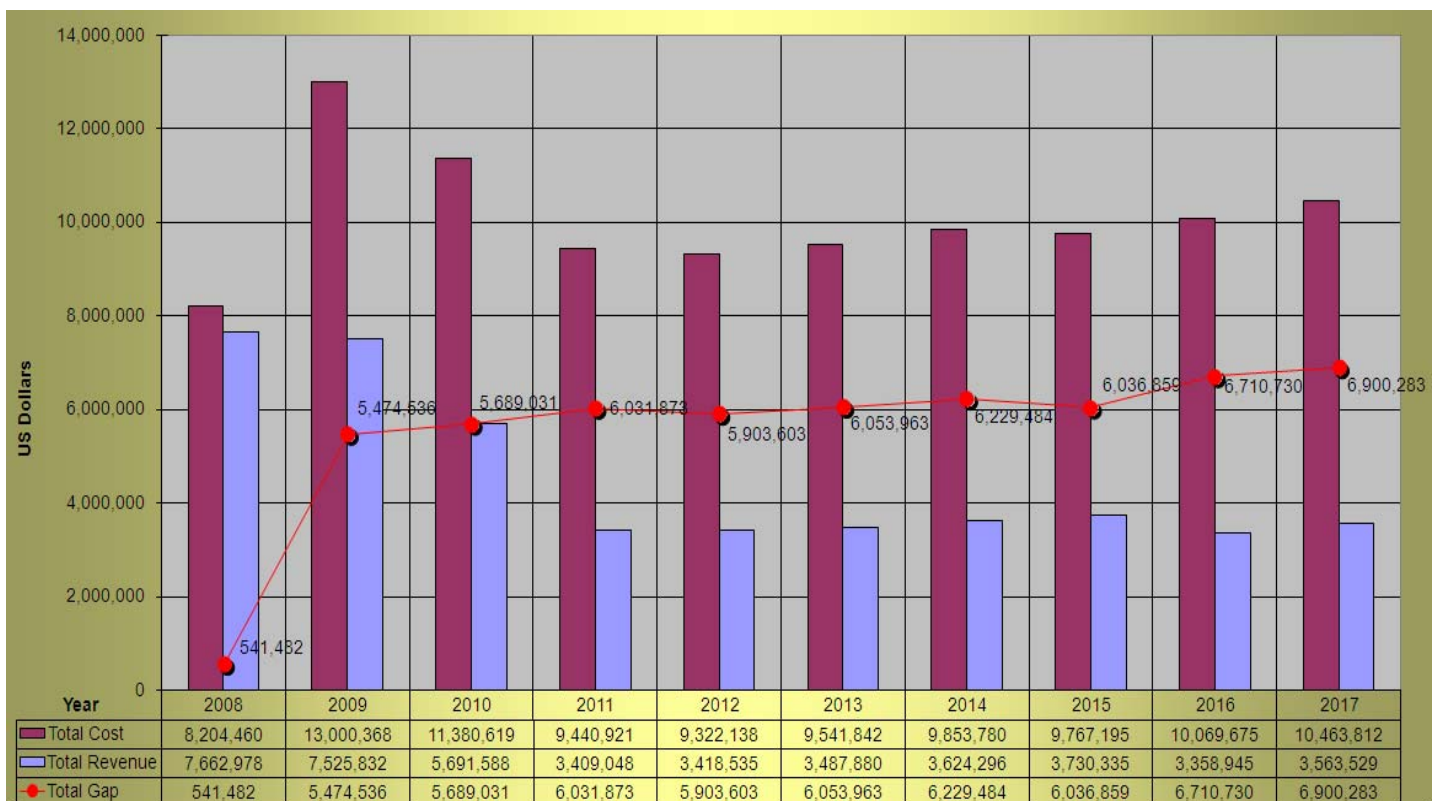
Aggregate Costs, Revenue and Gaps

The following charts summarize the 2008 to 2017 aggregate costs, revenue and gaps for the three pilot conservation areas: Bazaruto NP, Limpopo NP and Quirimbas NP.

The aggregate costs, revenue and gaps are expected to closely mimic those of Limpopo NP due to the disproportionately high costs and revenues in its financial plan. In the graph below, most of the projected cost increase in years 2009 and 2010 is from Limpopo NP's expansion of activities related to tourism, infrastructure development, and biodiversity monitoring. Note that none of Limpopo NP's large resettlement costs (or the revenues allocated against them) are included in the estimates in this report.

Broad standardized revenue categories (donors, Government of Mozambique, and self-financing) were developed to compare revenue sources among conservation areas. A similar standardization of cost categories was not possible because each conservation area applied a significantly different approach to allocating expenses.

Aggregate Annual Costs, Revenues and Gaps 2008-2017 (US dollars)



Average Annual Costs, Revenues and Gaps by Conservation Area (US dollars⁴)

Conservation Area	Cost	Revenue	Gap	Gap (%)	Cost per km ²
Bazaruto NP ⁵	\$ 610,000	\$ 420,000	\$ 190,000	31%	\$ 430/km ²
Limpopo NP ⁶	\$ 8,200,000	\$ 3,100,000	\$ 5,100,000	62%	\$ 820/km ²
Quirimbas NP	\$ 1,300,000	\$ 1,000,000	\$ 300,000	23%	\$ 180/km ²
1-yr TOTAL ⁷	\$ 10,100,000	\$ 4,500,000	\$ 5,600,000	55%	\$ 530/km ²
10-yr TOTAL	\$ 101,000,000	\$ 45,000,000	\$ 56,000,000	55%	\$ 530/km ²

Average Annual Revenue Detail by Conservation Area (US dollars)

Conservation Area	Donors	Government of Mozambique	Self-financing	Total	Average Annual Gap
Bazaruto NP	\$ 15,000	\$ 118,000	\$ 288,000	\$ 420,000	\$ 190,000
Limpopo NP	\$ 2,739,000	\$ 58,000	\$ 296,000	\$ 3,100,000	\$ 5,100,000
Quirimbas NP	\$ 629,000	\$ 22,000	\$ 384,000	\$ 1,000,000	\$ 300,000
1-yr TOTAL	\$ 3,382,000	\$ 197,000	\$ 968,000	\$ 4,500,000	\$ 5,600,000
10-yr TOTAL	\$ 33,820,000	\$ 1,970,000	\$ 9,680,000	\$ 45,000,000	\$ 56,000,000



⁴ Costs were subject to a 2.7% expected annual US dollar inflation rate.

⁵ Bazaruto NP costs and revenues from 2013 through 2017 were extrapolated based on 2012 figures.

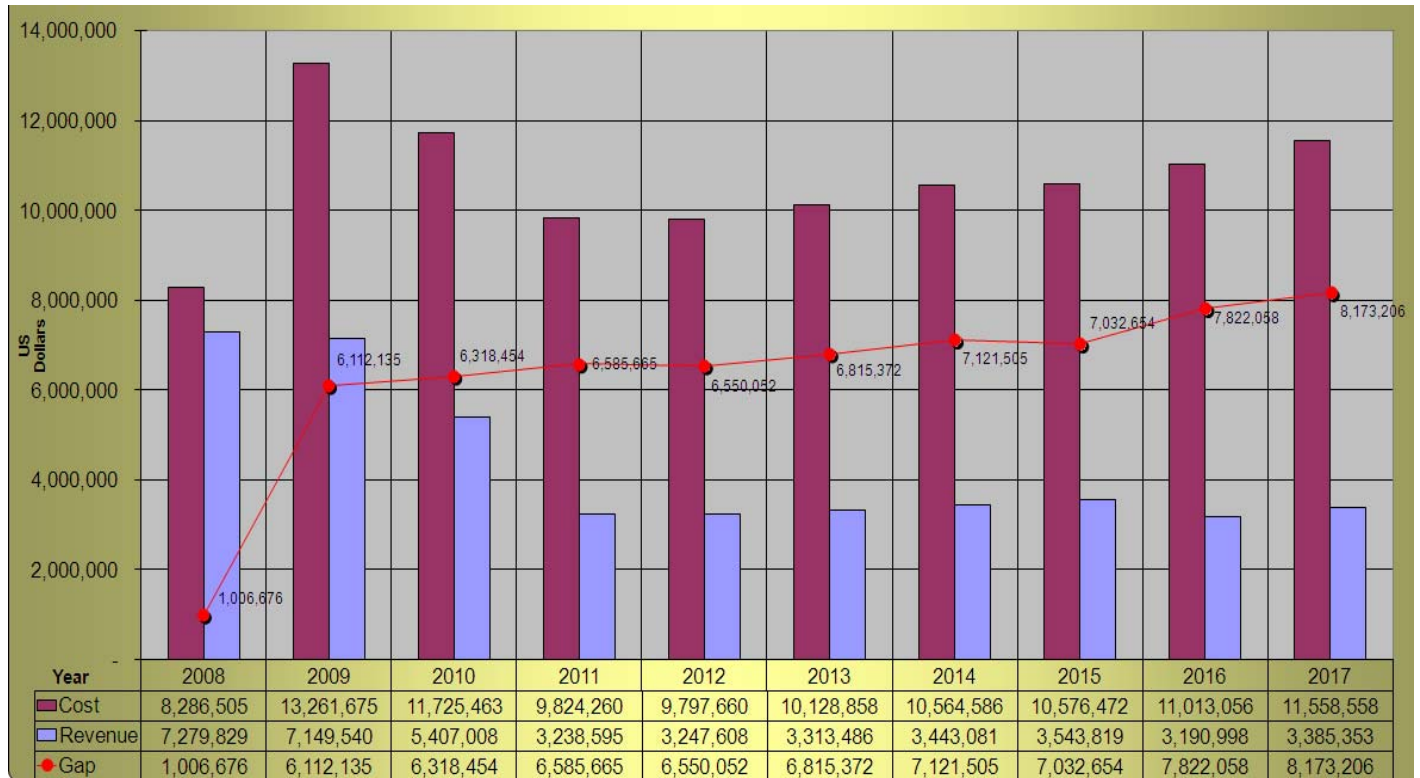
⁶ Limpopo NP costs and revenues from 2012 to 2017 were extrapolated based on 2011 figures. Limpopo NP resettlement costs and revenues are not included in the model. The exchange rate applied to Limpopo business plan is 1 euro = 1.46 dollars.

⁷ Regional conservation area activities such as military supervision of support units, monitoring, communication and publicity are not included.

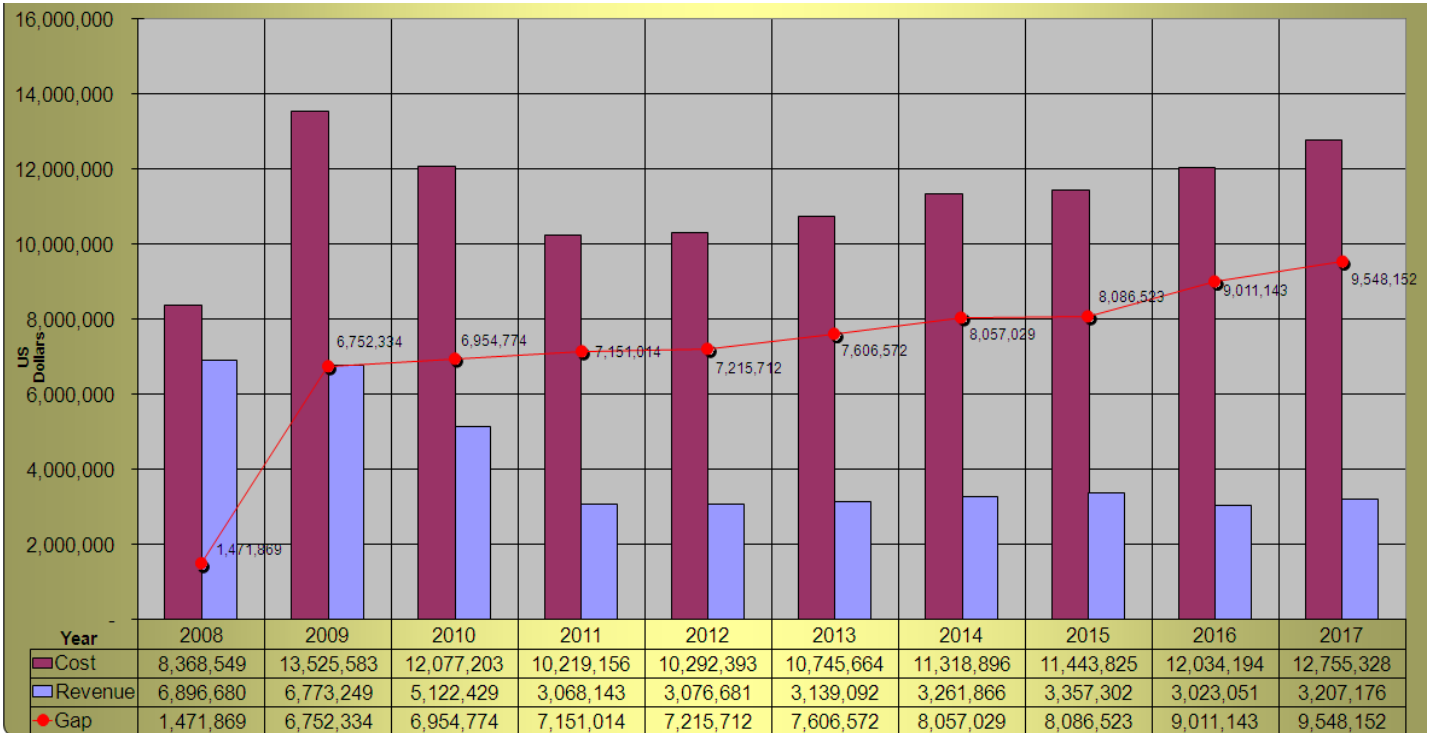
Scenario Analysis

All estimates in this report were based on an expected US dollar inflation of 2.7%, and on many different revenue growth rates. The following three scenarios project aggregate costs, revenues and gaps for Bazaruto NP, Limpopo NP and Quirimbas NP – but with higher expected inflation, and lower revenue growth rates.

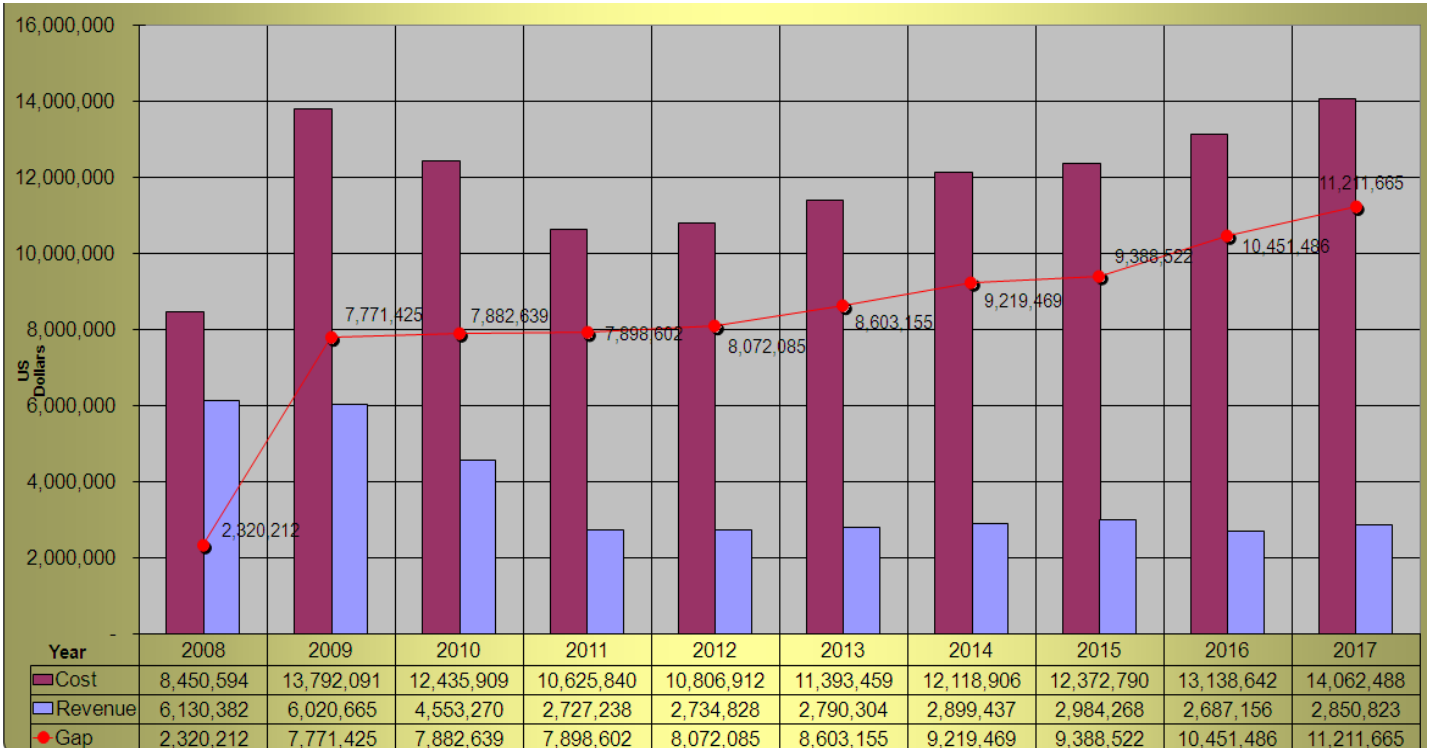
Scenario 1: Inflation = 3.7%; Revenue Growth = 5% less than base scenario Aggregate Annual Costs, Revenues and Gaps 2008-2017 (US dollars)



Scenario 2: Inflation = 4.7%; Revenue Growth = 10% less than base scenario
Aggregate Annual Costs, Revenues and Gaps 2008-2017 (US dollars)



Scenario 3: Inflation = 5.7%; Revenue Growth = 20% less than base scenario
Aggregate Annual Costs, Revenues and Gaps 2008-2017 (US dollars)



Recommendations

The Government of Mozambique should adopt a strong national financial planning policy framework that includes all its conservation areas, and one organization should be the designated coordinator of the financial planning process. This organization should be responsible for building capacity for conservation area managers to be able to input data and use the model. Sufficient staff time and funding should be budgeted to ensure these activities occur regularly.

Conservation area managers should be required to develop 5-year management plans and 10-year financial plans that summarize costs, revenues and financing gaps based on a standard approach and format. This includes standardizing cost and revenue categories and providing specific guidance for what should (and should not) be included in each. Doing so will allow conservation area and network level managers to accurately assess and compare costs, revenues and gaps.

Managers should distinguish between confirmed and expected revenues, and should validate and update their financial plans based on actual costs, revenues and operational constraints at least once annually. Network level managers should then aggregate figures across areas, and add necessary management, monitoring, communications and other regional costs.

Completed financial plans would then guide and support financing strategies at both conservation area and network levels – and managers could develop scenario analyses for proposed revenue generation mechanisms. Financial plans could also be used as management tools to help make resource allocation decisions. To accomplish these objectives, a proposed next step after this pilot is to develop and incorporate financial plans for Mozambique's remaining marine and terrestrial conservation areas.