



Perspectives on Aquaculture Development in the SADC region

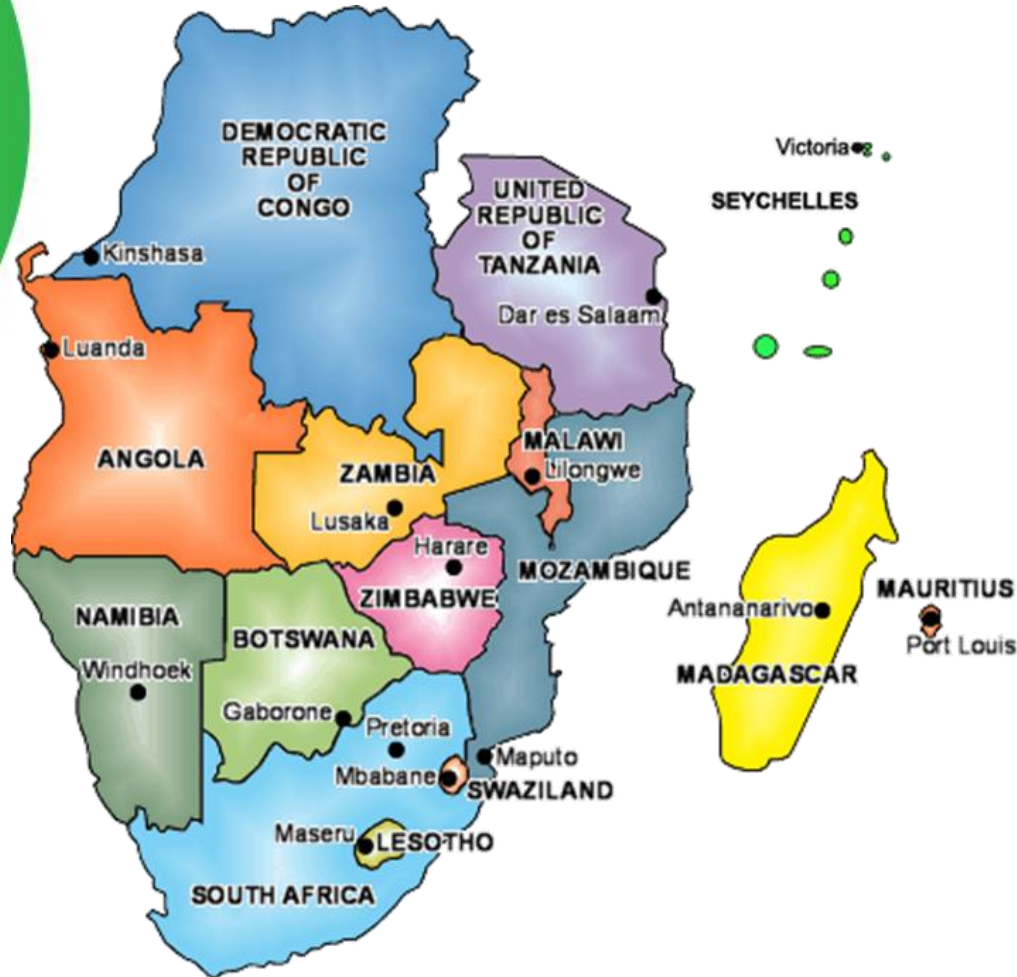
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Introduction



- The Southern African Coordinating Conference (SADCC), established 1 April 1980
- Southern African Development Community (SADC) established on 17 August 1992 in Windhoek, Namibia
- 15 Members States ratified the SADC Treaty (1992 as amended)
- Comoros new member (was accepted August 2017)



Policy Framework for Sustainable Aquaculture Development in SADC region

- **Vision:** Common future, a future in a Regional Community that will ensure economic wellbeing, improvement of the standards of living & quality of life, freedom & social justice & peace & security for the peoples of Southern Africa
- The SADC Common Agenda is stipulated in Article 5 of the Treaty & is implemented through the **Revised Regional Indicative Strategic Development Plan (RISDP) (2005-2020) & SADC Industrialization Strategy to 2063**

- **Code of Conduct for Responsible Fisheries (CCRF), 1995**
- **SADC Protocol on Fisheries, 2001**
- **Dar es Salaam Declaration, 2004**
- **ACP Strategic Plan of Action for Fisheries & Aquaculture, 2012-2016 (& its Implementing Roadmap to 2020)**
- **Regional Agricultural Policy (RAP), 2014**
- **Policy Framework & Reform Strategy for Fisheries and Aquaculture in Africa (PFRS), 2014**
- **Agenda for Sustainable Development (2015-2030)**
- ***SADC Regional Aquaculture Strategy & Action Plan (2016-2016) & SADC Regional Aquatic Animal Health Strategy (2016-2026)***

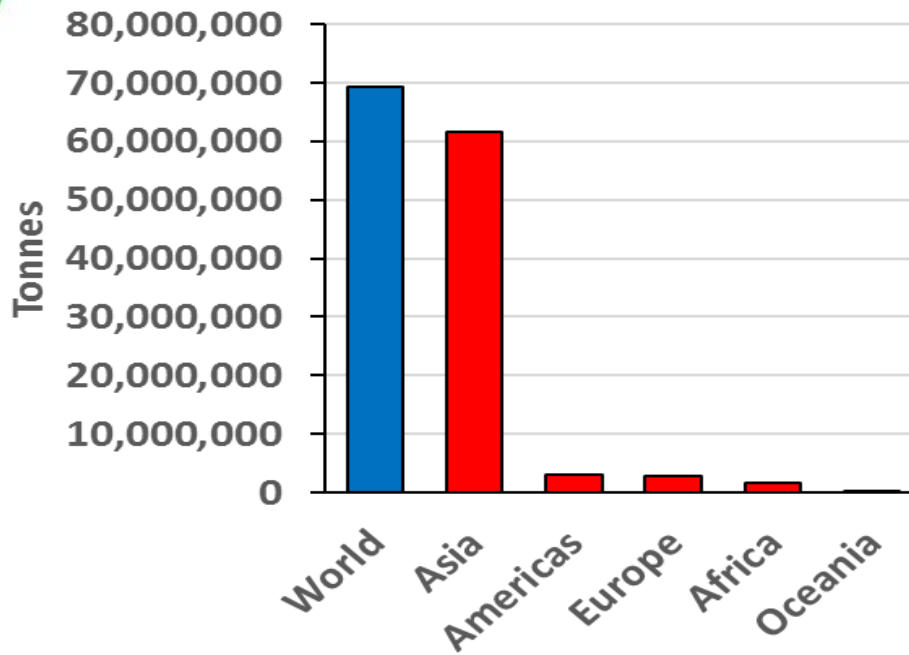
Protocol on Fisheries



SADC Aquaculture in a Global Context



Global Aquaculture Production 2015

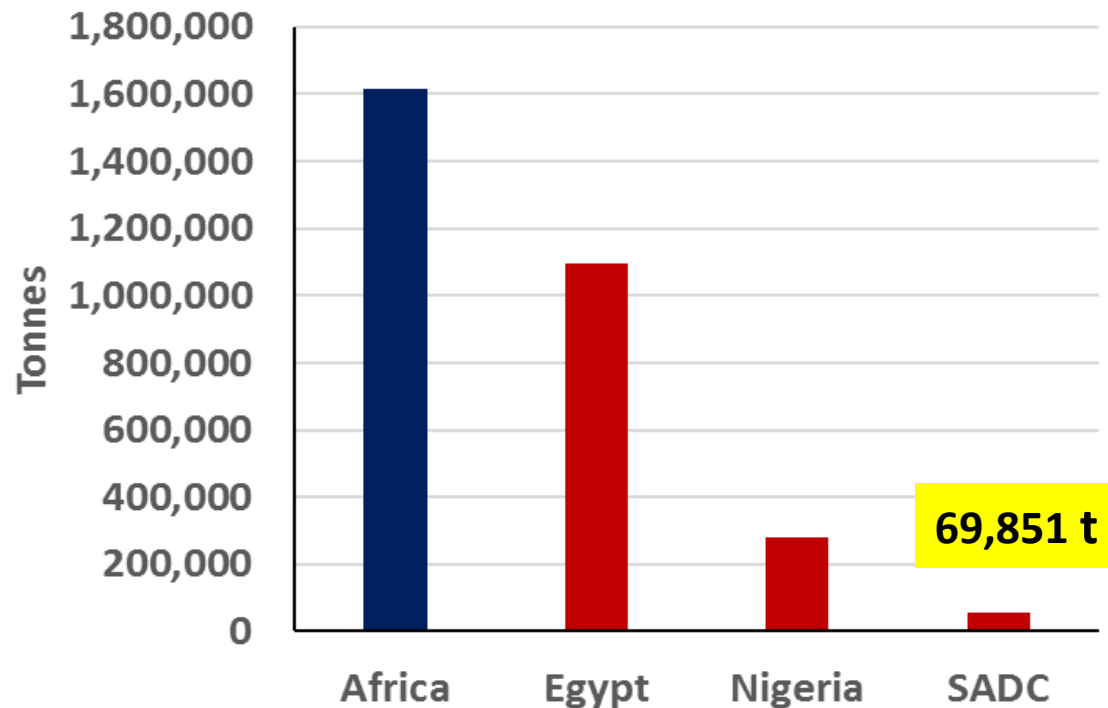


African aquaculture in a global context = 2.33%



SADC Aquaculture in a Global Context

African Aquaculture Production 2015



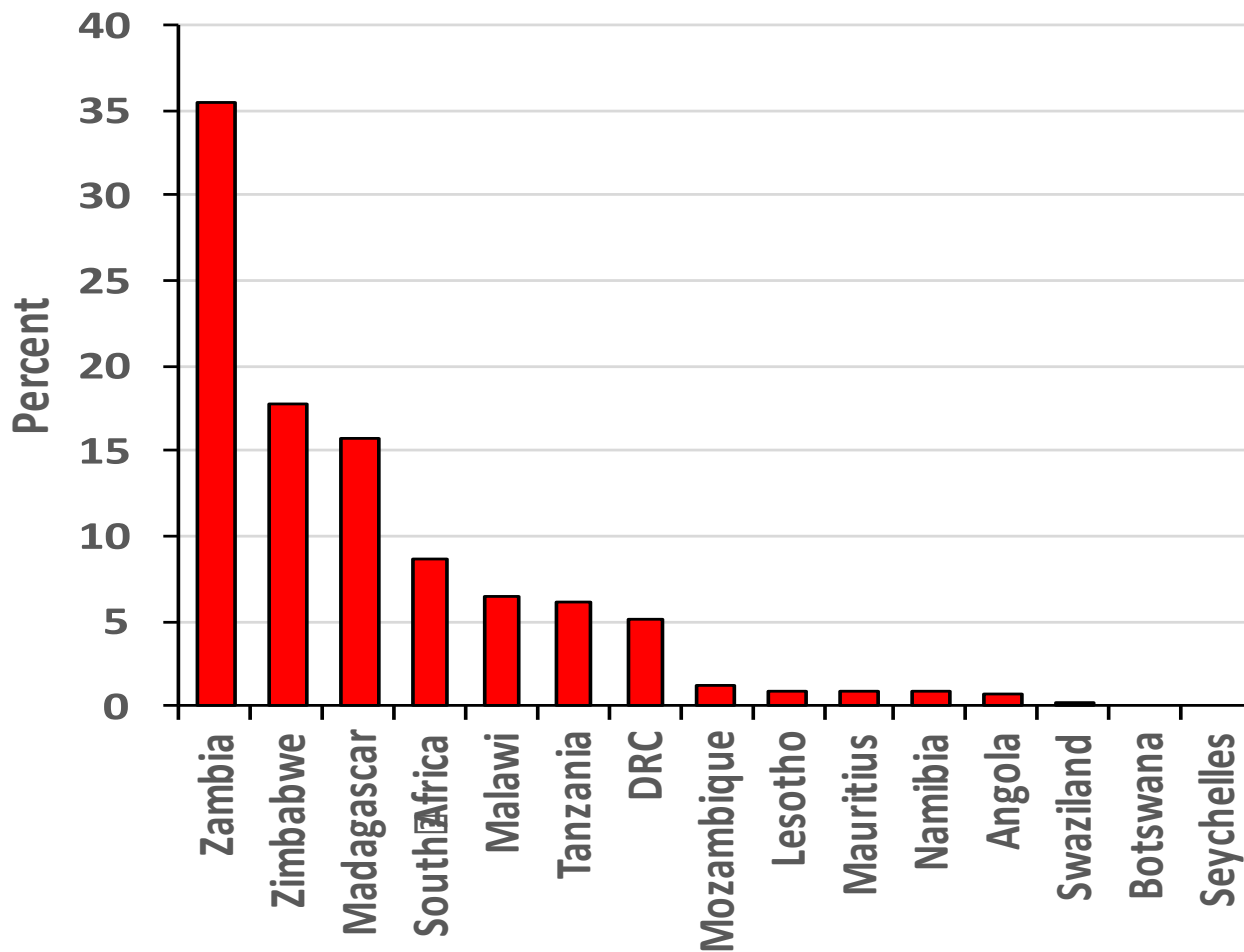
African aquaculture regional context (SADC = 3.5%)



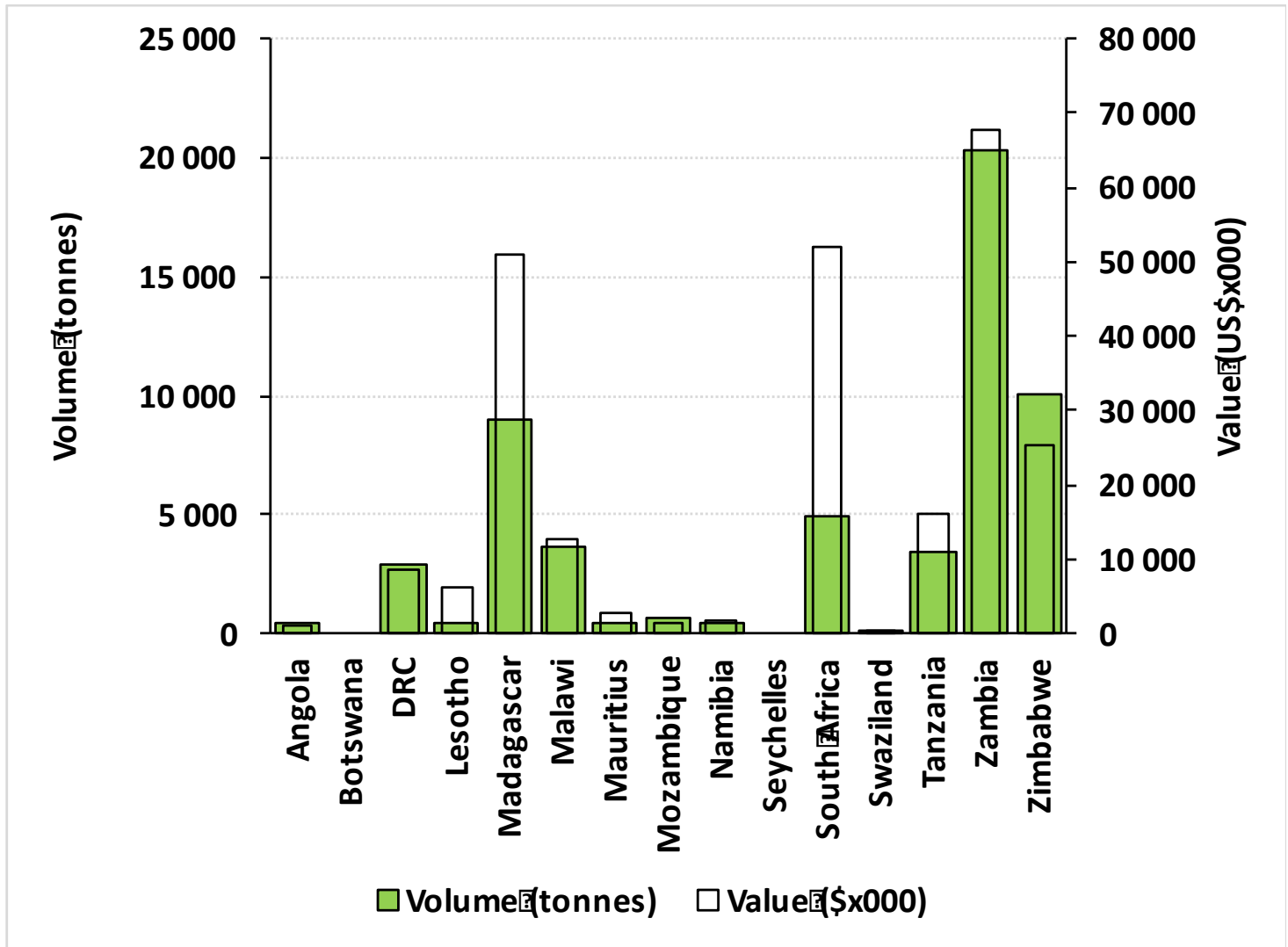


SADC contributes 0.08% to world aquaculture output (excluding seaweeds)

Percent contribution by country to total SADC aquaculture production of 69,851 tonnes in 2015

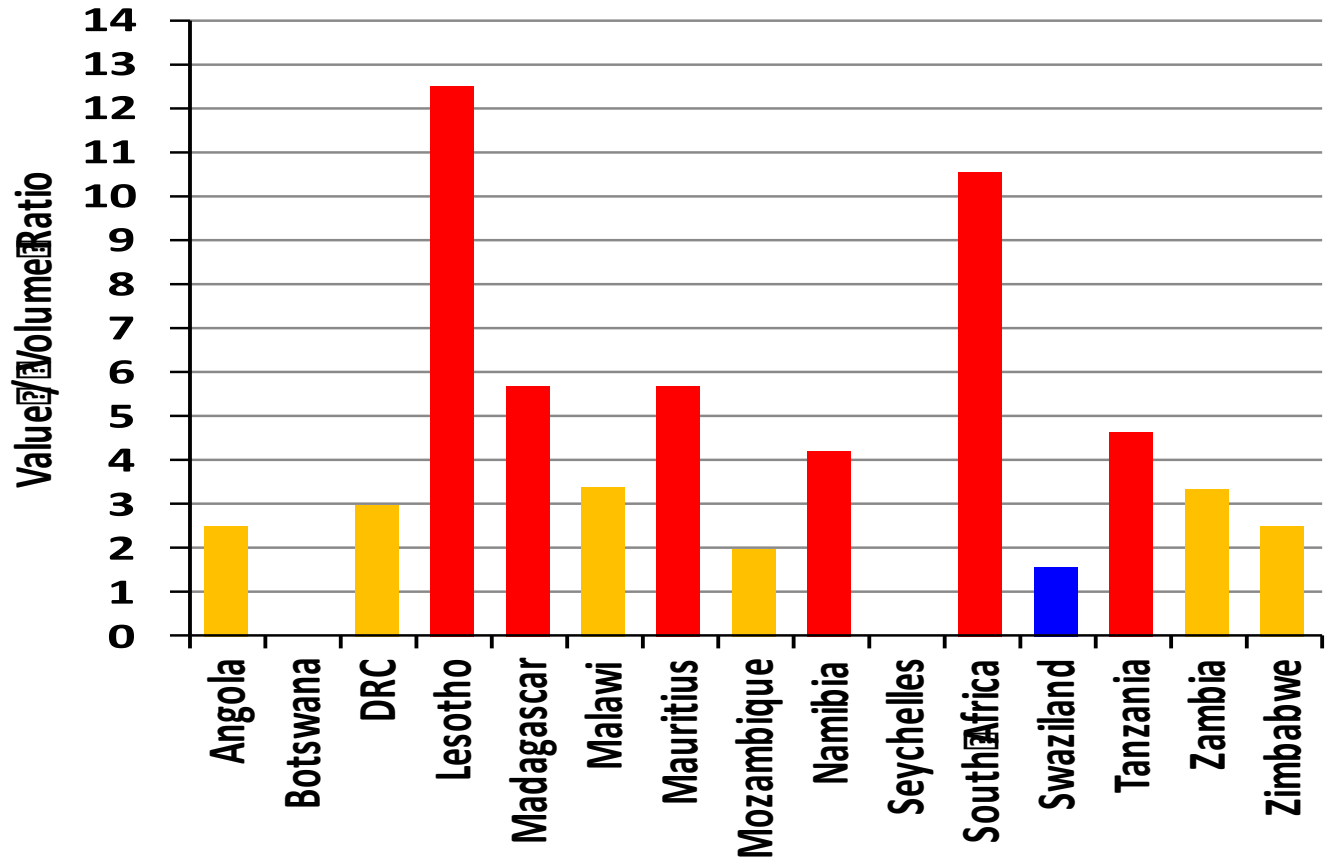


Top 4 = 77% of production and 75% of revenue





Value / volume ratio



- > 1 < 1.9 = Low fish price (Not favourable for aquaculture)
- > 2 < 3.9 = Medium to high price fish (Tilapia)
- > 4 = High value products (shellfish, prawns, trout)



Abalone farming in Hermanus, Western Cape, South Africa



Trout cage-culture in the Highlands, Lesotho





Oyster farming in Walvis Bay, Namibia



Prawn farming in Madagascar



Image photo 1481090 (c) Lionel Astruc / Biosphoto
Bio-breeding black tiger prawns from Madagascar / Sort by size of shrimp in the farm. Shrimp farm

Seaweed farming in Zanzibar, URT



Tilapia cages in Lake Kariba, Zimbabwe/Zambia



World Bank Doing Business Study (2015)

Country	Ease of doing business*	Capture (tonnes) 2013	% Change 01 to 13	Aquaculture (tonnes) 2013	% Change 01 to 13
Mauritius	1	7 309	-2.8	485	60.2
South Africa	2	412 510	-3.8	4 947	6.3
Botswana	3	431	22.1	0	0
Seychelles	4	74 128	3.2	0	-8.3
Namibia	5	485 738	-0.9	470	70.0
Swaziland	6	0	-8.3	100	3.2
Zambia	7	86 527	3.1	20 271	29.0
Mozambique	8	222 101	42.5	721	6.4
Lesotho	9	50	9.0	500	512.9
Tanzania	10	412 701	1.3	3 487	88.5
Madagascar	11	103 797	-1.3	8 973	1.3
Malawi	12	112 248	14.7	3 705	46.0
Zimbabwe	13	10 500	-1.2	10 090	28.5
Angola	14	275 000	0.7	450	332.6
DRC	15	227 414	-0.1	2 869	0.4
		2 593 848	-0.2	56 584	13.8

Fisheries

7 down, 8 up

Overall decline = 0.2%

Aquaculture

1 down

13 up

Overall growth = 3.8%

Sustained aquaculture growth

from 56,584 tons in 2013 to 69,851 tons in 2015

Seaweed All up

Overall growth = 3.8%

*Source: World Bank 2015. Doing Buisness 2015

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	Seaweed (tonnes)	% Change 01 to 13
Madagascar	2 775	24.7
Namibia	130	45.8
South Africa	2 000	1380.6
Tanzania	117 127	3.4
Totals	122 032	3.8



Dichotomy of Aquaculture in the SADC Region

Commercial Aquaculture

Market led and private sector
driven for profit

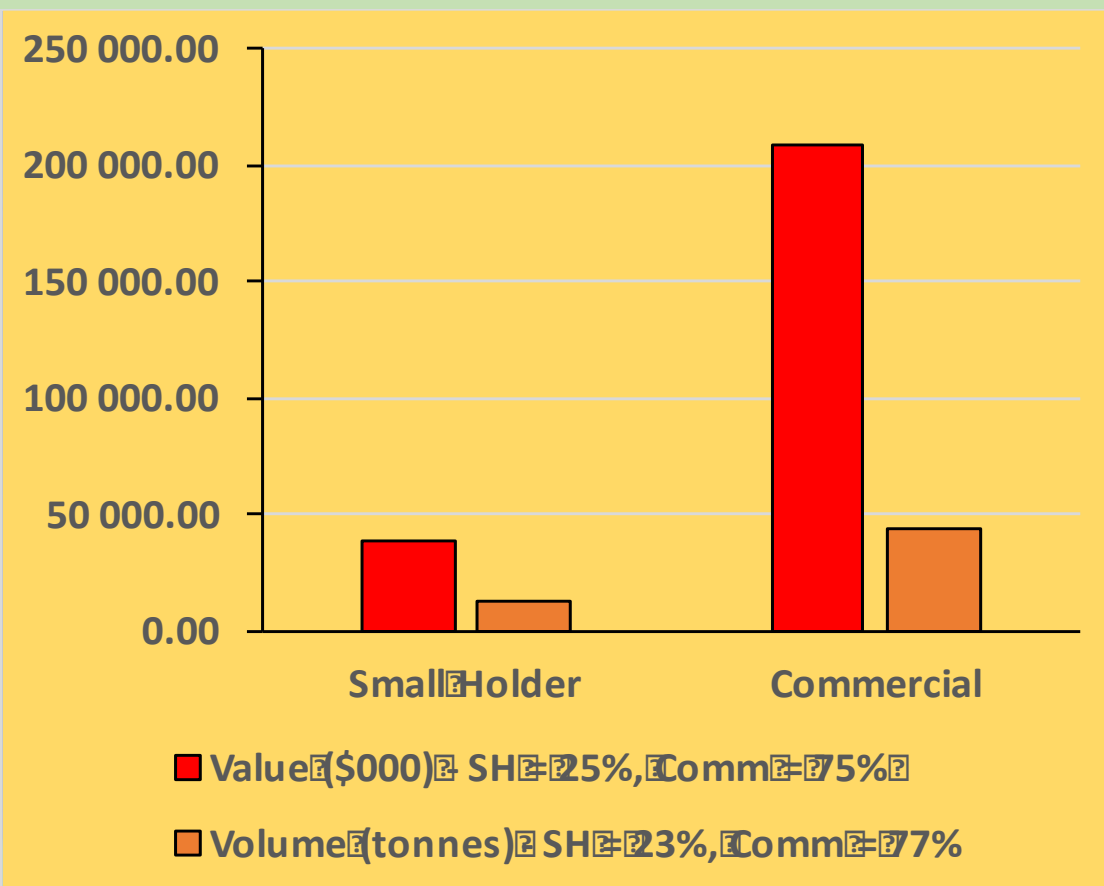
- 1. Origin:** Organic growth or planned based on feasibility studies.
- 2. Financing:** Local, FDI, Equity, loan, debt, incentives.
- 3. Scale of investment:** up to US\$35 million per farm.
- 4. Scale of production:** 20 to 20 000 tonnes pa
- 5. Benefits:** Profits, shareholder dividends, Employment, Social benefits, wealth, clinics, education, local area development.
- 6. Constraints:** Regulatory, administrative bureaucracy, corruption.

Small-holder Aquaculture

Generally not part of the value chain and does not contribute significantly towards poverty eradication and does not create wealth

- 1. Origin** – Top down, donor driven.
- 2. Financing:** Donor support, LIMITED State support, limited equity.
- 3. Scale of investment:** Labour (family or hired) and average < US\$1000
- 4. Scale of production:** 450 to 1500 kg /ha (This means 24.4 kg fish per 20x20m pond p.a. @ US\$3/kg = US\$73 p.a. per pond).
- 5. Benefits:** Improved nutrition at family level, contribution to food security, livelihoods diversification, some cash for education and other.
- 6. Constraints:** Access to finance and information, feed, fingerlings, equipment, transport, poor rural infrastructure.

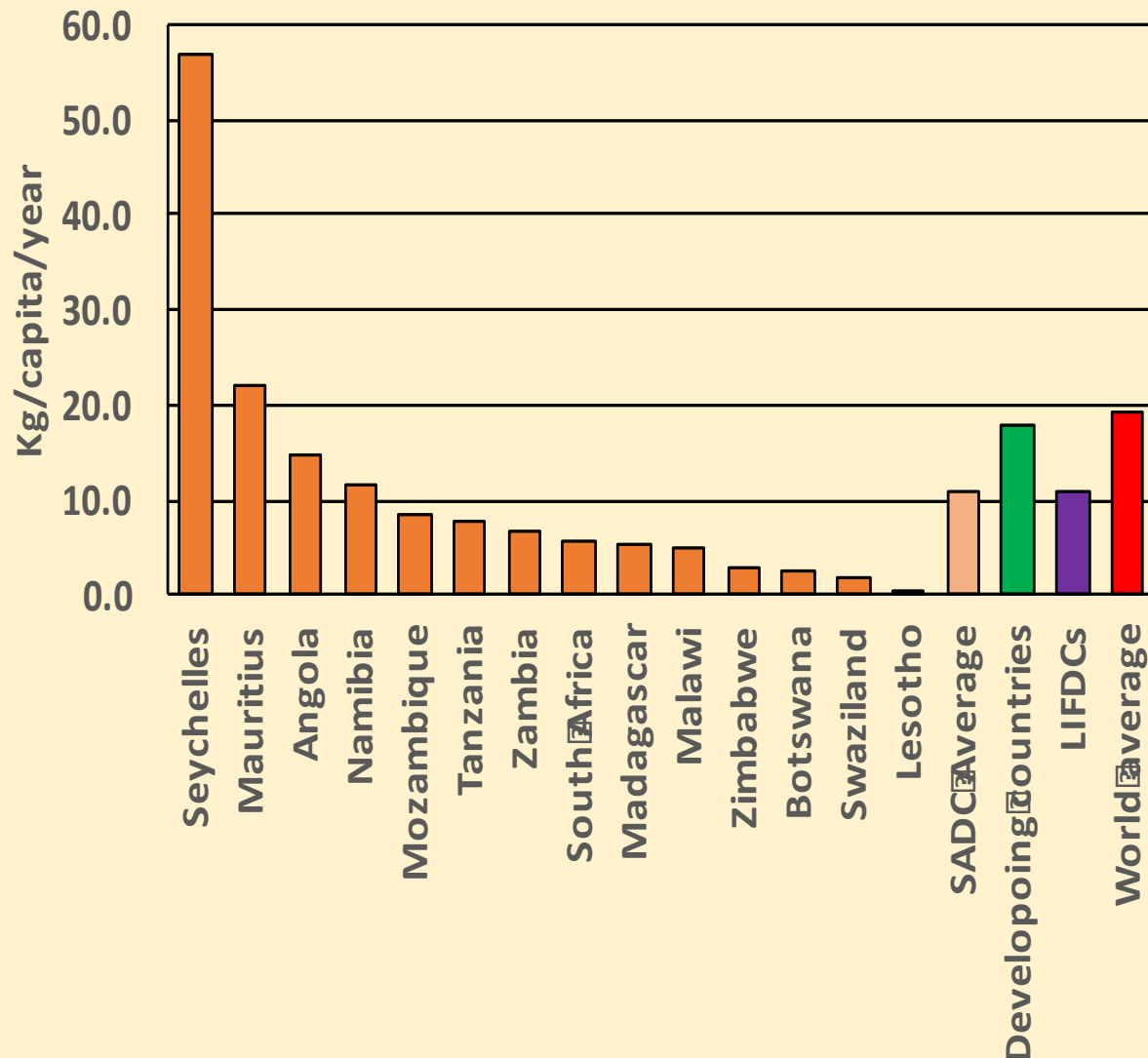
Comparison of outputs from commercial and small holder aquaculture in the SADC Region



Differences	Commercial	Small-holder
Market access	Yes	No or limited access
Logistics	Taken care of	Major constraint
Input costs	Economy of scale	High no economy of scale
Availability of inputs	Pre-arranged	Major constraint
Profitability	Yes	Major constraint

The need for growth of aquaculture in SADC Region

Per capita consumption of fish in SADC region



1. Declining or stagnating capture fisheries (down by 260,920 tons)

2. Satisfying growing demand for fish (consumer knowledge driven)

3. SADC shortfall of ca. 191,069 tons per annum)

4. Food security in rural areas

5. Economic growth, creation of wealth and employment



HOW ?

1. Management of capture fisheries improved.
2. Additional large scale farms established (where, how many, competition, financial feasibility, investment).
3. Transformation of small-holder farms to SMMEs to contribute towards national fish supply.

Imperative to transform small-holder operations into SMMEs

Change in development strategy from donor / NGO / state support to State investment in SMME development

1. Understand (why, how, when, where, who)
2. Feasibility (assessment of current initiatives, financial modelling, farmer identification)
3. Policy / strategy changes
4. Political will
5. ICPs technical assistance very critical (especially in R&D, technology transfer & capacity building)



Guided by:



**SADC AQUATIC ANIMAL
HEALTH STRATEGY 2016-2026**

**SADC REGIONAL
AQUACULTURE
STRATEGY AND ACTION
PLAN 2016-2026**

We now also need to focus on excellent work done before, to refine & identify commercial opportunities realistically & in light of operational constraints to business management & mindful of the key differentiators for successful aquaculture

Key differentiators

1. Meticulous planning
2. Correctly capitalized
3. Developed at correct scale
4. Top class management
5. Natural strategic advantage



Regional Aquaculture Interventions

- Supporting sustainable aquaculture development in partnership with: AU-IBAR, FAO, NPCA, WorldFish:
 - Environmental Management Framework for Sustainable Aquaculture Development in Southern Africa (2016)- SADCSec & AU-IBAR;
 - Aquaculture Evaluation Tool for the SADC region (2016)- SADCSec & WorldFish;
 - Strengthening capacity of SADC in implementing Fisheries & Aquaculture Programmes (regional & national TCPs)- FAO & SADCSec
 - Angola, Malawi, Mozambique, Swaziland, Tanzania (Zanzibar)
 - Strengthening Controls of Food Safety Threats, Plant and Animal Pests & Diseases for Agricultural Productivity and Trade in Southern Africa – FAO SADCSec & WorldFish
 - Including EUS & TiLV surveillance
 - CGIAR Research Program on Fish Agri-Food Systems (FISH)
 - Angola, DRC, Malawi, Tanzania, Zambia
 - SADC-WorldFish-FAO Platform for Genetic Improvement in Aquaculture
 - Zambia will launch the first national tilapia genetic improvement programme on 25 September 2017



Summary of High Potential commercial opportunities in the SADC region

1. **Abalone:** RSA, Namibia -- Land based farming and ranching
2. **Oyster and mussels:** RSA, Namibia, Angola -- Long line, rafts
3. **Oyster hatcheries:** Namibia, RSA (global shortfall)
4. **Pearl oysters (Mabe) :** Zanzibar, northern Mozambique, Madagascar.
5. **Black pearls :** Seychelles
6. **Mud crab :** Madagascar, Mozambique, Tanzania
7. **Sea cucumber :** Madagascar, Seychelles, Tanzania, northern Mozambique
8. **Prawns :** Madagascar, Mozambique, Tanzania, Seychelles.
10. **Rainbow trout:** Lesotho, South Africa – Cage, raceway, pond & tank culture.
11. **Seaweeds:** Zanzibar, Tanzania, Madagascar, northern Mozambique, Rodriguez – tie tie and floating culture.
12. **Seaweed processing:** Primary and secondary processing (Dar es Salaam)
13. **Nile Tilapia:** Zimbabwe, Zambia, Tanzania, Mozambique, Angola – cage and pond culture.
14. **O. shiranus / O. karongae:** Malawi – Cage and pond culture
15. **O. tanganycae :** Tanzania, Zambia – Cage culture.
16. **African catfish:** Angola, DRC, Zambia: Pond or high density tanks



Conclusions

- Aquaculture in SADC is small but very significant on a Regional basis;
- Aquaculture in SADC is dichotomous (single rural pond producing 30 kg fish per year to high tech, export orientated, abalone farming/large scale cage culture of tilapia & trout);
- Increasing demand & shortfalls provide scope for growth of commercial & small holder aquaculture in SADC;
- Small holder operations must be transformed to create wealth & food;
- Development of rural aquaculture in SADC is seriously constrained;
- Aquaculture technologies are reasonably well developed;
- Research base for inland & marine aquaculture is strong (Malawi – Inland / South Africa – Marine);
- Existence of strong collaborating and cooperating regional & international partners provide a good platform for alignment of interventions towards a common good;
- There is a need for greater cooperation between Member States to realise the opportunities provided by aquaculture in SADC; &
- Blue Growth Initiatives (FAO, ACP, SADC etc.) provides an opportunity to maximize aquaculture in the Region;





THANK YOU

MERCI

OBRIGADO

