

IRS for Cross Border Malaria Control and Elimination

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Presentation Outline

- Why IRS ?
- Where IRS ?
- Who are the key stakeholders?
- What is the Impact?
- What are the Challenges
- What is needed to sustain IRS?
- How will we make the case for IRS?

Why IRS ?

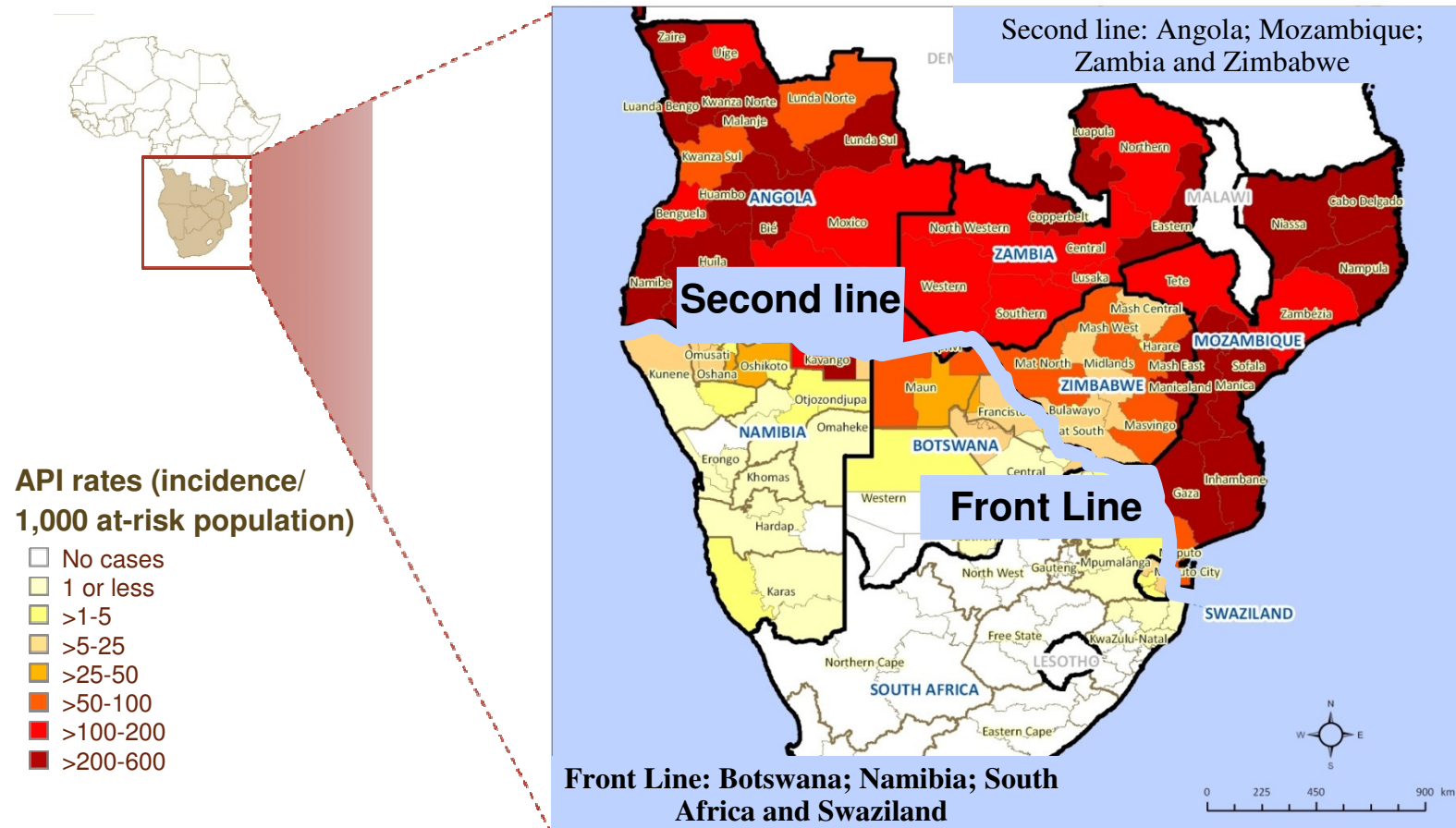
- Existing in Southern Africa since 1940's
- Vast technical skills and technical experience exists
- High level of political support
- Common Vectors *Anopheles Arabiensis*
- Community acceptance and support for IRS relatively high.
- Proven impact on reduction of malaria morbidity and mortality.



Where are the Cross Border Malaria Initiatives? & who are the key stakeholders?

- **TLMI** : Trans Limpopo Malaria Initiative- South Africa and Zimbabwe
- **MOZIZA**: Moziza- Mozambique, Zimbabwe and South Africa;
- **LSDI**: Lubombo Spatial Development Initiative South Africa, Mozambique and Swaziland
- **TZMI**: Trans-Zambesi malaria initiative- TZMI; Angola; Botswana; Namibia; Zimbabwe; and Zambia
- **TCMI**: Trans Cunene malaria initiative; Angola and Namibia

Overview of Malaria Elimination - E8 Countries, 2009

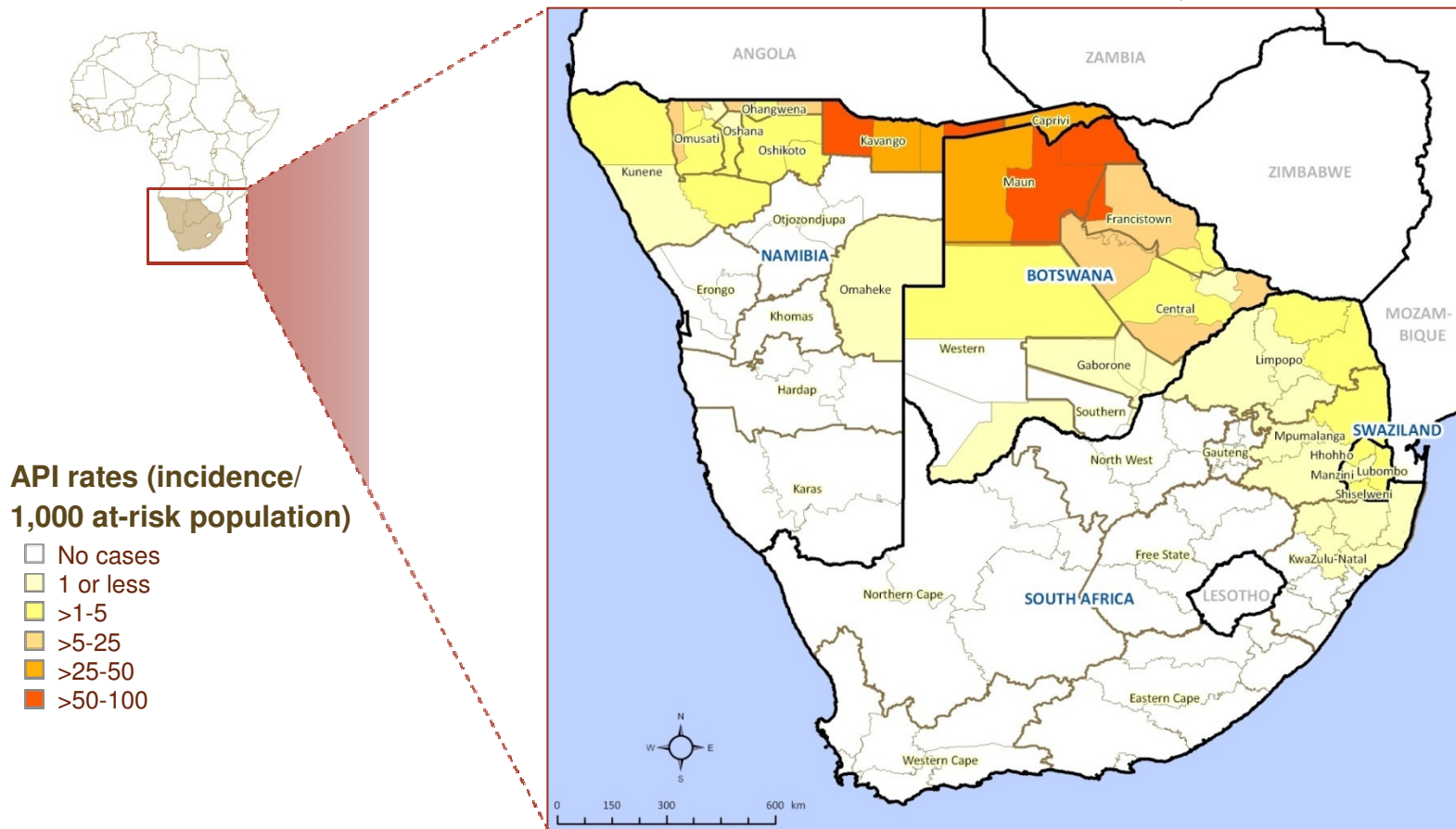


API: Annual Parasite Incidence, used to measure the number of cases recorded in a given year relative to population
 Note: Includes all cases, both confirmed and clinically diagnosed, both imported and local
 Source: WHO World Malaria Report 2009; South African Department of Health; Swaziland Ministry of Health, Statistics South Africa

Elimination 4 Countries, 2010:

Botswana; Namibia; South Africa and Swaziland

Endemic districts only

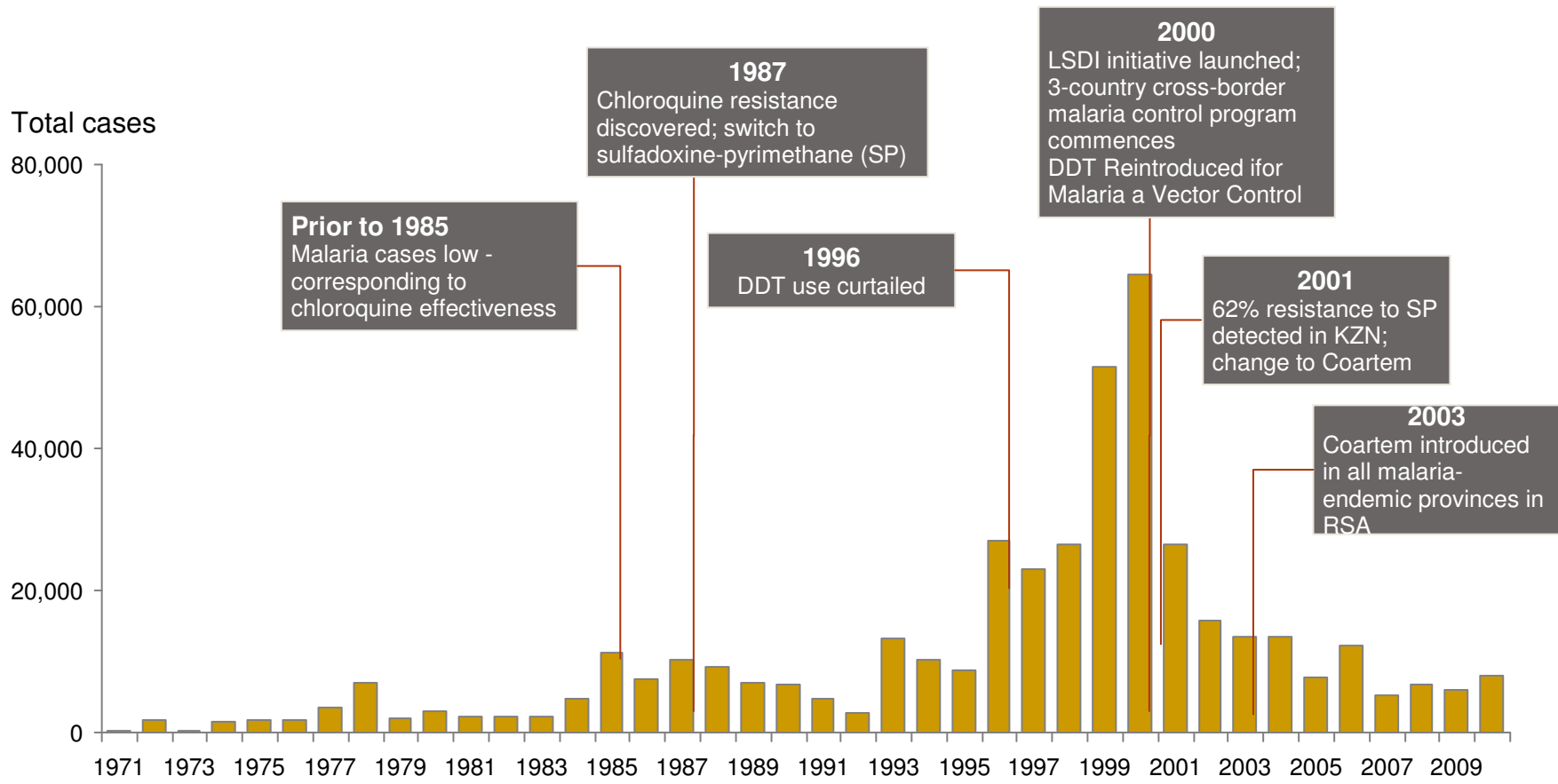


Note: Includes all cases, both confirmed and clinically diagnosed, both imported and local
 Source: WHO World Malaria Report 2009; South African Department of Health; Swaziland Ministry of Health; Statistics South Africa

Measuring the Impact from IRS Spraying Programmes

- Malaria morbidity
- Malaria Mortality
- Vector Density and
- Vector species eradication..

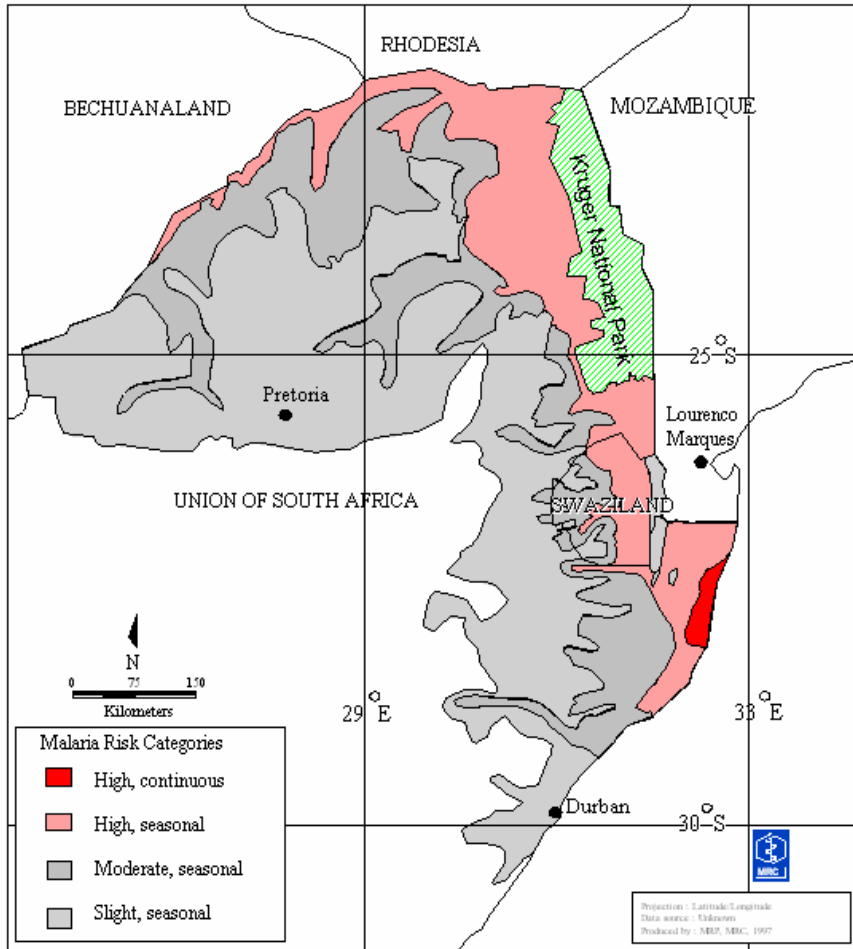
Total Malaria cases in South Africa, 1971-2010



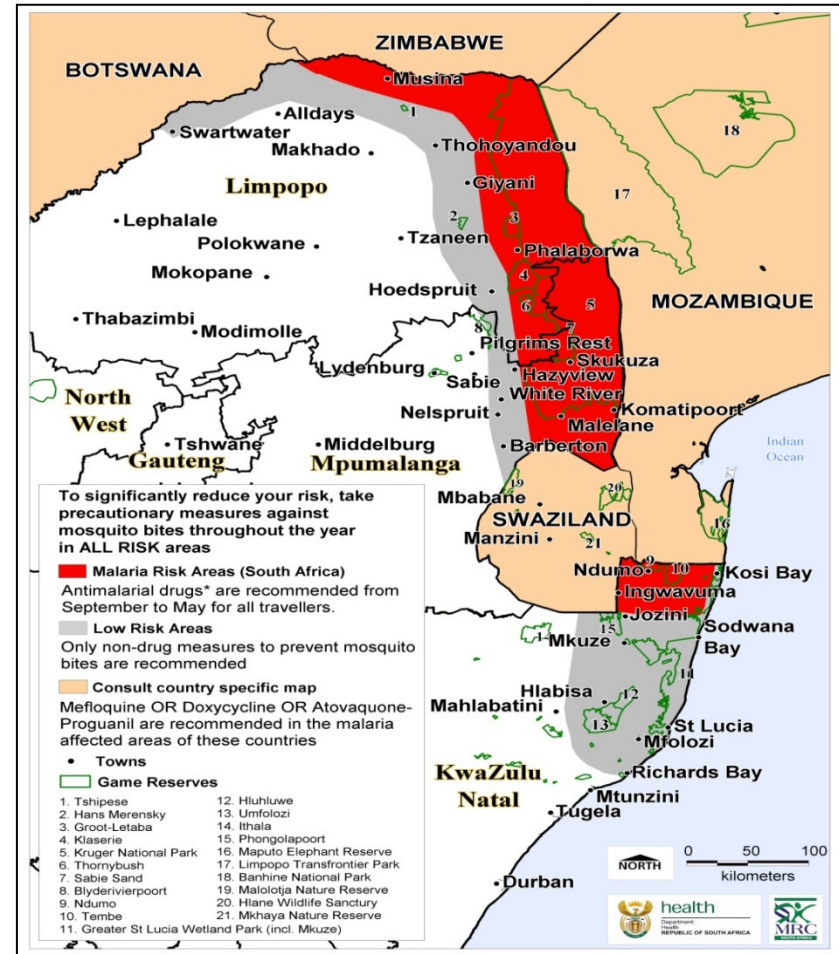
Reference: D. Moonasar and C.L. Johnson; Malaria. South African Health systems Review. The press Gang; South Africa 2004: 243-256;

Malaria Transmission Maps; 1938 and 2008

Malaria Risk Map Southern Africa 1938

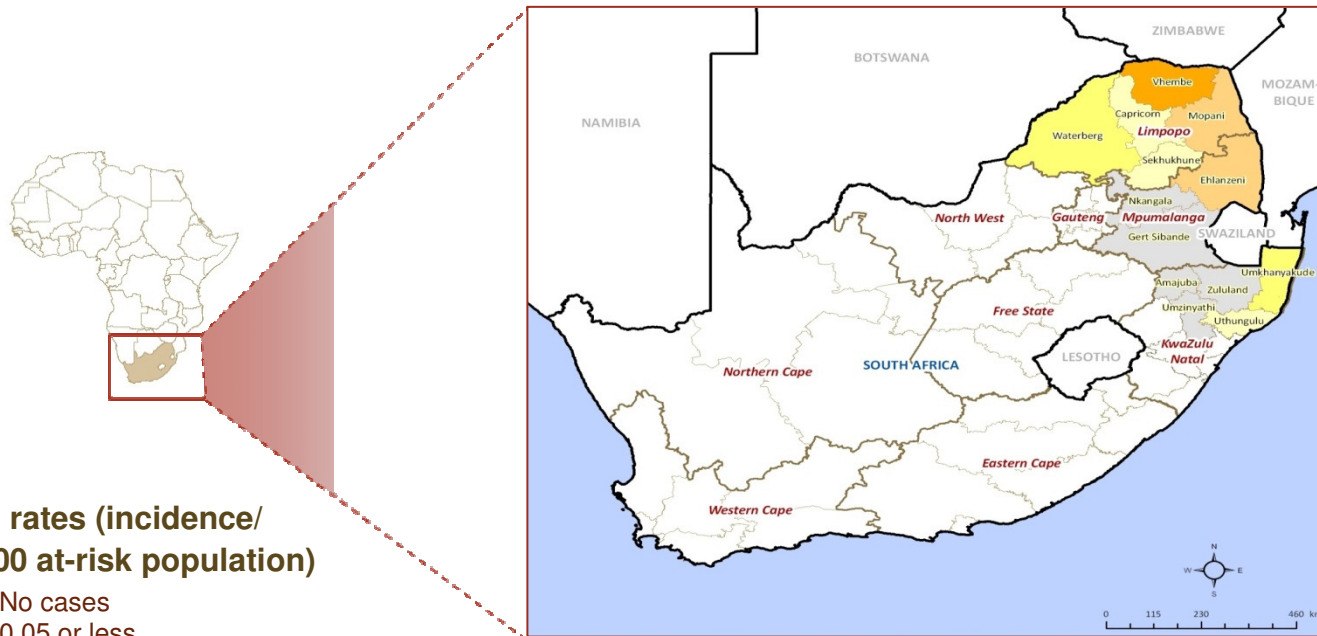


Malaria Risk Map; South Africa 2008



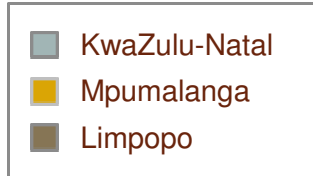
References: Brian Sharp, Marlies Craig, Bronwyn Curtis, Abaraham Mnzava, Rajendra Maharaj, Kleinschmidt I. Malaria. South African Health Systems Trust. South Africa The press Gang; 2000; 350-364
Ministry of Health South Africa

Progress towards elimination in South Africa, 2010

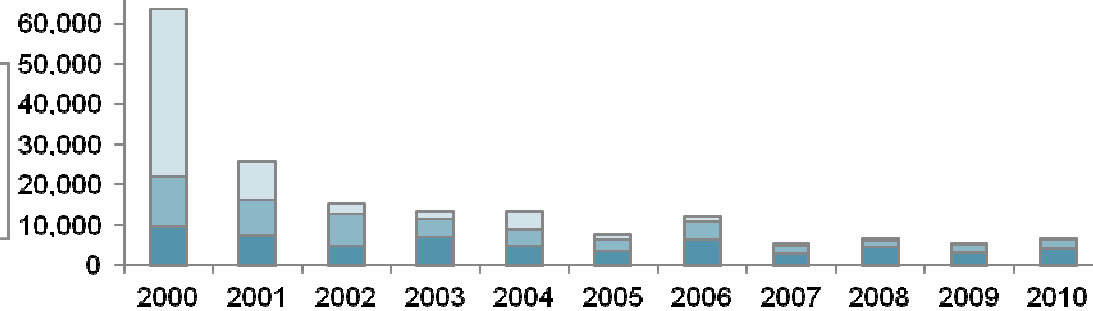


API rates (incidence/1,000 at-risk population)

- No cases
- 0.05 or less
- >0.05 – 0.1
- >0.1 – 0.5
- >0.5 – 1.5
- >1.5 – 2.1

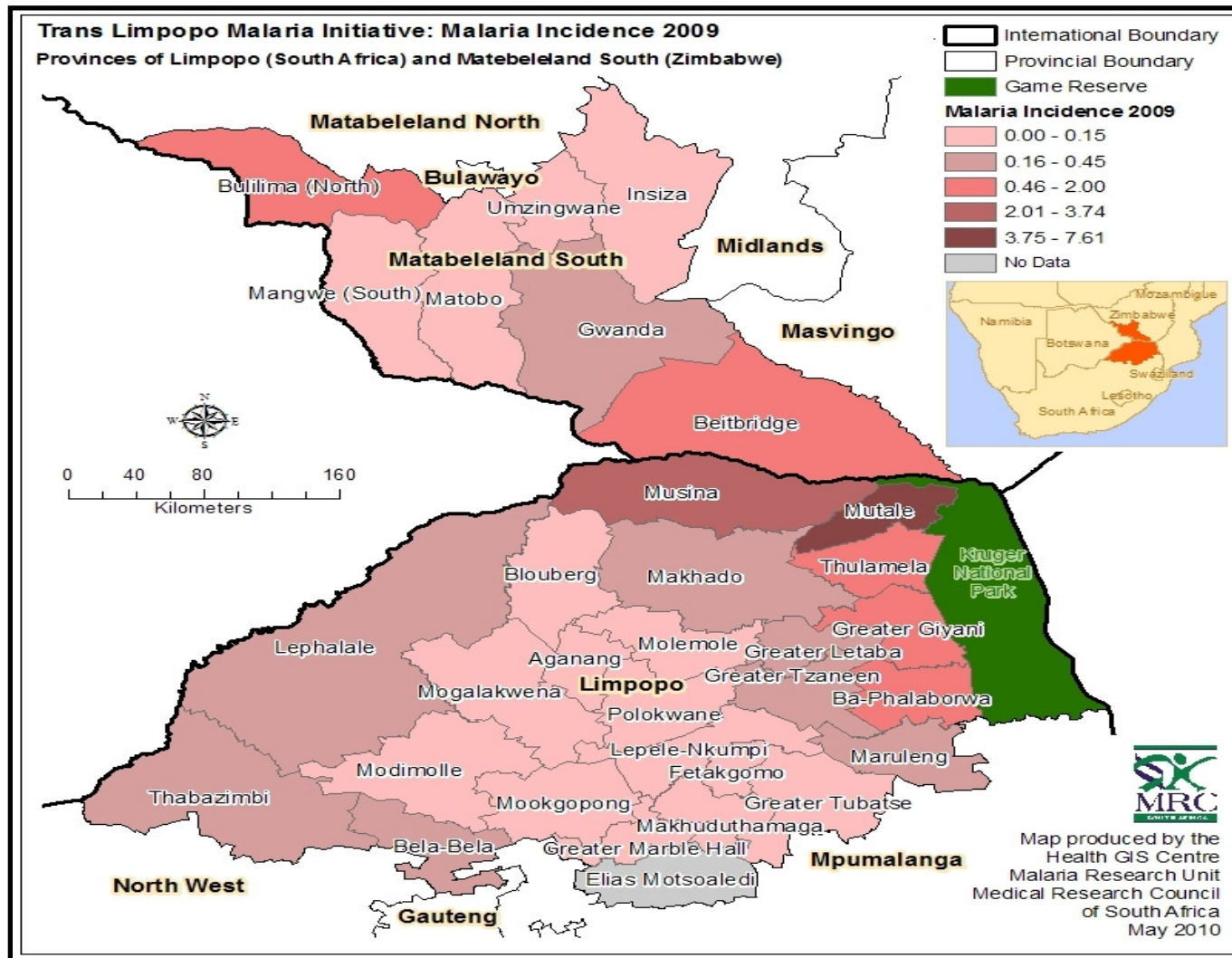


Total cases in endemic provinces



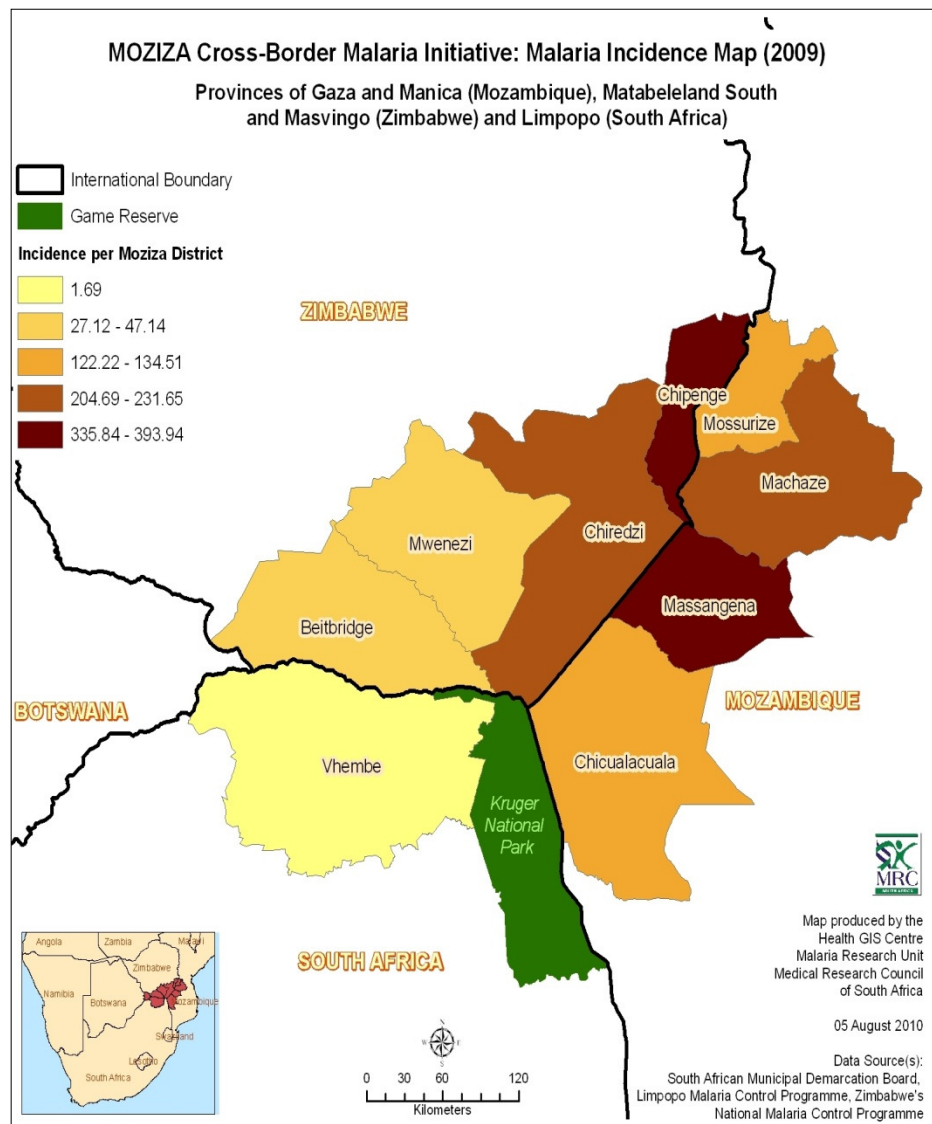
Note: Includes all cases, both confirmed and clinically diagnosed, both imported and local. Source: South African Department of Health, Statistics South Africa

TLMI- Trans-Limpopo:



Incidence map of municipalities in Limpopo Province, South Africa and Matabeleland South Province, Zimbabwe. Focus districts for the Trans-Limpopo Malaria Initiative show the highest burden of malaria (incidence rates for 2009: Beitbridge – IR 2009; Mutale – 9.79; Musina – 5.46).

MOZIZA Districts

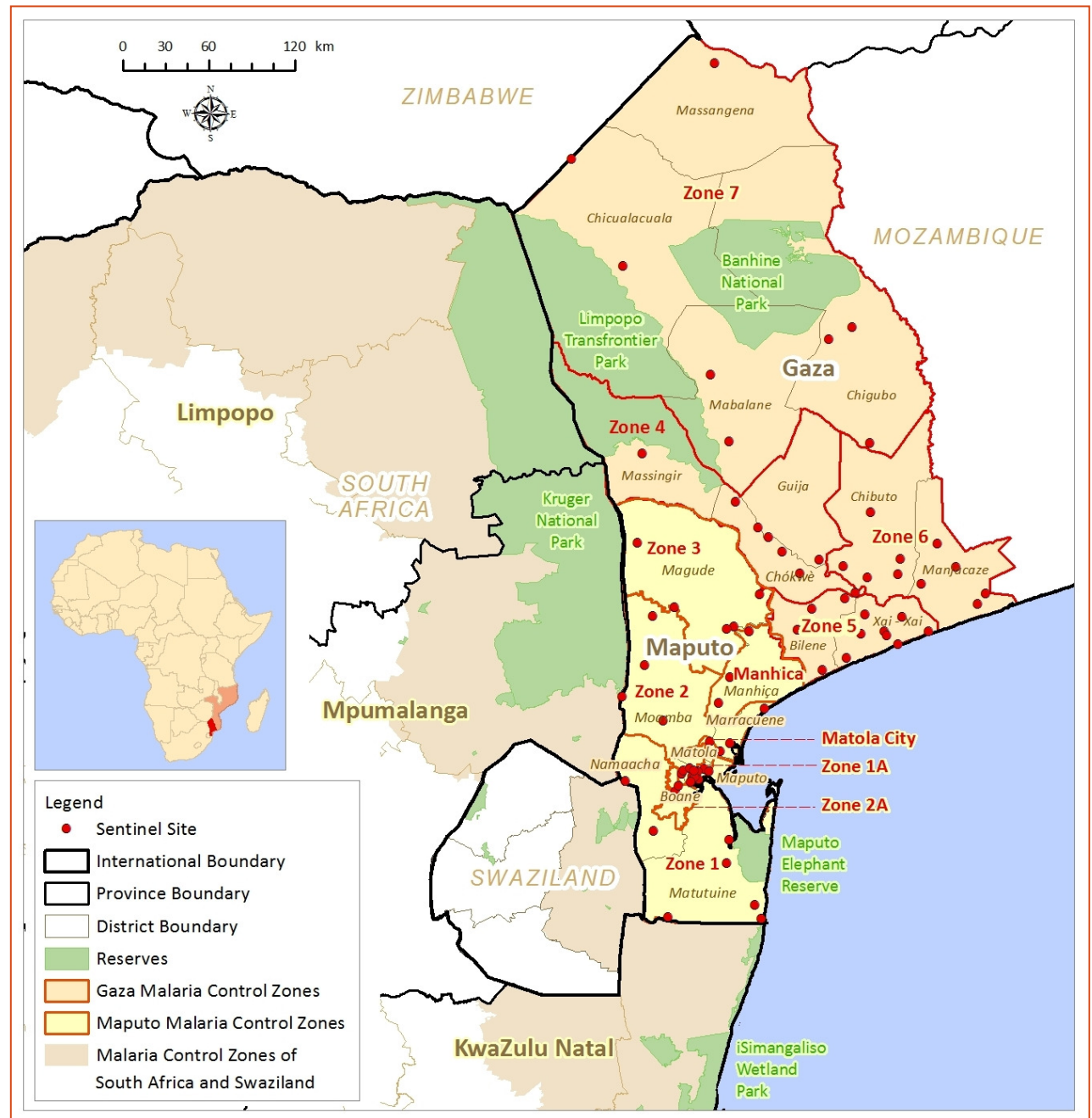


Country	District
Zimbabwe	Beitbridge
	Chipinge
	Chiredzi
	Mwenezi
Mozambique	Chicualacuala
	Massangena
	Machaze
	Mossurize
South Africa	Vhembe

LSDI Background

- The Lubombo Spatial Development Initiative (LSDI) is a programme by the Governments of Mozambique, Swaziland and South Africa to develop the Lubombo region into a globally competitive economic zone.
- Aim to create sustainable employment and equity in access to economic opportunity in the region.
- **Rationale:** Malaria is an impediment to economic development in the region, hence the LSDI malaria initiative was set-up, by President Mbeki, President Chissano and King Mswati (III) in July 1999.
- Key interventions:
- DDT

LSDI



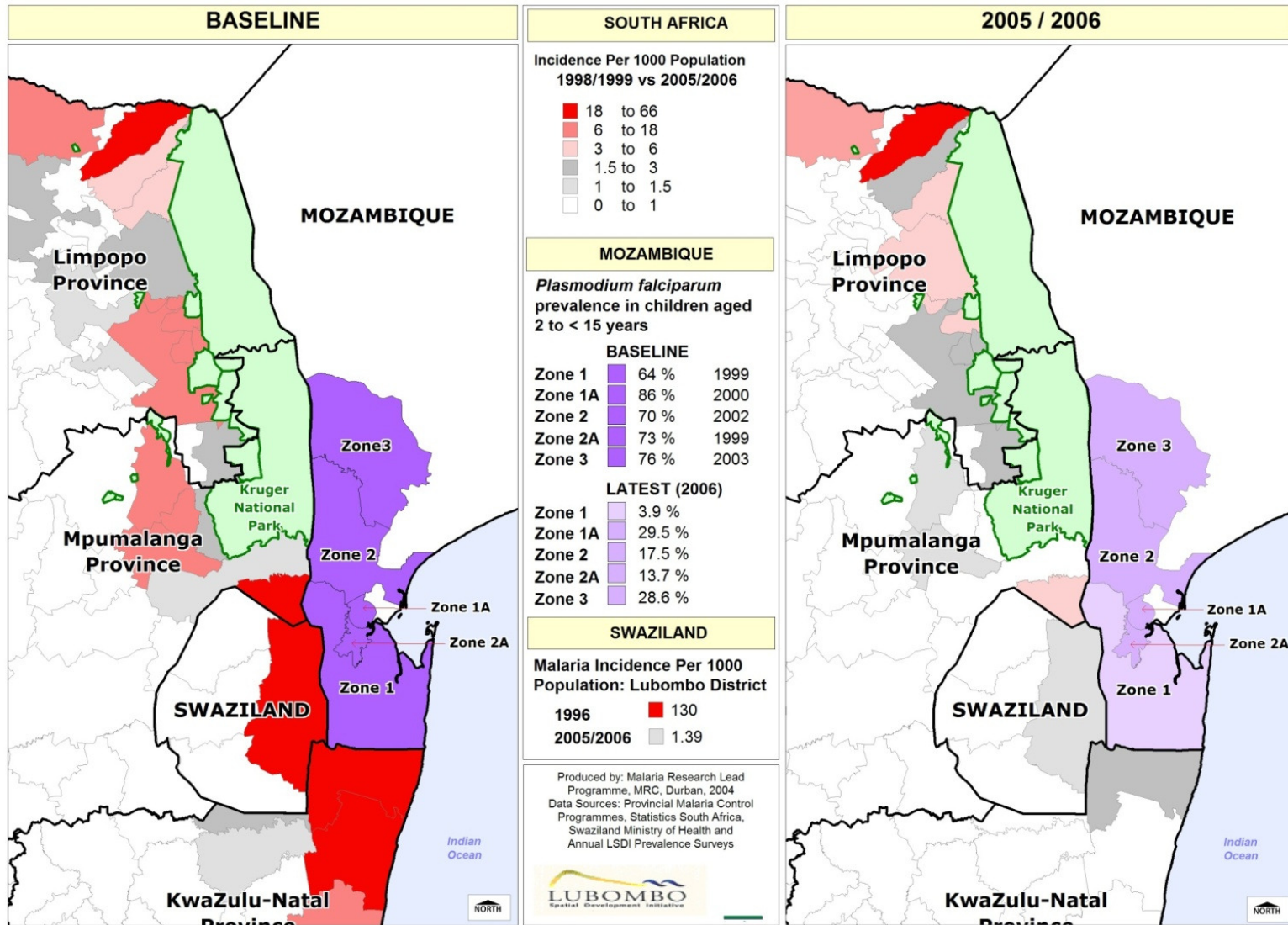
LSDI- Interventions

- Assessment of malaria control in Mozambique
- IRS recommended for rapid impact
- Insecticide resistant profile assessed
- RDTs introduced in 2000
- ACTs introduced in 2006

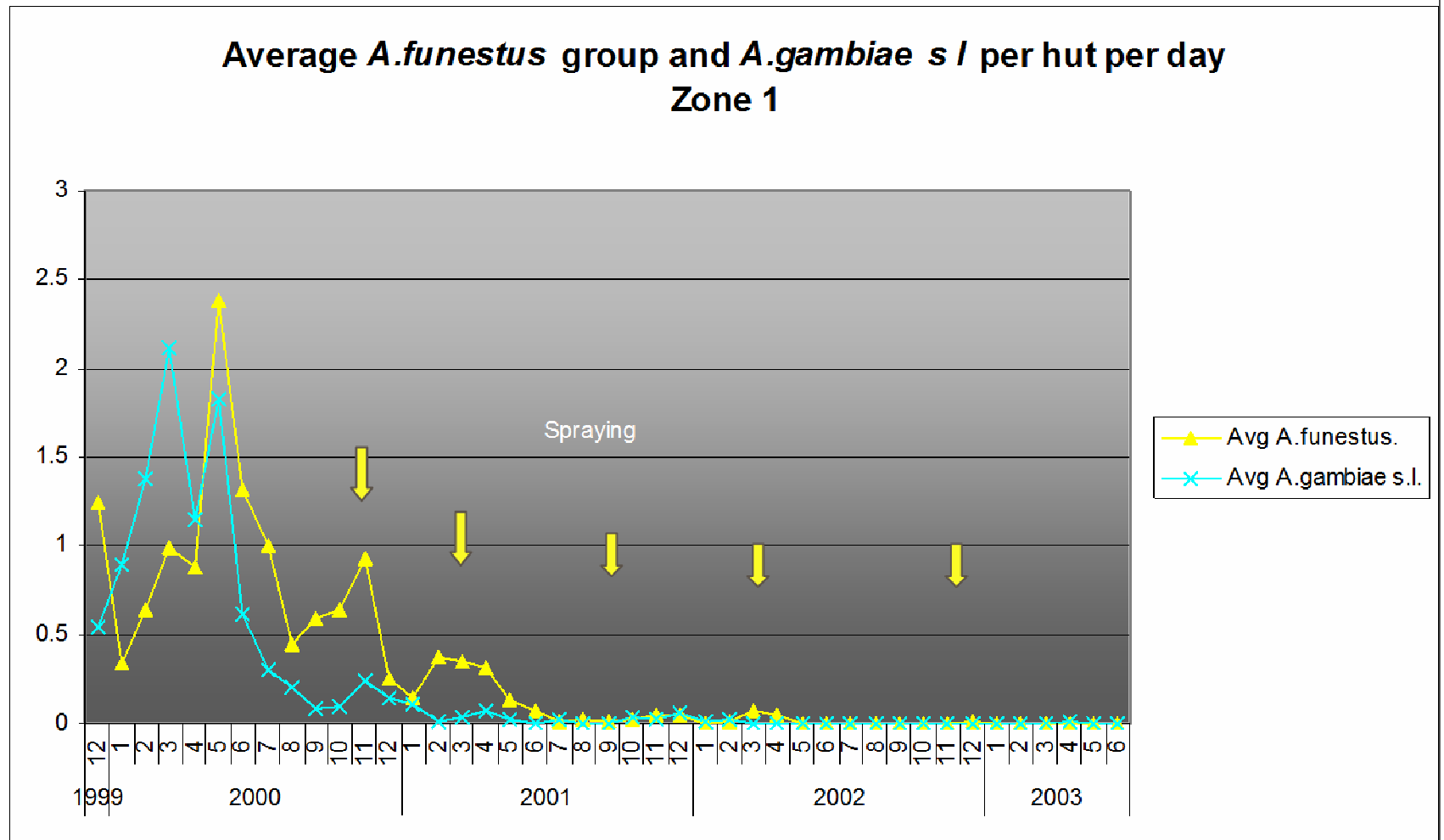
Progress 1

- Malaria incidence has declined in South Africa - KwaZulu-Natal and Mpumalanga Provinces and Swaziland – Lubombo region by 99% in 2009 compared to the baseline of 2000
- Furthermore, the prevalence of the disease has decreased by 92% in southern Mozambique up to 2009.
- This model has proven to be successful in malaria control and copied for other initiatives such as:
 - Trans-Zambezi Malaria Control Initiative involving Angola, Botswana, Namibia, Zambia and Zimbabwe, and
 - the Trans-Kunene Initiative involving Angola and Namibia and the Zimbabwe

Progress 2



Impact LSDI



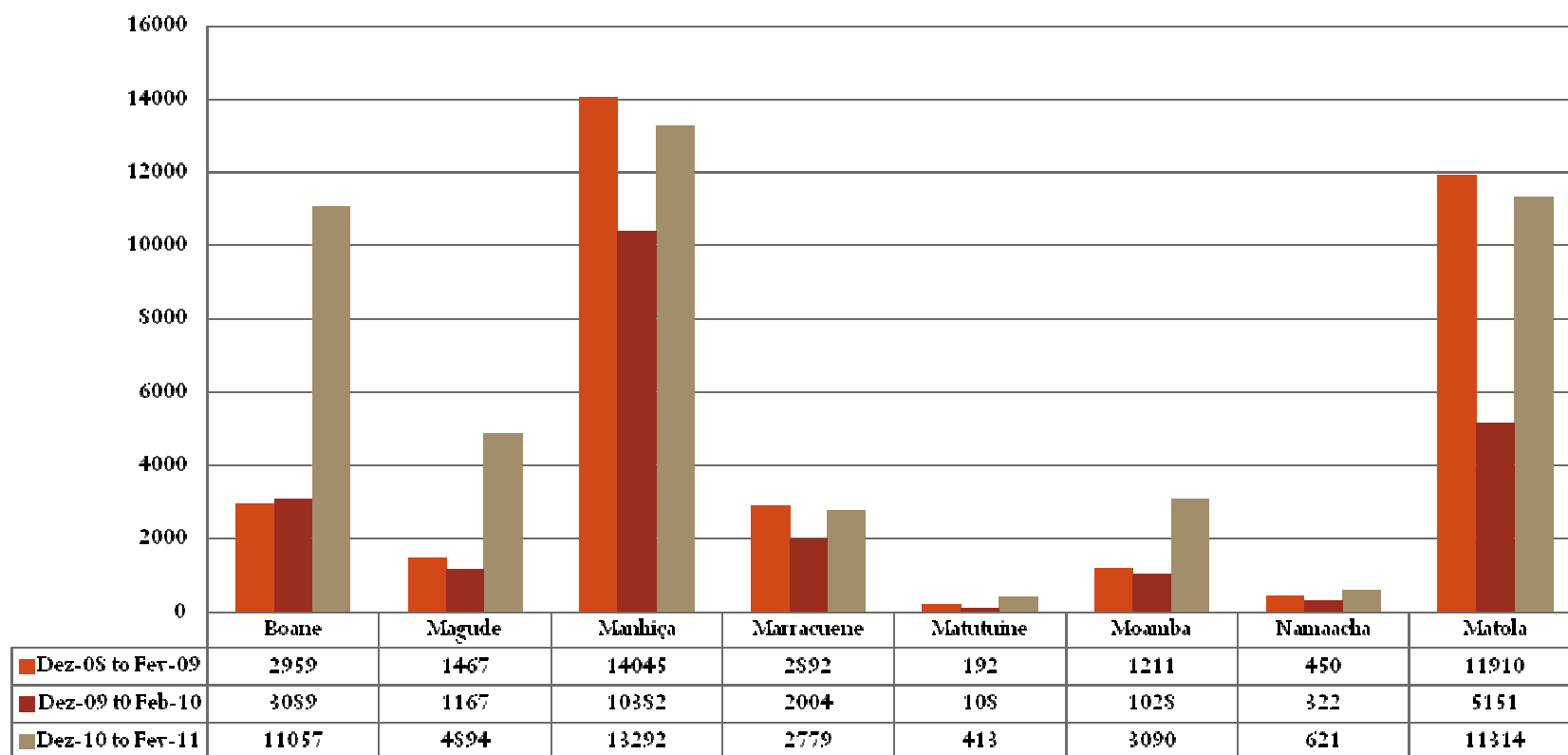
What are the Consequences of
not sustaining IRS programmes

% IRS Coverage in LSDI Provinces

Province	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Maputo	>85	>85	>85	>85	>85	>85	>85	>85	>85	70	28
Gaza						70	80	80	80	76	75
Mpumalanga	86	86	87	80	78	75	78	87	91	91	93
KZN	>80%										89
Lubombo	>80%					90	90	90	90	90	92

Maputo Province

Comparison of malaria cases during December 2008 to February 2011



What are the challenges for Sustaining Cross Border Malaria IRS programmes

- Funding
- Lack of Leadership- who drives the collaboration?
- Lack of technical skills
- Bureaucracy
- Lack of understanding
- Competing interests from partners and stakeholders

How can we sustain Cross Border IRS programmes

- Secure funding; beyond donor support; local government funding ideal
- Build the capacity : Skills and Numbers
- Strong M&E mechanisms must be in place to
- Co-ordination must be in place
- articulate the case for IRS:
 - Harmonisation
 - Synchronisation
 - Optimisation
 - Collaboration.

Food for Thought!!!!

- Public Health interventions (PHI) must be simple
- Must mimic the transmission of malaria from mosquito to man
- If PHI is complicated then the mosquito will continue to win the battle!!!
- IRS is one among many simple interventions that has proven its might against the adversary of the mosquito vector.

Questions....

