

**EXPERIENCE OF LSM in
Khartoum Malaria Free Initiative**

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Why LSM

- **Khartoum State has surface of 28000 km², laying between latitude 34.45-31.5 E and longitude 16.45-15.8 N.**
- **Located in the junction of Blue Nile, White Nile and River Nile.**
- **According to last census (2008) Khartoum has population of 6 million**
- **The State consist of seven localities .**
- **Mosquitoes breeding sites is well identified**
- **Malaria is a major public health problem**
- **Political commitment for malaria control**

Goals and Objectives of KMFI

Goal:

To make Khartoum free of Malaria

Objectives:

- 1. To reduce the prevalence rate to less than 1/1 000**
- 2. To reduce reported malaria cases by 70% as compared with 2001**
- 3. To reduce reported malaria deaths by 80% as compared with 2001**

Population Targeted

Stratum	Population	Common breeding habitats
Urban	2,073,300	Broken water pipes, construction tanks, rain drainage, overhead tanks
Peri-urban	3,201,021	Broken water pipes, agricultural activities, rain pools
Rural	640,672	agricultural activities, rain pools

How?

Approaches adopted in line with Roll Back Malaria Initiative (1998) :

- 1) Provision of prompt diagnosis and effective treatment**
- 2) Selective, cost-effective, and sustainable community-based integrated vector control**
- 3) Early forecast, control and containment of malaria epidemic and outbreaks**
- 4) Training and capacity building**
- 5) Community participation, intersectional collaboration and building partnerships .**
- 6) Operational research and surveillance.**

Political commitment

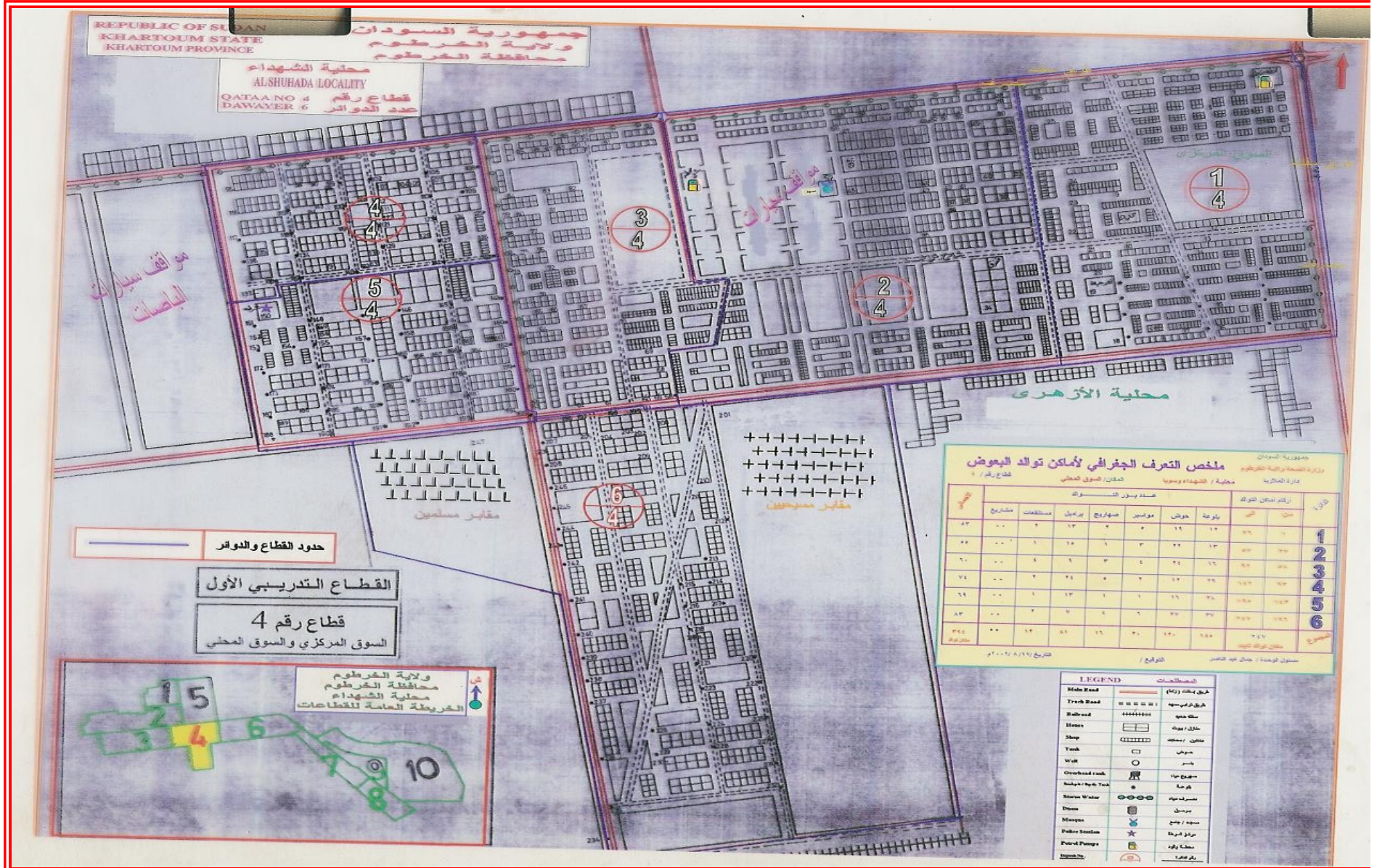
◆ Localities

- ✓ Laws and by laws
- ✓ Provision of resources
- ✓ Supervision & monitoring
- ✓ budget

◆ Khartoum state

- ✓ Laws
- ✓ Formation of high committee leaded by governor
- ✓ Formation of local committees
- ✓ Provision of resources
- ✓ Supervision & monitoring

GR



WHO Supports



Partnership was established with Water co-operation

- Listing of all pipes ledge in each sub-sector by malaria teams
- Provide the list to maintainer teams
- Conduct regular follow up by joint meeting

Water broken pipes

✓ Change and rehabilitation of main lines



Repair of water broken pipes



Enforcement of malaria legislation



**Removal of
basins by law**



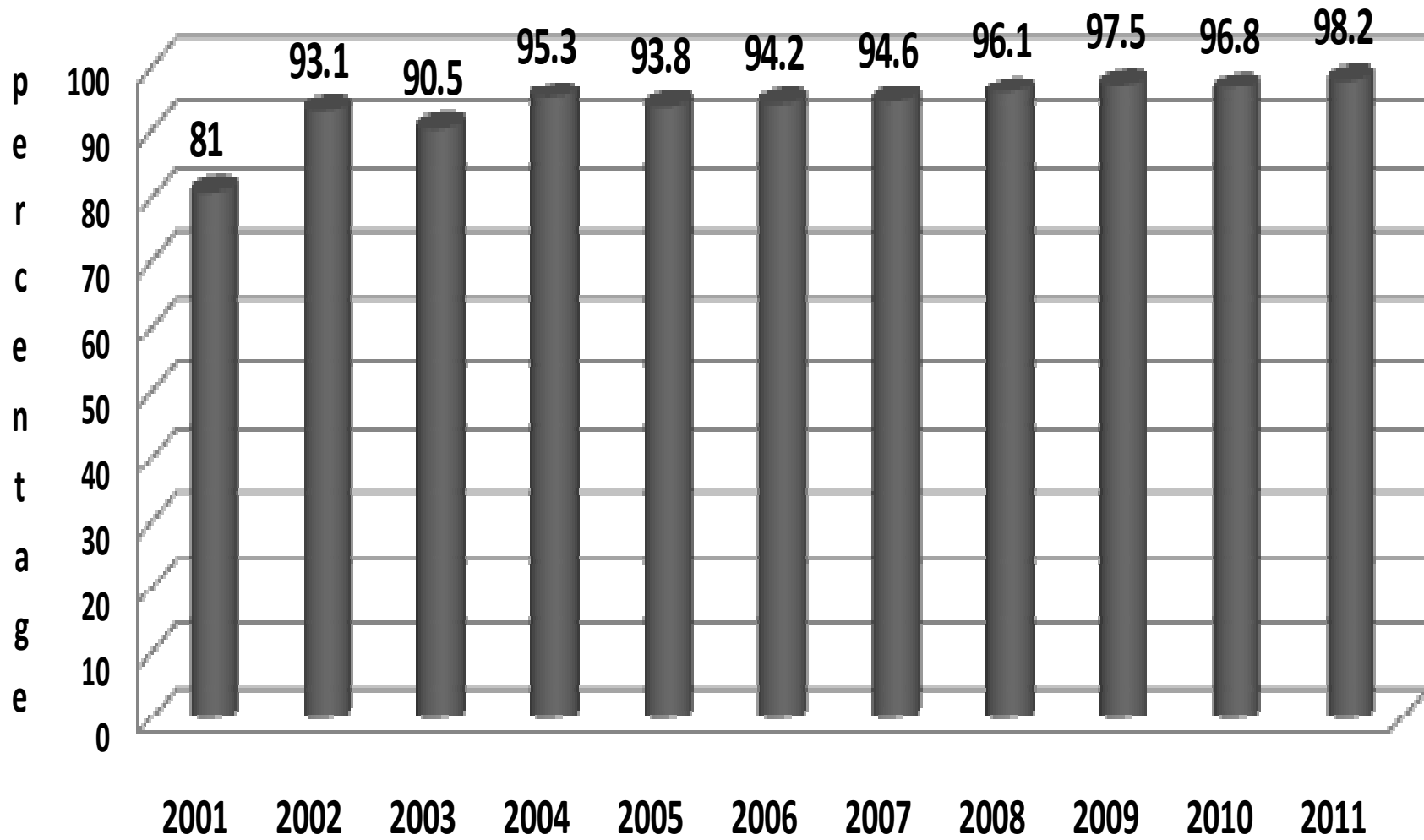
Partnership was established with Ministry of Agriculture

- continuous clearance and removal of vegetation from the irrigation canals .
- training and education of the farmers on benefits of application of intermittent irrigation.
- Fines on the excessive use of water by the farmers during stipulated so called “dry day”, .

Adoption of Intermittent irrigation in small irrigated schemes around Khartoum



% of irrigated scheme dried for at least 24 h in Khartoum state 2001-2011



Partnerships



Ministry of Education

- o **405 school**
- o **287,000 pupils**
- o **87,000 breeding sites treated**
- o **234,500 drained**



Environmental management (modification, land leveling)



Biological control using Gambusia fish







- ✓ RBM Societies ,Theatre,
Drama , Short stories
,operate Sketch



IEC

RBM societies

Football competitions

Human resources for KMFI

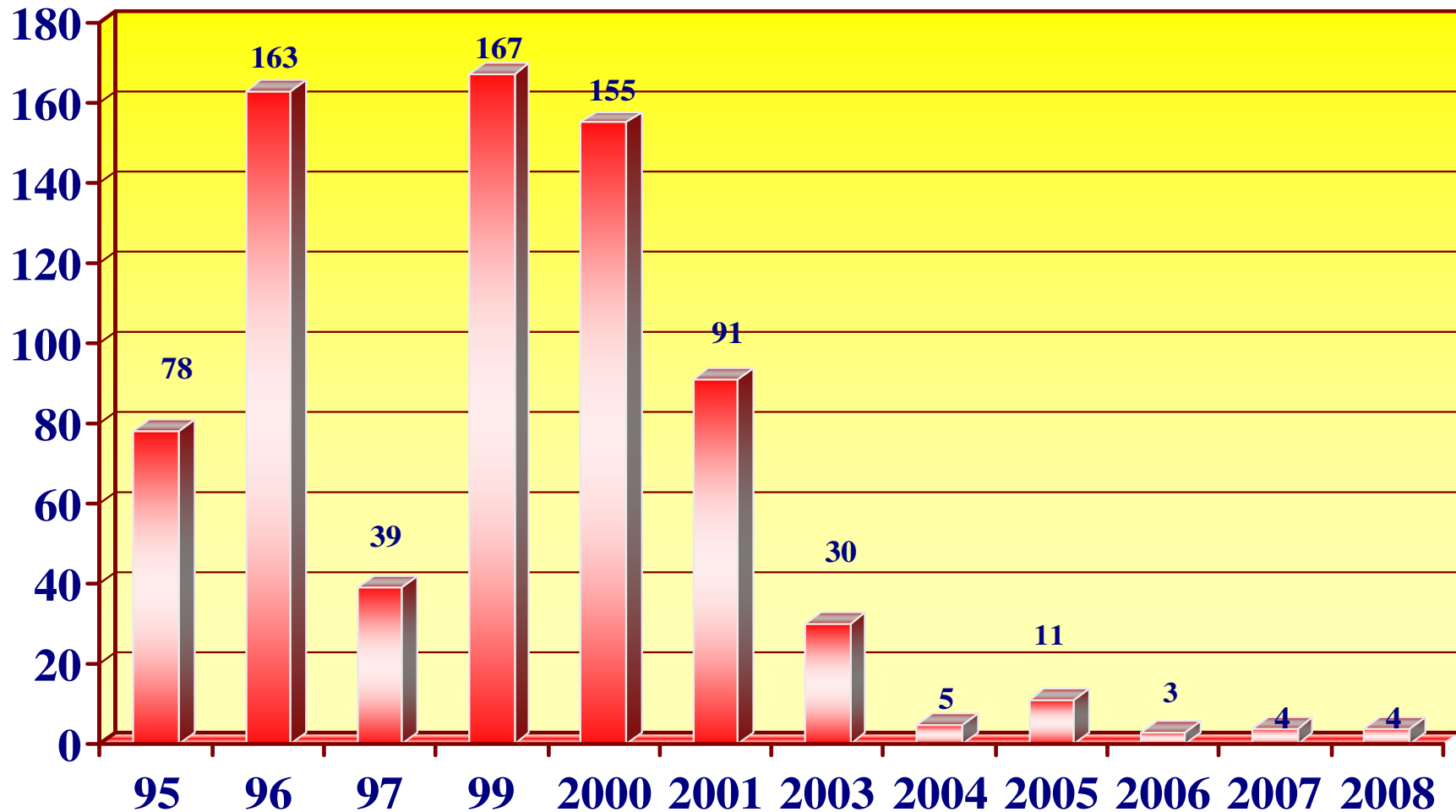
Msc in medical entomology and vector control	Public health officers	Sanitary oversee	Assistant Sanitary oversee	Spraying men
14	60	180	360	1,170

Resources and equipment for KMFI

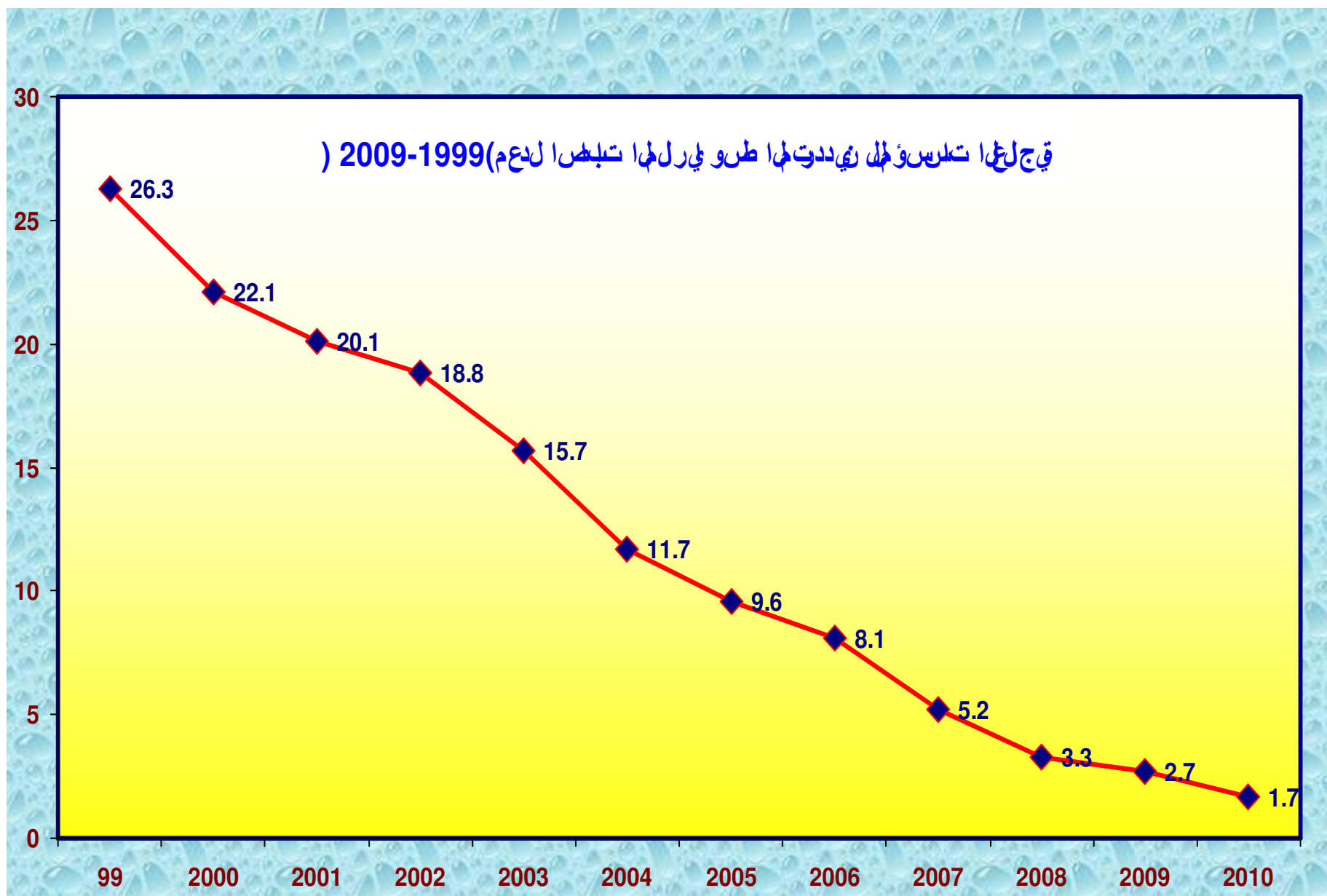
Cars	Partners	Hudson pumps	RBM societies in 7 localities	Other spraying machines (Truck mounted & fogging)	Annual budget in USD
54	More than 100	1,800	113	150 + 400	600,000

Impact

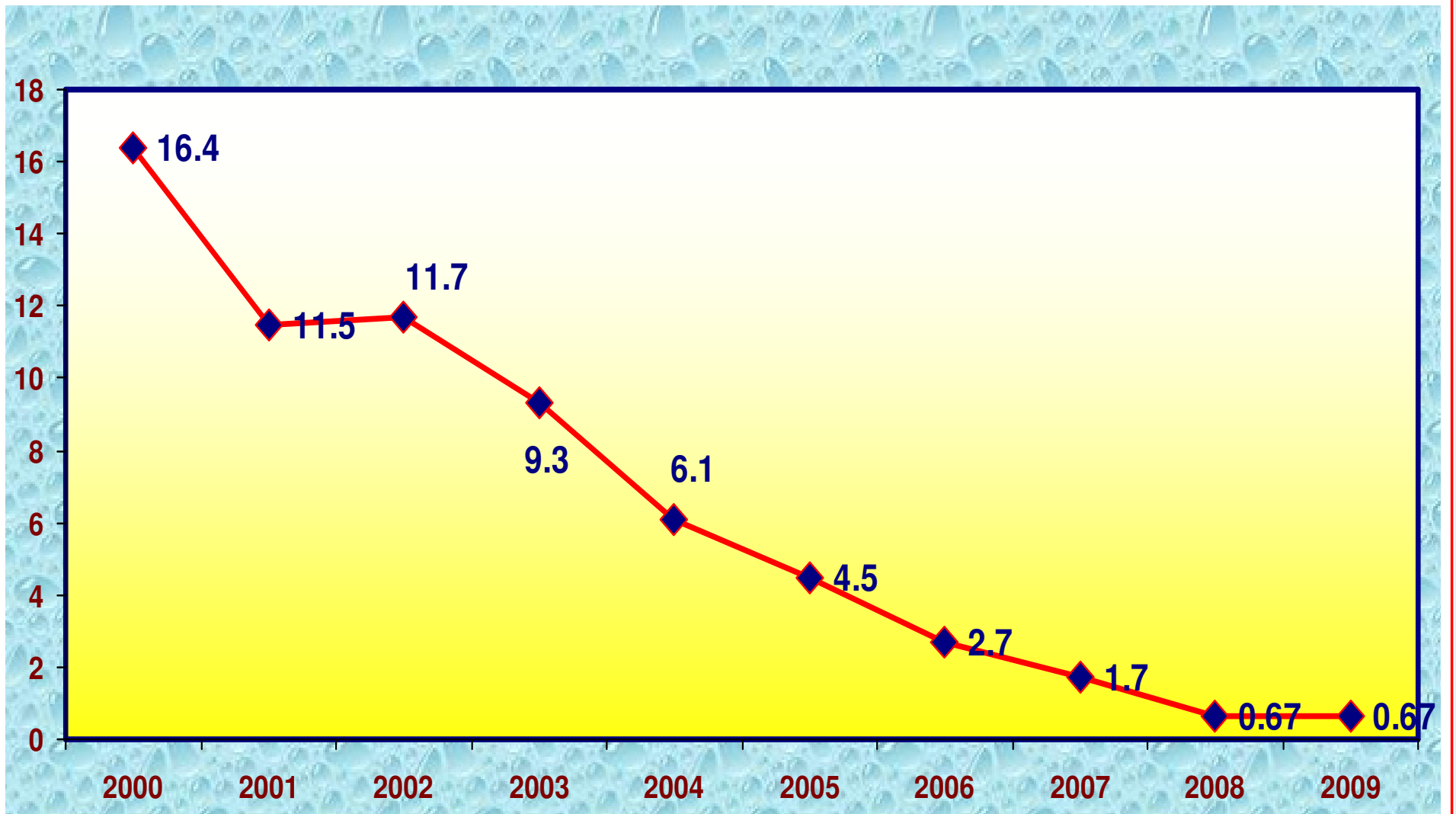
Prevalence rate / 10,000 1995- 2008



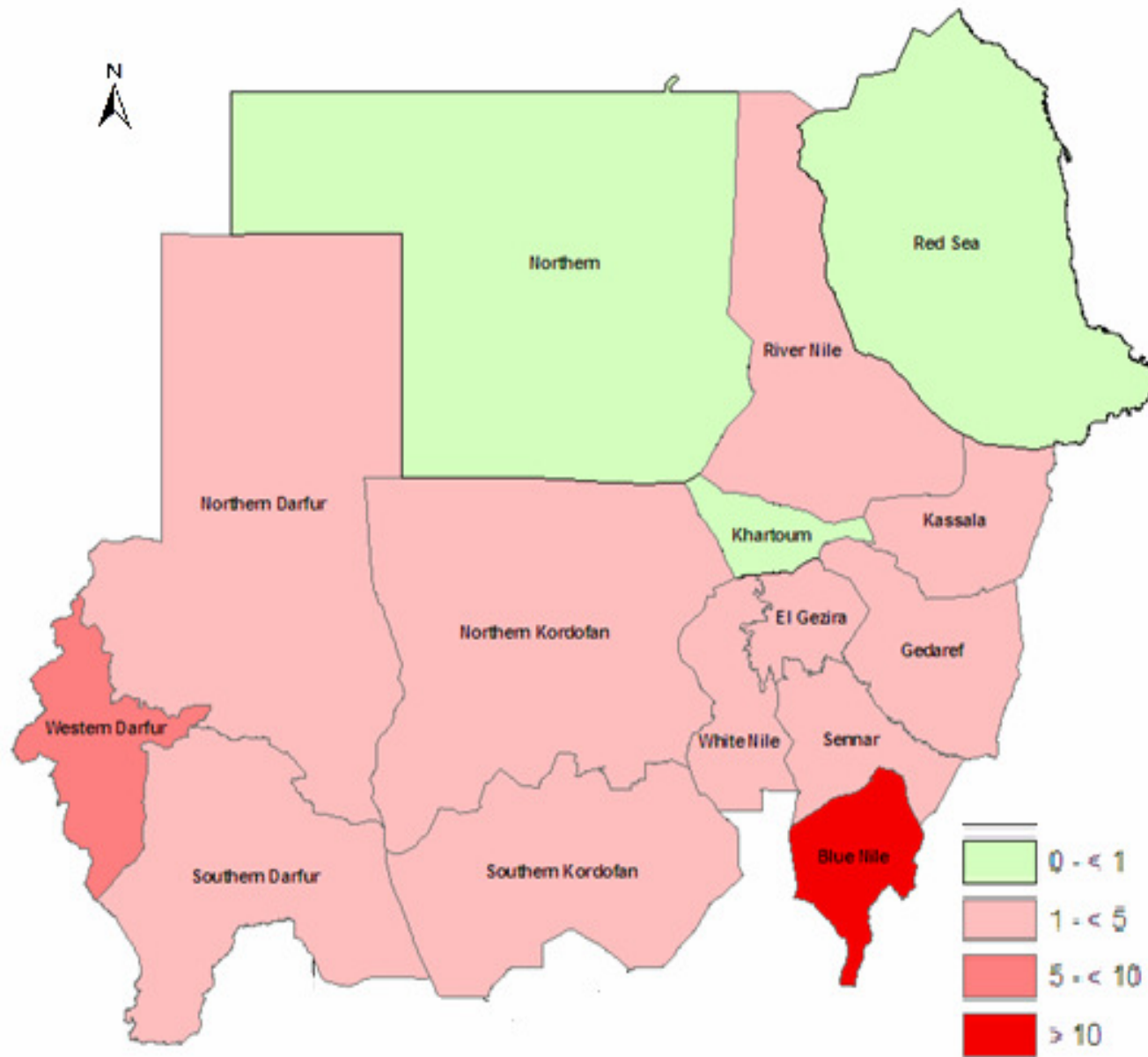
% of malaria cases 1999- 2010



% Of Malaria deaths 1999- 2009 from total deaths



Parasite prevalence among fever cases (community SPR)



Arising challenges threat continuity of KMFI achievements:

- Emerging of new agricultural schemes , which create a new workload within the insufficient budget.
- Increased of new residence units, new buildings surrounded Khartoum State, which may creates additional mosquitoes habitats.
- Emergence of plasmodium vivax in many scattered areas in Khartoum State.
- Preparations for pre-elimination phase :

challenges

- Strong monitoring and evaluation systems.
- Full involvement of the private sector, nongovernmental organizations .
- Functional of intersectoral, and cross-states border cooperation mechanisms .
- Networking for monitoring resistance to parasites and vectors
- Community mobilization ,awareness, partnership
- Continuity of the support
- Weakness of infrastructure



Thanks