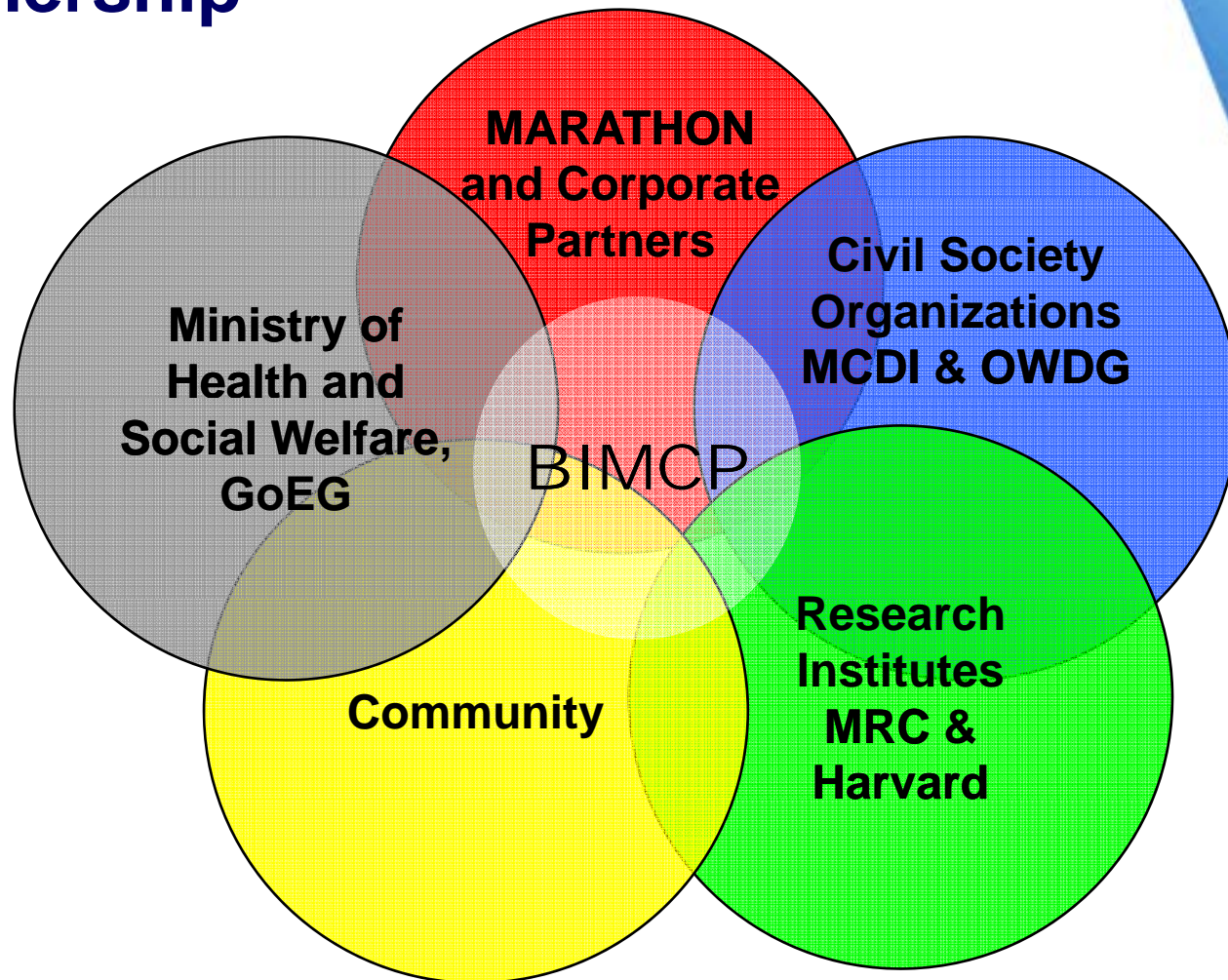




# Voluntary Multi-Stakeholder Partnership

Based on a highly cost-effective multi-stakeholder partnership between the private sector, Government and communities of Equatorial Guinea, civil society organizations, and research institutions

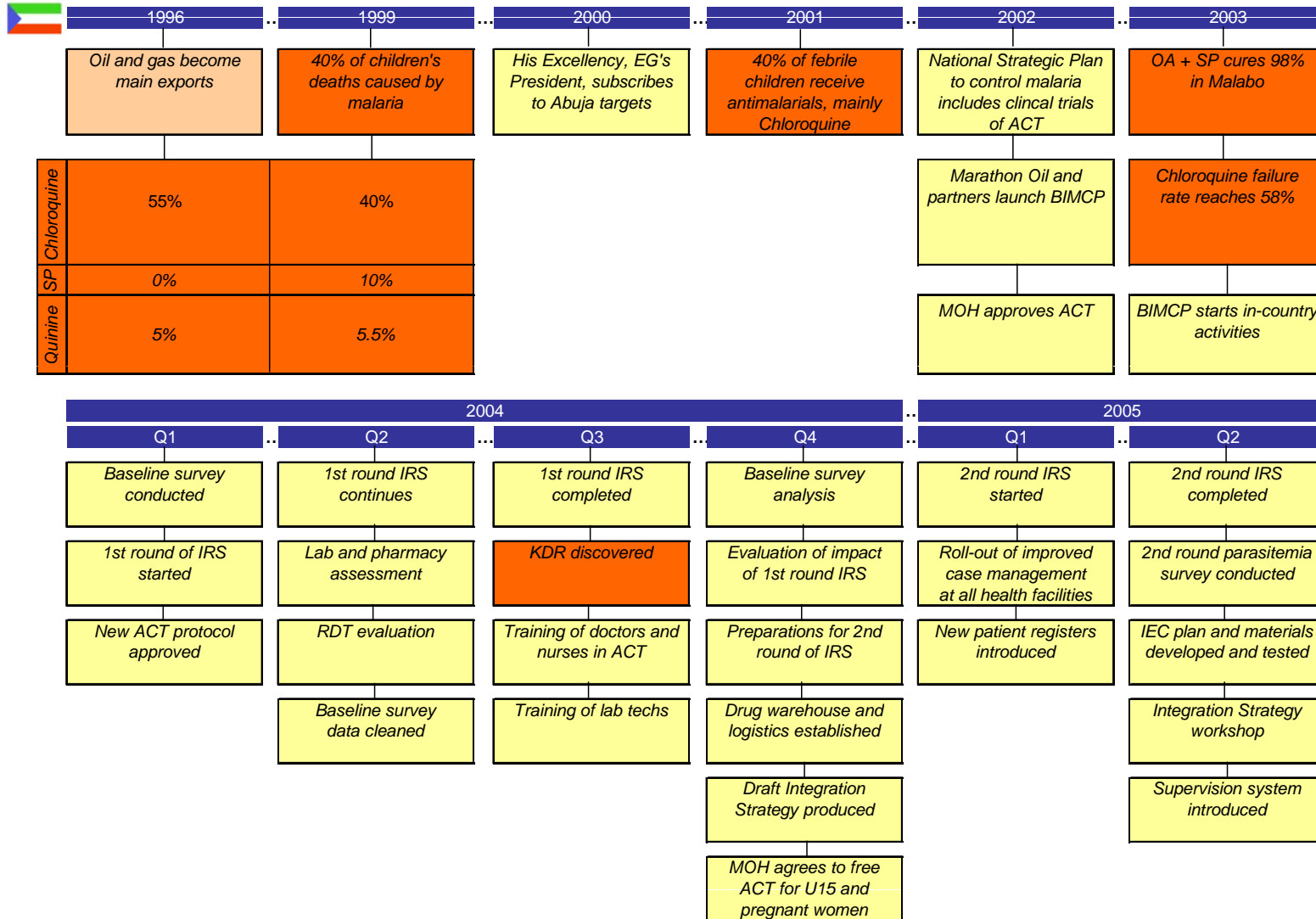


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# BIMCP Implementation (2003-2005)



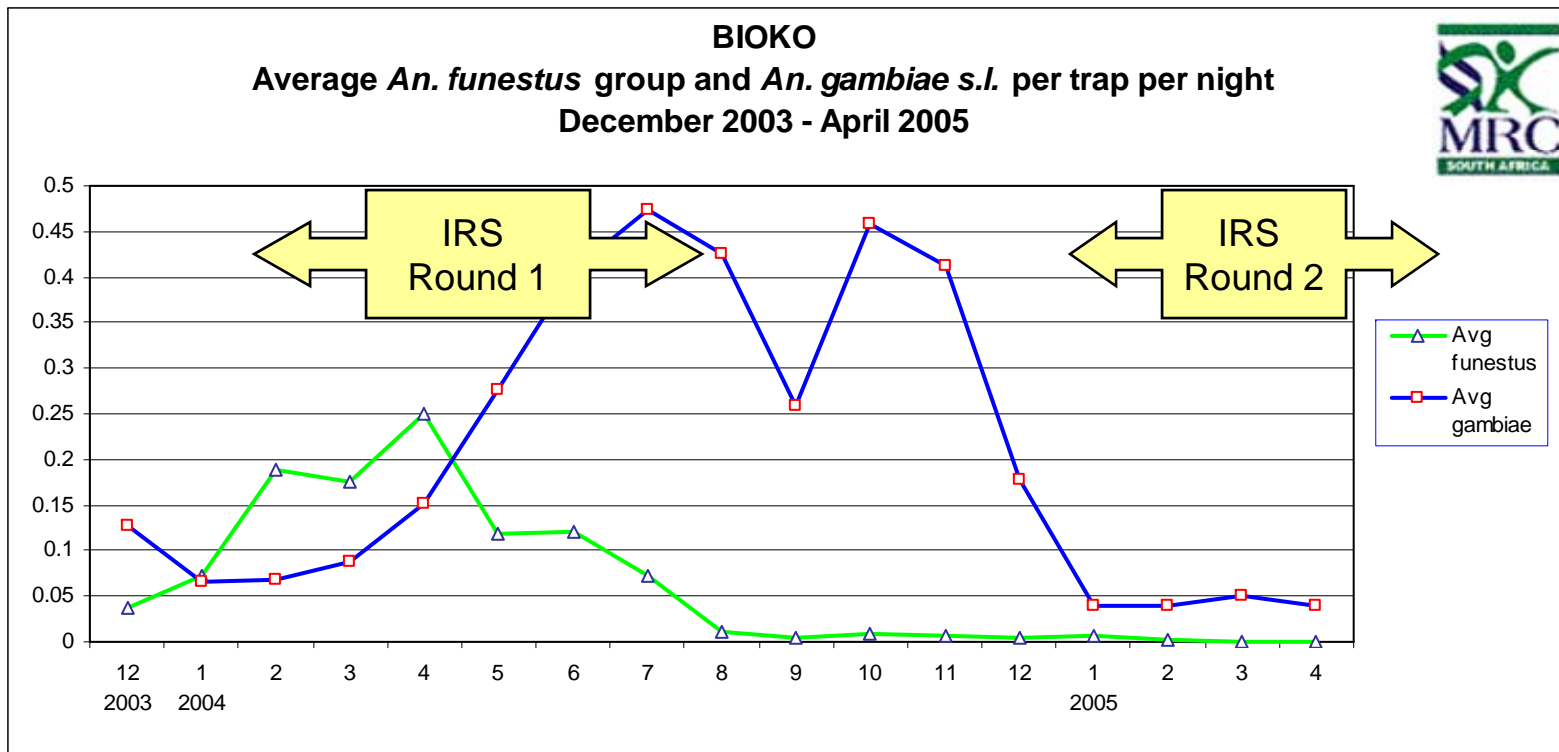
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# Effect of Round 1 Indoor Residual Spraying (IRS) on mosquito catch numbers

- Spraying of over 100,000 structures per round has substantially reduced the number of malaria-carrying mosquitoes on Bioko



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# Effect Round 1 IRS on % of mosquitoes infected with malaria

- Surviving mosquitoes are much less infected with malaria

Pre-Spraying	Pre-Spraying	Post-Spraying		
		2-weeks	2-months	6-months
<b><i>A funestus</i></b>				
Average caught / 100 night per house	23.6	5.0	4.7	3.0
Proportion sporozoite positive % (n)	4.1 (364)	5.6 (72)	2.6 (154)	2.3 (217)
Estimated infective specimens / 100 nights per house	0.97	0.28	0.12	0.07
Relative change in numbers per night		0.21	0.20	0.13
Relative change in infective mosquitoes per night		0.28	0.13	0.07
<b><i>A gambiae sl</i></b>				
Average caught / 100 night per house	29.1	7.3	23.4	24.9
Proportion sporozoite positive % (n)	6.5 (705)	2.7 (112)	1.8 (386)	1.6 (696)
Estimated infective specimens / 100 nights per house	1.90	0.20	0.42	0.39
Relative change in numbers per night		0.37	0.80	0.86
Relative change in infective mosquitoes per night		0.16	0.22	0.21

→  
4.1% -  
2.3%  
p=0.35

→  
6.5% -  
1.6%  
p<0.001

**Source:** Analysis prepared by B. Sharp and I. Kleinschmidt, MRC



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# Impact of 1<sup>st</sup> Round IRS<sup>a</sup> on % of children infected with malaria, anemic

- The rate of malaria infection among Under 15 year olds has decreased significantly

Sentinel site	February/ March 2004		February/March 2005		p-value for difference
	Prevalence of infection, % (n)	95% Confidence interval	Prevalence of infection, % (n)	95% Confidence interval	
All	45 (2451)	40 to 51	31 (2987)	23 to 40	0.0006*

**Notes:** (Analysis by Dr. Kleinschmidt (MRC) from data gathered by Dr. Torrez (MCDI))  
 (1) 2004 survey carried out in June  
 \* change since 2004 statistically significant

The prevalence of parasitemia dropped by 31% between 2005 and 2004

- The prevalence of anemia among Under 15 year olds has decreased significantly

Sentinel Sites	February/ March 2004		February/March 2005		p-value for difference
	Prevalence of infection, % (n)	95% Confidence interval	Prevalence of infection, % (n)	95% Confidence interval	
All sentinel sites combined (excluding Santa Maria, Moka and Punta Europa)	76 (2232)	71 to 80	66 (2662) (a) Includes 1 month of ACT	60 to 72	0.0001*

**Notes:** (Analysis by Dr. Benavente (MCDI) and Dr. Kleinschmidt (MRC) from data gathered by Dr. Torrez (MCDI))  
 (1) 2004 survey carried out in June  
 \* change since 2004 statistically significant

The prevalence of anemia dropped by 13% between 2005 and 2004



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# Impact of 1<sup>st</sup> Round Spraying on welfare of Biokans

## ■ Impact in welfare

Quintile of per capita household income	Estimated Reduction in Malaria Cases per Year			Estimated Net Reduction in Economic Burden (\$ millions)			Net Burden Reduction as % of Total Annual Income		
	Mean	95% CI		Mean	95% CI		Mean	95% CI	
Poorest 1	32,420	23,284	41,969	1.60	1.18	2.02	6.1%	4.5%	7.7%
2	34,184	22,453	47,463	1.73	1.16	2.35	4.5%	3.1%	6.1%
3	27,669	19,498	36,392	1.51	1.11	1.90	3.0%	2.2%	3.8%
4	30,617	22,326	39,118	2.00	1.65	2.29	3.1%	2.6%	3.6%
Wealthiest 5	37,715	28,622	46,471	4.32	5.35	3.21	2.3%	2.9%	1.7%

The projected savings from not having to pay for malaria treatment have benefited everybody, but particularly the poorest

## ■ Benefit- cost ratio

**Total Cost 03-04:** \$2.29 million

**Total Benefit 03-04:** \$10.8 million (95% CI: \$9.29m - \$13.16m)

**Benefit-Cost Ratio:** 4.1 (95% CI: 4.0 - 5.7)

Booth space (RBM partner's Forum, Yaounde, Cameroon, November 2005) to be used for:

- Display poster on Bioko Island Malaria Control Project
- Display sample IEC materials
- BIMCP staff present to share experiences with other countries from Equatorial Africa



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