

Performance Monitoring Plan 2002-2005

Madagascar Green Healthy Communities Project *(MGHC, Grant n°2001-18055)*

Monitoring and Evaluation of Health- Population-Environment Programmes

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ANNEX A : M&E Indicators time frame

List of Acronyms

ANC	Antenatal care
ARI	Acute Respiratory Infection
BCC	Behavior Change Communication
CBD	Community Based Distributor
CBDW	Community Based Distributor Workers
DHS	Demographic and Health Survey
FP	Family planning
GOM	Government Of Madagascar
IEC	Information Education and Communication
JSI	John Snow Incorporated
LDI	Landscape Development Interventions
MGHC	Madagascar Green Healthy Communities
MINAGRI	Ministry of Agriculture (Ministère de l'Agriculture)
MINEEF	Ministry of Environment, Water and Forest (Ministère de l'Environnement, des eaux et Forêts)
MINSAN	Ministry of Health (Ministère de la Santé)
M&E	Monitoring and Evaluation
NHIS	National Health Information System (SISG)
STI	Sexually Transmitted Infections

I. Background

Several demographic pressures and ecological problems threaten the rich biodiversity of Madagascar where 80% of species are endemic: a high population growth (2.8%) linked with a multitude of family health problems, a high rate of deforestation, poor forest exploitation, unsustainable resource extraction and other factors.

In connection with the Voahary Salama Integrated Programs initiative, the Madagascar Green Healthy Communities (MGHC) project was initiated in 2002 to address these issues in some key intervention areas along the corridor forests of two provinces: Toamasina and Fianarantsoa. Additional areas are situated close to the Andoahela Park, the dry forest in Toliary province, and preserved coastal zones in Antsiranana. The MGHC project is funded by David and Lucile Packard Foundation and implemented by JSI Research and Training Inc. together with national and international partners of Voahary Salama, Chemonics Inc. and rural associations participating in integrated activities on the community level.

To fulfill its goal, that is a healthy and well-nourished population living in a healthy environment based on rational management of natural resources at the community level, the MGHC Project has developed an integrated approach incorporating innovated activities and adapting existing health and environmental intervention measures of partner organizations. It is expected that this integrated population-environment approach should lead to the stabilization and eventual reduction of high population growth, and contribute to improved management of natural resources for conservation and economic development of rural populations living in and near the endangered intervention areas. In addition, after two or three year experiences, the project will be called to extend its activities in the other intervention areas.

II. Challenges facing the MGHC project

Since 1975, the population densities of the Toamasina and Fianarantsoa provinces have increased dramatically from 18 hab/km² to over 30 hab/km² in year 2000. By the year 2020, it is projected that the population density of these two provinces will double. The increasing population stress can be attributed to the following major factors:

- the influx of immigrants in the two regions,
- the lack of family planning knowledge and access to family planning,
- and the low literacy rate of the regions.

In addition, the high population growth rate is also linked with several health problems that are resulting to childhood malnutrition, increasing infant mortality (over 100 infants per 1000 in 2000 for the two provinces), increasing maternal mortality and high incidence rate of tropical diseases such as Acute Respiratory Infections, diarrheic diseases, malaria, chronic malnutrition and emerging sexually transmitted infections.

Similar to the national trend, most farmers, which represent over 80% of the population, in the two regions utilize traditional methods of farming: slash and burn farming, cultivation and irrigation. Besides, very little is done in strategies that increase reforested areas: In 1995 less than 2% of the total surface area cultivated by slash and burn were reforested. It is predicted that the remaining forest will disappear within 20 years if no concrete actions have been made.

According to the national environmental charter (Law N°90-033 as of December 21, 1990), the environment takes into account all conditions surrounding human activities that are biological (human, biodiversity), physical (biological balance, natural resources, climate, soil), socio-cultural, and the interaction of every element cited above. Therefore, environmental degradation is also linked to community health problems.

III. Proposed Programme

The above challenges highlight the need to reduce the demographic pressures in conservation areas, or areas of high biological diversity, that will contribute to the conservation and sustainable use of natural resources.

The proposed program is intended to address issues around the health and environment of communities that are leaving near key conservation areas in Madagascar. The goal and objectives of the program during the period 2002 to 2005 will be as indicated below:

Goal:

Promote integrated health, population, and environment strategies and activities.

Strategic Objective:

To increase the community capacity to improve their health status and food security using practices that also protect the environment.

Specific Objectives:

- To improve the living conditions for the target population.
- To ensure a rational management of natural resources within areas of high biological diversity.

A series of integrated, multi disciplinary activities and a social marketing strategy in targeted communities will be used to achieve the above objectives.

The program implementation includes the following activities:

- Work with local farmers' associations and health communities volunteers
- Community mobilization
- Use of selected material inputs
- Income generation activities
- Promote rural radio systems

- Capacity building (improving quality of care and services, community forest management, agricultural techniques,...).

IV. Monitoring and Evaluation (M&E) Plan

At the initial phase of the project, the existing monitoring and evaluation structures of the ECHO/Environmental Health Project and the University of Michigan Impact Assessment project were adapted and used for the MGHC Project integrated activities in terms of behavior change and communication or tracking the best practices. The proposed M&E system consists of the following components:

- Conceptual framework;
- Strategic framework;
- Logical framework; and
- List of corresponding indicators.

The conceptual framework (see Appendix A) broadly focuses on the proximate and non-proximate determinants of community health and environmental issues. The strategic framework consists of one strategic objective (SO) and four intermediate results (IR) as shown below:

Strategic Objective 1: increase the community capacity to improve their health status and food security using practices that also protect the environment.

IR1.1: Increase the use of modern contraception

IR1.2: Improve natural resource management

IR1.3: Increase farmers' incomes and food security

IR1.4: Improve health status of local populations.

Four logical frameworks have been developed; one for each intermediate result. The indicators will be used to track the performance of the program, including the expected effect of each specific intervention.

V. Data sources for Monitoring and Evaluation

1. Quick investigation of quality (QIQ):

- Exit interviews
- Observation
- Health facility surveys

2. Population based surveys:

- Household surveys
- Demographic and Health Surveys

3. Routine data collection and Health Systems:

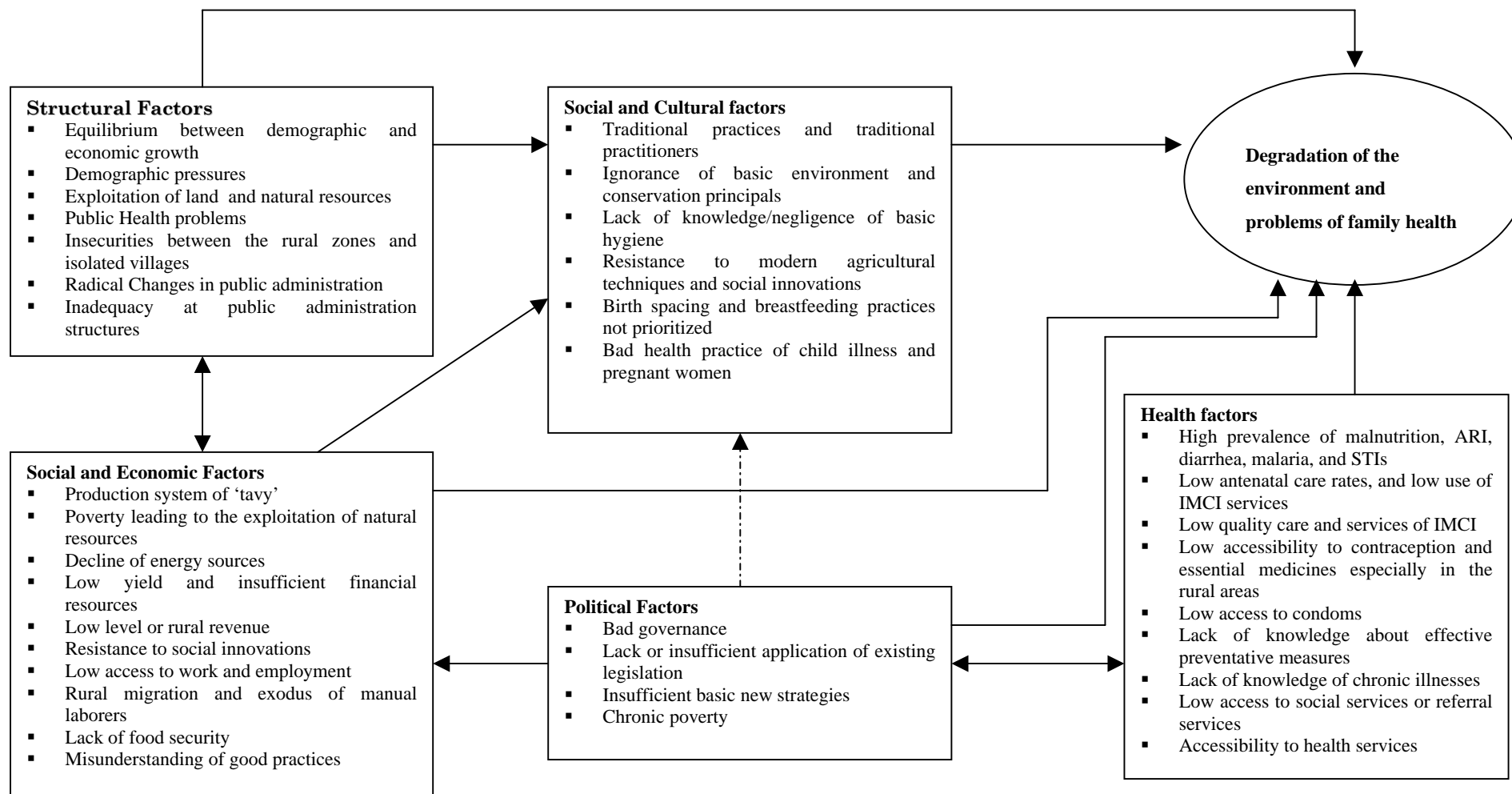
- National Health Information System (NHIS)
- Routine reports
- Landscape Management reports and records
- Official documents

4. Rapid Rural Appraisal (RRA) :

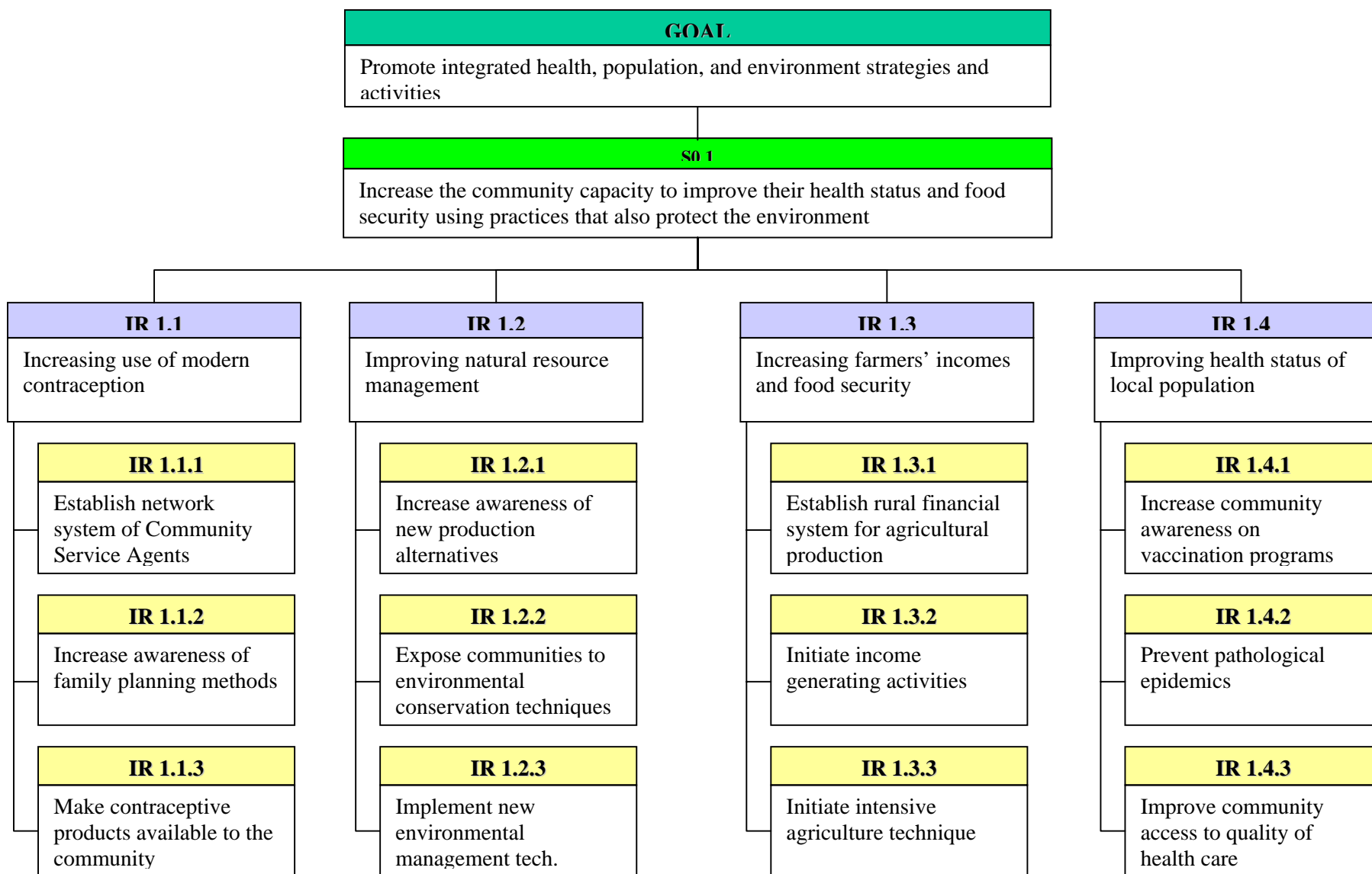
- Focus group discussions
- Mini-household surveys
- Environmental M&E tools
- Reports on best practices within communities

The quick investigation of quality (QIQ) methodology is going to be used to collect data on quality of care. The methodology entails conducting exit interviews and observations. Meanwhile, Rapid Rural Appraisal techniques will be used to evaluate progress on environmental or community natural resource management activities. Also, observations will be conducted to check the use of appropriate techniques (bee-keeping, fish cultivation, ecologic ginger cultivation, SRI/SRA,...)

Conceptual Framework for integrated Health, Population, and Environment Program

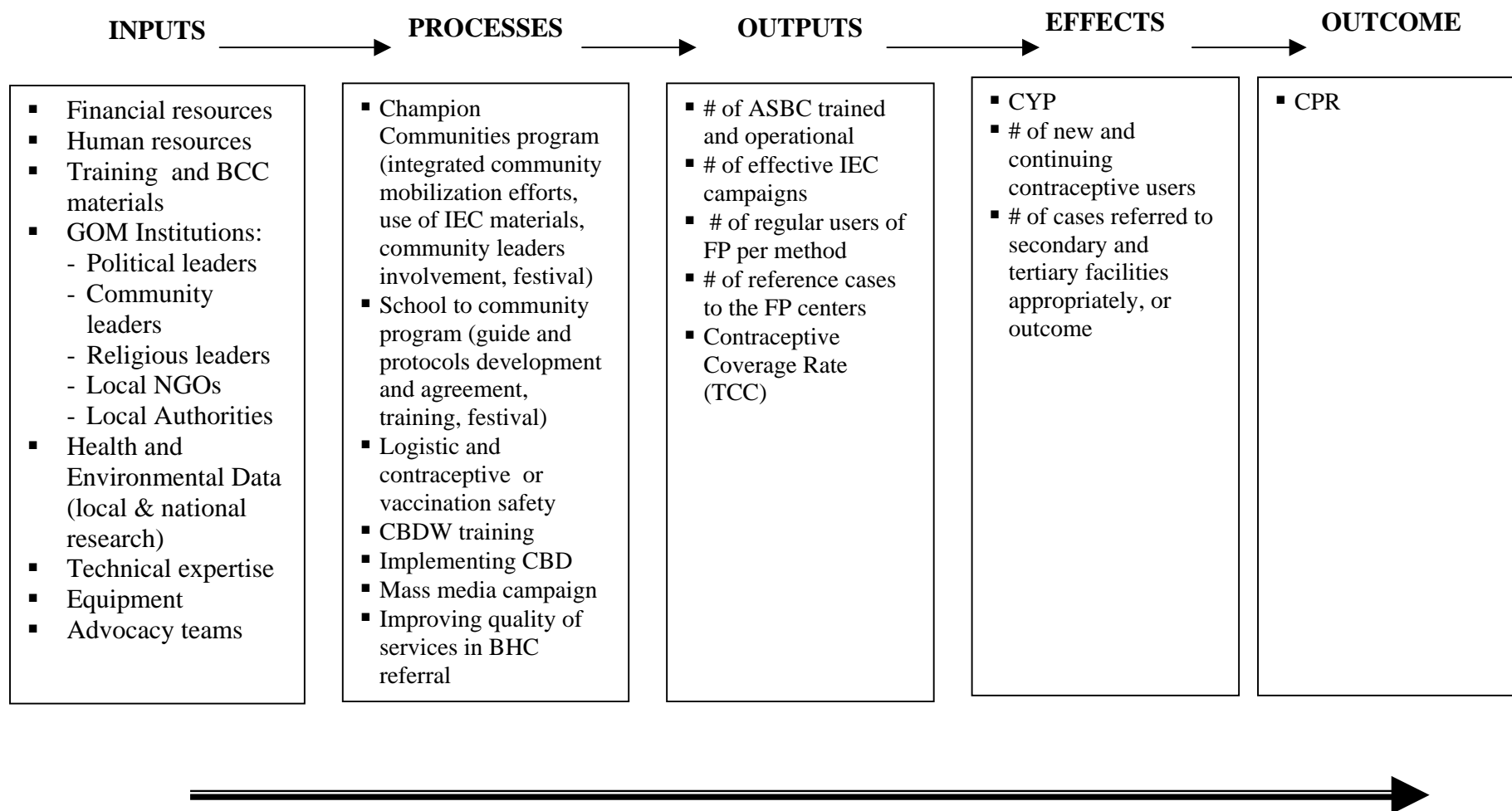


Strategic framework

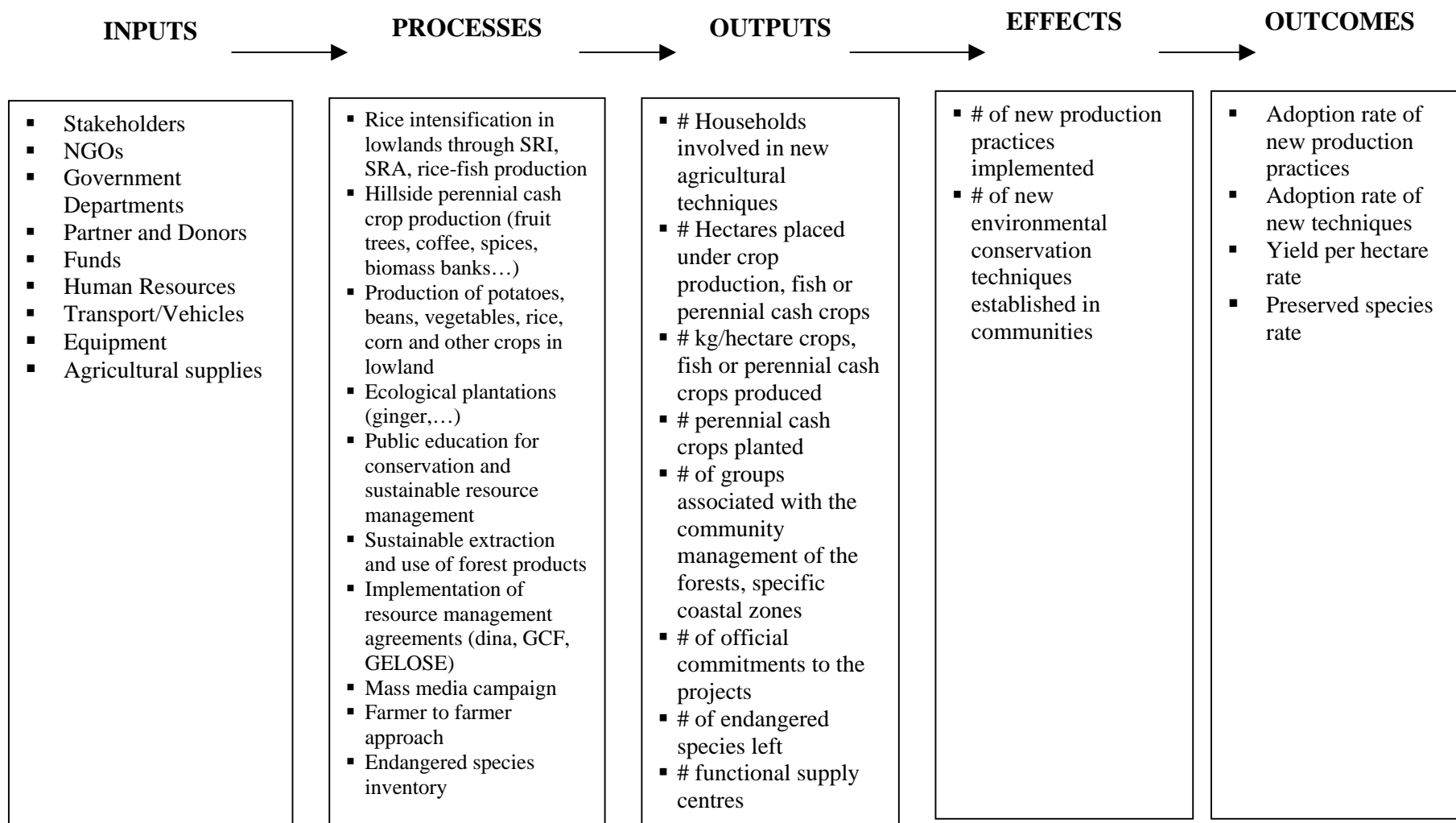


Logical frameworks

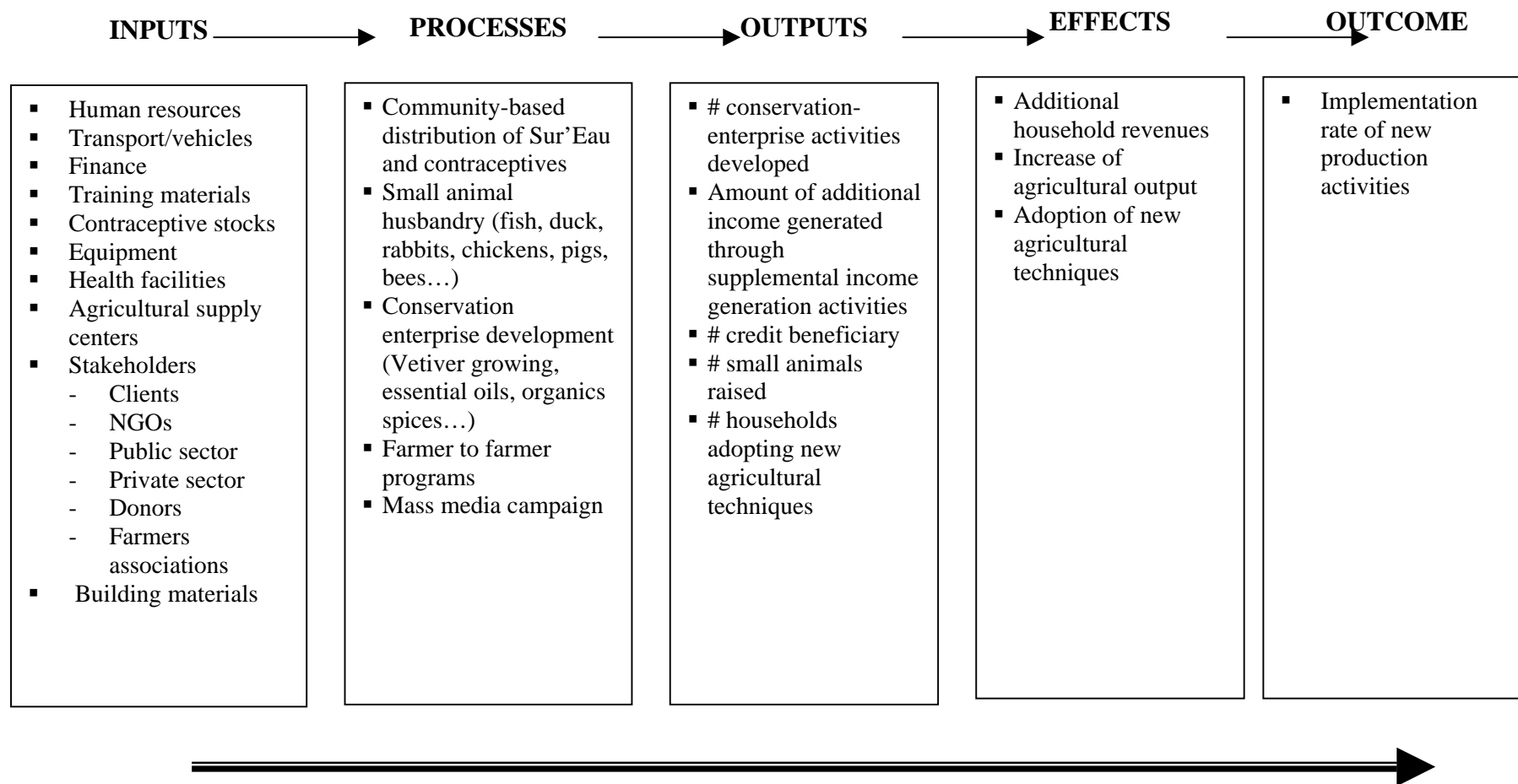
IR 1.1 Increasing use of modern contraception



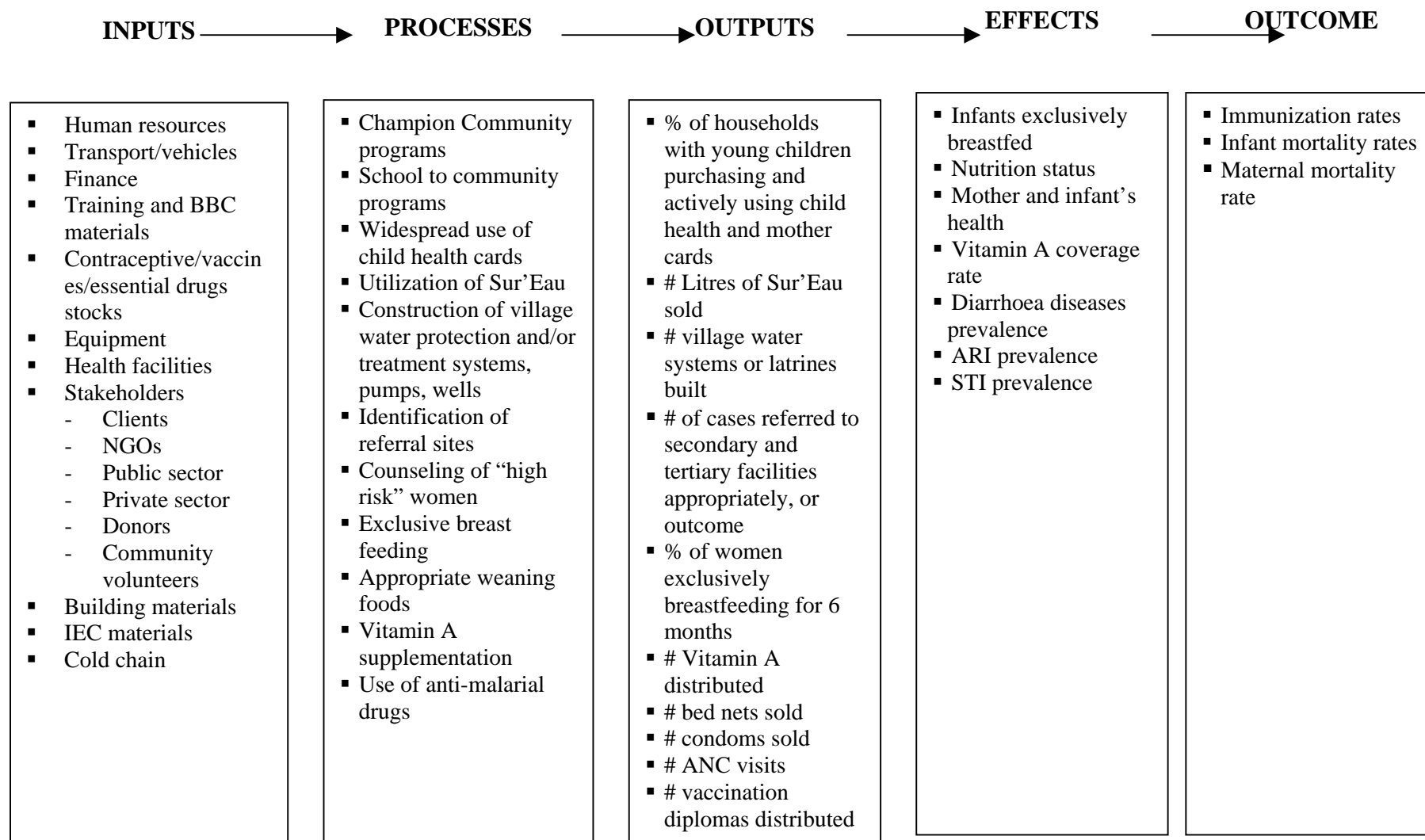
IR 1.2 Improving natural resource management



IR 1.3 Increasing farmers' incomes and food security



IR 1.4 Improving health status of local population



List of Indicators

SO 1: Increase the community capacity to improve their health status and food security using practices that also promote the environment

N°	Indicators	Page
IR 1.1	Increase the use of modern contraception	11
1.1.a	Contraceptive prevalence rate for modern FP methods (effective coverage)	
1.1.b	Couple years of protection at district levels (utilization rate)	
1.1.c	Method Mix	
1.1.d	Contraceptive coverage rate (utilization rate)	
1.1.e	Number of CBDW trained and operational (availability rate)	
1.1.f	Number of new and continuing contraceptive users (utilization rate)	
1.1.g	Number of appropriate referred cases	
1.1.h	% of health facilities offering wide range of family planning methods (adequate coverage)	
1.1.i	% of population within 5 km radius of a functional health facilities offering FP services (accessibility rate)	
IR 1.2	Improve natural resource management	12
1.2.a	Adoption rate of new production practices	
1.2.b	Adoption rate of new agricultural techniques	
1.2.c	% of preserved species	
1.2.d	% of cultivated areas	
1.2.e	Yield rate per hectare	
1.2.f	Total surface area cultivated by slash and burn by district	
1.2.g	Number of functional centers for agricultural supplies	
1.2.h	Number of new production practices implemented	
1.2.i	Number of households adopting new environmental conservation techniques	
1.2.j	Rate of deforestation	
1.2.k	Total reforested surfaces	
IR 1.3	Increase farmer's incomes and food security	13
1.3.a	% of households with additional income	
1.3.b	% of households with additional agricultural production	
1.3.c	Childhood malnutrition: under 5 stunting (< 2SD)	
1.3.d	% of alive birth less than 2.5 kg	
1.3.e	Total amount of credits distributed to households	
IR 1.4	Improve the health status of local populations	14
1.4.a	Childhood mortality rate	
1.4.b	Maternal mortality rate	
1.4.c	Prevalence of diarrhea	
1.4.d	Prevalence of ARI	
1.4.e	% Fully immunized infants (12-23 months)	
1.4.f	% Infant (12-23 months) with full vaccination diploma	
1.4.g	TT2+ immunization	

N°	Indicators	Page
1.4.h	Prevalence of STI	
1.4.i	Main causes of morbidity	
1.4.j	% of infant 6-59 months receiving Vitamin A capsule within last 6 months	
1.4.k	% infants exclusively breastfed	
1.4.l	% of delivery assisted by a qualified personnel	
1.4.m	Access to potable water	
1.4.n	% of HH with young children using a health card	
1.4.o	Bed nets coverage	
1.4.p	Access to latrine	

Performance Monitoring Indicator System

Result/Component	Indicator(s)	Definition	Value ¹		Data Source	Frequency	Implementation responsibility
			Baseline	Target			
IR 1.1	1.a. CPR	$CPR = \frac{\text{No of women using a contraceptive method at a given point in time}}{\text{No of women of reproductive age}}$	(2000)	(2005)	DHS	Every 5 years	MINSAN
	1.b. CYP	Quantity of each method distributed x conversion factor	NA		NHIS	Quarterly	M&E Unit
	1.c. Method Mix	% distribution of contraceptive users by method <ul style="list-style-type: none"> • Pill • IUD • Injections • Spermicides • Condoms • Female sterilization • Male sterilization • Norplant 	(2000)	(2005)	NHIS	Monthly	MINSAN
	1.1.d. Contraception coverage rate	$\frac{\text{\# of regular users}}{\text{Women in reproductive age 15 - 49}} \times 100\%$	NA		NHIS	Monthly	MINSAN
	1.1.e CBDW training	Number of CBDW trained and operational	(2002) 0	(2005)	Workshop reports	Quarterly	LDI
	1.1.f No of contraceptive users	Number of new and regular modern contraceptive methods users	(2002) 0	(2005)	NHIS	Monthly	MINSAN
	1.1.g No appropriate referred cases	Number of cases referred to secondary and tertiary facilities appropriately	(2002) 0	(2005)	Workshop reports	Monthly	M&E Unit
	1.1.h Wide range of FP methods	$\frac{\text{\# of health facilities with wide range of FP}}{\text{\# FP health centers}} \times 100$	(2002) 0	(2005)	NHIS	Quarterly	M&E Unit
	1.1.i Access to FP centers	No of facilities offering FP services ÷ No of population within 5 km radius of a functional FP health center x 100	(2002) 0	(2005)	NHIS	Quarterly	M&E Unit

¹ Values are the consolidation of the total intervention areas (Moramanga, Beforona and Ikongo,...)

Result/Component	Indicator(s)	Definition	Value ¹		Data Source	Frequency	Implementation responsibility
			Baseline	Target			
	1.2.a % New production practices	$\frac{\text{Number of HH with new production practices}}{\text{Total number of HouseHolds}} \times 100$	NA	(2005)	HH survey	Quarterly/annually	M&E Unit
IR 1.2	1.2.b % New techniques	$\frac{\text{Number of HH with new techniques}}{\text{Total number of HouseHolds}} \times 100$	NA	(2005)	HH survey	Quarterly/annually	M&E Unit
	1.2.c % of preserved species	$\frac{\text{Number of type of preserved species}}{\text{Total number of type of species in the areas}} \times 100$	NA	(2005)	Report/Records	Annually	LDI, Env. Offices
	1.2.d % of cultivated areas	$\frac{\text{Surface cultivated}}{\text{Total surface in the region}} \times 100$	NA	(2005)	Report/Records	Annually	LDI, Env. Offices
	1.2.e Yield rate per hectare	$\frac{\text{Tons of production}}{\text{Total cultivatable area (ha)}} \times 100$	NA	(2005)	Report/Records	Annually	MINAGRI
	1.2.f. % Slash and burn	Total surface area cultivated by slash and burn by district ÷ Total cultivatable areas x 100	NA	(2005)	Activity reports	Annually	MINAGRI
	1.2.g No of Agricultural suppliers	Number of functional centers for agricultural supplies by district	NA	(2005)	Field reports	Annually	MINAGRI
	1.2.h Adoption of new prod. Practices	Number of Households adopting new conservation techniques	NA	(2005)	Production records	Reviewed quarterly	M&E Unit
	1.2.i No of new conservation techniques	Number of new environmental conservation techniques established in the communities by district	NA	(2005)	Training reports	Annually	IEC Unit, Training Unit, LA
	1.2.j Rate of deforestation	$\frac{\text{Surface of deforestation}}{\text{Total surface in the region}} \times 100$	(2000)	(2005)	Report/Records	Annually	MINEF
	1.2.k Rate of reforestation	$\frac{\text{Surface of reforestation}}{\text{Total area of deforestation}} \times 100$	(2000)	(2005)	Report/records	Reviewed quarterly	M&E Unit, MINEF
	1.3.a % HH with additional income	$\frac{\text{Number of HH with additional income}}{\text{Total number of HouseHolds}} \times 100$	(2000)	(2005)	HH survey	Every two years	M&E Unit

Result/Component	Indicator(s)	Definition	Value ¹		Data Source	Frequency	Implementation responsibility
			Baseline	Target			
IR 1.3	1.3.b % HH with additional agricultural production	$\frac{\text{Number of HH with additional agricultural production}}{\text{Total number of HouseHolds}} \times 100$	(2000)	(2005)	HH survey	Every two years	M&E Unit
	1.3.c Childhood malnutrition	% of children under 5 that are stunted (Height/Age: <-2SD)	(2000) 40%	(2005) 47%	HH survey	Every two years	M&E Unit
	1.3.d % of alive birth less than 2.5 kg	$\frac{\text{No of birth less than 2.5 kg}}{\text{Total number of births}} \times 100\%$	(2000)	(2005)	NHIS	Monthly	MINSAN
	1.3.e Amount of credits to households	Total amount of credits distributed to households	NA	(2005)	Review report/ records	Reviewed quarterly	M&E Unit
IR 1.4	1.4.a Infant mortality rate	$\frac{\text{No of dead children < 12 months}}{\text{Total number of births}} \times 100$	(2000)	(2005)	NHIS, DHS	Annually	MINSAN
	1.4.b Maternal mortality rate	$\frac{\text{No of dead children < 12 months}}{\text{Total number of births}}$			NHIS, DHS	Annually	MINSAN
	1.4.c Prevalence of diarrhea	$\frac{\text{No of children < 5 with diarrhea episodes}}{\text{Total number of children < 5}} \times 100$			NHIS, DHS	Annually	MINSAN
	1.4.d Prevalence of IRA	$\frac{\text{No of children < 5 with IRA}}{\text{Total number of children < 5}} \times 100$			NHIS, DHS	Annually	MINSAN
	1.4.e % fully immunized infants	$\frac{\text{No of children (12 - 23 months) fully immunized}}{\text{Total number of children 12 - 23 months}} \times 100$			NHIS, DHS	Annually	MINSAN
	1.4.f % Infant with full vaccination diploma	$\frac{\text{No of children (12 - 23 months) with vacc diploma}}{\text{Total number of children 12 - 23 months}} \times 100$	(2000)	(2005)	Activity reports	Annually	LA, LMR
	1.4.g TT2+ immunization	$\frac{\text{No of pregnant women immunized (TT2+)}}{\text{Total number of pregnant women}} \times 100$			NHIS	Annually	M&E Unit, MINSAN

Result/Component	Indicator(s)	Definition	Value ¹		Data Source	Frequency	Implementation responsibility
			Baseline	Target			
IR 1.4	1.4.h Prevalence of STI	$\frac{\text{No STI cases}}{\text{Total number of clinical consultations}} \times 100$			NHIS	Annually	M&E Unit, MINSAN
	1.4.i Main causes of morbidity	% of morbidity causes for all clinical consultations <ul style="list-style-type: none"> ◆ Diarrhea ◆ ARI ◆ Malaria ◆ ... 			NHIS	Annually	M&E Unit, MINSAN
	1.4.j Vit. A coverage	$\frac{\text{No of infant 6-59 months receiving Vitamin A capsule within last 6 months}}{\text{Total number of infant 6-59 months}}$			NHIS	Annually	M&E Unit, MINSAN
	1.4.k Exclusive breastfeeding	$\frac{\text{Nb of infants (0-6 months) exclusively breastfed}}{\text{total number of infant 0-6 months}}$			Special HH survey	Every 2 years	M&E Unit
	1.4.l % of assisted delivery	$\frac{\text{No of delivery assisted by a qualified personnel}}{\text{Total estimated number of delivery}} \times 100$			NHIS	Annually	M&E Unit, MINSAN
	1.4.m Access to potable water	$\frac{\text{No of HH with potable drinking water}}{\text{Total No of HH}} \times 100$			Special HH survey	Every 2 years	M&E Unit
	1.4.n Use of health card	$\frac{\text{No of HH with young children using a health card}}{\text{Total No of HH}} \times 100$			Special HH survey	Every 2 years	M&E Unit
	1.4.o Bed nets coverage	$\frac{\text{No of HH using Bed Nets}}{\text{Total No of HH}} \times 100$			Special HH survey	Every 2 years	M&E Unit
	1.4.p Access to latrine	$\frac{\text{No of HH using latrine}}{\text{Total No of HH}} \times 100$			Special HH survey	Every 2 years	M&E Unit

NA : Data Not Available

DHS: Demographic and Health Survey
HFS : Health Facility Survey
HH: Household
HR: Human Resources
LMR: Logistic Management Reference
NHIS: National Health Information System